

U.S. Department of Education
Washington, D.C. 20202-5335



APPLICATION FOR GRANTS
UNDER THE

Arts in Education Model Development and Dissemination Program CFDA Number 84.351D

CFDA # 84.351D

PR/Award # U351D140076

Grants.gov Tracking#: GRANT11638071

OMB No. , Expiration Date:

Closing Date: Apr 28, 2014

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This application was generated using the PDF functionality. The PDF functionality automatically numbers the pages in this application. Some pages/sections of this application may contain 2 sets of page numbers, one set created by the applicant and the other set created by e-Application's PDF functionality. Page numbers created by the e-Application PDF functionality will be preceded by the letter e (for example, e1, e2, e3, etc.).

Application for Federal Assistance SF-424

* 1. Type of Submission: <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application	* 2. Type of Application: <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision	* If Revision, select appropriate letter(s): <input type="text"/> * Other (Specify): <input type="text"/>
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* 3. Date Received: <input type="text" value="04/28/2014"/>	4. Applicant Identifier: <input type="text"/>
--	--

5a. Federal Entity Identifier: <input type="text"/>	5b. Federal Award Identifier: <input type="text" value="NA"/>
--	--

State Use Only:

6. Date Received by State: <input type="text"/>	7. State Application Identifier: <input type="text"/>
---	---

8. APPLICANT INFORMATION:

* a. Legal Name:

* b. Employer/Taxpayer Identification Number (EIN/TIN): <input type="text" value="33-0515302"/>	* c. Organizational DUNS: <input type="text" value="0293323970000"/>
--	---

d. Address:

* Street1:
Street2:
* City:
County/Parish:
* State:
Province:
* Country:
* Zip / Postal Code:

e. Organizational Unit:

Department Name: <input type="text" value="Dramatic Results"/>	Division Name: <input type="text" value="Dramatic Results"/>
---	---

f. Name and contact information of person to be contacted on matters involving this application:

Prefix: * First Name:
Middle Name:
* Last Name:
Suffix:
Title:

Organizational Affiliation:

* Telephone Number: Fax Number:

* Email:

Application for Federal Assistance SF-424

*** 9. Type of Applicant 1: Select Applicant Type:**

M: Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

U.S. Department of Education

11. Catalog of Federal Domestic Assistance Number:

84.351

CFDA Title:

Arts in Education

*** 12. Funding Opportunity Number:**

ED-GRANTS-022514-001

* Title:

Office of Innovation and Improvement (OII): Arts in Education Model Development and Dissemination Program CFDA Number 84.351D

13. Competition Identification Number:

84-351D2014-1

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

84.351D.2014.Areas Affected by Project.pdf

Add Attachment

Delete Attachment

View Attachment

*** 15. Descriptive Title of Applicant's Project:**

Make It REAL will enhance the arts-integration curricula, Math in a Basket (2003 & 2006 AEMDD) and Write-On Arts (2010 AEMDD), by incorporating art and math content into an iPad-based program.

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

Application for Federal Assistance SF-424

16. Congressional Districts Of:

* a. Applicant

* b. Program/Project

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment

Delete Attachment

View Attachment

17. Proposed Project:

* a. Start Date:

* b. End Date:

18. Estimated Funding (\$):

* a. Federal	<input type="text" value="500,000.00"/>
* b. Applicant	<input type="text" value="4,410.00"/>
* c. State	<input type="text" value="0.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="0.00"/>
* f. Program Income	<input type="text" value="0.00"/>
* g. TOTAL	<input type="text" value="504,410.00"/>

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

a. This application was made available to the State under the Executive Order 12372 Process for review on

b. Program is subject to E.O. 12372 but has not been selected by the State for review.

c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**

Yes No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: * First Name:

Middle Name:

* Last Name:

Suffix:

* Title:

* Telephone Number: Fax Number:

* Email:

* Signature of Authorized Representative: * Date Signed:

Dramatic Results

84.351D 2014 Application

14. Areas Affected by Project (Cities, Counties, States, Etc.):

Long Beach, Los Angeles County, California

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.
19. Will comply with the requirements of Section 106(g) of the Trafficking Victims Protection Act (TVPA) of 2000, as amended (22 U.S.C. 7104) which prohibits grant award recipients or a sub-recipient from (1) Engaging in severe forms of trafficking in persons during the period of time that the award is in effect (2) Procuring a commercial sex act during the period of time that the award is in effect or (3) Using forced labor in the performance of the award or subawards under the award.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL Christi Wilkins	TITLE Executive Director
APPLICANT ORGANIZATION Dramatic Results	DATE SUBMITTED 04/28/2014

Standard Form 424B (Rev. 7-97) Back

DISCLOSURE OF LOBBYING ACTIVITIES

Complete this form to disclose lobbying activities pursuant to 31 U.S.C.1352

Approved by OMB
0348-0046

1. * Type of Federal Action: <input type="checkbox"/> a. contract <input checked="" type="checkbox"/> b. grant <input type="checkbox"/> c. cooperative agreement <input type="checkbox"/> d. loan <input type="checkbox"/> e. loan guarantee <input type="checkbox"/> f. loan insurance	2. * Status of Federal Action: <input type="checkbox"/> a. bid/offer/application <input checked="" type="checkbox"/> b. initial award <input type="checkbox"/> c. post-award	3. * Report Type: <input checked="" type="checkbox"/> a. initial filing <input type="checkbox"/> b. material change
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4. Name and Address of Reporting Entity:
 Prime SubAwardee
* Name: Dramatic Results
* Street 1: 3310 Lime Avenue Street 2: _____
* City: Signal Hill State: CA: California Zip: 90755-4612
Congressional District, if known: CA-047

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency: U.S. Department of Education	7. * Federal Program Name/Description: Arts in Education CFDA Number, if applicable: 84.351
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8. Federal Action Number, if known: _____	9. Award Amount, if known: \$ _____
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10. a. Name and Address of Lobbying Registrant:
Prefix _____ * First Name NA Middle Name _____
* Last Name NA Suffix _____
* Street 1 _____ Street 2 _____
* City _____ State _____ Zip _____

b. Individual Performing Services (including address if different from No. 10a)
Prefix _____ * First Name NA Middle Name _____
* Last Name NA Suffix _____
* Street 1 _____ Street 2 _____
* City _____ State _____ Zip _____

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* Signature: Christi Wilkins
* Name: Prefix Ms. * First Name Christi Middle Name _____
* Last Name Wilkins Suffix _____
Title: Executive Director Telephone No.: 562-397-1155 Date: 04/28/2014

Federal Use Only:	Authorized for Local Reproduction Standard Form - LLL (Rev. 7-97)
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PR/Award # U351D140076

NOTICE TO ALL APPLICANTS

The purpose of this enclosure is to inform you about a new provision in the Department of Education's General Education Provisions Act (GEPA) that applies to applicants for new grant awards under Department programs. This provision is Section 427 of GEPA, enacted as part of the Improving America's Schools Act of 1994 (Public Law (P.L.) 103-382).

To Whom Does This Provision Apply?

Section 427 of GEPA affects applicants for new grant awards under this program. **ALL APPLICANTS FOR NEW AWARDS MUST INCLUDE INFORMATION IN THEIR APPLICATIONS TO ADDRESS THIS NEW PROVISION IN ORDER TO RECEIVE FUNDING UNDER THIS PROGRAM.**

(If this program is a State-formula grant program, a State needs to provide this description only for projects or activities that it carries out with funds reserved for State-level uses. In addition, local school districts or other eligible applicants that apply to the State for funding need to provide this description in their applications to the State for funding. The State would be responsible for ensuring that the school district or other local entity has submitted a sufficient section 427 statement as described below.)

What Does This Provision Require?

Section 427 requires each applicant for funds (other than an individual person) to include in its application a description of the steps the applicant proposes to take to ensure equitable access to, and participation in, its Federally-assisted program for students, teachers, and other program beneficiaries with special needs. This provision allows applicants discretion in developing the required description. The statute highlights six types of barriers that can impede equitable access or participation: gender, race, national origin, color, disability, or age. Based on local circumstances, you should determine whether these or other barriers may prevent your students, teachers, etc. from such access or participation in, the Federally-funded project or activity. The description in your application of steps to be taken to overcome these barriers need not be lengthy; you may provide a clear and succinct

description of how you plan to address those barriers that are applicable to your circumstances. In addition, the information may be provided in a single narrative, or, if appropriate, may be discussed in connection with related topics in the application.

Section 427 is not intended to duplicate the requirements of civil rights statutes, but rather to ensure that, in designing their projects, applicants for Federal funds address equity concerns that may affect the ability of certain potential beneficiaries to fully participate in the project and to achieve to high standards. Consistent with program requirements and its approved application, an applicant may use the Federal funds awarded to it to eliminate barriers it identifies.

What are Examples of How an Applicant Might Satisfy the Requirement of This Provision?

The following examples may help illustrate how an applicant may comply with Section 427.

(1) An applicant that proposes to carry out an adult literacy project serving, among others, adults with limited English proficiency, might describe in its application how it intends to distribute a brochure about the proposed project to such potential participants in their native language.

(2) An applicant that proposes to develop instructional materials for classroom use might describe how it will make the materials available on audio tape or in braille for students who are blind.

(3) An applicant that proposes to carry out a model science program for secondary students and is concerned that girls may be less likely than boys to enroll in the course, might indicate how it intends to conduct "outreach" efforts to girls, to encourage their enrollment.

We recognize that many applicants may already be implementing effective steps to ensure equity of access and participation in their grant programs, and we appreciate your cooperation in responding to the requirements of this provision.

Estimated Burden Statement for GEPA Requirements

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless such collection displays a valid OMB control number. Public reporting burden for this collection of information is estimated to average 1.5 hours per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. The obligation to respond to this collection is required to obtain or retain benefit (Public Law 103-382). Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the U.S. Department of Education, 400 Maryland Ave., SW, Washington, DC 20210-4537 or email ICDocketMgr@ed.gov and reference the OMB Control Number 1894-0005.

Optional - You may attach 1 file to this page.

84.351D.2014 GEPA Statement.pdf

Add Attachment

Delete Attachment

View Attachment

Dramatic Results
84.351D 2014 Application

Description of how Make It REAL:Math meets the requirements of Section 427 GEPA:

The following is a description of the steps Dramatic Results proposes (or already takes) to ensure equitable access to, and participation in, our **Make It REAL: Math** program under the definition of Section 427 of GEPA:

According to the 2010 U.S. Census, Long Beach, CA, is the most ethnically diverse city in the nation. The student population within Long Beach Unified School District (LBUSD) reflects this diversity.

100% of the students served by this program are public school students. In response to the requirements of the *General Education Provisions Act (GEPA)*, Section 427, LBUSD adopted a Nondiscrimination and Employee Privacy in educational programs/activities and employment policy adopted by the Board of Education of Long Beach Unified School District on May 6, 1997. As a beneficiary of both federal and state funding, LBUSD already follows the requirements under Section 427 of GEPA. As an extension of their services to their most needy students on-site at public schools, Dramatic Results strives to reach under-represented students and their families and complies with all GEPA requirements under the supervision of LBUSD.

Of the specific student population Dramatic Results serves, 90% are considered high risk by school personnel because of their family situations, socio-economic status, poor academic performance and problematic classroom behavior. In the 2013/2014 academic year, Dramatic Results' students were 74% Hispanic, 24% African American, 1% Caucasian, and 1% other. 51% lived with single mothers; 5% stayed with other relatives or were in foster care. At least 8% of Dramatic Results students received special education services. More than 25% of the students are English Learners (EL). 86% to 99% are from low-income homes and meet the poverty

criteria in Title I, Section 1113(a)(5) of the Elementary and Secondary Education Act of 1965, as amended by the No Child Left Behind Act of 2001 (ESEA).

Dramatic Results' staff consists of two native Spanish speakers, one native Khmer speaker and one native Thai speaker – all of whom are both fluent and literate in their native languages. Each of these staff members are integrally involved in the delivery of the **Make It REAL: Math** program and interface easily and regularly in these multiple languages with parents and the general community.

Additionally, all written information to inform families, the community, and the general public of this program and its' products, performances and evaluation results will be printed (and translated in person as needed for those not literate) in English and Spanish.

CERTIFICATION REGARDING LOBBYING

Certification for Contracts, Grants, Loans, and Cooperative Agreements

The undersigned certifies, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

If any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure of Lobbying Activities," in accordance with its instructions. Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

* APPLICANT'S ORGANIZATION Dramatic Results	
* PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE	
Prefix: Ms.	* First Name: Christi Middle Name:
* Last Name: Wilkins	Suffix:
* Title: Executive Director	
* SIGNATURE: Christi Wilkins	* DATE: 04/28/2014

Abstract

The abstract narrative must not exceed one page and should use language that will be understood by a range of audiences. For all projects, include the project title (if applicable), goals, expected outcomes and contributions for research, policy, practice, etc. Include population to be served, as appropriate. For research applications, also include the following:

- Theoretical and conceptual background of the study (i.e., prior research that this investigation builds upon and that provides a compelling rationale for this study)
- Research issues, hypotheses and questions being addressed
- Study design including a brief description of the sample including sample size, methods, principals dependent, independent, and control variables, and the approach to data analysis.

[Note: For a non-electronic submission, include the name and address of your organization and the name, phone number and e-mail address of the contact person for this project.]

You may now Close the Form

You have attached 1 file to this page, no more files may be added. To add a different file, you must first delete the existing file.

* Attachment:

Grantee Name: Dramatic Results, 3310 Lime Avenue, Signal Hill, CA 90755

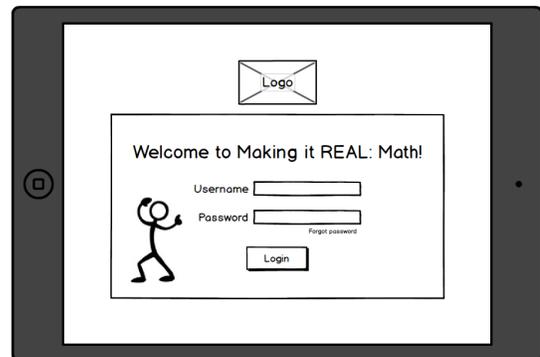
Contact: Christi Wilkins, Project Director, (562) 397-1155, Christi@dramaticresults.org

Grantee Project Name: *Making it REAL: Math* **Number of Students Served:** 1,680

Nonprofit organization, **Dramatic Results** (DR), in partnership with **Long Beach Unified School District**, will build on the success of three previous AEMDD projects (curricula from 2003 and 2006, professional development from 2010, dissemination to new districts and states and sustainability with private/public partnerships) by integrating iPad technology to allow students to research and design their art to enhance their learning of traditional hands-on “basket making” and math.

Goals for ***Making It REAL: Math***: (1) increase the integration of standards-based arts education with 4th grade core curricula, primarily math; (2) strengthen standards-based arts instruction; and (3) improve students’ achievement in math and language arts, and skills in creating and responding to the arts, by integrating the arts and a newly-developed digital tool. These goals meet the Absolute Priority and Competitive Priority 2: Technology of the Arts in Education Development and Demonstration program.

Expected Outcomes: (1) Students will demonstrate measurable improvements in their math and language arts proficiency, skills in creating and responding to the arts, and the use of iPad technology to research, explore and design to further enhance



their learning: (2) Classroom teachers will demonstrate efficacy in the integration of art, math and technology to engage students to meet Common Core Standards, develop 21st Century skills and close the achievement gap: and (3) ***Making It REAL: Math*** will be disseminated and sustained in at least one new school/district by Year Five.

Project Narrative File(s)

* **Mandatory Project Narrative File Filename:**

[Add Mandatory Project Narrative File](#)

[Delete Mandatory Project Narrative File](#)

[View Mandatory Project Narrative File](#)

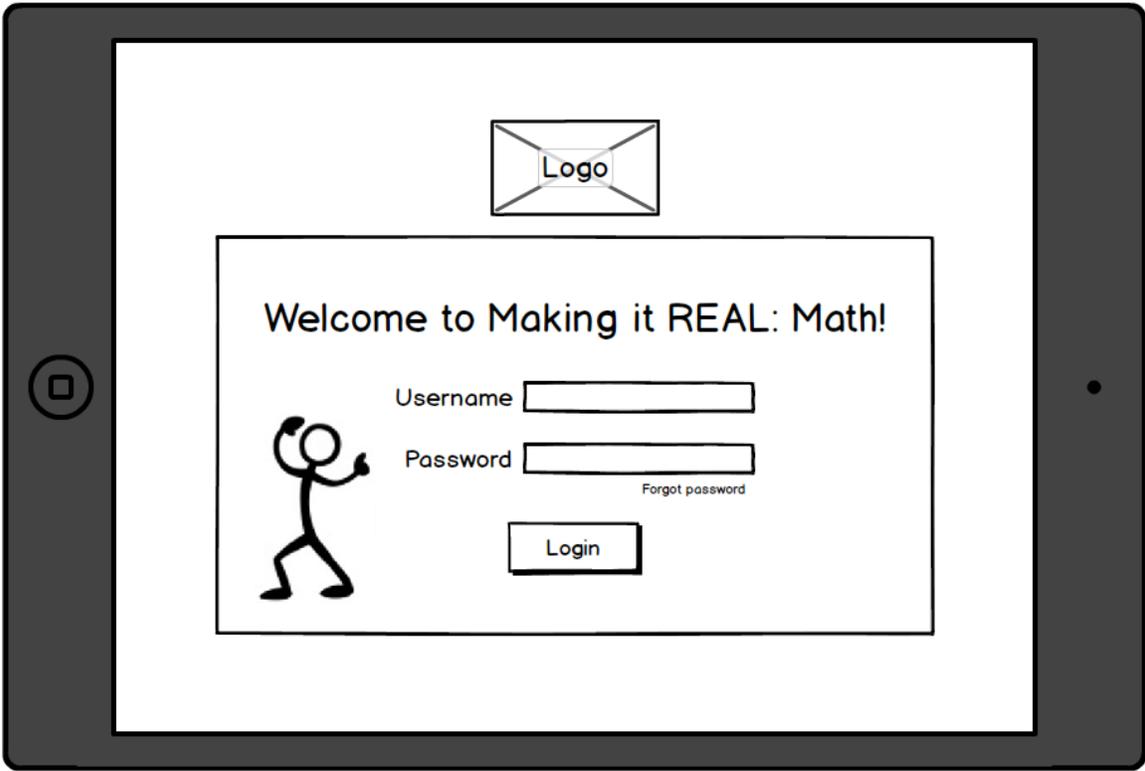
To add more Project Narrative File attachments, please use the attachment buttons below.

[Add Optional Project Narrative File](#)

[Delete Optional Project Narrative File](#)

[View Optional Project Narrative File](#)

Storyboard Sample #1
User-login



Title Page

DRAMATIC RESULTS
84.351D 2014 Application

Arts in Education Model Development and Dissemination Grant Program
84.351D - 2014 Application

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for Project Narrative

(Uploaded to *Mandatory Project Narrative Attachment* File)

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1. Need for Project: (a) *The extent to which the proposed project will provide services or otherwise address the needs of students at risk of educational failure.*

Making it REAL (Researching, Exploring, Analyzing, Learning): Math is based on evidence of promise from Dramatic Results' (DR) three successful AEMDD projects (2003, 2006 and 2010) that demonstrated statistically significant gains in Title I students' arts knowledge and math achievement¹ and statistically significant gains in teacher self-efficacy for and use of arts-integration in their classrooms.² In addition, Dramatic Results has been successful in sustaining and disseminating our AEMDD programs, including \$520,000 in non-federal and district funds raised (to date) for the ongoing (2011-2014) implementation of *Math in a Basket* (MIAB; AEMDD 2003, 2006) into a variety of settings and populations (e.g., Native American Youth in Alaska, mild/moderate special education elementary students in Long Beach, and professional development component for a museum exhibition on Basketry of Yosemite at the Autry National Center in Los Angeles and MIAB workshops for K-12 Alliance and Long Beach City College). All of these demonstrated pre-post gains in students' arts knowledge and math achievement.³

The need for ***Making it REAL: Math (REAL)*** is based on: (1) the need for evidence-based curricula integrating the arts and technology with scope and sequencing into core curricula to achieve Common Core Standards (CCSS); (2) the need for high-quality professional development integrating the arts and technology for in-service teachers to prepare their students to meet the demands of the 21st century workplace; and (3) requests from Long Beach Unified School District (LBUSD) to Dramatic Results to continue a 22-year partnership to help them achieve their educational goals for students in their lowest performing Title I elementary schools.

Making it REAL: Math (REAL) is multi-disciplinary program, blending elements of traditional art, math, language, social studies, and iPad technology to help students achieve grade-level, academic CCSS. This arts-integrated project is designed specifically to blend

traditional art forms (basketry, visual arts) with a digital tool (an iPad-based program) to connect the old with the new. Ultimately, students will use technology based-methods to research, explore, analyze and learn— **REAL** —from traditional ways and practices. The proposed project has three goals: (1) increase the integration of standards-based arts education with 4th grade core curricula, primarily math; (2) strengthen standards-based arts instruction; and (3) improve students’ achievement in math and language arts, and skills in creating and responding to the arts, by integrating the arts and newly-developed digital tools. These goals reflect both the Absolute Priority, and the Competitive Priority 2: Technology of the AEMDD program.

DR’s 2003 and 2006 AEMDD *MIAB* programs aligned with National and California (CA) Visual and Performing Arts (VAPA) Standards and met NEA best practice recommendations for responding to new standards and expectations. Across the past decade, *MIAB* has been implemented with more than 4,000 elementary/middle school students and 115 classroom teachers, in twelve Title I elementary schools in CA and Alaska, with promising results. While our 2003 and 2006 AEMDD projects integrated art with math, DR’s 2010 AEMDD *Write On Arts (WOA)* project integrated visual and performing arts curriculum with language arts while developing a structured professional development model that enabled all participating classroom teachers to increase their knowledge of, self-efficacy for, and enthusiasm to provide arts-integrated instruction.⁴ **REAL** will build on our greatest successes from these previous AEMDD projects (curricula from *MIAB* and PD model from *WOA*) and integrate iPad-based technology to ensure students at risk of educational failure demonstrate significant engagement, self-efficacy and success in both exploring and creating art via traditional hands-on “making” and technology-based research and design. **REAL** will also provide generalist classroom teachers with a proven effective professional development program that will enable them to implement **REAL**, including its requisite art and technology elements, with confidence and efficacy. Based on our

demonstrated track record over the past decade and continuing inquiries from interested schools across the nation, we are convinced that the integration of technology will provide the necessary “launching pad” to disseminate this traditional arts program nationally.

Specifically, **REAL** will address the needs of *students* at risk of educational failure due to three well-documented high-risk factors: (1) demographic, individual and family characteristics; (2) current lack of academic achievement; and (3) varied learning styles. **REAL** will also address the needs of *teachers* to improve their facility with arts-integration and technology.

Demographics. Research has shown that students from disadvantaged families enter school with fewer academic skills than their more advantaged peers, and that these substantial gaps in cognitive and academic competencies persist in later school years.⁵ The adverse effects of a well-documented set of socio-economic, physical, and relational risk factors related to poverty on young children’s lower school readiness skills is robust and have proven difficult to overcome.⁶ The developmental disadvantage of growing up in poverty has been confirmed using large, nationally representative databases (e.g., Early Childhood Longitudinal Study, Kindergarten Cohort; Early Childhood Longitudinal Study – Birth Cohort).⁷ Empirical research has found that early gaps in language, literacy, mathematics and learning skills are persistent. Studies focusing on early achievement have consistently found that if children enter kindergarten lacking requisite school readiness skills, they frequently develop limited academic skills by the end of first grade, and are likely to have lower achievement scores through the end of elementary school.⁸ Specific to the current project, researchers have found that 7th grade math performance is a predictor of math outcomes in high school, and that students who enter middle school on grade level in math tend to stay there.⁹ Preparing students for success in middle school is elemental in preventing four years of frustration and stagnation in high school.

The proposed project will be implemented in 4th grade classrooms in LBUSD. LBUSD is the

3rd largest urban school district in CA and is located in the nation's most ethnically diverse city.¹⁰ Forty-five percent of Long Beach (LB) residents speak a language other than English in the home. LB ranks 26th nationally not only in overall percentage of residents in poverty (25.5%), but 6th nationally on the concentration of the poor into neighborhoods of extreme poverty (8.1%). LB also ranks 3rd nationally in its percentage of children in poverty (33.0%).¹¹ Thirty-two of the 61 elementary schools in LBUSD are Title I sites with more than 35 percent of students from low-income families based on poverty criteria set out in AFDC/CalWorks, and are clustered in the densely populated, inner city area of LB.¹²

Based on 2013-14 LBUSD demographics for these 32 Title I elementary schools, we will randomly select 4 participating and 2 control elementary campuses for this *REAL* project. Beginning with the 2010-11 academic year, budget cuts led to an increase in average 4th grade class size from 30 to 35 students, per classroom. Using these averages and the data on 4th grade LBUSD populations from 2013-14 (140 students per 4th grade level), approximately 560 students will be served with this program each year (a total of 1,680 students over 3 years). Of these 1,680 students, it is anticipated that 64 percent will be from low SES backgrounds and 60 percent will be English Language Learners.

Lack of academic achievement. Research shows that without systematic intervention, children from financially, linguistically, and academically impoverished homes begin school behind their peers, seldom close the achievement gap, and are twice as likely to drop out of school.¹³ The impact of these risk factors is reflected in CA students' scores on the NAEP 4th grade assessment of mathematics. As a whole, CA's students have consistently scored below the national average, with only 25 to 33 percent achieving 'Proficient' or above for the past decade.¹⁴ For those who are 'economically disadvantaged', the percent decreases to 19% in 2013, and by English Language Learner, the percent decreases into single digits (8% in 2013).¹⁵

Looking specifically across LBUSD’s 61 elementary campuses, the annual STAR state achievement test results revealed that 73 percent of students were proficient in mathematics for both 2012 and 2013.¹⁶ However, mean scores among students eligible for free/reduced-price school lunch, a proxy for poverty (and the target population for **REAL**), were 45 points lower than that of students not eligible for free/reduced price lunch. In both 2012 and 2013, the achievement gap between students of high or low socio-economic status (SES) was dramatic—twenty percent fewer students from low SES backgrounds achieved math proficiency. This early achievement gap was not only persistent, it also increased, such that by the end of 8th grade, less than half of the students considered to be from low SES backgrounds were achieving math proficiency (44%) compared 70 percent of their non-low SES peers.

In 2008, LBUSD adopted the *Academic & Career Success Initiative* that aims to provide all students with as many postsecondary options as possible. Based on this initiative, LBUSD had set a goal of having 70 percent of 5th grade students proficient in Mathematics by 2012-13.¹⁷ In 2013, only 51 percent of 5th grade students in Title I schools met this goal.¹⁸ While an overall average of 70 percent is achievable, students in LBUSD’s Title I schools have far to go.

Varied learning styles. Empirical research has documented that children with lower language levels, like those to be served by this proposed **REAL** project, have greater difficulty staying on-task and controlling their behavior during teacher-directed activities than their language proficient peers.¹⁹ Students who learn better by doing rather than listening often have trouble concentrating in class, resulting in disruptive behavior and are quickly labeled “behavior problems”—a downward spiral of self-doubt and low expectations begins. A self-reinforcing negative feedback loop is set in motion with the frustrated child deciding school is a place of failure, reinforcing already powerful feelings of inadequacy.

Teacher training. Whether ‘the arts’ are conceptualized as languages, forms of intelligence,

or learning modalities, most educators agree that the arts engage diverse learners and provide them with opportunities to share what they know.²⁰ Gardner emphasized that art can attract students who have been pushed away from other opportunities for success in school.²¹ Irwin found that art offers students physical, emotional, intellectual and spiritual engagement. When learning through art, students had a greater likelihood of achieving understanding.²² To reach as many students as possible, teachers must incorporate varying teaching techniques and strategies into the classroom.²³ In *REAL*, teaching artists model the various learning modalities inherent in arts integration (see *Bibliographical, et al, p. 69, 7 Critical Elements*), so classroom teachers see that previously disengaged students can focus on a project attentively and appropriately, can learn, and can succeed when art with technology support is integrated into other academic areas.

(b) The extent to which specific gaps or weaknesses in services, infrastructure, or opportunities have been identified and will be addressed by the proposed project, including the nature and magnitude of those gaps or weaknesses.

Four identified weaknesses within LBUSD will be addressed by three goals of the *REAL* project: (1) academic achievement gap; (2) arts-poor environment; (3) limited access to technology at home and at school; and (4) lack of qualified art-specialists and arts-trained classroom teachers.

Academic achievement gap. While the existing effects of poverty on the achievement of LBUSD's students previously presented can seem overwhelming, research indicates these risk factors can be overcome: students who receive systematic instruction from a skilled teacher can increase their core academic skills by 1.5 grade levels in the course of just one academic year.²⁴ In fact, results from earlier *MIAB* projects have shown that treatment students more than doubled the math improvement of control students.²⁵ In art, gains for treatment students were more than 10-times those of control students. The proposed project has a high-probability for replicating—or surpassing—this success because it will be implemented using iPad-based technology to

enable students to research, explore, analyze and learn in new ways. LBUSD administrators have become increasingly more willing to include more innovative curricula and Dramatic Results' has established a trust and enthusiasm from site and district staff by delivering quality arts-integrated programming for more than two decades (*See Resumes and Letters of Support, pp. 2-6, LBUSD*).

Specially Designed Academic Instruction In English (SDAIE) techniques, such as integrating math concepts (measurement, perimeter, volume, surface area) while weaving their own traditional reed basket, helps students decode language as they learn content and demonstrate deeper comprehension. These SDAIE techniques will be enhanced in **REAL** by integrating iPad-based technology so that students can research, explore, analyze and share their learning with their peers with a variety of visual icons and animation to facilitate their imagination and language development. Fourth grade teachers know that the math concepts introduced in this grade (geometry and algebraic formulas) can be abstract and hard to learn. **REAL** permits students to move from the concrete to the abstract: from touching and doing to thinking and connecting. Students learn academic content in a new way. Students analyze visual arts and their baskets according to standards-based math content including geometry, measurement, fractions and decimals to find volume, perimeter and surface area of each project they design. Working collaboratively, students develop skills needed to make finished 2D and 3D products, the ability to appreciate baskets as an art form, knowledge to respond to 3D art and the capacity to discuss this art making—and thinking—with others.

Converting *MIAB* to a digital format will provide on-demand support and feedback, as well as expanded opportunities for exploration, **REAL** is expected to demonstrate even greater gains in students' achievement than documented with prior iterations. Although one overall goal is that **REAL** students will demonstrate a greater increase in the percentage achieving "Proficient" or

above on the CA STAR math tests compared to a control group, an auxiliary goal is that the students who are the most ‘at risk’—lower SES background and ELL—will also demonstrate a greater increase in proficiency. DR’s arts-integrated literacy curriculum *WOA* (AEMDD 2010) has had a statistically significant impact on the achievement of this high-risk group.²⁶

It is important to note here that a set of social emotional skills are common mediating factors in the academic achievement, or lack thereof, of children from poverty, including self-regulation, persistence, resilience, and self-efficacy.²⁷ These skills are currently receiving renewed investigation under the category of ‘grit’.²⁸ Research has consistently indicated that arts integration is valuable for all categories of students (special education, English Language Learners, gifted students, etc.) and can enhance academic performance, particularly among at-risk, inner-city students,²⁹ some propose that art impacts students' emotional and social lives leading to academic gains.³⁰ While seldom explicitly addressed in the school curriculum, researchers have connected art experiences with the key skill "learning to engage and persist"—when doing art, students are more apt to self-reflect and learn from their mistakes.³¹ Art engages students in a "constellation" of learning, from learning how to create and perform art to learning the elements of visual art and principles of design, that interacts in multiple ways with students overall development resulting in improved in attendance, behavior, motivation, and ability to focus that ultimately will increase student academic performance. Previous *MIAB* teachers have observed just this type of social-emotional development: *Students gained significant self-esteem through pushing past the tough parts of the lessons, learning patience when they make mistakes and how rewarding it is to slow down, do careful work, including re-doing some of their work to experience pride in their artwork.*

An arts-poor environment. LBUSD supports the integration of arts into the core curricula, has developed performance standards for the VAPA K-12 based on state and national

frameworks, invested more than \$2 million in arts education materials, and hired a half-time K-12 VAPA Curriculum Leader. LBUSD has partnerships with several community-based agencies who provide arts-based “enrichment” programs to their students, but most are after-school, not aligned to VAPA Standards, nor provide professional development support for classroom teachers. In spite of these efforts, art materials sit in elementary classrooms unopened and unused. Teachers do not integrate arts into curricula nor call the Curriculum Leader for help. The most promising practices effectively integrating art into core curricula are planned collaboratively by those participating in and facilitating that integration.³² DR has a 22-year history of modeling these “promising practices” with classroom teachers in LBUSD.

Whatever the merits of testing as a means of improving basic verbal, writing, reading, and math skills, there can be little doubt that this has led to school environments where "what gets tested gets taught." Arts are seen as "nice extras," but not essential to raising test scores.³³ In 2008, a survey of school superintendents found that 73 percent of the districts had no arts curriculum, 72 percent had no funding for art and fewer than 2 percent of the teachers were highly qualified in the arts.³⁴ The reality of these statistics is particularly visible in LBUSD’s inner-city schools where the economic recession has resulted in the elimination of arts support to elementary schools. While the [Local Control Funding Formula](#) approved by the CA state Legislature in 2013 provides greater flexibility as to how certain state funds are used by local schools—including for arts education—the economic crash of 2008 and its aftermath gutted LBUSD schools so they are putting their resources first to hiring back counselors, nurses, a librarian and technology, not arts education.³⁵ **REAL** enables Teaching Artists, Classroom Teachers, curriculum developers and a team of technology developers to collaboratively integrate art with the core curriculum, thereby bringing art education *back* into the classroom. **REAL** provides multiple years of hands-on training, emotional support and professional

coaching to enable non-art specialists to become comfortable and creative in integrating arts into their classrooms (*see pp. 24-33, Project Design*).

Limited exposure to technology at home and at school. Research has found that students from lower SES background also frequently have less experience with technology, both in their homes and at school.³⁶ **REAL** students will be provided the unique opportunity to utilize iPad-based technology that will allow them to explore academic concepts in math, art, social studies and language arts. Research has shown that when technology is integrated into the content with thoughtfulness,³⁷ students are more engaged and more likely to master the content.³⁸

The goals of **REAL** parallel those of LBUSD’s strategic plan for technology: to provide differentiated, technology-based learning options, supported with a teaching and learning goal to provide technology-enhanced curriculum.³⁹ LBUSD’s Technology Curriculum Leader strives to reduce the widespread use of technology as an expensive piece of paper—worksheets via iPad—and focus on building instructional integration that expands and enhances overall learning. This is exactly what **REAL** intends to do! Also, LBUSD has established a precedent for utilizing iPad-based apps to teach math (ST Math). LBUSD’s strategic plan envisions success as: “Engaging every student, every day, in a linked learning experience.” **REAL** integrates math and art through a digital medium and also requires hands-on art-making skills to create a basket. **REAL**’s *math concepts* translate directly and immediately into something that is tangible, personally meaningful and promotes divergent thinking.⁴⁰

In addition to mastering core academic and art concepts, students in **REAL** will develop proficiency in the technology-based standards commonly termed ‘21st-century skills’⁴¹ and included in the CCSS.⁴² The CCSS prescribe a substantial role for technology in classroom activities paralleling the way that 21st-century workers use technology. Workers routinely utilize technology as they research, collaborate, problem-solve and communicate in their jobs. Thus one

requirement of the CCSS is that all students across grade levels gradually improve their ability to use technology across disciplines. **REAL** intends to integrate and enable students to utilize technology as envisioned in the CCSS, in a format that bridges traditional with new methodology, thereby providing a foundation for technological proficiency to better meet future workplace demands.

Lack of arts-trained teachers. CA has not had art specialists in elementary schools since the passing of Proposition 13 in 1978. Los Angeles County, home of the proposed project district (LBUSD), represents 27 percent of all public school students in the state and presents a dim picture of arts instruction overall: (a) the current ratio of credentialed art teachers to students is 1:1,200; (b) nearly 80 percent of the schools report a lack of instructional time in students' schedules as a barrier to teaching art; and (c) 78 percent of the 82 school districts, including LBUSD, allocate less than 2 percent of their budget to arts education.⁴³ CCSS legislation requires that art be taught as a core curriculum, but the current cadre of teachers lack training in art techniques and the teaching of such. Pre-service teacher training has diminished art to a barely perfunctory position and most teachers are not equipped to develop an arts-rich classroom even *if* the materials were supplied to do so.⁴⁴ Even when administrators 'require' the arts be included in the classroom curricula, teachers resist and seldom do.⁴⁵ The advent and implementation of CCSS has made this situation even worse.

Adding teachers' general lack of arts education knowledge and background to the fact that underprepared teachers are five times more likely to teach in state's lowest achieving schools,⁴⁶ makes it clear that effective professional development will be integral to the success of this project. As one element in the change process, professional development is most effective when ongoing, integrated into the school operations, and built on a theoretical understanding of content and pedagogical knowledge.⁴⁷ **REAL** will replicate the gradual release of responsibility that was

successfully utilized in the *WOA* 2010 AEMDD project, whereby classroom teachers were provided with opportunities outside of the classroom to experience and experiment with the arts, combined with hands-on training in the arts and arts assessments, supervised classroom training, and instructional coaching to improve arts integration across multiple years so that non-art specialists can become comfortable with integrating arts into their classrooms (*see pp. 24-33, Project Design*). A previous *MIAB* participant said, "*I believe it is important to teach educators not to be afraid to weave art throughout the curriculum. I think that if teachers are given the opportunity and time to see how they can use art to teach and make lesson plans that are meaningful the students will be happier and more confident in their abilities. I also believe that this will decrease classroom management issues because students take ownership in their expression and most importantly, their learning.*"⁴⁸

An important tool for creating quality professional development is teacher networking and collaboration—*teachers teaching teachers*.⁴⁹ Utilizing a multi-year gradual release of responsibility, **REAL** will encourage and support on-going collaboration on arts integration among 4th grade teachers throughout their own and in different schools (in person and via online videos), resulting in sustained, intensive training and cross-training each year. This will build and expand upon *WOA*'s successful professional development model.

This type of on-demand collaboration will be even more vital given that teachers will need to master *two* new educational media—the arts and technology. A recent review of the research on technology implementation has suggested that it is an inherently complex, social, and developmental process, with K–12 teachers constructing new and unique perceptions about the role of technology in the classroom.⁵⁰ To align with the LBUSD professional development plan, **REAL** will produce mini-lesson videos for teachers to access as needed—*on demand*—that will present the art-making process, the technology process, and the integration of both into the core

math content that is integral to each lesson.⁵¹ Once developed and refined, these PD materials can also be utilized to support replication of *REAL* beyond southern California.

(2) Significance: *The likely utility of the products (such as information, materials, processes, or techniques) that will result from the proposed project, including the potential for their being used effectively in a variety of other settings.*

DR has a 22-year history of providing students with arts integration experiences that have resulted in statistically significant outcomes in both their academic achievement and self-efficacy, as well as performance in the arts. DR is the only in-class arts integrated program that is allowed to work with Title I elementary schools – a great testament to the value LBUUSD places in our programs and their impact on students. Three previous AEMDD projects have allowed us to build and refine the critical elements essential to each lesson, the lesson plan format, the curriculum materials presentation, and the teacher-training component. With each of these projects, the curriculum and resulting student and teacher outcomes have improved based on lessons learned. *REAL* will reflect the best of *MIAB* and *WOA* and will integrate technology in the form of iPad-based technology that will allow student-directed active inquiry in ways previously unimagined given the constraints of exploration within a typical elementary classroom (*see pp. 24-33, Project Design*).

REAL project will develop seven products with the potential of being used effectively in a variety of other settings: (1) 24 re-designed *REAL* lessons with measurable outcomes in student performance; (2) iPad-based programming to support 16 of the 24 re-designed lessons; (3) instructional strategies to effectively use integrated arts to increase student performance; (4) mini-lesson teacher professional development videos that parallel the 24 lessons; (5) data from a randomized control trial to contribute to future arts education research; (6) information on building and sustaining a successful school-community partnership to support arts integration to close the achievement gap; and (7) dissemination of lessons learned for replication of *REAL*.

REAL lessons. The quality of DR’s arts integration curricula (both *MIAB* and *WOA*) is already recognized via inclusion in Arts For All: Los Angeles County Arts Education PROGRAM DIRECTORY (lacounty.org, 2010). We will continue to update this directory annually with our latest lessons and assessments.

Throughout the past decade, education standards have transitioned and now mandate a greater degree of multi-disciplinary skill development. Our previous projects, *MIAB* and *WOA*, both aligned with the district’s priorities and integrated the subject matter scope and sequence structure into the curricula themselves. As a result, students experienced overlapping ‘waves’ of exposure to similar concepts and vocabulary, a strategy known to increase breadth and depth of student knowledge.⁵² Similarly, ***REAL*** is aligned with district and national math, social studies, and technology standards.⁵³ The resulting 24 ***REAL*** lessons will be applicable to 4th grade classrooms across the country. In addition, for the *WOA* project, DR’s curriculum developers have revised their lesson plan format to include text boxes that highlight the standards addressed and representative icons to reinforce the *7 Critical Elements of Arts Integration*. These techniques enabled classroom teachers to easily link the arts-integrated activities with core academic content and master effective instructional strategies as evidenced by independent evaluators’ documentation of statistically significant differences when comparing control and treatment teachers in each of DR’s previous projects.⁵⁴ This reinforcement technique will be replicated in the ***REAL*** lesson plans.

iPad-based technology. ***REAL*** is designed, and will be optimized, to convey the essence of DR’s existing paper-pencil *MIAB* curriculum (concepts, materials, processes, and techniques) without the heavy resource requirement of multiple specially trained teachers present in a classroom. By carefully distilling and converting the essence of the *MIAB* lessons into a form optimized for delivery on an iPad, the students will have access to the essential components of

the lessons, as well as to an array of differentiated resources for support or extension. In so doing, the students will determine the course of their inquiry, eventually enabling all students to increase their independence, and be successful (*see Bibliographical et al, pp. 82-83, Sample Story Board #2, Volume*).⁵⁵ This degree of differentiated instruction is the backbone of the LBUSD Technology Plan, which calls for providing differentiated, technology-based learning options, supported with a teaching and learning goal to “provide technology-enhanced curriculum”.⁵⁶

By converting some of the lessons into a digital format, when the ‘app’ is made available to math learners either via the iTunes App Store or a direct link, students everywhere will have access to the lessons. To ensure that **REAL** will continue in the district even after federal funding ends, the software program is purposefully being developed for the iPad to align with technology currently in place or in the pipeline for all elementary schools in LBUSD.

Instructional strategies. Working with more than 300 generalist elementary teachers in low performing Title I schools over the past decade, DR has developed and refined our instructional strategies, resulting in significant improvements in both the quality and quantity of instruction in art integration and student performance as measured by standardized test scores. Our seven core instructional strategies, *7 Critical Elements of Arts Integration* (*see Bibliographical, et al, p. 69, 7 Critical Elements*) will be made available via OER sources. Please note that DR’s outstanding teacher training in arts integration has garnered recognition across the country, including being featured in the 2008 national arts education professional development compendium, *Designing the Arts Learning Community: A Handbook for K-12 Professional Development Planners*, an **on-line publication** commissioned by L.A. County Arts Commission and Cultural Initiatives of Silicon Valley. DR is one of only 50 agencies selected from across the U.S. and 1 of 7 in CA for this publication, a testament to the value educators and the arts community place on the quality

of our instructional paradigm.

Teacher professional development videos. **REAL** will replicate the gradual transfer of responsibility training model utilized successfully in DR’s previous project, *WOA*. This model incorporates consecutive years of hands-on training and instructional coaching to enable non-art specialists to become comfortable and creative in integrating arts into their classrooms (*see Bibliographical, et al, p. 67, Professional Development Plan for Classroom Teachers for details*). The transfer happens slowly via the same process classroom teachers use with their students: classroom teachers *watch* as teaching artists *do*, then they both *do* together, then the teaching artists *watch* as the classroom teachers *do*, and ultimately the classrooms teachers *do* independently. During each project year, *WOA* includes more than 44 hours of explicit training and in-class coaching that focuses on the theory and practices integral to standards-based instruction, and is rich in active learning opportunities—essential elements of effective professional development.⁵⁷

As with the 24 **REAL** lessons, the components of the professional development program that must be experienced in-person and with hands-on will be preserved. Specifically, classroom teachers will experience “making” the arts the same way that their students will—they will weave a traditional reed basket (classroom teachers will make three baskets). In a professional development setting, this type of active learning challenges and engages teacher-participants in problem-solving and self-reflection that enables them to develop and apply new knowledge and instructional skills.⁵⁸

New to the overall model, **REAL** will produce mini-lesson videos for teachers to access as needed—*on demand*—that will present the art-making process, the technology process, and the integration of both into the core math content that is integral to each lesson. These videos will be produced in alongside the development and implementation of **REAL**. Critical components of

the lessons will be captured either during a professional development session or during one of the in-class delivery sessions. The mini-lesson videos are not intended to be movie theater quality, but rather real teachers with real students in real classrooms. This format has been found to be the most effective in activating and supporting change in teacher instructional practice.⁵⁹ The videos themselves will review instructional elements previously presented during the summer training sessions as well as when the Teaching Artists implement the lessons with the classroom teacher's help. LBUSD currently has an online teacher-resource of training videos to support their overall professional development plan; however, none of these videos is related to arts integration. The video segments produced through the proposed project will only be accessible by the implementation teacher groups until the project has ended to avoid contamination of control classrooms. Ultimately, these mini-lessons are intended to build local capacity and have a lasting impact on instructional practice, as they are integrated with school priorities, sufficient in duration and intensity, and subject-specific and practical—elements key to any professional development program.⁶⁰

Data on impact of arts education. Although most schools have talked about integrating arts into the curricula, few schools have done so successfully and consistently.⁶¹ An arts intervention that leads to positive outcomes may be exciting, but is only of limited value without knowing why it succeeded.⁶² The proposed project includes a randomized control trial comparing the impact of two forms of **REAL** with a control 'business as usual' group (*Bibliographical, et al., p. 72, Evaluation Timeline*). The results of this study will meet gaps identified in *Critical Links* for future arts education research.⁶³

The evaluation to be included in the proposed project will: (1) compare achievement from three participant groups: control, **REAL A** (8 iPad-based lessons), **REAL B** (16 iPad-based lessons), comparing 1,680 students and 24 teachers in 4th grade classrooms located in 6 Title I

schools to examine the effects of teaching and learning in the arts; (2) clarify the social emotional skills stimulated by learning in the arts; (3) pursue the indications that learning in the arts has significant benefits for special populations of students, including students in disadvantaged economic circumstances; and (4) determine the optimum contexts and conditions for learning in the arts and the enabling of school policies, practices and resources to support and sustain school-wide arts-integration practices.

Table 1. Making it REAL: Math Program Development and Delivery Plan

		Pilot	Treatment A	Treatment B
16 Classrooms/Teachers; 1,680 Students:		2 (70)	8 (280)	8 (280)
2014-15	Lessons integrating arts (out of 24 total)	24		
	Lessons integrating technology (out of 24 total)	4		
2015-16	Lessons integrating arts (out of 24 total)		24	24
	Lessons integrating technology (out of 24 total)		8	8
2016-17	Lessons integrating arts (out of 24 total)		24	24
	Lessons integrating technology (out of 24 total)		8	12
2017-18	Lessons integrating arts (out of 24 total)		24	24
	Lessons integrating technology (out of 24 total)		8	16

The independent evaluation team synthesizes all assessment data each year. The formative report delineating progress towards annual goals and objectives, including current successes and challenges, as well as samples of project-generated videos, teacher and student artwork, documentation forms and surveys will be posted online annually. This information will also be disseminated via DR’s website, a dedicated page to **REAL**, presentations at local community events, professional conferences at the regional and national level and through print and electronic media (e.g., Open Educational Resourced - OER) sources.

Building and sustaining a school-community partnership. Research proves that partnerships among schools, arts organizations and community members can help deepen teacher expertise, create focal points for community activities and enhance knowledge of cultures and heritages.⁶⁴ Good art instruction allows students to make something of value. Although the end product is not the goal (learning is the ultimate goal), the products are the tangible result of good art instruction⁶⁵ and annual exhibitions of these products permit schools, families and community to see student (and teacher) artwork (*see Bibliographical, et al, pp. 78-81, Photos*). This gives students a sense of accomplishment, and allows schools, community and parents the opportunity to talk about art and disseminate awareness of the value of art throughout the community.⁶⁶ Based on our success with *MIAB* and *WOA* over the past decade, we anticipate that ***REAL*** will be embraced by PTAs, and community volunteers trained in this program, resulting in family workshops led by teaching artists, trained volunteers and classroom teachers to introduce parents to this curriculum and how it enhances their children’s math and art skills (*see Bibliographical, et al, pp. 78-81, Photos*).



Proud family! Student’s basket on display in student and teacher basket exhibition at LB Art Museum

REAL provides one family workshop on-campus each year to foster and sustain parent interest and involvement in their student’s academic life and in arts education. These family workshops are key to sustaining ***REAL*** and vital to raising awareness of the benefits of the arts to children. Parents in our on-going *MIAB* and *WOA* AEMDD programs are volunteering in classes with prompting from their children. When asked how they like *MIAB*, parents say, “*I like it because I don’t have to know math. I just help my kid with art. It’s fun.*” During *Back to School* and *Open House* nights, student artwork decorates the classrooms—creating an arts-centered

environment and shifting the focus away from strictly grades and test scores to the overall achievement of each child during the year. DR has a core of 12 students who participated in the *MIAB* program (AEMDD, 2003), are now high school juniors and seniors, who volunteer weekly afterschool to help prepare *MIAB* program materials and participate in *MIAB* outreach activities with families (in English and Spanish), further building and sustaining a school-community partnership based on the arts. DR's Volunteer Coordinator will continue to recruit, train and support community volunteers to work alongside the TAs and CRTs to deliver **REAL**. In addition, DR's Executive Director will leverage the proposed federal support to garner additional private funding in Year Five (at no cost to this federal grant), so that volunteers will be organized and prepared to support the 16 *Intervention* teachers to continue using **REAL**.

Dissemination and replication of Making it REAL: Math model. Multiple means of public education/advocacy, including print and online publications and blogs, professional and community-based workshops, demonstrations, videos, and conferences are needed to effectively disseminate relevant information to educators and develop awareness and support in the community.⁶⁷ Electronic tools, rooted primarily in the Internet and social networking sites, will help the project communicate effectively and rapidly share lessons learned.⁶⁸ Table 2 (*above*) summarizes the sources for dissemination of **REAL**'s results. **REAL** will have a webpage set up exclusively for this project. **REAL** will also be advertised through DR's online social networking, where there will be detailed arts integration activities, lesson plans, case studies, lessons learned, and teacher collaboration. At the end of Year Four, this information will be compiled, complete with instructional materials, resources and samples and posted on-line (OER sites) to help others develop and implement similar projects. **REAL**'s evaluation team, program staff, curriculum leaders and classroom teachers will prepare and submit articles for publication and presentation to conferences. During Years 3 and 4, a Dissemination Specialist will pitch and

write stories to further disseminate program results via print and electronic media with the expressed goal of replicating *REAL* into at least one new district/state by 2018.

Table 2. Dissemination tools and venues

Dissemination Tools	Venues
Print /e-Print/ social media sources: Newsletters, online guide, articles in publications	DR’s semi-monthly e-newsletter; digital storytelling via Facebook and YouTube, media coverage via newspapers, a guide on <i>Making It REAL: Math</i> to be published on-line in Year Five, articles written for submission to professional publications (e.g., Harvard Education Review’s Voices Inside Schools, National Council of Teachers of Language Arts Journal, AERA, NEA and NAEA publications).
Electronic sources: DVD, websites, Facebook, e-mails	Produce videos on <i>Making It REAL: Math</i> & post on YouTube; DR’s website, social networking sites, electronic media coverage, L.A. County Art Commission’s ArtsEd.org website (the largest marketing website for arts education in L.A. Co.) and marketing e-mails of milestones & program events to educators, funders and elected officials, locally and nationally.
Presentations: Conferences, visits by community to program, community displays of artwork	Present at NAEA, AEP, AERA and other professional conferences; present <i>Making It REAL: Math</i> program and evaluation results to board of education members annually; engage community members to visit <i>Making It REAL: Math</i> in classrooms and mount displays of student and teacher work in schools and community settings, e.g., Long Beach Public Library.

As one of 82 school districts serving nearly 1.7 million students in Los Angeles County, LBUSD and DR’s arts-integration programs also have the advantage of being easily accessed and observed “in action” by tens of thousands of educators within a 100 mile radius. As one visiting administrator from Pasadena Unified recently stated, “*It’s unbelievable how engaged*

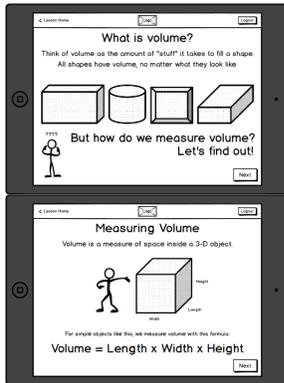
both students and teachers are in this process. I definitely had to see this [MIAB program] first-hand to fully appreciate its impact on kids – and teachers.”

(3) Quality of the project design: *(a) The extent to which the design of the proposed project reflects up-to-date knowledge from research and effective practice.*

When *creating* is an essential activity of the classroom, the activity of students is absolutely fundamental. When students *create* something, it is their choices at work, not someone else’s. Overstating the importance of these dimensions of a classroom is impossible—who is being active in the learning process (choosing, planning, and doing) and who is accountable (self-reflection and revision). A model that unleashes the true power of public school education needs to place the activity and the accountability in both the teacher and the student.⁶⁹ Stevenson and Deasy refer to the set of relationships and context for teaching and learning created with arts education as “Third Space” – that atmosphere in the classroom when the teacher and students create works of art, one in which students are deeply absorbed and able to take the risks demanded in a creative process.⁷⁰ Research by curriculum scholar Madeleine Grumet shows: *arts admits the child’s world into the curriculum, arts content engages children’s sensory and emotional experiences and understanding, and how the structural analogies between art and other subjects are exploited to activate transfer.*⁷¹

The central idea of **REAL** is based on research reviews showing that integrating the arts into the core academic curriculum is a powerful way to drive improvement in instructional practice and make academic learning opportunities accessible for all students.⁷² Second, integrating technology into the research, exploration, analysis and learning—**REAL**—that occurs when creating art is an example of technology enhancing instruction.⁷³ Technology expands the breadth and depth of what students can learn. Here are two examples of how this student-directed active inquiry happens in **REAL**. Please note that the images presented here are in gray scale and

are static for the purposes of this proposal. When presented on the iPad, they will be in color and animated. The LBusD technology plan allows students access their ‘locker’ of cloud-saved work via a user-id and login—and this will be the same system used in *REAL* (see Title Page of this Project Narrative and Sample Story Boards on pp. 82-84 of Bibliography, et al.).

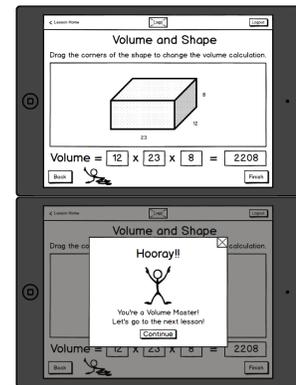


Once logged-in, students will access components of the lessons that are enhanced. *MIAB* lesson 20 includes a seven-minute exploration of volume (see *Bibliographical, et al, pp.82-83, Sample Lesson Plan #21*).

In this time, students use 1” cubes to discover the explore volume. In the classroom, this hands-on activity is invaluable but cumbersome. The limited number of cubes requires that 4-5 students work together (not

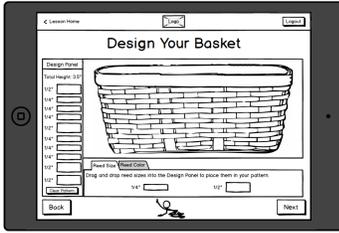
necessarily a negative), and the cubes do not always stack solidly. For *REAL*, this exploration

will be integrated with the iPad-based technology. Classroom teachers will activate students’ prior knowledge of perimeter and introduce ‘volume’, a new term. Then students will have time to actively explore this concept. Through the iPad-based technology, they will be presented with a brief introduction to volume. Then they will be able to generate their own shapes and corresponding volumes, enabling students to



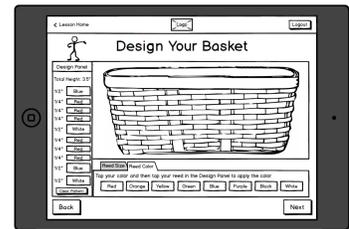
conceptualize even the most extreme forms—long, thin pipe-like shapes or tall vases! Self-directed and group discovery is woven throughout this component of the lesson with a sharing of students’ discoveries and an analysis of the volume of their own baskets. Using this technique, the technology is integrated as a tool for *interacting with* information rather than just for *presenting* information.⁷⁴

Another lesson includes the opportunity for students to research, explore, analyze and learn about colors and patterning as they design their baskets. In the current lesson, students use 3”



colored paper strips to design the pattern of the sides of their baskets – pictured on the next page (See *Bibliographical, et al, p. 84, Sample Lesson Plan #16, Basket Design*). Although students generally are successful using this two-dimensional system, integrating the iPad-

based technology into this activity allows for innumerable explorations of both width (practicing fractions) and patterning in real-time—and represented in 3-D! Once designed, students will then make these three-dimensional baskets through the traditional weaving of reeds, connecting the newest innovations of technology with one of the most traditional art forms.



Research across the country shows an upturn in standardized test scores in high poverty schools when well-designed arts integration programs are implemented, such as those in the Chicago Arts Partnerships in Education network.⁷⁵ Research also shows arts integration serves all categories of students (i.e., special needs, English Language Learners, low-, average-, and high-achievers, including gifted students) with equal success.⁷⁶ Recent increased equity in access to learning may begin to document how effective arts integrated teaching and learning can provide an important strategy in the struggle to achieve *No Child Left Behind*. As described in Significance, *MIAB*, laid the groundwork for the **REAL** program, was highly successful, and continues to be implemented in LBUSD even though AEMDD funding has expired.

(b) The extent to which the proposed project is supported by strong theory.

REAL is supported by strong theory about how to develop lifelong learners and stimulate an enduring change in teachers’ instructional practice.

Lifelong learners. **REAL** allows students to create original works of 2D and 3D art in order to explore Deasy’s “third space”. Facilitating students’ use of sensory and emotional experiences and understanding within the classroom setting allows new and deeper avenues for engaging

with other core curricula, especially in language arts. The arts integrated in to **REAL** promote understanding of other cultures, including changed awareness, acceptance and interest.⁷⁷ As one of the oldest known art forms, basket weaving allows students to explore many cultural perspectives while experiencing the knowledge needed to master the process of creating art—all while linking language arts and history with individual creative expression. Creating and performing art allows students to experience the pride that comes with persisting through obstacles to achieve their goal and the resulting “art” that is so admired by their peers, family and the community (*See Bibliographical, et al, pp. 78-79, Photos of students in classrooms*).

Students from our 2003, 2006, and 2010 AEMDD grants have demonstrated increased intrinsic academic motivation and self-efficacy after working through the tough parts of each art project, reinforcing Gardner’s theory linking heightened self-concept to increased academic achievement across core subjects. **REAL** has greater flexibility for student outcomes as a result of the integration of iPad-based technology. The technology will allow students to work at different levels of investigation, thereby differentiating instruction, and allowing all students to be engaged and successful.⁷⁸



Student in our Special Ed classroom carefully weaving and looking for over-under-pattern

The next step is to investigate whether increased intrinsic motivation and self-efficacy translates to increases in persistence and resilience, and ultimately academic achievement—and whether these skills persist over time. Empirical studies have documented this potential link, but have involved intervention programs specifically aimed at increasing these social emotional skills.⁷⁹ The proposed evaluation will investigate the immediate impact of the **REAL** program by

comparing the growth in mathematics, art, and social-emotional skills at the beginning and end of 4th grade. It will also investigate whether these skills persist through the end of 5th grade, since the goal is that students leave elementary school and enter middle school with the skills to become independent lifelong learners.⁸⁰

Changing classroom instructional practice. Regardless of the current staff's level of expertise, successful implementation of any new curriculum requires professional development. Such training is most effective when ongoing, integrated into the school operations, and built on a theoretical understanding of content and pedagogical knowledge.⁸¹ The ***REAL*** curriculum will involve new methods and perhaps even a paradigm shift for some staff.

To support a parallel change in classroom instructional practice, the ***REAL*** professional development model includes 360 degrees of support (*see Bibliographical, et al, p. 66, Logic Model*), including: a project-specific strategic plan to foster and monitor implementation; face-to-face summer workshops to ongoing afterschool support; classroom-based Teaching Artists implement and mentor each lesson; and the use of videotaping mini-lessons for teachers' independent review of elements of instruction.

Filling a unique role, the Teaching Artists deliver instruction directly to students and act as teacher-trainers. After years of experience with this professional development model, the DR's Teaching Artists have learned to balance the structural elements of the curriculum and its supporting theory to enable the classroom staff to implement the curriculum with fidelity because they understand the purpose for the activities. The multi-year, gradual release of responsibility model utilized in ***REAL*** will demonstrate how effective integration of arts in the classroom environment can be in creating measurable changes in students' academic achievement and in teachers' quality of instruction (*see Bibliographical, et al, p. 67, Program Delivery Plan for Classroom Teachers*).

(c) The extent to which the proposed project is part of a comprehensive effort to improve teaching and learning and support rigorous academic standards for students.

Results from our previous AEMDD projects has informed and led the revisions of our professional development model to maximize results. Our Teaching Artists teach, model, and then coach classroom teachers in the *7 Critical Elements of Instruction* as well as the implementation of the **REAL** lessons over multiple years (See Table 3 above). Within this three-year gradual release of responsibility, classroom teachers are introduced to and experience the **REAL** lessons prior to Year One of implementation (project Year Two). Throughout Year One of implementation, teachers experience **REAL** modeled in their classrooms with the support of a three-person team of teaching artists and the in-class coaching support of our Director of Arts Education (a total of 24-hours of in-class coaching). At the end of each unit, the teacher and his/her team of teaching artists will meet to assess students' art products using art rubrics. As teachers learn the **REAL** curriculum and gain confidence in implementing and assessing the eight *WOA* lessons, their learning is shared with other teachers at their site and via on-line sources, e.g., Facebook, to promote an arts learning community among these teachers.

Prior to Year Two, classroom teachers attend another summer workshop that focuses on the implementation strategies of the lessons, including practicing the art-making techniques and use of the iPad technology. Throughout Year Two, classroom teachers and two Teaching Artists work together to present the 24 lessons, with the classroom teachers taking the lead role for eight lessons. The Teaching Artists and Director of Arts Education continue to supply in-class and monthly after school coaching and support, and volunteers are integrated into the program (*see Bibliographical, et al, p. 67, Program Delivery Plan*). Implementation Year Three (the final Project Year) is similar to Years One and Two with a summer workshop focused on teaching the lessons—art making and technology—as well as sharing other ideas of how arts could be

integrated with the existing curriculum. During Year Three, however, classroom teachers are now the primary instructor for 16 of the 24 lessons, with either 8 or 16 lessons integrating technology (depending on Intervention Group), with the support of one Teaching Artist and 2 volunteers. After school coaching and support continues monthly through this final year as well.

Before receiving DR's professional development in 2004, 35 percent of teachers in *MIAB* described themselves as "extremely comfortable teaching math". By spring, this increased to 55 percent. The percentage of teachers comfortable teaching art almost doubled (12% in fall to 23% in spring). Based on this and anecdotal data from our current and past *WOA* teachers, we are confident we will see even greater improvements in the quality of instruction demonstrated by the 2014 AEMDD ***REAL*** teachers.

Research has shown that even with adequate materials, classroom teachers' instructional practice lacks the depth and breadth needed to enable at-risk children, especially ELLs, to overcome the achievement gap that stands before them.⁸² In many classrooms, the length and number of instructional interactions is minimal because classroom staff feel overwhelmed by class size and/or behavior management. However, embedding explicit activities within an implicit approach to cognitive development has shown to be an effective model, especially with children with lower language skills.⁸³ For this reason, ***REAL*** integrates high-quality art making and mathematics activities within an instructional paradigm that supports the development of students' social emotional skills that are common outcomes of students' involved in the arts.⁸⁴ As such, DR's Teaching Artists will use the arts to help classroom teachers create a classroom structure that promotes students' effortful control (e.g., *self-regulation, persistence, resilience*). The integration of technology in ***REAL*** will further support students' engagement and self-efficacy as independent learners—teachers may be surprised at how much their students can accomplish when provided the appropriate tools and requisite support to do so!

There is scientific evidence that student learning and achievement in non-arts domains is heightened in environments featuring high-quality arts education programs and a school climate supportive of active and participatory learning.⁸⁵ In fact, **REAL** is built on the solid academic and arts achievement that resulted from DR's previous AEMDD programs (see Significance).⁸⁶ **REAL**, while providing art as a core component of the curriculum across the year, will simultaneously be developing an arts-rich school environment through teacher professional development, shared learning, displays of student work, community outreach, and involvement and collaboration among artists and teachers.

REAL directly teaches standards-based visual arts content and connects with mathematics, while giving teachers and students a comprehensive sensory and emotional art-making experience (*See Bibliographical, et al, pp. 76-77, National/CA Standards*). **REAL** students and teachers analyze their artwork according to CA and national VAPA standards. Students record their responses in an "all year perspective" journal on their iPad, providing them a longitudinal perspective of their own growth and learning. Arts permit students to move from the concrete to the abstract: from touching and doing to thinking and connecting. Art enables students to learn academic content in a new way, resulting in "very significant overall gains".⁸⁷

(d) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the applicant beyond the end of the grant.

As mentioned in *Need*, LBUSD's demonstrated academic improvements across most grades and subjects over the past several years has resulted in significant national recognition (including being awarded the Broad Prize in Education twice) and a growing willingness to include more innovative curricula to serve persistently low performing schools. Our three AEMDD models expanded DR's emphasis beyond just program delivery for students to include focused professional development for teachers. The resulting "buy-in" from teachers, principals, content

specialists and district administrators to arts integration and a multi-year comprehensive design, particularly demonstrates how **REAL** supports LBUSD's comprehensive effort to have 70% of their 5th grade students proficient in math by 2015. (see *Letters of Support and Resumes*, pp. 2-6, *Letter from LBUSD*). In addition to increases in teacher knowledge and improved instructional practice that will remain with the teachers and LBUSD, the instructional mini-lessons and iPad-based technology will remain in the district as part of LBUSD's overall plan to improve the quality of classroom instruction and utilize technology to enhance this instruction.⁸⁸

A Rand study shows that giving individuals repeated rewarding experiences in the arts over time is a necessary first step before other, more public benefits of the arts, can be realized.⁸⁹ These other benefits include exposure to new perspectives, sharpened learning skills among young people, expanded capacity for empathy, and stronger social bonds in communities. **REAL** builds teacher and student capacity to benefit from and participate in the arts by providing them with exactly the process of sustained involvement advocated by Rand's study. Further supporting sustainability, our 'teachers-training-teachers' model allows teachers to become engaged in the revision and implementation of the lessons, developing a cadre of experts and collective self-efficacy. In addition, **REAL** builds the arts capacity of the whole community (children, parents, educators, artists), a model that will yield measurable and observable longitudinal results extending beyond the period of this Federal grant.

The ultimate goal of this proposed AEMDD project is the long-term impact of implementing the **REAL** lessons and experiencing the professional development model on the transfer to curriculum-wide instructional improvement resulting in overall increases in student academic achievement. The three goals of this **REAL** project highlight just that; specifically, goal one is to increase the integration of standards-based arts education with 4th grade core curricula, primarily math and goal two is to strengthen standards-based arts instruction. In previous AEMDD

projects, we have found that our gradual release of responsibility and experiential learning model allows teachers to develop confidence and self-efficacy for their art ability and arts instruction ability, and to understand how the arts can be integrated with other core curricula, above and beyond simply continuing to implement the arts-integrated lessons they have mastered. **REAL** intends to achieve this degree of transfer as well.

Lastly, research has found that teachers in arts-rich schools become re-energized.⁹⁰ Based on the success of both *MIAB* and *WOA* in Long Beach, we hypothesize that when non-participating teachers see their peers become re-energized and excited about integrating arts into the classroom, receive administrative accolades and public recognition for their work, as well as increased academic achievement of their students sustained over multiple years, non-participating teachers will clamor to integrate arts into their classroom curricula.

(4) Quality of project personnel: (a) *The extent to which the applicant encourages applications for employment from persons who are members of groups that have traditionally been underrepresented based on race, color, national origin, gender, age, or disability.*

DR is an Equal Opportunity Employer. The majority of students we serve are ethnic minorities, so DR strongly encourages applications from prospects whom match the demographics of our student and teacher population. We actively solicit interns and Teaching Artists from local public universities and many are hired via recommendations by current staff. Our 2013/14 staff represents four languages (English, Spanish, Khmer and Thai), seven different cultures (American, Moroccan, East Indian, Mexican, Chilean, Cambodian and Thai), and includes gays and straights. Our staff is 10 percent male and 90 percent female, ranging from 21–58 years old. Thirty percent are the first in their families to graduate college. To date, we have not had any staff with significant disabilities (e.g., blind, deaf, wheelchair bound). The four Teaching Artists selected for this **REAL** program include two native-Spanish speakers, both female, one Khmer-speaking female and one Caucasian male.

(b) The qualifications, including relevant training and experience, of key project personnel.

REAL unites the expertise of the DR team with an experienced external technology and evaluation team to develop, implement, and evaluate a superb AEMDD program.

Project Director, Christi Wilkins: Ms. Wilkins has led DR since its inception in 1992. She has successfully written and administered three successful AEMDD grants resulting in national recognition by the AEMDD program officer as a “model among models” both for the rigor of our evaluation design and the strength of the dissemination of our model to other districts. The excellence of her management skills has been featured with a full chapter in *Vital Factors*, a management book (Josey & Sons, 2007). She has received numerous awards for her vision and dedication to arts and education for high need students. Ms. Wilkins has presented at numerous regional and national conferences (*see Letters of Support and Resumes, p. 7*).

Director of Arts Education, Lucinda Rudolph: Ms. Rudolph has worked with DR as Director of Arts Education since 2009. She has her Single Subject Teaching Credential in Art, with an emphasis of study on multicultural classrooms, CLAD, exceptional learners and intercommunity education and awareness. She has an MBA from USC with an emphasis on marketing management (*see Letters of Support and Resumes, pp. 8-9*).

Volunteer Coordinator: Samai Khom, a native Khmer speaker, has been working with DR, both teaching in classrooms and as volunteer coordinator, for more than a decade. Known as our “Math in a Basket” lady as well as a hub for community building, Ms. Khom will be actively involved in training one of our current basket making volunteers to take on the role of Volunteer Coordinator in Year Two of this project so that she can devote her time to teaching and dissemination efforts. She will continue to be very involved in training new volunteers in the *REAL* program (*see Letters of Support and Resumes, pp. 10-11*).

Evaluation Liaison/Dissemination Coordinator, Nuttiporn Masuk: Ms. Masuk has an MBA,

specializing in International Business and her B.A. in Marketing. She has been a core part of DR's management and evaluation team since 2010 and integrally involved in the coordination of evaluation for our 2010 AEMDD grant (*see Letters of Support and Resumes, pp. 12-13*).

Teaching Artists: Samai Khom, Raquel Lira, Laura Duphily and Steven Urubek are the heart of DR's program delivery with both students and classroom teachers. Combined, they have 23 years experience teaching inner-city students with DR. Three of these four Teaching Artists have degrees in art. All have been extensively trained by DR in our methods and have taught in our 2003, 2006 and 2010 AEMDD projects. These Teaching Artists are also bilingual; each being either native speakers in Spanish or Khmer (*see Letters of Support and Resumes, pp. 14-18*).

Evaluation Team, Griffin Center for Inspired Instruction: Principal Investigator, Lynn Waldorf, Ph.D., is a nationally recognized expert in research methodology applied in arts education. Dr. Waldorf has been responsible for the design and implementation of numerous efficacy studies, each of which involved the identification of criteria for measuring progress and/or outcomes of education interventions in Pre-K through Grade 8 schools. One-third of these evaluative studies focused on the academic achievement through arts-integrated instruction. Dr. Waldorf has received awards for evaluation work including UCLA's Leigh Burstein Research Methodology Award. Her research has been published in books and seminal research volumes, including *Champions for Change* and *Critical Links*, and in refereed academic journals and regional newspapers (*see Letters of Support and Resumes, pp. 26-27*).

Evaluation Liaison, Kim Atwill, holds a Ph.D. in Educational Psychology with an emphasis on Learning and Early Childhood Cognitive Development. She has an M.S. degree in the Education of Deaf and Hard-of-Hearing Children with an emphasis on cognitive development among at-risk populations. Dr. Atwill's B.A. is in Psychology with an emphasis in developmental psychology and research methods. Dr. Atwill has 22 years of experience in education (preK-16),

with expertise in classroom-based instructional intervention programs for at-risk students and program evaluation, including quasi-experimental and randomized control designs (*see Letters of Support and Resumes, pp. 28-29*).

Technology Development: Stephen Yeoh, project Technology Supervisor. Mr. Yeoh has a degree in Computer Science, an MBA from Pepperdine University and is a Goldman Sachs 10,000 Small Businesses alumnus. He has spent a significant portion of his career helping firms strategize how to convert their analog world in to a digital one through the use of software (*see Letters of Support and Resumes, pp. 19-20*). He will liaison with DR, LBUSD and the Software Development Team at Goldfishbrain to ensure successful delivery of all aspects of integrating technology into **REAL**. Goldfishbrain is a software development company that is comprised 100 percent of in-house employees under contract (*see Letters of Support and Resumes, pp. 21-25*). No design or development efforts are outsourced. Staff believe that good design is the cornerstone of every good product. Period. No matter how smart the idea behind the product is, if users struggle to figure out how it works, then it is not working. Goldfishbrain staff will research the intended audience for **REAL**, construct a solid strategy to connect with identified user types, and then translate this strategy into a comprehensive design that will provide a positive and effective experience for the student and teacher users.

(5) Quality of the Management Plan: (a) *The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines and milestones for accomplishing project tasks.*

DR's success as a three-time grantee of the AEMDD program affirms our ability to effectively manage this 2014 **REAL** program on time and within budget, with demonstrated replication and sustainability beyond federal funds.

On time. Each of the partners in **REAL** has a long history of providing effective services to students, teachers and families in Long Beach. Each partner's credibility is built on the ability to

develop a project, implement it on time, within budget and provide measurable results of effectiveness. This management pattern will continue with **REAL** to ensure time to establish relationships, support cross-training of partners, provide direct services to both students and teachers, conduct evaluation and research, prepare exhibits of teacher and student art in school and the community (place-based and on-line) and publicize and disseminate project design and findings into new school districts and educational settings.

Within budget. The total budget for this proposed project is \$2,325,323: 4 years with federal support and Year Five as a no-cost extension. We are seeking \$1,999,598 (86%) of this budget from the U.S. Department of Education. A total of \$325,725 (14%) is being provided by our partners, including: \$168,000 (7%) from LBUSD in computer equipment (iPads, rolling carts, support), maintenance, training and program space; and \$157,725 (7%) from DR as contributions of personnel, administrative space and equipment/materials. Twenty-two percent of the budget is for evaluation and dissemination. No indirect costs are charged to this project.

Clearly defined responsibilities, timelines and milestones. DR will be the fiscal agent for this program. DR's Executive Director Wilkins will manage and coordinate all components of the proposed Project. The following schedules are based on award receipt prior to the beginning of the 2014 school year. (*See Bibliographical, et al, pp. 74-75, Roles and Responsibilities*) explicates the monthly activities for this first year (plans for Years 2-4 follow), our development year, that critical to the success of our achieving the three goals of the proposed project:

Goal 1: Increase integration of standards-based arts education with 4th grade math curriculum

Goal 2: Strengthen standards-based arts instruction

Goal 3: Improve students' achievement in math and language arts, and skills in creating and responding to the arts, by integrating the arts with a newly-developed digital tool.

The proposed project brings together experts in multiple fields—art, arts education, evaluation, technology, and marketing—to develop the best possible product to support student

achievement. Table 3 also reflects the complexity of this wide-ranging collaboration, yet appropriately designates the personnel responsible for the activity.

Table 3. *Making it REAL: Math* monthly project timeline for Year 1: Development & Pilot

Activity	A	S	O	N	D	J	F	M	A	M	J	J
Reflect and revise goals	ALL											
Collect MOUs from pilot school	DR											
Present/attend <i>Make it REAL</i> trng. (all lessons)	ALL											
Schedule in-class <i>Making it REAL</i>	DR & TA											
Convert <i>Make it REAL</i> for digital (iPad) use			TT									
Clarify iPad user-data collection system		E & TT										
Develop classroom observation of iPad tool			E									
Revise standards-based art rubrics			E									
Deliver <i>Making it REAL</i> in classes (+/- tech)			TA & CRT									
Present/attend after-school PD meetings			TA, CRT, & DR									
Complete standards-based art rubrics						TA		TA		TA		
Complete IRB request w/CSULB & LBUSD			E									
Pilot <i>Making it REAL</i> iPad enhanced lessons					TA & CRT							
Observe <i>Making it REAL</i> iPad enhanced lesson					TT & E							
Download & analyze iPad user-interface data						E						
Present iPad enhanced lesson pilot results						E						
Revise & finalize <i>Make it REAL</i> for digital use								TT				
Submit <i>Make it REAL</i> for LBUSD tech review											TT & DR	
Submit Annual Performance Report								DR & E				

With the four iPad-enhanced lessons piloted and revised, the project is prepared to begin our randomized control trial. The technology team will continue to convert additional lessons for iPad use, 4 of which will be added each year (Years 2, 3 and 4; *(see Bibliographical, et al, p. 68, Technology Implementation)*). The Overall Project Timeline enumerates the intermediate milestones and the seven proposed deliverables delineated in the Significance section (*pp. 13-22*) by quarter across the three-years of implementation (*see Bibliographical, et al, p. 72, for detailed Evaluation Timeline*).

(b) The extent to which the time commitments of the project director and principal investigator and other key project personnel are appropriate and adequate to meet the objectives of the proposed project.

Personnel with relevant expertise and experience bring leadership and dependability to this project. Relevant contributions include the expertise of the partners reflecting decades of practitioner-based research and interventions serving at-risk populations, especially in the area of arts-integrated education, as well as 14 percent of the total budget provided by partners with cash and in-kind services, personnel time, space and equipment (*see Bibliographical, et al, pp. 74-75, Roles and Responsibilities*).

Project Director. DR's Executive Director Wilkins is committing **.75 FTE** as Project Director to administer the grant, supervise program operations, raise private and school funding and support for **REAL**, prepare all financial and reporting requirements, and ensure effective dissemination of **REAL** project results locally and nationally. She will supervise staff and program meetings, oversee the development and revision of the **REAL** curriculum with Technology Team and DR's staff, coordinate collection of evaluation data, community/partner involvement (e.g., cultural presenters and consultants), and participate in evaluation activities. One **.50 FTE** Evaluation Liaison/Dissemination Coordinator will support the Project Director by monitoring the accurate and timely administration of assessment tools for the evaluation team,

updating web pages for **REAL**, creating electronic links (OER), producing e-newsletters and materials, and assisting in dissemination and replication efforts.

Curriculum Developer and implementation staff. DR's Director of Arts Education will spend **.75 FTE** to train and supervise art teams, develop and revise the **REAL** integrated arts curriculum with the Technology Development Team and Teaching Artists, oversee training and delivery of services with partners, supervise teaching staff, coordinate campus protocols and scheduling, liaison with PTA groups, parents and volunteers, curate artwork in schools and the community (place-based and on-line), and participate in evaluation and dissemination (e.g., conferences and articles). The Volunteer Coordinator will spend .50 FTE to recruit, ensure compliance with LBUSD's Volunteers in Schools (VIPS) program, support training in **REAL** and support community volunteers to work alongside TA and CRTS to deliver in-class programs and community outreach in Years 2-5. Four Teaching Artists in **REAL** will commit up to **.88 FTE** each week over 32 weeks/year to prepare and provide direct in-class services to teachers and students, participate in all professional development, technology training, assist with classroom teacher PD videos, attend program meetings, participate in evaluation and dissemination efforts, and provide weekly one-on-one coaching support to teachers.

LBUSD is committing its K-5 Visual and Performing Arts (VAPA), Math and Technology Curriculum Coaches to each work up to **50 hours** in Years 1-4 to review and advise on the development and implementation of **REAL**, and support participating teachers, including tech hosting support for videos produced by project. Classroom Teachers in both Intervention A and Intervention B groups will participate in all professional development activities, including producing PD videos, meet with project staff, and integrate **REAL** lessons into their classrooms. Classroom Teachers in the Control group will complete all assessments for evaluation. Principals from all Intervention schools will convene quarterly and informally with project administration

to provide support and ensure optimum reception to **REAL**. LBUSD will translate all written materials into Spanish and Khmer. The LBUSD Director of Research, Planning and Evaluation will ensure strict adherence to the experimental model, help secure the IRB for **REAL**, provide the necessary data to our evaluation team for the random selection of schools, and provide the evaluation team with the requisite district and state assessment data.

Technology Development. The Technology Supervisor (TS) has committed **.30 FTE** to guide the conversion of the **REAL** curriculum to the digital medium by charting the strategic direction for the software application development and directing the Technology Development Team (TT). The TT will design, develop, and digitize curriculum elements. The TS will visit the intervention classrooms to observe and evaluate the user interface with iPad-based **REAL** activities up to 12 times during the course of each school year. To support on-going revision and improvement of the program, the TS will convene with the TT to report his observations regarding engagement with and flow of the iPad-based activities when used by students, including elements of confusion. The TT will incorporate this feedback into their revisions in order to further refine the user interface of the **REAL** program. The TT also will manage the infrastructure to support iPads used in school and coordinate with LBUSD Technology Coaches.

Dissemination Specialist (consultant) will work alongside all partners to develop and pitch stories, get **REAL** program accepted as conference presenters and at community events, coordinate/write articles in peer reviewed and/or other professional and commercial publications and support dissemination of program into new districts/states by Year Five.

Principal Investigator. Drs. Waldorf and Atwill are each committing **.35 FTE** to oversee the evaluation of the proposed project. Dr. Atwill will take the role of communication liaison to coordinate the efforts of the Curriculum Developer and the TT. During the first year of the project, 2014-15, Dr. Atwill, the Project Director, and the TS will form a management team that

will communicate regularly about the development of **REAL** and coordinate the day-to-day and long-term conduct of the development project. Dr. Waldorf will work with Dr. Atwill to ensure that the design and conduct of the development and accompanying evaluation adheres to the highest possible standards. From the onset of the project, the Principal Investigators, Project Director, Curriculum Developer and TT will work together to develop **REAL** and to collect the requisite data to ensure the end product is of high-quality and utility.

(c) The adequacy of procedures for ensuring feedback and continuous improvement in the operation of the proposed project.

The rigor of our iterative feedback loop covers all areas of the **REAL** model to ensure feedback and continuous improvement, including the administration of **REAL**, revisions to the program, development of the iPad-based Program, implementation of professional development for classroom teachers, program delivery to students, independent evaluation of the project, buy-in from site/district administration for arts integration, and support from community partners to sustain the program beyond federal support. The Project Director will monitor the milestones in the feedback process to ensure all objectives are met.

Our iterative feedback loop is conducted at two levels: (1) informal and (2) formal. **Informal feedback** will be gathered weekly from Classroom Teachers, Teaching Artists, students, site and district administration. Informal feedback also will be gathered regularly from the TS, families, community partners and evaluators during the course of program delivery. This feedback is discussed and acted upon by DR's Project Director or Curriculum Developer, Teaching Artists and the TS at our weekly meetings, or immediately when needed. **Formal** feedback will occur at regular intervals (i.e., monthly, end of each program unit, and year-end) via monthly partner meetings (in-person and via Google+), pre/post-anecdotal surveys of classroom teachers, activity logs kept by Teaching Artists, pre-unit trainings in **REAL**, and unit end assessment meetings

with classroom teachers, Teaching Artists, Curriculum Developer, and TS. This formal feedback is further enhanced by the rigor of our independent evaluation (tools outlined in both our management timeline and in the evaluation section of this narrative).

6. Quality of the Project Evaluation: (a) *The extent to which the methods of evaluation include the use of objective performance measures that are clearly related to the intended outcomes of the project and will produce quantitative and qualitative data to the extent possible.*

To ensure a high-quality project evaluation, the proposed project will utilize an **independent evaluator** to conduct a **randomized control trial** measuring the impact of the **REAL** program.

Independent evaluator. The **REAL** program evaluation will be conducted by staff from the Griffin Center for Inspired Instruction, a non-profit education service organization with offices in Portland and Aspen. The evaluation team will be led by Griffin Center Executive Director Dr. Lynn Waldorf. Dr. Waldorf has been the principal investigator on more than 20 efficacy studies over the past decade focused primarily on arts education and literacy development with at risk students, and has published numerous technical reports and articles based on the findings. She also has prior experience evaluating AEMDD project, as well as other large-scale projects funded by the U.S. Department of Education and private foundations. Dr. Waldorf is also a visual artist so her expertise in the area quality art lessons is invaluable.

Dr. Waldorf will be assisted by Dr. Kim Atwill, Senior Director at Griffin Center. Dr. Atwill has been the co-principal investigator for numerous U.S. Department of Education-funded projects, including AEMDD, Early Reading First, Head Start, and Indian Education projects. She is a seasoned expert in professional development for improved academic outcomes and research on both small and large-scale classroom interventions, including randomized control trials. Dr. Atwill has authored or co-authored numerous publications focused on K-12 educational issues, and is a frequent panelist and presenter at state and national conferences.

The Griffin Center evaluation team has extensive experience using a wide range of experimental designs, designing instruments with high reliability and validity, and conducting both qualitative and quantitative data analyses (done in house using SPSS and Excel software).

The evaluation team will be responsible for selecting or developing objective measures, monitoring the data collection, conducting all statistical analyses, and reporting the formative and summative results to the **REAL** curriculum and technology team and to the funder. The evaluation team will collaborate with all project stakeholders (i.e., **REAL** staff, students, teachers, and LBUSD administrators) to collect the necessary and relevant data over each of the four years of this project (*see Letters of Support and Resumes, pp. 4-5, LBUSD Letter*). To facilitate data collection, participating treatment and control teachers will attend a short orientation meeting and receive an orientation packet delineating the project's objective, the assessment timeline, and sample of the measures themselves. Working collaboratively on the evaluation will allow for the opportunity to equip **REAL** program partners with the tools and skills necessary to use data effectively for ongoing program improvement and for sustaining changes and lessons learned.

Randomized Control Trial (RCT) research design. To ensure a rigorous experimental design, the evaluation team will work with LBUSD's administrators and research department to randomly assign qualified elementary schools to one of the three treatment conditions: Intervention A (**REAL** + 8 iPad-based lessons), Intervention B (**REAL** + 16 iPad-based lessons), and Control (business as usual). The proposed project includes two intervention groups to ascertain whether and to what degree utilizing the iPad-based program to extend and enhance the curriculum, and thereby reducing some of the social and kinesthetic components of the math and arts curriculum, impacts the overall results.

DR has implemented three previous AEMDD projects in the LBUSD, each of which utilized

a randomized control design. LBUSD fully supports random assignment within the identified Title I schools and has provided their full assurances that they will support the implementation of **REAL** in any of the schools selected to receive the program (*see Letters of Support and Resumes, pp. 4-5, Planning, Research and Evaluation*). In addition, teachers in the control schools will be provided with \$125 as an additional incentive for participation.

Use of the **REAL** lessons and professional development is conceptualized as a school-wide program. Although school level random assignment is not the ideal level of assignment, the multi-year structure of the **REAL** professional development program requires that a cohort of 4th grade teachers learn to implement the program gradually and have an opportunity to work with peers at their grade level.⁹¹ Thus, classroom level assignment is not possible due to the fact that treatment teachers are encouraged to share ideas within their elementary school building, effectively contaminating the rest of the sample.

As a result, the study will employ a hierarchical design, with schools as the unit of assignment. Student-level data will be nested within classroom and school-level clusters, wherein teachers will implement the **REAL** lessons themselves.

Conducting this randomized-control trial over the course of three years ensures that teachers are exposed to the **REAL** program for multiple years. Research shows that at least two years of training or experience with a curriculum is needed for teachers to learn the curriculum.⁹² In control schools, teachers will use their existing strategies and materials for teaching. If private funding sources are located, schools that are assigned to the control condition will receive the **REAL** program, if interested, after the study is over.

Random assignment procedure. During year one, schools and their 4th grade teachers will be assigned to the *Intervention A*, *Intervention B* and *Control* participating condition or to a ‘business-as-usual’ control condition. Schools will remain in the assigned condition all three

years of the study. There currently is a pool of 32 Title I-funded elementary schools in LBUSD, in which 35% or more of the children enrolled are from low-income families. A power analysis was conducted based on previous results with *MIAB* to determine the requisite sample size to reliably detect a statistically significant difference. The minimum sample per group is 229. The elementary schools to be involved in the proposed project vary in size, but most have four 4th grade classrooms with 35 students in each, or a total of 140 4th graders.⁹³ As a result, a random number generator will select three schools (2 primary and one alternate) for each of the three treatment conditions: Intervention A, Intervention B, and Control. It should be noted that the Title I schools in LBUSD are relatively homogeneous in their ethnic diversity and socioeconomic status.⁹⁴ Baseline differences between the treatment and control schools will be noted in the research and evaluation reports, and, wherever possible, controlled for statistically.

Participants. During each of the three implementation years, the evaluation study will collect data from three distinct, randomly selected participant groups: (1) Classroom teachers ($N = 8$) and their students ($N \cong 280$) from 2 **Intervention A** schools will represent the *Intervention A: Participating teacher* group and the *Intervention A: Participating student* group; (2) Classroom teachers ($N = 8$) and their students ($N \cong 280$) from 2 **Intervention B** schools will represent the *Intervention B: Participating teacher* group and the *Intervention B: Participating student* group classroom; and (3) Classroom teachers ($N = 8$) and their students ($N \cong 280$) from 2 **Control** schools will represent the *Control: Participating teacher* group and the *Control: Participating student* group. Each year, the evaluation team will track arts, math, and social-emotional outcomes among 840 students (i.e., all students from *Cohort A: Participating student*, *Cohort B: Participating student*, and *Control: Participating student*); by the end of the third year project of implementation, evaluation data will have been collected from just over 2,500 fourth graders!

Similarly, the evaluation team will monitor instructional practices in the arts, arts-integration, and use of technology for all 24 fourth grade teachers, *participating* and *control* cohorts, over three years.

Research questions. Using an RCT framework, the evaluation study will measure the degree to which the three **REAL** program goals address the AEMDD program purposes:

Goal One: Increase the integration of standards-based arts education within the mathematics curricula at grade 4.

Goal Two: Strengthen the quality of standards-based arts instruction at grade 4.

Goal Three: Improve students' mathematics performance, including their skills in creating, performing and responding to the arts, by integrating the arts and a newly-developed digital tool.

Five evaluation questions guide the documentation of changes in teachers' instructional practice and students' achievement. These evaluation questions (EQ) along with their corresponding ancillary questions (AQ), performance objectives (PO), annual benchmarks, and data collection measures are summarized in Tables 4-6. Since the program structure entails a three-year professional development model, we can track teachers' knowledge, skills, and use of arts and arts-integration strategies across time. We will also document the persistence in any differences in student outcomes achieved after experiencing **REAL** by following students through the end of 5th grade (one year after completing the program).

By the end of the baseline data collection year (2014-15), all 24 teachers (16 Intervention, 8 Control) will complete the *Teaching with the Arts Survey (TWAS)*.⁹⁵ The *TWAS* was developed under a US Department of Education Grant to document teachers' knowledge and use of arts and arts-integration techniques. This survey will also provide the data evidencing the achievement of other project goals, such as their beliefs and attitudes about the role of arts instruction in the core curriculum. As shown in the Evaluation Timeline (*see Bibliographical, et al, p. 72*), the *TWAS* will be administered annually to participating and control group teachers to capture incremental

changes in knowledge, skills, and practice. Beyond providing a measure of change in sustained teacher practice, the annual surveys will evidence where the **REAL** program is most effective in increasing arts integration, and where it needs to be revised as the intervention proceeds.

Teacher-report Implementation Logs that record their use of **REAL** lessons and/or other arts integrated lessons will be reviewed and analyzed.

Table 4. Evaluation table for Goal One: Arts-integrated with core math

EQ1: To what extent does the <i>Making it REAL: Math</i> professional development series affect teachers’ use of arts-integrated instruction to teach the mathematics curricula?		
AQ(1) How often do teachers provide arts-integrated math instruction using the <i>Making it REAL: Math</i> program or other arts-integration lessons?		
PO1: <u>80%</u> of participating 4 th grade teachers integrate arts instruction with the teaching of other core subjects at least once a week.	Benchmarks	2015/16 80% of teachers, once a month
		2016/17 80% of teachers, twice a month
		2017/18 80% of teachers, once a week
Measures: Pre-post <i>Teaching with the Arts Survey</i> ; Monthly Implementation logs; Year-end focus group interviews with teachers and Teaching Artists.		

At the end of each year, separate focus group interviews will be used to capture the perspectives of 50 percent of participating teachers, all teaching artists, and all **REAL** professional development staff on the impact of the program on preparing teachers to offer arts-integrated lessons on a regular basis in benefit of increased student achievement in the arts, math and technology. The focus group data will be used to triangulate the findings from the survey and implementation log data. The teacher sample size, while small, is within the range to document a difference. Also, since the pre-post outcomes are measured annually as well as longitudinally, if teachers are transferred in or out of Intervention classrooms, new teachers will complete the baseline surveys and be added to the group.

Table 5.a Evaluation plan for Goal Two: Quality standards-based art instruction

EQ2: To what extent does the <i>Making it REAL: Math</i> professional development model affect teachers' knowledge of and ability to implement <i>Making it REAL: Math</i> ?		
	(AQ2a) What do teachers comprehend (i.e., skills, knowledge) and what can they implement within the <i>Making it REAL: Math</i> program?	
	(AQ2b) What do teachers comprehend (i.e., skills, knowledge) and what can they implement within the <i>Making it REAL: Math</i> technology enhanced lessons?	
	(AQ2c) To what degree are the <i>Making it REAL: Math</i> lessons implemented with fidelity according to stated program goals?	
PO2: 80% of participating teachers acquire the knowledge and skills needed to implement the full <i>Making it REAL: Math</i> curriculum with high fidelity (90% complete).		
2015/16	80% of teachers achieve low fidelity (50%)	DATA: Pre-post <i>Teacher Knowledge Survey</i> ; <i>Making it REAL</i> Lesson Fidelity Checklists; Monthly Implementation Logs; Reflection Session Summaries; Year-end focus group interviews with teachers & TAs.
2016/17	80% of teachers achieve medium fidelity (70%)	
2017/18	80% of teachers achieve high fidelity	

Some of the measures used to evaluate Goal 2 *on an annual basis* are the same as used to evaluate Goal One, allowing for multi-purpose data collection efforts over the course of the grant period. The *Teacher Knowledge Survey* will be developed during Year One of the project to ascertain teachers' knowledge of and self-efficacy for utilizing the arts, arts-integration, technology, and technology-integration. The evaluators have developed, piloted and achieved reliability of similar measures in intervention evaluations previously.

Table 6. Evaluation plan for Goal Two: Quality standards-based art instruction

<p>EQ3: To what extent does the <i>Making it REAL: Math</i> professional development model affect teachers’ knowledge of and ability to facilitate students in creating, performing and responding to art both as a core academic subject and through integrated instruction?</p>		
	AQ(3a) Do the <i>Making it REAL: Math</i> lessons address National and VAPA standards?	
	AQ(3b) Is there an increase in teacher knowledge and skill in teaching in and through the arts, relative to the National and California Visual and Performing Arts Content Standards?	
<p>PO3a: 100% of the <i>Making it REAL: Math</i> lessons align with National and California Visual and Performing Arts Content Standards, Grade 4. Raw numbers.</p>		
2015/16	100% alignment	<p>DATA: Alignment of <i>WOA</i> lessons with National and VAPA standards</p>
2016/17	100% alignment	
2017/18	100% alignment	
<p>PO3b: 80% of participating teachers increase their knowledge and skill in facilitating students in creating, performing and responding to art both as a core academic subject and through integrated instruction.</p>		
2015/16	40% of teachers have statistically significant increase	<p>DATA: Pre-post <i>Teacher Knowledge Survey</i>; Year-end focus group interviews with teachers and Teaching Artists.</p>
2016/17	60% of teachers have statistically significant increase	
2017/18	80% of teachers have statistically significant increase	

Classroom instructional sessions will be observed on a randomly selected basis (at least 16 observations per year across the 16 participating classrooms at each grade level) to capture evidence that teachers are acquiring and practicing the skills and strategies included in the **REAL** program, including their skill at integrating the technology enhanced lessons. **REAL** Lesson Fidelity Checklists will be completed during each observation. The individual data will be shared with the classroom teachers and Teaching Artists, and then input for aggregated data analysis. An additional analysis will entail a content analysis of the **REAL** lesson plans by District

curriculum leaders, as well as by the evaluators. The lead evaluators have vast experience and expertise in curriculum development in the arts and cognitive development. Focus group interview items will be used verify data collected through other measures and to provide insights into how the training program functions in raising the capacity of teachers to provide quality arts instruction integrated with language arts learning that results in greater student achievement.

To evaluate learning in the arts, the evaluators will collect and analyze student scores attained from rubric-based assessments used to each student’s three individual projects. By the end of year three, classroom teachers should be delivering the arts-integrated lessons well enough to maintain high marks for all students (*see Table 7, below*)

Table 7. Evaluation plan for Goal Three: Student performance in math and art

EQ4. To what extent does <i>Making it REAL: Math</i> increase students’ skills in creating, performing and responding to the arts?		
AQ(4) What are students able to demonstrate they know and can do, relative to the National and California Visual and Performing Arts Content Standards?		
PO4: 70% of <i>Making it REAL: Math</i> students will demonstrate "Proficient" or above in their knowledge and skill in creating, performing and responding to the arts.		
2015/16	40% of participating students achieve proficiency	DATA: Standards-based arts rubrics; Year-end focus group interviews w/ teachers and TAs
2016/17	55% of participating students achieve proficiency	
2017/18	70% of participating students achieve proficiency	

To evaluate the impact of **REAL** on math proficiency levels across the 280 *Intervention A: Participating student, Intervention B: Participating students*, 280 *Control: Participating students* California Standards Tests (CST) Mathematics subtest scores will be collected from the district on an annual basis, as well as District reading benchmark test scores (*see Table 8, on page 32*). The scores will be analyzed from each test on an annual basis to determine whether **REAL** has

had a statistically significant impact on student achievement and to ascertain progress toward achieving the *WOA* program and district achievement goal of 70 percent of all students scoring at or above the proficiency. The year-to-year comparisons provide a way to track the impact of the program and provide insights into how the program is affecting students' ability to demonstrate increased achievement in math proficiency.

Table 8. Evaluation plan for Goal Three: Student performance in math and art

EQ 5. To what extent does <i>Making it REAL: Math</i> improve student achievement in math?		
AQ(5) How has <i>Making it REAL: Math</i> impacted students' math proficiency?		
PO5a: <i>Making it REAL: Math</i> students will demonstrate a greater increase in the percentage scoring "Proficient" or above on the CST math subtest from year-to-year, comparing Intervention A to Control and Intervention B to Control (Intervention A and B will also be compared).		
2015/16	Statistically significant	DATA: CST Math scores; Focus group interviews with teachers
2016/17	Statistically significant	
2017/18	Statistically significant	
PO5b: <i>Making it REAL: Math</i> students will demonstrate a greater increase in the percentage scoring "Proficient" or above on the District math benchmarks subtest from year-to-year, comparing Intervention A to Control and Intervention B to Control.		
2015/16	Statistically significant	DATA: District math benchmark scores; Focus group interviews with teachers
2016/17	Statistically significant	
2017/18	Statistically significant	

Data analysis. The results of the performance objectives will be compared with data from the control group teachers and students in completing the randomized control study and providing evidence of a causal relationship between the intervention, teacher knowledge and skill in

delivering quality arts integrated instruction, and student achievement.

(b) The extent to which the methods of evaluation will provide performance feedback and permit periodic assessment of progress toward achieving intended outcomes.

The evaluation timeline includes data collection to evaluate both short- and long-term progress. This ongoing data collection is designed to judge progress towards performance objectives as a check to program implementation. As a result, the evaluators can share interim formative results with the **REAL** staff in order to facilitate revisions to the program to maximize success. Tracking progress incrementally with an eye on both teacher and student outcomes will also help the **REAL** staff identify where the model is less successful. **REAL** staff will have enough information to adjust their professional development to better support change in teacher practice. Information from this iterative loop is important because it helps to ensure that ineffective strategies and activities are modified or deleted. The evaluation team will share this interim data on a quarterly basis. This system of checks and balances helps ensure that challenges are recognized and addressed in a timely fashion, helping to ensure the overall success of the intervention during the grant period.

(c) The extent to which the methods of evaluation will, if well-implemented, produce evidence of promise.

The current project includes an RCT design that will include randomly assigned participant and control groups of schools and follow the longitudinal growth of participating teachers and students over a three-year period. A power analysis was conducted utilizing DR's previous AEMDD results to ensure that the sample size was sufficient to detect a statistically significant difference should one exist. Data collection includes both qualitative and quantitative methods plus a review of **REAL** program itself. Whenever possible, previously utilized measures will be employed as appropriate to help the field begin to develop a set of reliable and valid assessment tools. The measures to be developed include: Implementation log, *Teacher Knowledge Survey*,

focus group protocols, *REAL* lesson fidelity checklists, teacher and teaching artist reflection session summary protocol, and standards-based student art project rubric assessments. The evaluation team will create a prototype, gain input from *REAL* program staff, pilot the measure, and revise if necessary.

Some of the quantitative measures are beyond the control of the evaluation team, such as the CST and the District reading benchmarks. This existing student data will be utilized to reduce the burden on students and teachers to gather similar information from an additional standardized assessment. The validity and reliability for these measures is strong, and the evaluation team have no reason to doubt their overall accuracy.⁹⁶

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Other Attachments Form
Bibliographical References and Support Materials

	<u>Pages</u>
• Bibliographical References (<i>cited in Project Narrative</i>)	pgs. 55-65
• Logic Model for <i>Making It REAL: Math</i>	pg. 66
• Program Delivery Plan for Classroom Teachers: <i>Making It REAL: Math</i>	pg. 67
• Technology Implementation Plan	pg. 68
• Dramatic Results' 7 Critical Elements	pg. 69
• Evaluation Highlights and Testimonials for AEMDD 2003 and 2006	pgs. 70-71
• Evaluation Timeline	pg. 72
• Project Timeline	pg. 73
• Roles and Responsibilities of Collaborators	pgs. 74-75
• Tables of National/CA Standards	pgs. 76-77
• Photos of AEMDD 2003 and 2006 Implementation and Dissemination	
• In The Classroom	pgs. 78-79
• Professional Development	pg. 80
• In The Community	pg. 81
• Storyboard Samples for iPad application	
• Sample #2: Learning About Volume, Screens 1-4	pgs. 82-83
• Sample #3: Design Your Basket, Screens 1-2	pg. 84
• Curriculum Outline: <i>Making It REAL: Math</i>	pgs. 85-88
• Curriculum Samples: <i>Making It REAL: Math</i>	
• Lesson #21: (<i>relates to Storyboard Sample #2</i>)	pgs. 89-91
• Lesson #16: (<i>relates to Storyboard Sample #3</i>)	pgs. 92-98

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• FIGURE 1: SAMPLE LOGIC MODEL—ARTS INTEGRATION TO IMPROVE CORE ACADEMIC SKILLS FOR 4TH GRADE STUDENTS

INPUTS	OUTPUTS		OUTCOMES – IMPACT		
	Activities	Participation	Short term	Intermediate	Long term
<ul style="list-style-type: none"> Funding Promising arts-integrated curriculum (<i>Math in a Basket</i>) converted to digital format iPad-based program expands and enhances MIAB curriculum Promising teacher professional development (WOA model) 	<ul style="list-style-type: none"> iPad-based program integrated into 4th grade curriculum integrating art and math (<i>MIAB</i> becomes <i>Making it REAL: Math</i>) <i>Making it REAL: Math</i> scope & sequence, lesson plans developed PD sessions and professional learning communities provided to support <i>Making it REAL: Math</i> Mini-lesson video clips developed to support teacher-to-teacher learning. 	<ul style="list-style-type: none"> Number of students in each <i>Making it REAL: Math</i> lesson Number of teachers in each PD session Number of teachers in each PLC meeting Number of teachers who viewing mini-lesson video clips 	<ul style="list-style-type: none"> Students complete weekly arts-integrated <i>Making it REAL: Math</i> activities Students utilize iPad-based program to research, explore, analyze and learn about math and art Teachers experience and, then, implement arts-integrated <i>Making it REAL: Math</i> activities, including use of iPad-based program Teachers report that PD & PLC session activities are useful, relevant, and of high quality 	<ul style="list-style-type: none"> Students' risk-taking, persistence, and engagement increases with both hands-on and iPad-based lessons Teachers learn how to implement arts-integrated <i>Making it REAL: Math</i> curriculum Teachers learn how to use iPad-based program to enhance and expand their instruction Teachers increase feelings of self-efficacy for implementing <i>Making it REAL: Math</i> arts-integrated curriculum Teachers increase self-efficacy for iPad-based programs Teachers learn how to integrate arts activities and technology into core instructional activities to increase academic learning 	<ul style="list-style-type: none"> Students' academic skills in core subject areas (math, art, technology) improve Teachers make changes in their instructional practice Technology platform (iPad-based program) successful in delivering and expanding arts education program Access to arts-integrated curriculum increases

Table 1. Making it REAL: Math Program Delivery Plan for Classroom Teachers

	Pilot	Treatment A	Treatment B
16 Classrooms/Teachers; 1,680 Students:	2 (70)	8 (280)	8 (280)
2014-15	After-school PD w/Curriculum & Tech Coaches: Hours	12	
	Lessons integrating arts (out of 24 total)	24	
	Lessons integrating technology (out of 24 total)	4	
2015-16	Summer curriculum training w/Teaching Artists: Hrs	32	32
	After-school PD w/Curric & Tech Coaches; Teaching Artists: Hrs	12	12
	Instructional lead: Teaching Artist (TA)	3 TA	3 TA
	Support staff: Classroom Teacher (CRT)	1 CRT	1 CRT
	Lessons integrating arts (out of 24 total)	24	24
	Lessons integrating technology (out of 24 total)	8	8
2016-17	Summer curriculum training w/Teaching Artists: Hrs	32	32
	After-school PD w/Curric & Tech Coaches; Teaching Artists: Hrs	12	12
	Instructional lead: Teaching Artist (TA); Classroom Teacher (CRT)	1 CRT; 2 TA	1 CRT; 2 TA
	Support staff: Volunteer (VOL)	1 VOL	1 VOL
	Lessons integrating arts (out of 24 total)	24	24
	Lessons integrating technology (out of 24 total)	8	12
2017-18	Summer curriculum training w/Teaching Artists: Hrs	32	32
	After-school PD w/Curric & Tech Coaches; Teaching Artists: Hrs	12	12
	Instructional lead: Teaching Artist (TA); Classroom Teacher (CRT)	1 CRT; 1 TA	1 CRT; 1 TA
	Support staff: Volunteer (VOL)	2 VOL	2 VOL
	Lessons integrating arts (out of 24 total)	24	24
	Lessons integrating technology (out of 24 total)	8	16

Dramatic Results - 84.351D 2014 Application: Technology Implementation Plan

Priority 2: Technology: Projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials.

Project Goal 3: Improve students’ achievement in math and language arts, and skills in creating and responding to the arts, by integrating the arts and a newly-developed digital tool.

Who: Technology Team

		Year 1				Year 2				Year 3				Year 4			
		2014-15				2015-16				2016-17				2017-18			
J=June S=September D=December M=March		J	S	D	M	J	S	D	M	J	S	D	M	J	S	D	M
Product Stage		J	S	D	M	J	S	D	M	J	S	D	M	J	S	D	M
Reflect/revise goals (Admin, Tech & Eval Team)																	
Attend <i>Make it REAL</i> workshop (all lessons)																	
Lessons 1-4	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Lessons 11, 13-15	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Lessons 6-9	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Lessons 17-20	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Product sent to LBUSD technology review																	

Dramatic Results 7 Critical Elements



1. Arts Integration/Arts Knowledge: Lessons integrate the arts, including arts knowledge, experience, and performance, with core academic content.

How can the arts be integrated with this lesson to increase student outcomes in a core content area, as well as in an arts discipline?



2. Inquiry-based Learning: Lessons promote student-led collaborative engagement in problem-solving activities.

How can I make this lesson student-led, collaborative and emphasize problem-solving?



3. Decision Making: Lessons require students to explore options and experiment with ideas (i.e., take risks) to complete the target activity.

How can I encourage students to explore options and take risks?



4. Tactile-Kinesthetic Learning: Lessons move beyond visual and auditory learning to include tactile (touch or fine motor) and kinesthetic (movement or gross motor) experience.

How can I ensure my students are physically engaged?



5. Constructive Feedback: Lessons provide multiple opportunities for students to receive constructive feedback (teacher-student, student-student, or student-self) to improve outcomes.

How can my students and I use constructive feedback to reinforce the learning experience?



6. Assessment: Lessons incorporate assessment as a guide for learning, so each lesson objective can be assessed by both student and teacher (also known as ‘assessment as learning’).

How will my students and I know learning in the arts and core content area has been achieved?



7. Reflection: Lessons include opportunities for teacher and students to reflect on the target activity in relation to prior knowledge and their own learning experience.

How can I ensure that both my students and I are reflecting on our prior knowledge and learning experience?



Math in a Basket

EVALUATION HIGHLIGHTS

2008-2009 (Year Two of Three)



PROGRAM DESCRIPTION

Math in a Basket (MIAB) is an art and math integrated longitudinal program serving an entire grade level of students at five schools over three years, from 3rd to 5th grade.

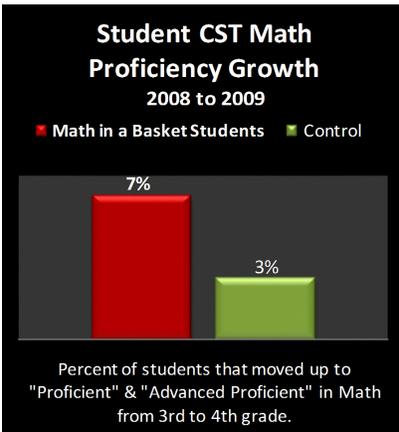
- Approximately 660 students receive 24 hours (1hr/wk for 24 weeks) of small-group, hands-on, art-integrated activities. Students plan, design, and make actual reed baskets from scratch. In this unique program, students integrate grade level geometry with art and design concepts to create functional art.
- Each week includes reflection and a compliment circle to build student social/behavioral skills.
- Teachers receive training in Math in a Basket curriculum and art s integration techniques.

PROGRAM OBJECTIVES

- 1) Improve student academic performance, particularly in Math and Visual Art
- 2) Foster student personal and social growth
- 3) Increase teacher ability to use and integrate art with other core subjects in their classrooms

METHODOLOGY

“The [Claremont Graduate University] evaluation team followed the same cohort of students from 3rd grade to 4th grade and collected multiple student/teacher surveys, focus groups, observations, and standardized test scores from the five randomly selected treatment (those receiving MIAB) and five control (those not receiving MIAB) schools to understand the impact that MIAB had on student academic and social performance.”



MATH PROFICIENCY

(Based on California Standards Test (CST) Math scores)

“The treatment schools had a higher percentage of students who moved from below proficient to proficient and above when compared to control students.”

TEACHER QUOTES

It leveled the playing field. Academic level did not necessarily play a part – their personalities affected their work.

I had one student who never passed a math test, pass the last two tests at 80%!

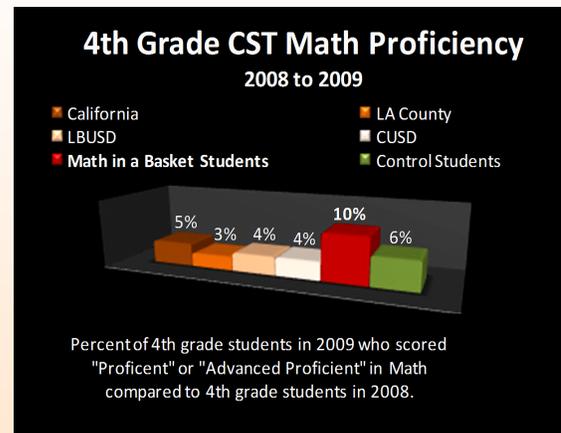
Kids at a lower level are really invested; they don't just stop and give up.

CLOSING THE ACHIEVEMENT GAP

Math in a Basket students are moving toward Math proficiency in larger numbers than their peers across the state.

(Based on data from the CA Dept of Ed: <http://dq.cde.ca.gov/dataquest/>)

One student struggles with everything across the board all day long, and he is reading at a second grade level. When he got to do his basket it shocked me, because he was the first one done. He was beaming, and I saw a different side of him, because it was something he could do well. Sometimes there isn't that outlet for kids to show their strength. (4th Grade MIAB Teacher)



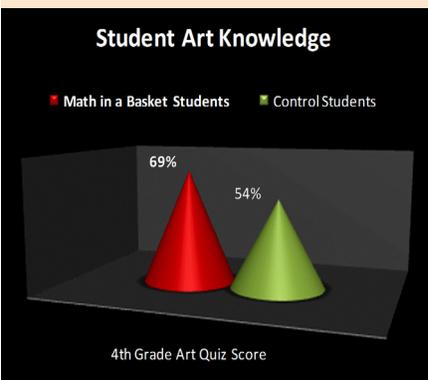
“The trend indicates that students in the treatment schools appear to be moving in larger numbers towards proficiency.”

“The second year comparisons revealed that students who received MIAB had more art knowledge, art confidence, were more motivated in math, reading, and science, and (according to their teachers) had higher social and academic skills.”

www.dramaticresults.org
www.facebook.com/dramatic.results

Dramatic Results has been fostering CREATIVITY in children since 1992.

Our student programs and teacher trainings aim to foster 21st Century skills students need to succeed, including **problem solving, collaboration, productivity, responsibility, and flexibility.**



STUDENT ART KNOWLEDGE

Math in a Basket students...“had better knowledge of art related concepts such as the distinctions between impressionist and realistic art, art interpretation, and the various elements of art. This trend is also consistent with the previous year’s findings.”

Also, “Students in the treatment schools tended to have higher levels of art confidence and motivation.”

Oh my goodness, I loved the training that I received in the summertime...it was the best training I have been to in years.
(4th grade MIAB Teacher)

STUDENT QUOTES

If you have a family member's birthday and don't have enough money to get a gift, you can just make a basket and give it to them.

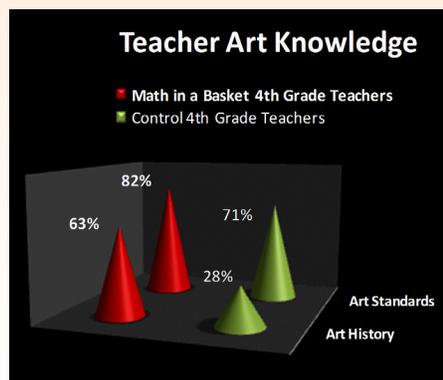
I've been feeling confident when taking tests on area and perimeter.

I'm doing 90% better in math and in school.

TEACHER ART KNOWLEDGE

“The teachers who underwent the MIAB program demonstrated a greater knowledge of art than the teachers who did not.”

Also, “MIAB teachers were more likely to invite parents to participate in art activities in the classroom and were more likely to use a visual arts textbook in the classroom than control teachers.”



“Students who would ordinarily be too embarrassed to ask for help felt more comfortable expressing their frustrations and requesting assistance with their baskets. Many teachers indicated the MIAB program provided their struggling students with the opportunity to rise to the same level as their peers (and sometimes perform better than their peers). This experience was seen as a chance for them to thrive and become confident about who they are and their contribution to the classroom.”

SOCIAL SKILLS

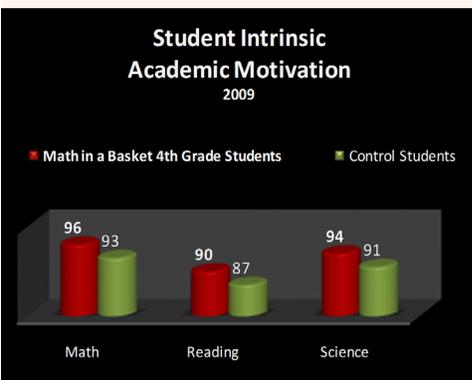
“Students in MIAB improved their ability to resolve problems with their peers on their own (communication skill), express needs and feelings appropriately (emotional regulation), and function well even with distractions (academic skills).” Also, “Teachers in the treatment schools believed that their students were generally more behaviorally and socially skilled than teachers in the control schools.”

TEACHER QUOTES

Attendance will tell you a lot about how much the kids love the program. As soon as they hear Math in a Basket, everyone is there. Kids who are sick refuse to go home.

Teamwork is key because they really learn when they teach someone else. They had a lot of that going on.

They have learned to be team players and to be respectful of other people.



ACADEMIC MOTIVATION

“Students who had received MIAB scored higher on their motivation for Math, Reading, and Science than students who had not received MIAB (control).”

If you'd like to request a copy of the entire year-end evaluation report, please email beverly@dramaticresults.org or visit www.dramaticresults.org

Dramatic Results
84.351D 2014 Application

Evaluation Timeline

	Year 1 2014-15				Year 2 2015-16				Year 3 2016-17				Year 4 2017-18			
	J	S	D	M	J	S	D	M	J	S	D	M	J	S	D	M
Component 1: Materials development and revision																
Reflect/revise goals																
Develop/revise instruments and protocols																
Lesson plan analysis (including revisions)																
Annual Performance Report & Data Summary																
Component 2: Data collection and analysis																
Students:																
Collect achievement scores (CST, District)																
Administer social-emotional surveys																
Collect standards-based art rubric data																
Teachers:																
Administer <i>TWAS & Teacher Knowledge Survey</i>																
Collect weekly reflection logs																
Collect professional learning session summaries																
Collect Coach's observation checklists																
Conduct in-class observations																
Focus group (include Teaching Artists)																
Technology:																
Download student and teacher user data																
Analyze quantitative & qualitative data																
Synthesize analyses, share w/DR staff & Tech																

Dramatic Results
841.351D 2014 Application

Making it REAL: Math overall project timeline

Who: DR Administration (Dir) and <i>Making it REAL: Math</i> teaching artists (TA), Technology Team (TT) LBUSD classroom teachers (CRT), and Evaluation Team (Eval)												
	Year 2			Year 3			Year 4					
	2015-16			2016-17			2017-18					
	J=June S=September D=December M=March											
Intermediate Milestones and Proposed Deliverables	J	S	D	M	J	S	D	M	J	S	D	M
Reflect/revise goals (Dir, TT, Eval)	■				■				■			
Schedule in-class <i>Making it REAL</i> ; Collect MOUs (Dir)		■				■				■		
1. Online resources, Lesson plans and 7 Critical Elements:						■	■	■	■	■	■	■
Reflect & revise <i>Making it REAL: Math</i> lessons (Dir & TAs)	■	■	■	■	■	■	■	■	■	■	■	■
2. <i>Make it REAL</i> successfully converted for digital use												■
Observe & revise <i>Make it REAL</i> lessons 1-4 (TT & Eval)			■	■		■	■			■	■	
Convert, observe, & revise <i>Make it REAL</i> , #11, 13-15 (TT & Eval)			■	■		■	■			■	■	
Observe, observe, & revise <i>Make it REAL</i> , #6-9 (TT & Eval)						■	■			■	■	
Observe, observe, & revise <i>Make it REAL</i> , #17-20 (TT & Eval)									■	■	■	
Product sent to LBUSD technology review (Dir & TT)	■				■				■			
3. CRTs master arts-integration strategies:												■
<i>Make it REAL</i> summer workshop (all lessons)	■				■				■			
TAs present <i>Making it REAL</i> weekly; CRTs support		■	■	■								
After-school professional development for on-going training		■	■	■		■	■	■		■	■	■
Standards-based student rubric assessments (TAs & CRTs)			■	■		■	■			■	■	
TA & CRTs present <i>Making it REAL</i> weekly; volunteer support						■	■	■				
CRTs present <i>Making it REAL</i> weekly; TA & volunteer support										■	■	■

Dramatic Results

841.351D 2014 Application

Roles and Responsibilities of Collaborators in the *Making it REAL: Math* project

Role	Responsibilities
Dramatic Results: Project Director & Fiscal Agent; Implementation & Development	
Implementation and Curriculum Development	<ul style="list-style-type: none"> • Oversee project processes, iterative development, intervention implementation and evaluation • Manage Development Team for <i>Making it REAL: Math</i>, including communication and relationships with teachers and technology team • Project reporting
Expert Consultant: Stephen Yeoh	
Technology Development Design and Implementation	<ul style="list-style-type: none"> • Manage and monitor the technology development efforts • Observe & report results of classroom implementation of iPad-based activities • Provide quality assurance review of final product
Goldfishbrain: Technology Development	
Technology Development Design	<ul style="list-style-type: none"> • Convert <i>Making it Real: Math</i> for iPad use • Revise and finalize <i>Making it Real: Math</i> for iPad use based on user feedback
Griffin Center: Evaluation	
Evaluation Design and Implementation	<ul style="list-style-type: none"> • Ensure that lessons (+/- technology) are aligned with standards • Produce instruments and ensure their reliability/validity • Manage data collection, analysis, and reporting • Support the revision of the product through iterative feedback loop

4. TAs & CRTs create PD videos for teacher-to-teacher learning			
5. Results of Randomized Control Trial:			
Administer surveys to CRTs & students			
Collect LBUSD student-level achievement data			
Conduct focus groups with Dir & CRTs & TAs & TT (Eval)			
Analyze and present summary of results (Eval)			
6. School-community partnership established:			
LBUSD Board meeting - update on <i>Making it REAL: Math</i>			
LBUSD Administrators observe program			
Family Art Workshop (Dir, TAs, CRTs, LBUSD, Community)			
Exhibit art work of students & CRTs in school or community			
7. Online dissemination of project design and results			
7. Annual Performance Report (Dir & Eval)			

DRAMATIC RESULTS

84.351D 2014 Application

Making it REAL: Math - Content Standards

	Unit 1	National Standards for Visual Arts: Content Standards (CS)	CA VAPA: Visual Arts Standards	CCSS: Math Standards
1	Introduction			
2	Color Theory and Bookmarks	CS #1, #5	1.3, 2.4, 2.8	4.G.1
3	Common Threads/ Design “Group” Baskets Part 1	CS #1, #3	1.3, 1.5	4.NBT.4
4	Common Threads/ Design “Group” Baskets Part 2	CS #3	1.3	4.NF.3, 4.MD.3
5	Prepare materials	CS #1	2.4	4.MD.1, 4.MD.3
6	Weave bases	CS #1	2.4	4.MD.3, 4.G.1
7	Weaving, Day 1	CS #1	2.4	4.MD.2, 4.MD.3, 4.G.1
8	Weaving, Day 2	CS #1	2.4	4.MD.2, 4.MD.3, 4.G.1
9	Weaving, Day 3	CS #1	2.4	4.MD.2, 4.MD.3, 4.G.1
10	Rim & Finish baskets	CS #1	1.5, 2.4	4.MD.3, 4.G.1
11	Art Talk	CS #2, #3, #5	1.5, 4.1	4.MD.3, 4.G.1
	Unit 2	National Standards for Visual Arts: Content Standards (CS)	CA VAPA: Visual Arts Standards	History-Social Science or CCSS: Math Standards
12	Native American Basketry	CS #4	3.2	4.2
13	Shell Jewelry	CS #4	4.2, 4.4	4.2

14	Geometric Abstract Art Portfolio	CS #1	1.5, 2.6	4.MD.5, 4.MD.6, 4.G.1
	Unit 3	National Standards for Visual Arts: Content Standards (CS)	CA VAPA: Art Standard	CCSS: Math Standard
15	Design Rectangular Prism Basket, Part 1	CS #1, #3	1.5, 4.1	4.MD.3
16	Design Rectangular Prism Basket, Part 2	CS #3	4.1, 4.5	4.MD.3
17	Prepare Materials	CS #1	2.4	4.MD.1, 4.MD.3
18	Weave bases	CS #1	2.4	4.MD.3, 4.G.1
19	Weaving, Day 1	CS #1	2.4	4.MD.3
20	Weaving, Day 2	CS #1	2.4	4.MD.3, 4.G.1
21	Weaving, Day 3	CS #1	2.4	4.MD.3, 4.G.1
22	Rim and Finish baskets	CS #1	1.5, 2.4	4.MD.3
23	Musical Art Critique and Journal	CS #2, #3, #5	1.5, 4.1	4.MD.3
24	Jeopardy Review and Post Quiz	CS #1, #2, #3, #4, #5	Review of all standards covered	Review of all standards covered

Math in a Basket in the Classroom



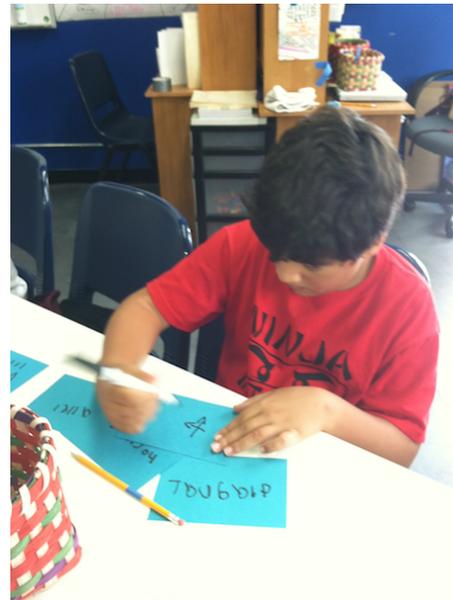
Students work in pairs to measure, calculate, and cut the correct number of spokes for baskets



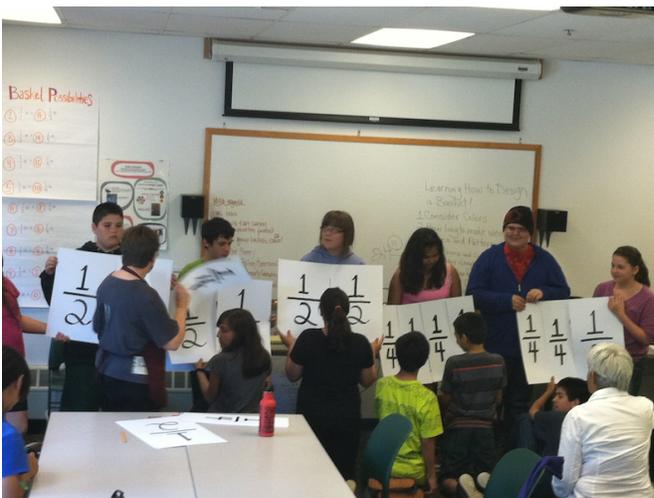
Teams showing Teaching Artist color scheme for their group identity basket



Student in our Special Ed classroom carefully weaving and looking for over-under-pattern



Student learning and making flashcards for different types of lines in our Special Ed Summer Camp



In Juneau, Alaska: Opening the Gates Academy
Students working together to represent the height of a 5 inch basket with fractions



Students participating in a "Museum Tour" to learn about basketry and the Gabrielino Tongva culture

Math in a Basket in the Classroom



Student discovering something new as he looks closer at his basket during art critique



Art Portfolio Self Portrait: Student use warm, cool, and complementary colors in each square



Student writing down response to art critique questions



Students share positives, challenges, and compliments during reflection circle



Students eager to share answer to math questions



Students proudly showing off their Group Identity Basket after art critique

Math in a Basket Professional Development



Teacher thankful to have our high school volunteer's help at the K-12 Alliance West Ed. Workshop



Just like our students! Even teachers can't resist wearing their baskets at the K-12 Alliance West Ed. Workshop



Classroom teachers' art on display at MIAB Exhibition at the Long Beach Art Museum in Toyota Gallery



Teacher beaming as she holds up her Elements of Art poster at the Beyond Basketry Teacher Workshop



Teacher weaving Wedding Basket at MIAB Teacher Workshop 2008



Group of teachers hard at work at our MIAB Teacher Workshop 2008

Math in a Basket in the Community



Proud family! Student's basket on display in MIAB Exhibition at Long Beach Art Museum



Parents make baskets in a Math in a Basket Parent Workshop and learn how math and art is integrated in an elementary school in Compton



Cal State University Long Beach President's Ambassadors help families weave baskets at the Latino Outreach Festival at Cal State Dominguez Hills



Parent and student showing off basket in joint art based summer camp with Long Beach Art Museum



Basket making booth at the International Children's Festival



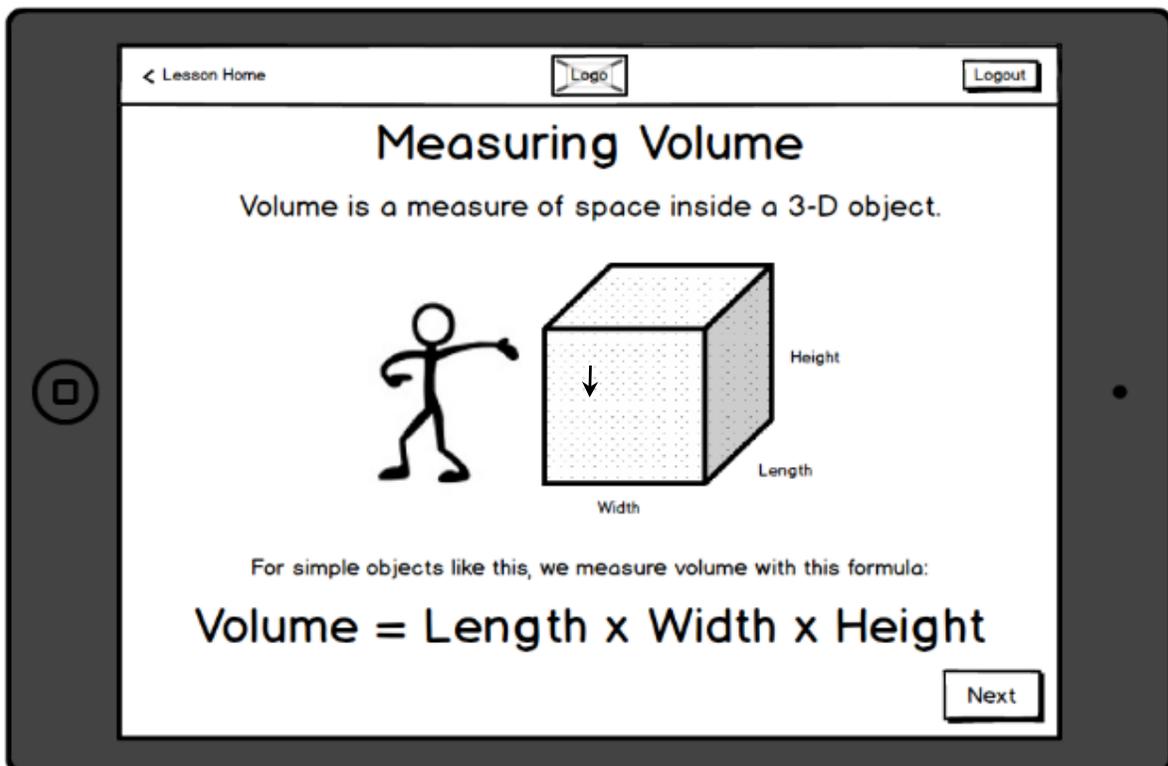
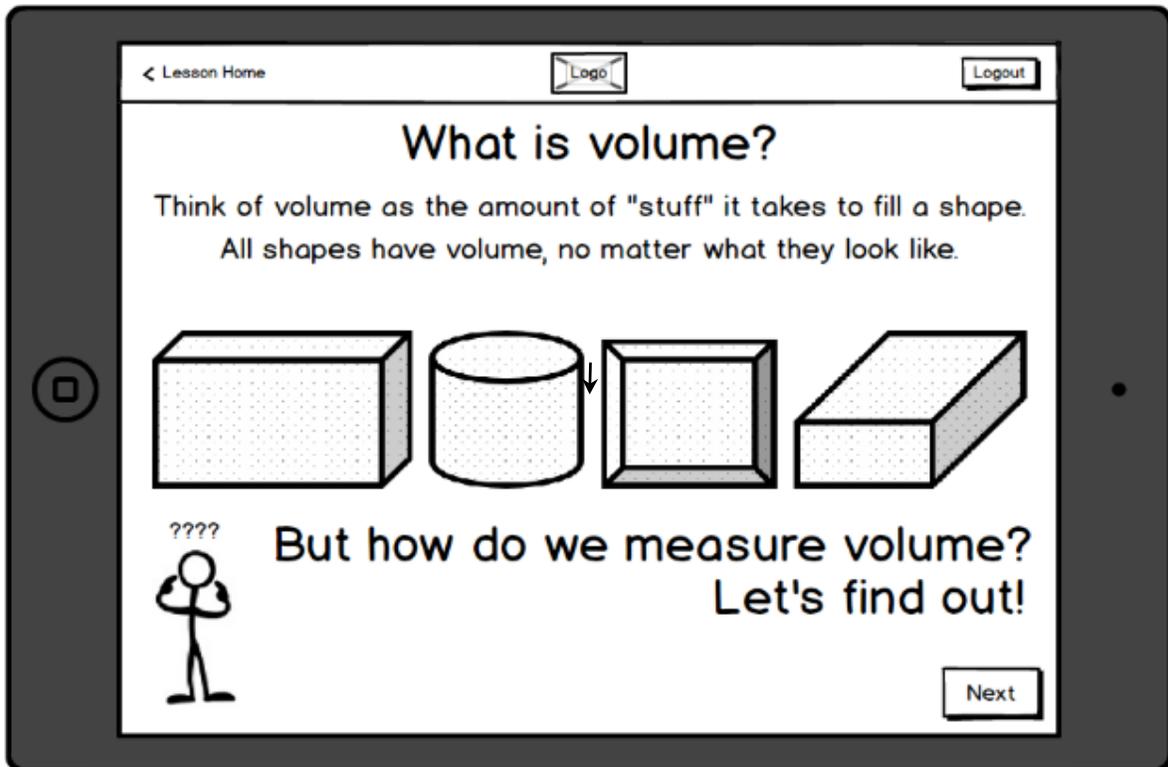
MIAB Exhibition at Long Beach Art Museum in Toyota Gallery



Smiling mom making a base for round basket at Parent Workshop at Burnett Elementary in Long Beach

Storyboard Sample #2

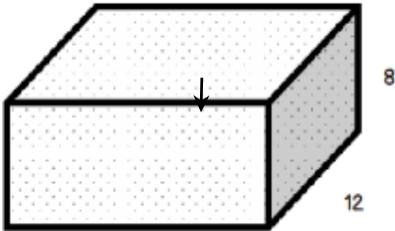
Lesson #21: Learning About Volume



< Lesson Home Logo Logout

Volume and Shape

Drag the corners of the shape to change the volume calculation.



23 12 8

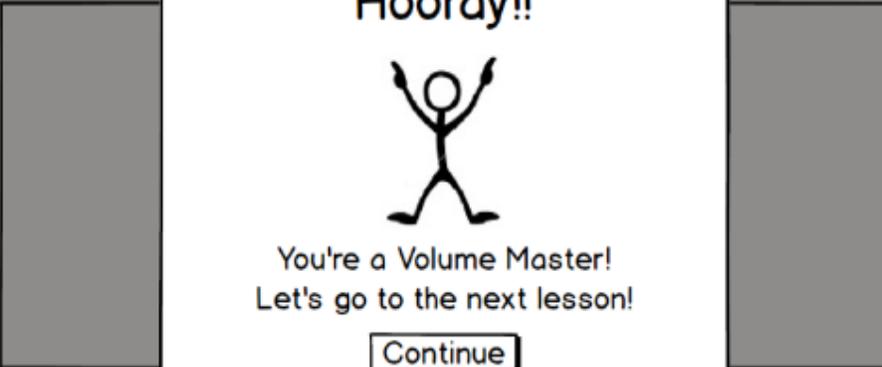
Volume = x x =



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Volume and Shape

Drag the co calculation.



Volume = x x =

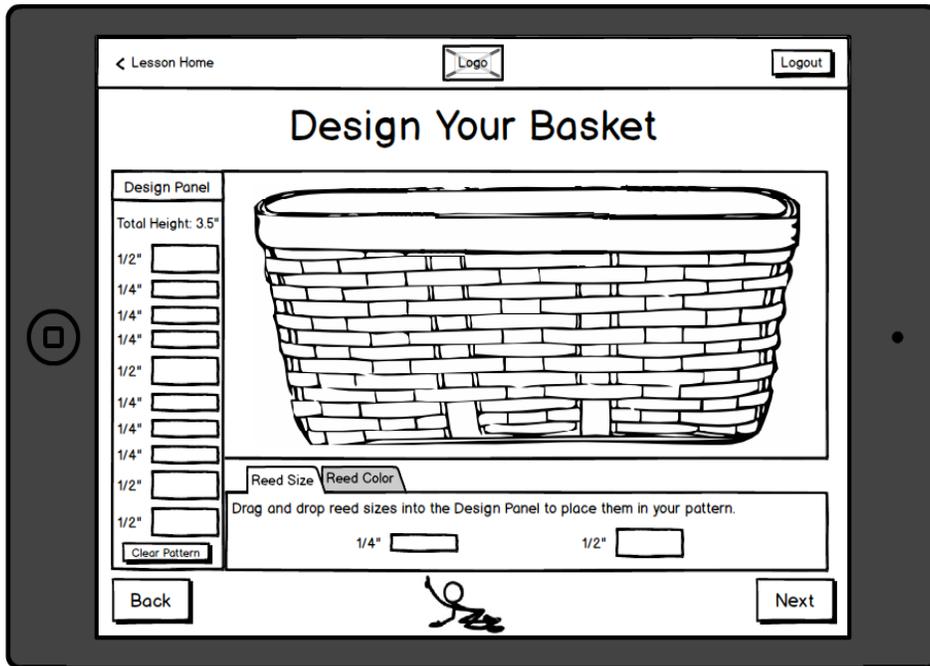


Hooray!!

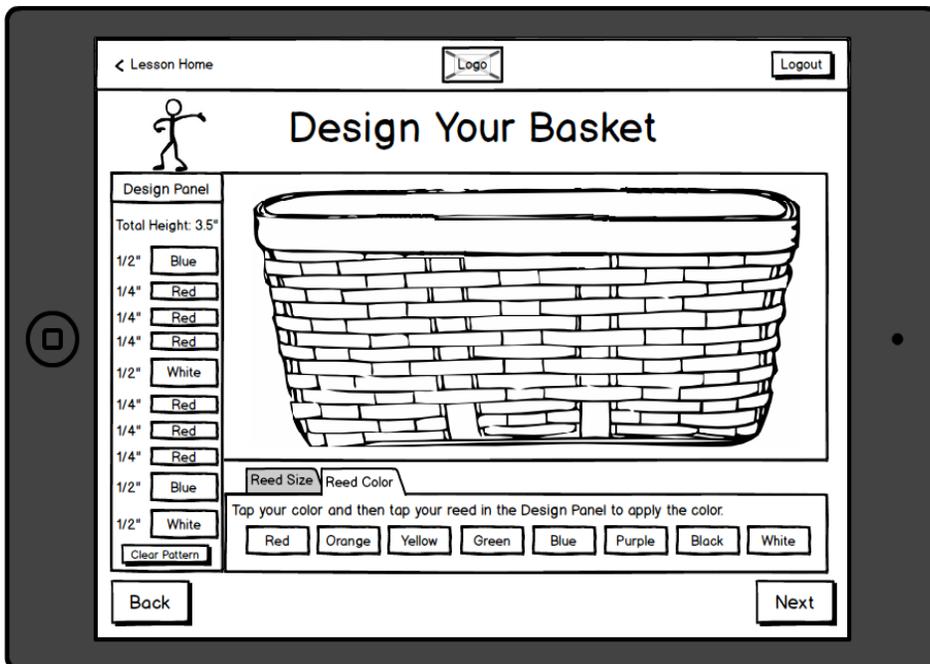


You're a Volume Master!
Let's go to the next lesson!

Storyboard Sample #3
 Lesson #16: Design Basket Pattern



NOTE: Using different tabs (**Reed Size**, **Reed Color**) in the same screen, students will explore pattern options with both reed size and reed color to design their basket.





Curriculum Outline
 Grade 4
 Making It REAL:
 Math
 School Year: 14-15
 Unit 1-3

Students will explore the enduring theme of **IDENTITY** through a variety of art and math integrated projects. The goal of the program is for students to improve academic performance in math, art, classroom behavior, self-concept, motivation, academic persistence & problem solving.

Week/ Lesson #	Lesson Title	Thematic Description	Goals/Objectives	Assessment	Content Standards
	Unit 1	Exploring Group Identity and Connections Students will complete a graphic organizer that allows them to identify things that they have in common with other group members. They will then brainstorm ways they can symbolize one or more of these common traits in a basket. Students will review fractions, and then plan baskets using design sheets. On the sheet, students will determine the dimensions of their baskets, the measurement of their spokes and weavers, what sizes of reed they will use and how they will incorporate the symbol of the group's chosen common traits.			
1*	Introduction	Students will be introduced to Dramatic Results, look at the new projects they will be making, go over expectations, and discuss identity. Students will also create journals/sketchbooks and art portfolios. Students will take a pre-quiz at the beginning of MIAB to assess student knowledge of math and art.	<ul style="list-style-type: none"> • Know guidelines/expectations • Begin to understand "identity" • Review math, art & basketry terms • Introduce program/show projects • Make journals, art portfolios • Introduce Reflection: Challenges, positives and compliments • Pre-quiz (Assessment) 	Portfolio Rubric	Introduction
2*	Color Theory and Bookmarks	Students will create bookmarks in small groups to practice weaving and to explore the ideas of how color, pattern and contrast can reflect identity. Students will learn how to use emphasis, contrast, complementary, warm and cool colors to create excitement, interest and drama in their own artwork. Students will also review hand gestures & identify the elements in art on poster.	<ul style="list-style-type: none"> • Select a color scheme • Practice weaving with team bookmark • Discuss how to symbolize ideas and characteristics through art. 	Bookmark Complete project – rubric	Visual Arts 1.3, 2.4, 2.8 Mathematics 4.G.1
3*	Common Threads/ Design "Group" Baskets Part 1	Students will complete a graphic organizer that allows them to identify things that they have in common with other group members. Students will brainstorm ways they can symbolize one or more of these common traits in a basket. Students plan baskets using design sheets. On the sheet, students will determine the dimensions of their baskets, the measurement of their spokes and weavers.	<ul style="list-style-type: none"> • Discuss how to symbolize ideas and characteristics through art. • Review basketry terms, including spokes, weavers, up-set • Design a basket using design sheet 	Group Graphic Organizer Design Sheet Complete project-rubric	Visual Arts 1.3, 1.5 Mathematics 4.NBT.4

Note: Asterisk indicate lessons to integrate with technology.

4*	Common Threads/ Design "Group" Baskets Part 2	Students will finish design sheets, review fractions, and design their baskets on a pattern card to incorporate the group's chosen colors.	<ul style="list-style-type: none"> • Discuss how to symbolize ideas and characteristics through art • Review basketry terms, including spokes, weavers, up-set • Design a basket using design sheet • Determine sizes of reed to be used • Add fractions (reed sizes) to determine accurate basket height 	Design Sheet Pattern Card complete project – rubric	Visual Arts 1.3 Mathematics 4.NF.3, 4.MD.3
5*	Prepare materials	Using the design sheets and pattern card as a guide, students will accurately measure and cut the reed for their baskets. Students will learn about perimeter.	<ul style="list-style-type: none"> • Discuss and practice accurate measuring • Measure and cut reed • Discuss how group identity and self identity are included in designs 	Design Sheet Pattern Card	Visual Arts 2.4 Mathematics 4.MD.1, 4.MD.3
6*	Weave bases	Students will weave their spokes into a base for their baskets. They will review weaving, learn to twine, and how to up-set a basket. Students will also discuss types of lines in baskets and why it is important for reed to be parallel and perpendicular. Students will review perimeter and the formula for perimeter.	<ul style="list-style-type: none"> • Identify parallel and perpendicular lines • Use formula for perimeter to obtain correct measurements • Review basketry terminology • Review under-over weaving, twining 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
7*	Weaving, Day 1	Students will review fractions, and learn about math concept area and begin weaving their baskets. Students will review the basketry, and art vocabulary discussed in previous lessons.	<ul style="list-style-type: none"> • Review fractions • Use formula for area to obtain correct measurements • Vocabulary review • Review under-over weaving • Weave first 3 rows 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.2, 4.MD.3, 4.G.1
8	Weaving, Day 2	Students will set personal weaving goals and continue weaving baskets. In small groups, students will use the formula for area to solve problems and check in with partners to verify and discuss answers.	<ul style="list-style-type: none"> • Continue weaving baskets • Vocabulary review • Review under-over weaving • Weave remaining rows • Use formula for area 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.2, 4.MD.3, 4.G.1
9	Weaving, Day 3	Students will set personal weaving goals and continue weaving baskets. In small groups, students will use the formula for area to solve problems and check in with partners to verify and discuss answers.	<ul style="list-style-type: none"> • Continue weaving baskets • Vocabulary review • Review under-over weaving • Weave remaining rows • Use formula for area 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.2, 4.MD.3, 4.G.1
10*	Rim & Finish baskets	Students will finish their baskets and latch their rims. Students will calculate perimeter, area and practice math skills. Students will write about how their baskets relate to the group identity and their personal identities.	<ul style="list-style-type: none"> • Review math concepts • Latch rim • Discuss identity in basketry 	complete project – rubric	Visual Arts 1.5, 2.4 Mathematics 4.MD.3, 4.G.1
11	Art Talk	Students will partake in an art talk in which they get to share their own work and experience the artwork of their classmates. All students will describe, analyze, interpret, and form opinions about the artwork they see and learn to share these in both written and verbal ways.	<ul style="list-style-type: none"> • Students will identify elements of art in art work • Students will review/remember artistic process • Students will discuss artists' intent 	Student Participation Journal Entry	Visual Arts 1.5, 4.1 Mathematics 4.MD.3, 4.G.1

Note: Asterisk indicate lessons to integrate with technology.

Unit 2		Exploring Cultural Identity			
Students will learn about some of the Native American tribes in California best known for their art, including basketry and weaving. Students will learn about the tribes' cultures and relationship to the environment. Students will discuss the material culture and identity of Native Americans and discuss their own material cultures and relationship to identity, then work with a partner to use a pump drill to create a hole in a shell.					
12*	Native American Basketry	Students will learn about some of the Native American tribes in California best known for their art, including basketry and weaving. Students will learn about the tribes' cultures and relationship to the environment. Students will discuss the material culture and identity of Native Americans and discuss their own material cultures and relationship to identity, then work with a partner to use a pump drill to create a hole in a shell.	<ul style="list-style-type: none"> Learn about Native American tribes Discuss different types of materials and patterns used by different tribes. Use a pump drill to make a hole in a shell 	Project Completed Rubric	Visual Arts 3.2 History-Social Science 4.2
13	Shell Jewelry	Students will discuss cultural identity and make shell necklaces using some of the same techniques that many California tribes, including Gabriellino-Tongva, used to make baskets and jewelry. Students will talk about cultural identity, and reflect on how their shell jewelry relates to cultural identity, then use those thoughts to write a poem.	<ul style="list-style-type: none"> Learn about traditional weaving techniques Explore idea of identity in baskets and woven jewelry Discuss how selection of media relate to meaning of art Discuss relationships tribes had with their physical environment and how it affected their way of life & art 	Project Completed Rubric Journal Reflection- Poem	Visual Arts 4.2, 4.4 History-Social Science 4.2
14*	Geometric Abstract Art Portfolio	Students will also create journals/sketchbooks and art portfolio cover. Students will design their very own geometric abstract art portfolio using, line, geometric shapes, color, measurements, and angles.	<ul style="list-style-type: none"> Students will identify elements of art in art work Students will review/remember artistic process Identify parallel and perpendicular lines Discuss and practice accurate measuring 	Project Completed Rubric Journal Reflection	Visual Arts 1.2, 1.5, 2.8 Mathematics 4.MD.5, 4.MD.6, 4.G.1
Unit 3		Exploring Identity and Rectangular Connections			
Students will build on basket weaving techniques through the planning, designing, and weaving of an original basket and explores comparative geometric sizes.					
15*	Design Rectangular Prism Basket Part 1	Students will discuss the concept of identity. They will look at various baskets and talk about what we learn about the artist from looking at each one. Students will design an original basket using a design sheet representing their identity. Students will determine the dimensions of their baskets, the measurement of their spokes and weavers, what sizes of reed they will need. Students will finish designing baskets using $\frac{1}{2}$ " and $\frac{1}{4}$ " reed using color and pattern to represent their self-identity.	<ul style="list-style-type: none"> Students will talk about the concept of identity. Students will fill in a thinking map to reveal more about their own identities Students will design their 2nd basket 	Design Sheet Identity thinking Map	Visual Arts 1.5, 4.1 Mathematics 4.MD.3
16*	Design Rectangular Prism Basket Part 2	Students will finish designing baskets, then, using the design sheets as a guide, students will accurately measure and cut the reed for their baskets.	<ul style="list-style-type: none"> Students will explore ways to share personal characteristics in art, specifically baskets Add fractions (reed sizes) to determine accurate basket height 	complete project – rubric Reflection in portfolio Perform pattern	Visual Arts 4.5 Mathematics 4.NF.3, 4.MD.3
17	Prepare Materials	Students will finish designing baskets, then, using the design sheets as a guide, students will accurately measure and cut the reed for their baskets.	<ul style="list-style-type: none"> Students will discuss and practice accurate measuring Students will measure and cut reed 	complete project – rubric Reflection in portfolio Perform pattern	Visual Arts 2.4 Mathematics 4.MD.1, 4.MD.3

Note: Asterisk indicate lessons to integrate with technology.

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Page 3

18	Weave bases	Students will weave their spokes into a base for their baskets. They will also review perimeter and the formula for perimeter.	<ul style="list-style-type: none"> Identify parallel and perpendicular lines Review fractions Review basketry terminology Review perimeter Review under-over weaving, twining 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
19*	Weaving, Day 1	Students will determine the areas of their bases by using area tiles, then discuss how to use the formula $A = L \times W$ and why it works. Students will also begin weaving their baskets.	<ul style="list-style-type: none"> Discuss the concept of area Use formula to determine area Review under-over weaving Weave first 3 rows 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3
20*	Weaving, Day 2	Students will make predictions about the following two questions: Can rectangles that have the same perimeter have different areas? Different areas have different perimeters? They will re-visit the questions and use their completed baskets to prove the answers in an upcoming lesson. Students will also continue weaving their baskets.	<ul style="list-style-type: none"> Discuss how to find perimeter and area using tiles and rulers and formulas Make predictions about the relationships between area and perimeter Continue weaving baskets 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
21*	Weaving, Day 3	Students will use 1inch cubes to determine the volume of their baskets. Students will discuss how to use the formula $V = L \times W \times H$ and why it works. Students will also continue weaving their baskets	<ul style="list-style-type: none"> Discuss volume and how to calculate volume using formula Determine basket volume Continue weaving baskets 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
22*	Rim and Finish baskets	Students will practice measuring the dimensions of different size baskets and calculate its volume. Students will finish basket with rimming and latching.	<ul style="list-style-type: none"> Practice volume Complete weaving Latch rims 	Math Game participation complete project – rubric	Visual Arts 1.5; 2.4 Mathematics 4.MD.3
23	Musical Art Critique and Journal	Students will partake in an art talk in which they get to share their own work and experience the artwork of their classmates. All students will describe, analyze, interpret, and form opinions about the art work they see and learn to share these in both written and verbal ways.	<ul style="list-style-type: none"> Students will identify elements of art in art work Students will review/remember artistic process Students will discuss artists' intent Group baskets thematically 	complete Project- rubric	Visual Arts 1.5; 4.1 Mathematics 4.MD.3
24	Jeopardy Review and Post Quiz	Students will play games to review all of the material and concepts covered. Students will also discuss the enduring theme of identity and the real-life applications of the math, art, and basketry techniques they have studied over the year.	<ul style="list-style-type: none"> Students will review all of the art, math, and social studies material from the entire year Students will discuss what they learned with classmates 	Post Quiz	Review of all standards covered

Note: Asterisk indicate lessons to integrate with technology.



Self Identity Basket **Weaving Day 3** **Unit 3, Lesson #21**

Objective

Students will be introduced to Volume through a volume guessing game. Students will finish weaving their baskets using the over/under pattern, and begin the rim and latching process.

Common Core Standards for Mathematics

Measurement and Data

4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

Geometry

4.G.1 Draw points, lines, line segments, rays, angles (right acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Visual Arts Concepts:

1.5 Describe and analyze the elements of art (color, shape/form, line, texture, space and value), emphasizing form, as they are used in works of art and found in the environment.

2.4 Use fibers of other materials to create a simple weaving.

Materials: iPod and Music (Optional), sample baskets, zip lock bag with weavers, student baskets, student pattern card, scissors, plastic clips, water containers, towels, 1/4" reed for latching, 1/2" reed for basket rims, measuring tapes, white board, dry eraser marker

Vocabulary: Spokes, Weavers, De-air, Latching, Estimate, Volume, Cube

Music: Play Selected music in the background during weaving time. *Optional*

Anticipatory (7 Min)

Hold a student basket in your hand

We have discussed perimeter many times (trace basket perimeter). We have discussed area (run your hand over the basket base area). So you are now ready for a new math concept. It is Volume, or how many units the inside of your basket can hold (put our hand inside basket). Lets take a guess. Show tall and short basket filled with cubes. Your Teaching Artist has the Take a Guess Sheet! (**Appendix 2oB**) Use Appendix 2oB to record student responses:

- Which basket can hold more 1 inch cubes? (Tall/Short)
- How many 1 inch cubes do you think the tall one holds?
- How many 1 inch cubes do you think the short one holds?

FOURTH GRADE Making It REAL: Math (24 Weeks)

Stated Objectives

Tell students, “Our goal today is to weave in more weavers using the under, over, under pattern. Remember to focus on good basket craftsmanship, using good tension in weaving and de-airing of basket.”

Modeling (5 Min)

1. Today will be your last weaving day. Even if you don't use all of the weavers you cut, it is okay because we want you to concentrate on weaving to the best of your ability.
 - **We will tell you when to stop weaving so that you will have plenty of time to tuck and trim your spokes.**
2. Model how to **de-air** weavers (use fingers to push weaver down closing up any gaps between weavers).
3. Show students how to cut spokes at an angle if necessary (making a point-if spokes are long).
4. Demonstrate how to bend and tuck spokes under a basket weaver.
5. Show students how to secure 1/2 inch inner and outer rim pieces **with** plastic clips
6. (Optional) Model latching of basket rim using the quarter inch reed selected from available colors.

Guided practice (30 Min)

1. Students will refer to their Pattern Cards as they continue to weave.
2. Students will de-air as needed.
3. Students will cut spokes that are too long to tuck.
4. Students will bend and tuck spokes under a weaver in preparation for rimming.
5. Students will add 1/2 inch inner and outer rim pieces, securing with plastic clips.
6. (Optional) Students will latch basket rim using the quarter inch reed selected from available colors.

Check for understanding

- As student weave ask: What part of your basket can show volume? (Inside)
- Have students check their shoulder partner's basket for open windows that need de-airing.

Classroom Volunteer

- Check to make sure students weave correctly using the over/ under pattern.
- Remind students to de-air their baskets so that their basket is nice and tight.
- Assist students in the selection of rim and latching materials.
- Make sure that student's spokes are truly vertical and parallel and basket is de-aired before they cut and tuck spokes.

FOURTH GRADE Making It REAL: Math (24 Weeks)

Students who are rimming and latching only:

- Check to make sure that students use two weavers for their basket rim (one weaver inside and one weaver outside).
- When latching help students keep their ¼” reed flat in the loop.

Clean Up (5 Min)

- Clip unlatched reed to basket.
- Place Pattern Card in zip lock bags and place in the middle of the table for Teaching Artist to put away.

Reflection (8 Min)

Teaching Artist will model possible language structure to be used during reflection: share out in front of class something that was a **challenge** (hard, difficult, or confusing) during the lesson. They will then share their **positive** (what was fun, exciting, wonderful, learned) with students.

Guided Question: Do you feel that you have improved your weaving skills? What was challenging and positive about weaving your second basket?

Compliment Circle

Teaching Artists will model compliment circle based on day’s activity. Students will share a compliment with each other. Emphasize saying “thank you” after each compliment

Closure (5 Min)

Show cube filled baskets

Does anyone know of a math formula that can help us calculate how many cubes are in each of these baskets? Respond based on classroom input.

- Respond in the affirmative if answered correctly
- Inform students that everyone will learn about the formula next week, and find out who guessed the correct number of cubes!



Design Self-Identity Basket, Part 2 Unit 3, Lesson #16

Objective:

Students will create a self-identity basket and discuss how the Element of Art: **color** can be used to symbolize ideas. Students will use their symbolic colors to design their basket pattern. Students will use their design sheet to determine the dimensions of their basket and the measurement of their spokes and weavers using $\frac{1}{2}$ inch and $\frac{1}{4}$ inch reed.

Common Core Standards for Mathematics

Measurement and Data

- 4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.
- 4.NF. 3 Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

Visual Arts Standards:

- 4.5 Describe how the individual experiences of an artist may influence the development of specific work of art.

Materials:

iPod (optional), Student Design Sheet (Self Identity Basket), Exploration Journals, Self-Identity Basket Samples (5x5x5 and 5x3x5), Patten Card, Reed Chips, Pencils, Crayons, Surprise Perimeter Problem Sheets

Vocabulary:

Self-Identity, Weavers, Spokes, Dimensions, Width, Length, Height, Perimeter

Anticipatory Set: (10 Min)

Say, “Today you will play a game called Surprise Perimeter Problem.” Review formula for perimeter as a class before students begin. Teaching Artist will reach into a bag to randomly pull out a problem. Place the problem on the board or Elmo. Each student will solve the problem then check their work with a partner. Ask students, “Was your answer the same or different? Why or why not?” After both partners agree on the final answer, report to your Teaching Artist to check if answer is correct. Teaching Artist will say “Cha Ching” if students have the correct answer, if not, teaching artist will say “Cha-Check” so students could go back and check their work together.

Stated Objective:

Tell students, “Last week, you used the dimensions of your basket to calculate the length of your spokes. Today you will use the perimeter to figure out the length of your weavers.” Tell students, “Today, we will review perimeter and continue to work on our design sheets. **You will get to design your self-identity basket using reed chips with the**

weavers.” Tell students, “Today, we will review perimeter and continue to work on our design sheets. You will get to design your self-identity basket using reed chips with the colors that you selected to create a pattern that symbolize your personal interests/characteristics.”

Modeling: (15 Min)

1. Pass out design sheet (**See Appendix 14A: Self-Identity Basket**)
 - Remind students that we are calculating weaver data for both the short (5x5x3) and tall (5x3x5) baskets.
 - Model working through design sheet using one color for tall basket data and another color for short basket data.
 - Model how to reference basket dimensions to complete **back page** of design sheet and have students participate using the “I do, you do” technique.
 - Review basket vocabulary: **Weavers** are the horizontal strips on the basket. They go around the **perimeter** of the basket.
 - Remind students that in order to figure out the length of their weavers, they must add 4 inches (the magic number). This allows for cutting and overlapping (Just like a belt).
2. Pattern Card: Show Self Identity basket sample. Explain that pattern is the principle of design that repeats.
 - Model how to design a basket pattern using 1/2” and 1/4” reed chip on Pattern Card (**Appendix 15A: Pattern Card**)
 - Model selecting reed chips from warm, cool, or neutral bags.
 - Tell students to use at least two 1/4” reed but no more than six 1/4” reed in their basket pattern.
 - Show students how to start with 1/2” reed at the bottom and end with 1/2” reed at the top on Pattern Card.
 - (Optional) Show how to color in Pattern Card using crayons.
 - Model how to record color and meaning on Pattern Card.

Guided Practice (20 Min)

Students will:

1. Calculate basket weaver length using Design Sheet with teacher.
 - Determine the perimeter and weaver lengths as a class.
2. Select reed chips according to Self-Identity color and explore pattern with Pattern Card.
 - Students will select 1/2” and 1/4” reed according to self-identity colors chosen.
 - Students will ensure that basket pattern uses at least two 1/4” reed but no more than six 1/4” reed.
 - Students need to start with 1/2” reed at the bottom and end with 1/2” reed at the top on Pattern Card.
 - Students will use crayons to color in pattern according to reed chip pattern design.
 - Students will write down colors of reed and meaning on Pattern Card.

Check for understanding:

- Ask students, “How many $\frac{1}{4}$ ” reed do you have?”
- Ask students, “Did students start with a $\frac{1}{2}$ ” reed and end with a $\frac{1}{2}$ ” reed on pattern card?”

Classroom Volunteer:

Circulate to check for correct calculations on basket design sheet and assist students if necessary. Check to make sure students start their basket pattern using $\frac{1}{2}$ ” reed at the bottom and end with a $\frac{1}{2}$ ” reed at the top. Pass out/collect reed chip, design sheet and art portfolio.

Reflection:(8 Min)

- Teacher should model possible language structure to be used during reflection: share out in front of class something that was a **challenge** (hard, difficult, or confusing) during the lesson. They will then share their **positive** (what was fun, exciting, wonderful, learned) with students.
- **Guiding Questions:** Was creating the pattern for your self-identity basket a challenge and/or positive? Why?

Compliment Circle:

Teaching Artist will model compliment circle based on day’s activity. Students will share a compliment with each other. Make sure to emphasize saying “thank you” after each compliment.

Clean Up:(2 Min)

- Students will place design sheet inside art portfolio and stack art portfolios in middle of the table groups for Teaching Artists or volunteers to collect.
- Students will stack Pattern Cards in the middle of table for Teaching Artist to collect.
- Help by putting reed chip into zip lock bags and put crayons back in boxes for volunteers to collect.

Closure: (5 Min)

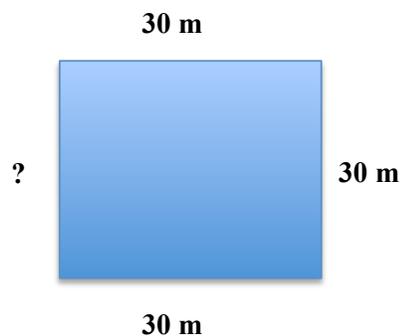
- Tell students, “Today you completed your design for your self-identity basket using art and math. This week we focused on perimeter, so let’s review the perimeter formula one more time.”
- Tell students, “I will ask what is the formula for perimeter? As class, you will have to tell me the formula and show me with your fingers.”
- Say, “Next week, you will get to find the perimeter of irregular shapes.”

Problem A

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.



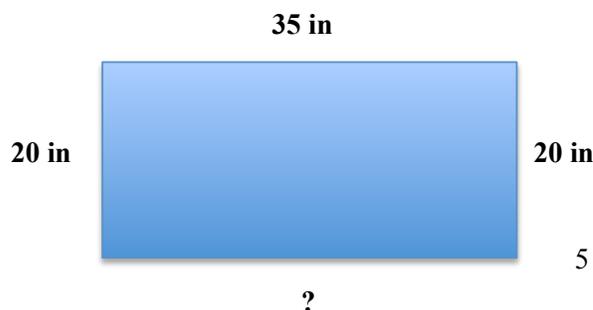
Perimeter=_____

Problem B

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.



Perimeter=_____

01/30/14 SK

Problem C

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.

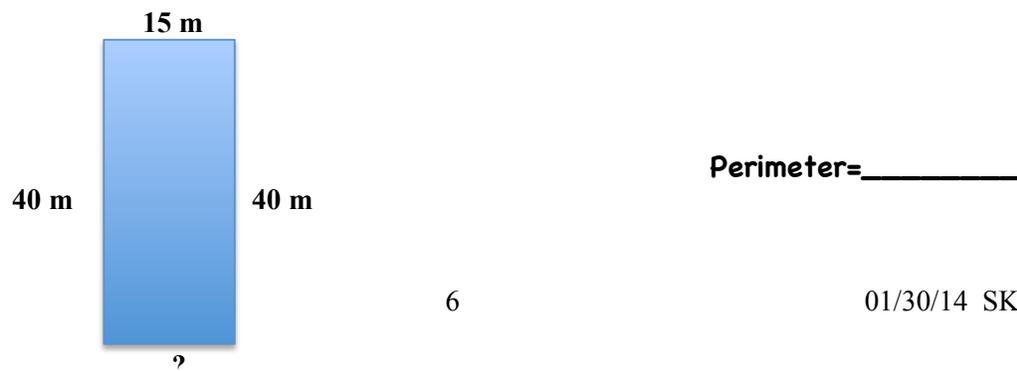


Problem D

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.



6

01/30/14 SK

ANSWER KEY:

Calculating the Perimeter of Regular Shapes

Problem A: Perimeter= 120 m

Problem B: Perimeter= 110 cm

Problem C: Perimeter= 80 in

Problem D: Perimeter= 110 m

ANSWER KEY:

Calculating the Perimeter of Regular Shapes

Problem A: Perimeter= 120 m

Problem B: Perimeter= 110 cm

Problem C: Perimeter= 80 in

Problem D: Perimeter= 110 m

Other Attachment File(s)

* **Mandatory Other Attachment Filename:**

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84.351D - 2014 Application
Dramatic Results: *Making It REAL: Math*

Other Attachments Form
APPENDICES

(Please scroll down this document to access each appendices item)

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LONG BEACH UNIFIED SCHOOL DISTRICT

SERVING LONG BEACH, LAKEWOOD, SIGNAL HILL
AND AVALON

OFFICE OF THE SUPERINTENDENT
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April 22, 2014

Asheley McBride, Management and Program Analyst
Members of the 2014 Review Panel
Arts in Education Model Development and Dissemination Program
Office of Innovation and Improvement
U.S. Department of Education
400 Maryland Avenue, S.W., Room 4W240
Washington, D.C. 20202-5950

Subject: CFDA #84.351D – Arts in Education Model Development and Dissemination Program

Dear Ms. McBride and Members of the Review Panel:

The Long Beach Unified School District (LBUSD) has earned a reputation as one of America's finest school systems, winning many awards as a national model of excellence. LBUSD was named a national winner of the Broad Prize for Urban Education, recognizing America's best urban school system for increasing student achievement. LBUSD also has been a five-time finalist for the prize.

Established in 1885 with fewer than a dozen students meeting in a borrowed tent, LBUSD now educates 81,000 students in 84 public schools in the cities of Long Beach, Lakewood, Signal Hill, and Avalon on Catalina Island. The third largest school district in California, it serves the most diverse large city in the United States, with dozens of languages spoken by local students.

While we are proud of our national reputation for outstanding progress as an urban school district, we need solid partnerships with the community if we are to succeed in meeting our challenges. Dramatic Results has demonstrated commitment to and measurable success with serving our students and teachers of the past 22 years. We have also been privileged to work in partnership with Dramatic Results with 3 AEMDD grants (2003, 2006 and 2010) using their **Math in a Basket** and **Write-On Arts** curricula, resulting in measurable improvements in students' math gains and classroom teachers' knowledge, comfort and efficacy in integrating arts into their core instruction, meeting the needs of the whole child. District funding makes it possible for **Math in a Basket** to now serve our mild/moderate special education students – both as an in-class program and as part of our Extended School Year program.

We are supportive of Dramatic Results' efforts with this proposal under 84.351D in 2014 for the **Make It REAL** program to develop and expand their Math in a Basket (math/traditional arts integrated) program and successful professional development model from the Write-On Arts program to integrate iPad technology to support LBUSD's Strategic Plan (2011-2016) with the focus on providing all students with as many post-secondary options as possible. Dramatic Results has worked closely with our Technology Curriculum Leader to ensure that their arts-integrated delivery model for this **Make It REAL** program supports our CCSS K-12 Technology Scope and Sequence.

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Make It REAL will serve a total of 1,680 fourth grade LBUSD students from Title I, K-5, campuses and 16 generalist classroom teachers with rigorous scientifically based research methods to assess whether sustained engagement with arts integration (both via hands-on learning and iPad technology) can measurably impact and sustain improved student engagement and academic performance, especially in math. Each student will participate in this program for one year. Each of the 16 classroom teachers will participate in this program for three years.

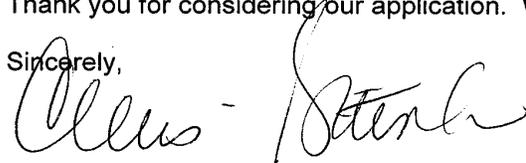
LBUSD has made great strides to reform and enhance our traditional core academic programs to include the arts. However, like every other school district, student needs are greater than our resources. Based on Dramatic Results' 22-year record with LBUSD, their arts-integrated programs and professional development for our generalist classroom teachers, they have provided a comprehensive linkage between LBUSD, community artists, private funders and cultural institutions to ensure that our inner-city students and classroom teachers are trained in the best practices in arts education, together with the academic frameworks to which they are held accountable. **Make It REAL** fosters positive relationships between teaching peers, principals, parents, artists and the community to sustain their involvement with the arts and create a community of learners who understand and continue to develop a full set of skills required today of good educators everywhere. With 65% of our students qualifying for free or reduced lunch, we have a large number of students and elementary school teachers that would benefit from this program. That is why this 2014 **Arts in Education Model Development and Dissemination** grant partnership with Dramatic Results is so exciting to us.

Dramatic Results will actively promote the dissemination and public awareness of this program through exhibits of students and teachers' work in public venues (libraries, district offices, cultural institutions from our greater L.A. community, presentations to professional association and cultural festivals), together with oral presentations by students to families and peers through in-class presentations, on-line communities, PTA workshops and back to school and open house nights. Their arts-integrated lesson plans and evaluation are easily accessible on the Dramatic Results website and include presentation of the process, outcomes and products created by students and teachers. Dramatic Results has also proven successful in expanding partnership to support their programs to benefit our students through private funding these 22 years.

We believe our long established relationships, the momentum that has been established with the three AEMDD grant programs, LBUSD's national recognition for our outstanding programs and high need student population make us an ideal candidate for this 2014 **Arts in Education Model Development and Dissemination** grant program.

Thank you for considering our application. We believe we are a winning team!

Sincerely,



Christopher J. Steinhauser
Superintendent of Schools



OFFICE OF RESEARCH, PLANNING, AND EVALUATION

1515 Hughes Way, Long Beach, CA 90810

Telephone: (562) 997-8226 Fax: (562) 997-8289

April 22, 2014

Asheley McBride, Management and Program Analyst
Members of the 2014 Review Panel
Arts in Education Model Development and Dissemination Program
Office of Innovation and Improvement
U.S. Department of Education
400 Maryland Avenue, S.W., Room 4W240
Washington, D.C. 20202-5950

Subject: CFDA #84.351D – Arts in Education Model Development and Dissemination Program

Dear Ms. McBride and Members of the Review Panel:

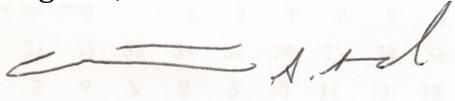
This letter represents a commitment by Long Beach Unified School District (LBUSD) to provide continued school and classroom access to the **Make It Real** program. Dramatic Results has been working with LBUSD for the past twenty-two years and we look forward to a continued future partnership.

According to information received from Dramatic Results, the proposed 2014 **Make It REAL** program will expand their Math in a Basket (math/traditional arts integrated) program to include their professional development model from Write-On Arts (language arts/visual/theater arts integrated) and integrate iPad technology to support LBUSD's Strategic Plan (2011-2016). The **Make It REAL** program will directly serve 1,680, fourth-grade, students and 16 generalist classroom teachers over three years. Each student will participate in this program for one year. Each of the 16 classroom teachers will participate in this program for three years.

For the evaluation, three to five schools will be randomly selected to receive the **Make It REAL** program. LBUSD's Research and Evaluation unit will provide the program and evaluation team with a list of schools who fulfill the criteria as outlined in the grant (CFDA #84.351D). From this list, 3-5 schools will be randomly selected to participate in the program. Schools not selected will be used as control schools for comparison purposes. The evaluation team will complete our IRB process and then be granted access to standardized test scores for students in treatment and control schools. In addition, the evaluation team will be granted access to conduct

student and teacher focus groups, and administer student and teacher surveys. **Make It REAL** will receive additional support from our District Visual Arts Curriculum Leader, Math Curriculum Leader and Technology Curriculum Leader in a training capacity and in the collection of evaluation data via classroom observations, focus groups and review of program documentation. LBUSD fully supports **Make It REAL** and we hope to provide any needed assistance to **Make It REAL** program staff and evaluation team.

Regards,

A handwritten signature in black ink, appearing to read "C. Lund", is written over a light-colored rectangular background.

Christopher Lund, Director
Research, Planning and Evaluation

From: **Anne McConaghy** <amcconaghy@lbschools.net>
Date: Sun, Apr 27, 2014 at 9:45 AM
Subject: Re: Testimonial?
To: christi@dramaticresults.org

Sorry Christi, I have been gone. Hope I am not too late.

To Whom It May Concern:

I am a 4th grade teacher at Whittier Elementary School in the Long Beach Unified School District. I have had Math in a Basket in my classroom for more than 7 years. I have also asked for them to return every year for the last 5 years. Over these years, all my students have benefited and enjoyed the program. The curriculum teaches math with hands on activities and relates the concepts to the students' daily life. There is also social studies' connections studying the basket making and cultures of California Indians. The best part is allowing art curriculum to be integrated into math and social studies, and seeing how it helps students learn.

I feel that Math in a Basket supports the CCSS standards, by teaching the concepts in different modalities, and challenging the students to discover the concepts on their own with activities that support the curriculum. Since we are moving more into technology to meet CCSS standards, I have been anxious to use my iPad to support the students' questions and learning. I think the integration of Math in a Basket curriculum with this technology will be invaluable to the students.

Sincerely,
Anne McConaghy
4th Grade - Whittier Elementary

Christi Wilkins
4142 Elm Avenue, #306
Long Beach, CA 90807
Christi@dramaticresults.org

Education

- 2004 Professional Designation in Arts Education, **Los Angeles County Arts Commission**
- 1996 Leadership Certificate Program, **Leadership Long Beach**, Long Beach, CA
- 1984 B.A. in Sociology/Ethnology from **Wilson College**, Chambersburg, Pennsylvania

Experience

- 1992 – **Founder/Executive Director – Dramatic Results**
- Present Launched Dramatic Results with a seed grant of \$2,500 and a dream to create ways for students to positively express themselves through art while becoming engaged in learning. Since Dramatic Results' first pilot program for 15 students in Long Beach 21 years ago, the agency has served more than 19,000 Long Beach students. Annual independent evaluation has shown that 75% of Dramatic Results' students significantly increase their academic and behavioral performance at school as a result of our programs. My role, as Executive Director, includes overseeing all operations, development and dissemination efforts.
- 1989- **Grant Writer - Stop-Gap Theater Company, Santa Ana, CA**
1992 Responsible for the 50% growth in their operating budget over three years, including the development of fee-for-service contracts with schools totaling more than 20% of their budget in less than two years.
- 1988 **Marketing Consultant – Royal Institute of British Architects, London, UK.** Conducted focus groups with architects/engineers on building supply use/preferences to gauge market share/growth potential for both British and U.S. suppliers.
- 1984- **Business Manager, Architecture Magazine, American Institute of**
1987 **Architects, Washington, D.C.**

Awards/Recognition

- 2010 – **Amazing Woman – Arts & Culture** award from the Press-Telegram
- 2008 - **Woman of Distinction in Education** award from the Long Beach Soroptimists Int'l
- 2007 – **Vital Factors** – a full chapter in management excellence book (Josey & Sons)
- 2004 – **Capacity Build** award from the Long Beach Nonprofit Partnership
- 1996 - **Friend of Education** award from the Teachers Association of Long Beach (TALB)

Conference Presentations: Town Hall L.A., Arts Education Partnership, National Arts Education Association, California Arts Education Association, U.S. Department of Education's OII/AEMDD Conferences, and Association of California School Administrators

Press: San Diego Tribune (2007), National Public Radio (2001), Los Angeles Times (1997) and Long Beach Press-Telegram(1994)

Lucinda S. Rudolph
California Teaching Credential- Single Subject - Art

Academic Background:

- 2005 – 2008 **California State University, Long Beach**
Single Subject Teaching Credential Program - **Art**
• Credential awarded January 2008
- Educational coursework included multicultural classrooms, CLAD, Exceptional learners, aesthetics, and intercommunity education and awareness.
- Summer Arts Program Drawing and Painting in Florence, Italy 2006
- 1990 -1996 **University of California, Los Angeles**
Certificate in Environmental Arts and Interior Design
- 1978-1980 **University of Southern California**
Master of Business Administration - Marketing Management
- 1973 – 1977 **University of Southern California**
B.S. Business Administration, Cum Laude

Education Experience:

- Jan. '09 to **Director of Arts Education – Dramatic Results, Long Beach, California**
Current Non- profit Agency promoting academic success through arts integration. Curriculum development, staffing and monitoring 8 teaching artist staff.
- Fall 08 **Long Term Substitute Art – Shery High School , Torrance Unified**
Develop and instruct contract - based arts curriculum. Alternative school teaching at-risk students.
- Summer 08 **Art Teacher Summer School - Venice High School, LAUSD**
Developed and taught Painting summer school program.
- May-June 2008 **Long Term Substitute Art - Los Angeles Center for Enriched Studies LAUSD.** Completed 2008 school year as replacement teacher developing curriculum, teaching and final assessment of students. Beginning design through painting.
- May 2008 **Consultant – Hudson K-8 IB School.** Developed Curriculum to be implemented by existing teacher base to meet VAPA standards.

Spring 2008 Substitute Teacher – **Long Beach Unified School District**

Fall 2007 Student Teacher – **Millikan High School**, Long Beach

Spring 2007 Project Educator with University Art Museum -**CSULB**

Business Experience:

1997-2005 **Rudolph/Design**, Principal/Designer
Commercial and Residential Architectural and Interior Design
Palos Verdes / San Pedro, California

1993- 1997 **Creative Resource Associates.**
Designer/ Commercial Design, Los Angeles, California.
Restaurant, Hotel, and Timeshare Design.

1987-1989 **Watco-Dennis Corporation**
Vice President, Marketing and Sales
Rancho Dominguez, California.

1980-1987 **Carnation Company/ Nestle Corporation**
Product Manager, Food Service Division
Los Angeles, California

Art Affiliations and Community:

Studio Artist Residency Program - Angels Gate Cultural Center, San Pedro, CA
LBCreative - A collaboration of local artists and organizations working together to
strengthen the arts and culture in Long Beach. Youth arts initiative.

Art Exhibitions and Shows:

“Taste of San Pedro” – August 2009
Cannery Row – Certificate of Appreciation- July 2009
“Home”. - Juried Group Show –February 11-15, 2007 Gallery CSULB
“Untrue Confessions” - Art Education Juried Student Show -2006 CSULB
Foundation Show –2006 –Werby Gallery, CSULB

Service and Professional Associations

CAEA – California Art Educators Association
House of Hope – Woman’s Recovery Center – San Pedro, CA.- Artist, Mentor.
Sandpipers – South Bay Philanthropic organization.

Lucinda S. Rudolph
(310) 748 9418
email: flmingo55@aol.com

PR/Award # U351D140076

Page e125

SAMAI KHOM

1685 EAST PLYMOUTH STREET, LONG BEACH, CA 90805
SAMAIKHOM@GMAIL.COM
(562) 519-4246

Professional Profile

- Motivated, enthusiastic, and creative Teaching Artist with an emphasis on visual arts.
- Dedicated Teaching Artist with over 7 years experience teaching meaningful curriculum and developing young minds.
- Effective in managing students and maximizing learning opportunities in diverse classroom settings.
- Adaptable and the ability to work with children of various intellectual, behavior, and physical challenges.
- Dedication to continuous professional development, communication with teachers, and providing relevant teaching strategies for effective learning.
- Excellent in parent-teacher communication record and student motivation techniques.
- **Bilingual** - Khmer

Education and Certification

2005 Individualized Education Plan (IEP) Interpreter Training,

Long Beach Unified School District, Offices of Special Education
1515 Hughes Way, Long Beach, California 90810

Current- California State University Long Beach

Major: Liberal Arts History/ Social Science: California Studies

Teaching Emphasis: Cross-Cultural Education, Child Development, Language Acquisition, Computer Technology in Education, Art, Adolescence and the Child, Exploring, Music Geometry and Measurement for Elementary Teachers

Service Learning: 120 Hours of Classroom Service Learning

Professional Experience

August 2004 – Current Program Coordinator - Dramatic Results Educational Arts Agency,
3310 Lime Ave., Signal Hill, CA 90755

Planning and implementing curriculum for LBUSD. Specializing in integrating Standards-based Math, Science and Language Arts with Visual and Performance Arts where the focus is child – based. Promotes student interest and receptive learning through hands-on art integrated experiences.

- Planning, developing, and conducting Professional Development workshops; for current Long Beach Unified K-5 teachers with a balanced program of instruction, demonstration, and work time that provided teachers with opportunities to observe, question, and investigate.

- Presented at 3 educational conferences to audiences of 60+ teachers and leaders/educators in the field.
- Operated afterschool programs for Long Beach and Compton Unified School District for children 8 to 13 years old and handled all aspects of planning curriculum and activities. Developed interesting curriculum to meet academic, intellectual and social needs of students.
- Coordinated and scheduled afterschool programs and assumed major responsibilities in planning and follow-up with staff.
- Organizing and participating in special outreach program to promote community awareness with active participation and creating a fun environment.

2002-2004 Assistant to Director of Healthy Start - Willard Elementary School,

1055 Freeman Ave., Long Beach, Ca 90804

Assisted in preparing agendas and reports for meetings. Transcribed meeting minutes and maintained databases. Managed heavy calendar schedule. Planned and coordinated weekly parent workshops with guest speakers and/or educators. Ordered and maintained program supplies and materials. Created and produced parent workshop flyers and arranged childcare providers for appropriate workshop dates.

Courses, Workshops, Student Programs

Facilitator/ Trainer/ Leader:

Opening The Gates: Juneau, Alaska (Jun 2013) **Lead Teacher**

SOCES - MIAB (Math in a Basket) Pilot Program (Mar 2012) **Lead Trainer**

West Ed K-12 Alliance (Jan 2012), **Project Manager**

High School Service Learning **Coordinator**, *Dramatic Results 20th Anniversary*

Latino Outreach Festival / CSU Dominguez Hills, (2012) **Lead Trainer**

Long Beach City College Young Educators with Project Rise (Apr 2012) **Lead Trainer**

High School Service Learning **Coordinator**, Learning Forward Conference (Dec 2011)

Family Community Outreach Workshop/ Burnett Elementary (May 2010) **Facilitator**

Urban Green Community Outreach Workshop (Apr 2010) **Facilitator**

Long Beach Open Studios Community Event (Oct 2010) **Coordinator**

Villages at Cabrillo Project **Key Collaborator** w/ CSU Long Beach Business Students

Beyond Basketry Teacher Training (Spring Fall 2008) **Lead Teacher**

Migrant Ed Art Camp for K-12 Students (Aug 2007) **Lead Teacher**

Summer Art Camp at Long Beach Art Museum (May 2006) **Lead Teacher**

The Long Beach Art Museum (Toyota Children's' Gallery) **Facilitator:**

Classroom Teachers and Student's Baskets (May 2006)

Cultural Presentation Partner w/ Kimberly Morales -Johnson (Gabrielino Tongva Representative) School Sites with LBUSD and CSULD (2006-2009)

NUTTIPOORN MASUK (GIFT)

837 5th st, APT 6 , Hermosa Beach, CA 90254 • gift.masuk@hotmail.com • (310) 956-8070

MY CURIOSITY TO LEARN AND ADAPTABILITY MAKE ME OUTSTANDING.

EDUCATION

2008-2010 **Master of Business Administration**, specializing in International Business
National University, Los Angeles, CA

2003-2007 **Bachelor of Arts in Business French**, minor in Marketing
Assumption University, Bangkok, Thailand

EXPERIENCES

JAN 10–PRESENT **Dramatic Results** – *Signal Hill, CA*

Teaching Artist/Evaluation Coordinator for Write-On Arts Program- assist students to achieve their academic goals by fostering creativity and incorporating arts, basketry and cultures into core academic subjects. Plan and conduct professional developments and coordinating the teachers and student's evaluation and data collections.

APR 09–PRESENT **Bridge Languages** – *Denver, CO*

Independent Translator- perform the interpretation, translation and related services required by Bridge Languages for the benefits of its clients.

JUN 10– SEPT 11 **3 Days Flooring & Kitchens** – *Torrance, CA*

Sales Representative/Customer Service – demonstrate and carry out sale transactions of its products and services. Establish, develop and maintain business relationships with current and prospective customers.

JUL 08 – JAN 09 **Global Campus Management** - *El Segundo, CA*

Student Ambassador - mainly responsible for school newspaper, *NU Newsletter*: writing articles, format and layout setting. Look up or create activities for and

assist International students (to make sure that they have comfort and fun living and studying abroad) and perform day-to-day task.

MAR 07 **Assumption Universities – Bangkok, Thailand**

Master of Ceremony: French National Day celebration, translate speech from French to English for authorities, to participants.

MAR – JUN 06 **Six Flags Magic Mountain - Valencia, CA**

Ride Operator - Operate ride, safety check, and give spiel to riders for ride instructions, regulations and safety.

ACADEMIC AWARD

- Jun 7, 2006: Academic Honor for academic year 2/2005 with G.P.A of 3.60 at Assumption University, Bangkok, Thailand.

SKILLS

- English, French & Thai (Mother Tongue).
- Proficient in Internet and Microsoft Office: Word, Excel and Power Point under Windows 98/XP/VISTA and MAC operation system.

COMPETENCIES AND PERSONALITIES

- Curiosity to learn and Adaptability.
- Welcome the challenge of problems solving, hard working, creative, and team oriented.

References available upon request

SAMAI KHOM

1685 EAST PLYMOUTH STREET, LONG BEACH, CA 90805
SAMAIKHOM@GMAIL.COM
(562) 519-4246

Professional Profile

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- **Bilingual** - Khmer

Education and Certification

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- SOCES - MIAB (Math in a Basket) Pilot Program (Mar 2012) **Lead Trainer**
- West Ed K-12 Alliance (Jan 2012), **Project Manager**
- High School Service Learning **Coordinator**, *Dramatic Results 20th Anniversary*
- Latino Outreach Festival / CSU Dominguez Hills, (2012) **Lead Trainer**
- Long Beach City College Young Educators with Project Rise (Apr 2012) **Lead Trainer**
- High School Service Learning **Coordinator**, Learning Forward Conference (Dec 2011)
- Family Community Outreach Workshop/ Burnett Elementary (May 2010) **Facilitator**
- Urban Green Community Outreach Workshop (Apr 2010) **Facilitator**
- Long Beach Open Studios Community Event (Oct 2010) **Coordinator**
- Villages at Cabrillo Project **Key Collaborator** w/ CSU Long Beach Business Students
- Beyond Basketry Teacher Training (Spring Fall 2008) **Lead Teacher**
- Migrant Ed Art Camp for K-12 Students (Aug 2007) **Lead Teacher**
- Summer Art Camp at Long Beach Art Museum (May 2006) **Lead Teacher**
- The Long Beach Art Museum (Toyota Children's' Gallery) **Facilitator:**
Classroom Teachers and Student's Baskets (May 2006)

Cultural Presentation Partner w/ Kimberly Morales -Johnson (Gabrielino Tongva Representative) School Sites with LBUSD and CSULD (2006-2009)

Laura Duphily

lduphily@gmail.com

Phone 562-756-6448 Fax 562-439-6103

4035 E. Colorado St.
Long Beach, CA 90814

Education

California State University, Long Beach

Bachelor of Fine Arts in 3-D Media

Major: Fiber

Graduated: December 2008

Skills

- Highly creative
- Proficient in textile design/processes: dying, weaving, felting, pattern design
- Learns quickly
- Strong color theory sensibilities (advanced color theory course taken with certification)
- Quality drawing skills
- Excellent written and verbal communication skills

Exhibitions

Group Exhibitions

- 2009 *FUSE*, Belmont Music Studio, Long Beach, CA
- 2008 *Insights* The Annual Student Art Exhibition, University Art Museum, Long Beach, CA

Solo Exhibitions

- 2008 *BFA Senior Exhibition*, CSULB Dutzi Gallery, Long Beach, CA

Experience

Dramatic Results, Signal Hill, CA
Teaching Artist

July 2009 - Present

Next Level Apparel, Rancho Dominguez, CA
Customer Service Representative

December 2008 - July 2009

- Maintaining relationships with customers and the public
- Using knowledge of textiles to aid in consultation with customers
- Accurate and efficient entering of purchase orders
- Managing multiple office duties including: multi-line phones, e-mail, and faxes

Long Beach Unified School District, Long Beach, CA

Kids' Club (Fremont Elementary)
College/ Recreational Aide

September 2006 - December 2008

- Supervised and engaged with elementary age students
- Organized and planned group games for 10-30 kids
- Tutored in math, science, reading, and language arts
- Counseled students in conflict mediation

Kids' Club (Henry Elementary)
College Aide

September 2005 - June 2006

- Supervised and engaged with elementary aged students
- Developed and coordinated crafts for 60 kids ages 5-11
- Encouraged students while providing homework assistance in all subject areas
- Worked with a diverse student population

Guidance Opportunity Classroom
College Aide

January 2004 - June 2005

Raquel Lira
814 ½ Wilmington, Ca. 90744
(310) 308-6276
Lira_Raquel@yahoo.com

Professional Profile

- Creative Visual Artist
- Hold a Bachelor of Arts degree in Art Education.
- Experienced in teaching to diverse populations.
- Dedicated to enthusiastic and dynamic teaching as a means of creating and nurturing a lifelong love of learning and creative expression.
- Superior interpersonal and communication skills to foster meaningful relationships with students, staff and parents.
- **Bilingual**- Spanish

Education, Honors, and Certifications

2008 Professional Artist School-Based Administrator Training Program. LOS ANGELES COUNTY ARTS COMMISSION 1055 Wilshire Blvd Suite 800 Los Angeles, CA 90017

B.A. Art Education, California State University Long Beach

1250 Bellflower Boulevard, Long Beach, California, 90840

Graduated Cum Laude 3.67 G.P.A. 2007

A.S. Art, El Camino College

16007 Crenshaw Boulevard, Torrance, California, 90506

Graduated with Honors 3.8 G.P.A. 2005

Pi Lambda Theta

International Honor Society and Professional Association in Education Member

Employment/ Experience

Teaching Artist – Dramatic Results Educational Arts Agency. 3308-10 Lime Ave. Signal Hill, Ca. 90755. (562) 595-4600 September 2007 – Current. Writing and Implementing Curriculum for Long Beach and Compton Unified School Districts. Integrating Standards based Math, Science and Language Arts with the Visual and Performance Arts through placements in Classrooms, After school programs and Community outreach settings. Presenting professional development instruction for current Long beach and Compton Unified k-6 teachers in the subject of Arts Integration and art production.

Instructional Tutor, Placed at Edison Elementary School Long Beach through the Center for Language and Minority Education and Research. 625 Maine Ave. Long Beach, Ca. 90813 October 2006 to May 2007. Implemented Specially Designed Academic Instruction in English at the Kindergarten level bridging the instructional gap for English Language Learners.

Teaching Artist – Arts and Social Action, CSULB in collaboration with Mary Knoll NGO Little Sprouts, Phnom Penh, Kingdom of Cambodia. January 2, 2007 to January 21, 2007. Writing and Implementing Arts Curriculum to service HIV positive, orphaned children ages 3-16. Utilizing the therapeutic aspects of art and art production through various visual and performance art projects at the group home.

Teaching Artist – Young Artist’s Summer Camp at CSULB. 1250 Bellflower Blvd. Long Beach, Ca 90840. Summer 2006. Writing and Implementing Arts Curriculum to service children of all age groups in Ceramic and mixed media sculptural projects.

Teaching Artist – Arts and Services for the Disabled, 3962 N. Studebaker Rd. Ste. 206 Long Beach, Ca 90980. February 2006 to May 2006. Writing and Implementing Arts Curriculum servicing Physically and Developmentally Disabled Adults in multiple art forms and mediums. Curator for culminating art show CSULB art gallery.

STEVEN URUBEK

5515 Iroquois Ave, Lakewood, CA 90713
Cell: (562) 810-8384
STEVENURUBEK@YAHOO.COM

PROFESSIONAL SUMMARY

I'm a multi-talented Illustrator skilled in several artistic mediums, ranging broadly from traditional to digital. As well, I am motivated to work on all projects collaboratively with the design team. From conception through to final production I provide as much positive input as possible to benefit the final outcome of any project.

As an artist new to the workforce, I have not learned any poor work habits. I am ready to be surrounded and influenced by talented artists and diligent coworkers.

SKILLS

Well Versed in Adobe Illustrator and Photoshop	VERY Fast Learner
Knowledge of Print/Silk Screen Color Separation Processes	Hard Working
HIGH Attention to Detail	Dependable

WORK HISTORY

Teaching Artist August 2013 to Present

Dramatic Results - Long Beach, CA

Working directly with elementary school students, on campus during school hours, teaching an arts integrated curriculum. Responsibilities also include creating graphics and videos for instruction.

Kevin Tong Illustration

January 2013 to Present

Intern

Assisting the artist in day to day responsibilities and tasks while simultaneously learning the ins-and-outs of the professional illustration business.

Valet/Ticketer

April 2011 to April 2013

Ameripark Valet - Long Beach, CA

Park and retrieve vehicles, greet customers and explain pricing

Freelance Design/Illustration

September 2010 to Present

Self Employed Illustrator - Long Beach, CA

Working with clients on a variety of projects ranging from traditional portraiture and murals to T-shirt design

Food Server/Event Setup

May 2007 to Present

Orange County Catering - Costa Mesa, CA

Traditional food service for events like weddings and birthdays. Personally seeing that every client is satisfied while simultaneously working with a team to satisfy the events requirements.

Cashier

May 2007 to April 2011

Pierpoint Landing - Long Beach, CA

Answering telephones, managing the register, handling cash register money, stocking

EDUCATION

California State University Long Beach

2007-2013

Long Beach, CA

Bachelor of Arts: BFA ILLUSTRATION

STEPHEN YEOH, MBA, PMP

Stephen@un1tee.com

6028 Alexandra Ct
Oak Park, CA 91377
805-835-4352

UN1TEEE

2009 - Present

Managing Director

- Guide clients in the development of strategic software to improve their business
- Member, Apple Consultant Network
- One of 30 in the world to receive advanced Mobile Device Management from Apple
- Develop and maintain relationship with business owners and executives. Work as a trusted partner, providing consulting services to solve business problems and develop consensus support for their chosen solutions
- Develop and present proposals to senior management
- Focused on delivering added value by examining business process from end to end to identify areas for simplification or automation
- Strategic partner, assisting with strategy, planning, budgeting and implementation
- Integrate disparate technologies and train users to maximize their efficiency

AMGEN

2006 – 2009

Business Analyst

- Implemented SharePoint integration with Documentum to enable cross-functional, global collaboration across 6,000+ Research & Development staff. Enhanced productivity by providing a consistent interface across all platforms
- Analyzed business process. Designed custom meeting sites in SharePoint (MOSS 2007), enhancing productivity by providing relevant information on the same screen
- Provided strategic guidance as subject matter expert for the Learning Management System (SumTotal), role based training, portal and collaboration technology for Amgen R&D
- Streamlined business process, architected portal configuration for key enterprise initiatives to maximize cross-functional collaboration
- Implemented document management strategies to minimize duplication of effort and automate the publication of key reports. Emphasis on facilitating ease of use while collaborating on projects
- Received multiple awards for quality of work, consistent on-time project completion and customer engagement

PRAXAIR

2005 – 2006

Project Manager

- Managed national deployment of the asset performance management product, Datastream 7i Mobile
 - Scope included vendor management, developing software testing scope, overseeing testing, resource planning, communication with stake holders
- Provided the analysis and documentation to abort an enterprise-wide deployment of immature mobile technology that failed to meet business needs. Saved \$250,000 in deployment costs

INDEPENDENT CONSULTANT

2004 – 2005

- Reduced a gift shop's printing expense 70% by optimizing form printing – observed workflow and resource utilization, developed alternative to reduce cost
- Developed Sarbanes-Oxley policies for a national security printer to comply with regulatory requirements
- Reduced daily e-commerce batch order processing time from 1 hour to 30 minutes for a million-dollar mail order business.
- Search engine optimization for web and e-commerce clients
- Reduced onsite processing time from 1.5 hours to 45 minutes by developing a custom online event registration system – built using LAMP.

COGNIGEN

1998 – 2003

Manager, Software Development, 1999 – 2003

Web Solutions Integrator, 1998 – 1999

- Managed and mentored a team of 15: 12 Java developers, two PHP developers and one Oracle database administrator – responsible for recruiting, staff development, conduct annual performance reviews.
- Implemented a proprietary web based collaboration and communication system developed in Java,
- Ensured software compliance with Food and Drug Administration regulatory requirements – interpreted 21 CFR Part 11 and HIPAA to define internal software audit scope.
- Directed application architecture, on-time delivery and development of product roadmaps
- Converted Waterfall SDLC to Agile methodologies, reducing timelines by 50% and errors by 75%
- Secured \$150,000 in State-funded training grants for the entire company – identified availability of funding, wrote and submitted grant proposal, managed compliance reporting.

OTHER EMPLOYMENT

1987 – 1998

IKON Technical Services, Buffalo, NY

Senior Network Consultant (1996-1998)

Systems Engineer (1996-1996)

University at Buffalo, Buffalo, NY

Network Engineer (1991-1996)

Software Engineer (1989-1991)

Millard Fillmore Hospital, Buffalo, NY - **Software Engineer** (1987-1989)

PROFESSIONAL CERTIFICATIONS

PMP	Project Management Institute's Project Management Professional Certification
MTC	Apple Mobility Technical Competency
ACSA	Apple-Certified Systems Administrator
ACSP	Apple Certified Support Professional
Linux+	CompTIA Linux Plus certification
Project+	CompTIA IT Project Plus Certification
MCSE	Microsoft-Certified Systems Engineer (including Microsoft Exchange)

EDUCATION

Pepperdine Graziadio School of Management

Masters in Business Administration, April 2011

University of Michigan at Ann Arbor

Bachelors of Science in Computer Science, May 1987

MILITARY TRAINING

Two-and-a-half years of service with the Singapore Armed Forces

Training: Basic Military Leadership, Signals Corps and Clerical

Awards: Company Best Trainee during Basic Training
Company Best Trainee during Section Leader Training
School Best Trainee during Section Leader Training (4 awards annually)



Marko Tasic

(312) 300-7500 • mtasic@goldfishbrain.com

CAREER SUMMARY

- Senior software developer/architect focused on highly-scalable applications and mobile applications and games
- Strong experience with the full-stack software from database to services to user interfaces
- Implementing software development life cycle policies and procedures
- Highly adaptable to rapidly-changing technical environments with very strong organizational and analytical skills
- Cloud Computing with OpenStack

PROFESSIONAL EXPERIENCE

Goldfishbrain LLC

Senior Developer

Chicago, IL

April 2014 – Present

Projects: web application development, website design, graphics design, mobile application and game development

Programming Languages: Python, PHP, JavaScript, Java, ObjC

Frameworks/Libraries: Cordova, PhoneGap

Environment: Linux, Windows, Mac OS X, Android, iOS

DCloud DOO

Managing Director and Senior Software Developer

Leskovac, Serbia

October 2013 – April 2014

Projects: Private cloud, cloud computing, hosting, data aggregation, online backup

Environment: Linux, OpenStack

DotCom

Lead Software Developer and Project Manager

Leskovac, Serbia | Beirut, Lebanon

July 2012 – October 2013

Projects: data aggregation, data analysis, PR clipping, language translation, automatic document classification, sentiment analysis, distributed task execution, mobile application development, game development

Programming Languages: Python, JavaScript, Java, C/C++

Tools/Systems: Cassandra, ElasticSearch, Redis, RabbitMQ, Moses, Tesseract Frameworks/Libraries: Celery, Scrapy,

Sentry, Django, Flask, jQuery, Underscore, Backbone, Bootstrap, UIKit

Environment: Linux, AWS, OpenStack

Kreative DOO

Managing Director and Senior Software Developer

Leskovac, Serbia

June 2011 – October 2013

Projects: web application development, website design, graphics design, mobile application development, game development

JoJo

Lead Software Developer

Leskovas, Serbia | Sydney, Australia

June 2011 – June 2012

Projects: Online backup storage service, ecommerce website, mobile application development

Programming Languages: Python, C, JavaScript

Frameworks/Libraries: Django, Flask, Redis, Sentry, jQuery, Underscore, Backbone, Qt/PySide

Environment: Linux, *BSD, Mac OS X, Windows, AWS

Atrrios DOO

Lead Software Developer and Project Manager

Belgrade, Serbia

February 2010 – May 2011

Project: AtrriosVPE (Atrrios Visual Programming Environment).

Visual development environment, or integrated development environment for visual programming for desktop and web.

Context-free programming environment: no strictly specialized. Dynamic programming environment; everything is changeable

Project: RadKit – web application utilizing open source software that allows fast design of multiplatform software applications to work equally well on Windows, Linux, BSD, Solaris and MacOS X operating systems and web browsers
Programming Languages: Python, C, C++, C#, Java, JavaScript, Lua
Frameworks/Libraries: Django, Flask, jQuery, Underscore, Backbone, Gt+, Qt, Tk/Tkinter, FLTK, Swing, Forms
Environment: Linux, *BSD, Mac OS X, Solaris, Windows, AWS

Radius South East Europe

Nis, Serbia

Lead Software Developer and Project Manager

November 2007 – November 2010

Project: Design and Implementation of Industrial Protocol Stacks Software and hardware development and research. Designing and implementing industrial protocol stacks (Modbus, DNP3, IEC, MPT1327, MAP27, and R4E3), remote configuring and unit testing applications for devices, programming embedded devices, distributed and decentralized highly reliable applications. Programming Languages: C, Python, Java
Environment: Linux, Windows

Project: Developed highly configurable environment for Rapid SCADA Application Development.
Programming Languages: C, Python, Java

Alfatec d.o.o.

Nis, Serbia

Lead Software Developer and Project Manager, Research and Development Center

November 2008 – June 2010

Project: Design and Implementation of SCADA and GIS
Software and hardware development and research. Designing and implementing new compression methods for small bandwidth communication channels, SCADA systems, GIS, alarming systems, industrial distributed measuring and monitoring systems. Research and development in field of software, hardware, electric power engineering and telecommunications, distributed and decentralized highly reliable applications.
Programming Languages: C, Python, Java
Environment: Linux, Windows

Project: Multi-Protocol Multi-Interface Framework
Designed and implemented Multi-Protocol Multi-Interface (MPMI) framework that is capable of running N protocol stacks on M interfaces, and also bridging, switching and routing communication between systems where such features and interoperability are not supported by default.
Programming Languages: C, Python, Java
Environment: Linux, Windows

Lead Software Developer, Faculty of Electrical Engineering

September 2007 – April 2010

Project: Intelligent Battery Charger with Mini-Telemetry Module Programming Languages: C, Python, Java
Environment: Linux, Windows

Project: Automatic Report Generator on Completed Control of Measuring Units in the Power Distribution Networks. Developed both desktop and web versions.
Programming Languages: C, Python, Java
Environment: Linux, Windows

EDUCATION

New York Institute of Technology

Manhattan, NY

Computer Science

August 2004 – May 2007

AWARDS

October Award for Outstanding Contribution to Information Technology from Leskovac Municipal Assembly, Serbia (October 11, 2004)

SKILLS

Design, implementation, optimization and testing of compilers, virtual machines, type/object systems, operating systems and kernels, wrappers, DBMS, data compressions, communication protocols, file formats, GUI toolkits, platform-independent software, 2D/3D graphics libraries, SCADA and GIS, smart-home, scalable distributed and decentralized highly reliable applications, fault-tolerant systems, scalable web applications, mobile applications, game development

LANGUAGES

English
Serbian

ENVIRONMENTS

Linux, BSD, Solaris, Mac OS X, Windows, Android, iOS, Windows Phone, OpenStack, oVirt, Amazon Web Services, Rackspace, Heroku, Google Cloud Platform

DATABASES & OTHER SERVICES

Cassandra, ElasticSearch, MongoDB, Redis, Sqlite, PostgreSQL, MySQL, Neo4j, nginx, apache, gunicorn, uwsqi, gevent, tornado, greenlet, RabbitMQ, ZooKeeper, ZeroMQ

FRAMEWORKS & LIBRARIES

Flask, Django, Celery, Scrapy, CodeIgniter, CakePHP, Zend, Cordova, PhoneGap, jQuery, Underscore, Backbone, Bootstrap, UIKit, Unity3D, GameMaker, GameClosure, Qt/PySide, Gtk+/PyGObject, FLTK, Tk/Tkinter, Swing, Forms

PROGRAMMING LANGUAGES

C, C++, C#, ObjC, Vala, Java, JavaScript, Python, Ruby, Lua, PHP, Basic, Shell, Lisp, Assembler, LLVM

Amanda J. Miles

(312) 718-2198 • aj@goldfishbrain.com

CAREER SUMMARY

- Drive thought leadership in a creative team-based setting
- Foster an environment that drives innovative and persistent problem-solving in a positive light
- Co-create technological solutions to modern business problems with the latest technology tools

PROFESSIONAL EXPERIENCE

Goldfishbrain LLC

Chicago, IL

Chief Creative Officer

October 2012 – Present

- Lead team of design professionals creating animations and original art in 2D, 3D and mobile games
- Conceptualize internal and third party products for design and development
- Provide detailed art and design direction and product multiple forms of documentation to guide project execution
- Provide client consultation on user interface architecture, user-driven feature design, product branding
- Create detailed user interface analysis and produce various user interface efficiency reports for clients

Jones Lang LaSalle

Chicago, IL

Senior Data Analyst

July 2010 – November 2012

- Support team members in meeting client metrics and business goals
- Served as singular technical resource in designing, programming, and debugging early tool prototype of Triple Crown Analytics tool (2011 DaVinci Award Winner)
- Workplace Excellence (WE) Award (August 2011)
- IBP quarterly award for CORE (Q3 2011)
- IBP monthly awards for One Bryant Park Fire Warden tool and CORE
- Won Monthly IBP Award in September 2011 and Quarterly IBP Award in Q3 2011 for leadership on CORE
- Primary or sole contributor in 14 projects:
 - Rosetta Update Program
 - 360 Engineering Overtime Report v1 & v2
 - OneView Server for 360 Tables
 - First and Second Green Belt
 - Database Aggregation
 - Triple Crown Analytics Tool
 - WO Cost Analysis Tool
 - CORE
 - Work Order Client Satisfaction Tool
 - HR Quarterly Metrics Report and Database
 - OVWO Disposed Site Reconciliation File
 - OVWO Supplier Validation Database for PMC

PepsiCo

Chicago, IL

SAP Business Warehouse Report Analyst

September 2009 – July 2010

- Led a cross-team data analysis project to compare the Gatorade Mountain Top network's safety stock levels and prove that inventory optimization software delivers capital savings over "tribal knowledge" and legacy systems
- Determined ideal objective hierarchy for transportation for Tropicana Bradenton with short shelf life products
- Designed the back-up reporting plan to deliver critical Business Warehouse reports in the event of system interface failures; utilized SQL and MS Access queries to ensure uninterrupted planning activities across business units
- Served as liaison between the Integrated Supply Chain Planning Center of Excellence business teams and the Advanced Analytics technical team

Logistics Supply Chain Associate

January 2008 – September 2009

- Member of technical project team responsible for developing, testing, end-user training and deploying in in-network transportation optimization software across Quaker, Tropicana, Gatorade and PCNA business units
- Designed multiple custom databases and reporting solutions in MS Access and Excel to derive project-critical scorecards, trackers and Key Performance Indicators
- Leveraged Access, Excel, Visual Basic, and SQL programming skills to join data sources for evaluation.
- Coordinated production planning end-users from Quaker, Tropicana, Gatorade, and PCNA and multiple technical and business teams to document, discuss, and track end-user software issues from discovery to resolution
- Traveled nationally to off-site end-user environments to create ad hoc reports and troubleshoot software solution issues regarding optimizer set-up changes, data gap resolutions, process changes and other site-specific challenges
- Worked effectively with Quaker, Tropicana, and Gatorade optimization software end-users and cross-team representatives to develop reporting solutions

Project One Up, Intern

May 2007 – August 2007

- Worked with the Tactical Capacity Planning Team to test and develop a custom SAP least-cost-solution supply chain optimization program for in-network material sourcing
- Outlined, managed and executed lengthy independent activities lists for internship on a day-to-day basis
- Developed and maintained an enhancement testing tracker system in Excel for regular reporting to management; used tracker to deliver objective-driven test results, number and type-distribution of issues found, and issue-resolution statuses from off-shore development team

University of Michigan – HUMOSIM, Data Processor

Ann Arbor, MI

HUMOSIM, Data Processor

May 2006 – April 2007

- Processed and digitally corrected VICON 2.0 HUMOSIM data for use in complex human motion simulation software for modeling human motion and physical responses
- Learned to use SIMION software rapidly, finishing analytical qualification first among summer data processing team
- Contributed to HUMOSIM Group strategic discussions on model design and development

NanoPos, Design Assistant

May 2005 – March 2006

- Simulated positron trajectories for University of Michigan Physics Department NanoPos positron beam design as primary SIMION computer programmer
- Developed multiple three-dimensional virtual electromagnetic lens simulations and accompanying quantitative analyses and variable trends on a daily basis. Served as an important asset to the team for quick simulation programming and quantitative trajectory evaluation
- Assisted in group discussions on model evaluations and the dynamics of developing the positron beam design, adding much feedback from my own simulation experience with SIMION
- Wrote formal reports, summaries, and model recommendations for the NanoPos positron beam designs to communicate between University of Michigan and North Carolina State University teams, which later contributed to various scientific article publications

Individuality

Chelsea, MI

Owner/Creator

August 2002 – September 2005

- Formulated, planned, and executed an effective model for own successful independent jewelry business at the age of 16
- Designed and manufactured original precious metal and crystal jewelry for independent sale and distribution via local fairs and art shows
- Demonstrated effective creative thinking and marketing skills when designing jewelry for Individuality, drawing an average of \$2,000 in revenue per fair or art show attended

EDUCATION

University of Michigan

Ann Arbor, MI

Industrial and Operations Engineering, BSE

GPA 3.4/4.0

August 2004 to December 2007

- Derivative Instruments, Economics, Probability and Statistics, Statistical Modeling, Basic Operations Modeling, Linear Algebra, Basic Computer Programming, Calculus, Markov Processes, Linear and Nonlinear Modeling, Queuing Systems, Manufacturing Strategies, Statistical Quality Control, Technical Communications, Windows Application Programming, Simulation Programming, Lean Manufacturing

Lynn Waldorf, Ph.D.

PO Box 5797 | Snowmass Village, CO 81615
303-351-1595 | lynn@thegriffincenter.org

EDUCATION

2005	Doctor of Philosophy , Arts Education Research University of California, Los Angeles, California
1989-1991	Visual Art Studies , Drawing and Painting California College of Art, Oakland, California
1986-1988	Visual Art Studies , Drawing and Painting Mira Costa College, Oceanside, California
1978	Bachelor of Science , Education Oregon State University, Corvallis, Oregon

AREAS OF EXPERTISE

- Arts education program design and evaluation
- Literacy development through arts-integrated instruction
- Professional artist
- Quantitative and qualitative research methods including paper and web surveys, rubric assessment, quasi-experimental designs, data analysis, field observation, individual and focus group interviews, video analysis, narrative analysis, coding and data triangulation
- Technical, academic, and general audience writing

EXPERIENCE IN ARTS & EDUCATION

2009-date	Executive Director/Arts Program Evaluator <i>Griffin Center for Inspired Instruction, Aspen, Colorado</i>
1992-date	Professional Visual Artist Aspen, Colorado
2007-2008	Principal Investigator <i>Mid-continent Research for Education and Learning, Denver, Colorado</i>
1998-2007	Arts & Learning Consultant Los Angeles, California
2001-2003	University Teaching Assistant: Graduate Statistics <i>University of California, Los Angeles, California</i>
1998-2000	Senior Project Coordinator/Arts Curriculum Writer <i>UCLA/Options for Youth 21st Century Curriculum Laboratory, Los Angeles</i>
1996-1998	Coordinator: Museum Docents/Student Art Programs <i>The Contemporary Museum, Honolulu, Hawaii</i>
1996-1998/ 1978-1980	Kindergarten Teacher & PreK-12 Substitute: All Subjects Tacoma, Washington; Ketchum, Idaho; and Honolulu, Hawaii

SELECT PROJECTS IN ARTS EDUCATION & INTEGRATED INSTRUCTION

- Principal Investigator, ***Write-On Arts: A Model Arts Education Model Development and Dissemination Grant***, U.S. Department of Education (2010-date)
Dramatic Results, Long Beach, California
- Principal Investigator, ***Arts for All: Los Angeles County School Arts Survey*** (2010-date)
Los Angeles County Arts Commission, Los Angeles, California
- Principal Investigator, ***Arts for All: The Vanguard Districts*** (2008)
Los Angeles County Arts Commission, Los Angeles, California
- Principal Investigator, ***Arts Impact Program Evaluation*** (2003-2005)
Puget Sound Educational Service District
- Principal Investigator, ***Art Central: A Yearlong Artist-in-Residence Program*** (2001-2003)
Armory Center for the Arts, Pasadena, California
- Principal Investigator, ***Performing Tree's Teaching Artist Training Program*** (2001-2003)
Performing Tree, Los Angeles, California
- Principal Investigator, ***Culver City Arts Partnership in Education*** (2002)
Performing Tree, Los Angeles, California

SELECT PUBLICATIONS

Books and Book Chapters

- Waldorf, L., McGreey-Nichols, S. and Yu, S. (2011). *Arts Education in Colorado: Guidebook and Resources*. Denver, CO: Colorado Department of Education.
- Waldorf, L. (2010). *Principal Dynamics of a Teaching Artist Residency: Mentorship, Collaboration and Assessment*. Saarbrücken, Germany: VDM Publications.
- Waldorf, L. (2008). Designing an in-school teaching artist training program. In *Evaluating the Impact of Arts and Cultural Education* (pp. 457-465). Paris, France: Centre Pompidou.
- Catterall, J. S. and Waldorf, L. (1999). The Chicago Arts Partnerships in Education: Summary evaluation. In E. B. Fiske (Ed.), *Champions of change: The Impact of the Arts on Learning* (pp. 47-62). Washington, DC: The Arts Education Partnership.

Selected Articles, Monographs and Technical Reports

- Dramatic Results (2012). *Write-On Arts! Annual Evaluation Report*. Waldorf, L. & Atwill, K. Colorado Creative Industries (2012). Success Through Art (StART) schools:13 cases studies of model arts programs. L. Waldorf.
- Los Angeles County Arts Commission (2011). Measuring quality, equity and access in art education: Summary report, Los Angeles County School Arts Survey. L. Waldorf & K. Atwill; S. Klatzker (Ed.).
- Los Angeles County Arts Commission (2010). Engaging senior leadership to advance arts in schools: An examination of Los Angeles County's Arts for All 2009-2010 Leadership Fellows Program. K. Levin & L. Waldorf; L. Chiavaroli & T. Gibas (Ed.).
- Waldorf, L. (2005). Assessment training for teaching artists. *Arts & Learning Research Journal*, Vol. 21/1, pp. 63-89.
- Los Angeles County Arts Commission (2011). Factor Analysis of the Los Angeles County School Arts Survey. K. Atwill & L. Waldorf.

KIM ATWILL

602.363.0622 | kim@thegriffincenter.org

EDUCATION

Ph.D. Educational Psychology, Arizona State University, Tempe, AZ, 2007

Emphasis: Learning, early childhood development

M.S. Education of Deaf and HH Children, Lewis and Clark College, Portland, OR, 1994

Emphasis: Language and literacy development among at-risk populations

B.A. Psychology, Stanford University, Stanford, CA, 1987

Emphasis: Developmental psychology, research methods

RELEVANT AREAS OF EXPERTISE

- ◆ Investigative research involving quasi-experimental and randomized control designs
- ◆ Program evaluation with focus on assessment development, data-driven decision making and improvement planning
- ◆ Provision of professional development activities for in-service and pre-service teachers
- ◆ Cognitive, linguistic, and social-emotional development of young children

PROFESSIONAL EXPERIENCE

Adjunct Professor, *Portland State University*

- Instructing courses in American Sign Language (undergraduate level)
- 2012-
present
- Creating syllabi aligned with sequential course structure
 - Developing in-class presentations, activities and assessments

Senior Director, *Griffin Center for Inspired Instruction*

- Creating program-specific professional development presentations and activities
- 2009-
present
- Building internal capacity for on-going program improvements
 - Initiating and integrating internal evaluation and data-driven improvement plans
 - Mentoring in-service teachers in observation and documentation of student growth
 - Coordinating and implementing external evaluation and survey protocols
 - Analyzing and summarizing data to prepare mid-year and final project reports

Adjunct Professor, *Lewis and Clark College*

- Instructed courses in Childhood Development and Learning (graduate level)
- 2012
- Developed in-class presentations, activities and assessments

Researcher, *Mid-continent Research for Education and Learning*

- Obtained \$10 million+ in external funding to improve classroom instructional quality
- 2007-
2009
- Created professional development materials based on program needs
 - Coached preschool instructional staff
 - Developed coaching materials to increase local capacity for self-assessment
 - Managed databases, analyzed data, and synthesized findings into final reports

Educational Diagnostician, *Phoenix Day School for the Deaf*

- Administered psycho-educational, behavioral and standardized assessments
- 1997-
2002
- Observed children's classroom behaviors to determine instructional modifications
 - Provided one-on-one and small group instruction for children with special needs
 - Prepared and explained Individualized Education and Family Service Plans (IEP/IFSP)
 - Implemented parent-child curriculum for families of children with special needs

SELECTED PROJECT EVALAUTION EXPERIENCE

Researching the Impacts of the *Write on Arts! Curriculum* (September 2010-now)

US Department of Education, Arts in Education Demonstration and Dissemination grant

Evaluation/Training of the Rocky Boy Coalition Early Reading First grant (Sep 2010- Sep 2012)

US Department of Education, Early Reading First

Evaluating Quality, Equity, and Access in Arts Education (April 2009-July 2010)

Wallace Foundation

Promoting DLLs' Language, Self-Regulation, & School Readiness (April 2009-September 2010)

US National Institutes of Health

A Study of the Differential Effects of ELL Training and Materials (June 2007-January 2009)

US Department of Education, Institute of Education Sciences, Regional Educational Lab

Minot, North Dakota Preschool Literacy Acquisition Collaboration (September 2008-January 2009)

US Department of Education, Early Reading First

Rocky Boy Coalition (August 2008- January 2009)

US Department of Education, Early Reading First

Let Me Play Head Start curriculum evaluation (September 2007- January 2009)

National Head Start Association

Arizona Center for Excellence in Early Education (June 2003-May 2007)

US Department of Education, Early Reading First

Navajo Nation Early Education Project (March 2004-March 2006)

US Department of Education, Indian Education

PROFESSIONAL AFFILIATIONS

- ◆ National Association for the Education of Young Children
- ◆ American Educational Research Association
- ◆ International Reading Association
- ◆ Society for the Scientific Study of Reading

CERTIFICATIONS

- ◆ Certified teacher of students who are Deaf, AZ; OR Initial Teaching License, in process
- ◆ Interpreter Quality Assurance System (IQAS) Level IV
- ◆ American Sign Language Teachers Association (ASLTA) Provisional, in process

HONORS

- ◆ Finalist, Dissertation of the Year, International Reading Association (*April, 2008*)
- ◆ Outstanding Service for Students, Disability Resources for Students, ASU (*May, 2004*)

COMMUNITY VOLUNTEER ACTIVITIES

- ◆ Member: Ready For Kindergarten collaborative of Multnomah County
- ◆ Staff Sponsor: Immigrant and Refugee Community Organization-Portland State University Outreach Project with refugees who are deaf.
- ◆ Community Coordinator/Vice-president: Riverview Neighborhood Association

kim@thegriffincenter.org

Budget Narrative File(s)

* **Mandatory Budget Narrative Filename:**

[Add Mandatory Budget Narrative](#)

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To add more Budget Narrative attachments, please use the attachment buttons below.

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DRAMATIC RESULTS

84.351D 2014 Application

Budget Narrative for 84.351D: Making It REAL: Math Year One – Planning/Preparation/Training

Budget Categories:

1. **Personnel - (\$180,808)**

Two teams of 3 **teaching artists (art team)** each works a total of 216 hours in Year One for: training in Making It REAL:Math curriculum, Math standards, Technology standards, program integration with iPad and coaching techniques; pilot program with two classrooms with 70, fourth grade students, attend program meetings, and participate in evaluation and assessments. Two art teams @ \$23.00 per hour, per person = 6 people x 216 hours = **\$29,808**.

The **Director of Arts Education @ .75FTE** will adapt Math in a Basket curriculum into Making It REAL: Math; train the art teams in Making It REAL: Math curriculum, Math and Language Arts Standards, coordinate technology training for staff with Technology Supervisor, develop and update integrated arts curriculum based on continuous monitoring, provide weekly on-site supervision for all program operations, coordinate integration and training with LBUSD visual art, math and technology specialists, order program supplies, provide oversight and coordination of campus protocols and program scheduling with campus administrators, schedule, curate and install displays of artwork within school, district and community sites (place-based and online) and participate in evaluation, assessments and dissemination projects. (\$71,000 % .75FTE = **\$53,250**).

The **Evaluation Liaison/Dissemination Coordinator @ .50FTE** will coordinate the accurate and timely administration of print and online evaluation and assessment tools for our independent evaluator team, create and keep updated web-based sites dedicated to this project, create electronic links with community and other professionals on this project through Open Education Resources (OER), coordinate translation and printing of all program materials into Spanish and Khmer and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$50,000 % .50FTE = **\$25,000**).

The **Volunteer Coordinator @ .10FTE** will recruit, ensure compliance with LBUSD's Volunteers in Schools (VIPS) program, support training in Making It REAL: Math program and support community volunteers to work alongside the Teaching Artists and Classroom Teachers to deliver in-class programs in Years 2-5. (\$45,000 % .10FTE = **\$4,500**)

The **Project Director @ .75FTE** will administer the grant, including overseeing the iterative feedback process on this project, producing all reports and budgets, supervision of staff, facilities and consultants, raise balance of funds to support this program beyond federal support, maintain and expand community relations, process all payroll and personnel paperwork, market program to other school/districts nationally, and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$91,000 % .75FTE = **\$68,250**).

2. **Fringe Benefits - (\$36,162)**

Art team benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$29,808 = **\$5,962**

Director of Arts Education benefits (payroll taxes, workers' comp, retirement benefits

1

and \$145/per mo. health insurance) @ 20% of \$53,250 = **\$10,650**

Evaluation Liaison/Dissemination Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$25,000 = **\$5,000**

Volunteer Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$4,500 = **\$900**

Project Director benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$68,250 = **\$13,650**

3. Travel - **(\$5,000)**

One, 2-day **Make it REAL technical orientation** in Long Beach, CA - Includes round-trip airfare from Chicago, IL. to Long Beach for two people (Development Manager and Creative Director) (\$950), lodgings (\$980 for 2 nights), food (\$360 for 3 days), land transportation and incidentals (\$150) = **\$2,440**

One, 3-day **84.351D project director meeting** in Washington, D.C. (Includes round-trip airfare from Long Beach, Ca. to WDC for two people (Project Director and one Evaluator) (\$950), lodgings (\$1,100 for 3 nights), food (\$360 for 3 days), land transportation and incidentals (\$150) = **\$2,560**

4. Equipment - **(\$15,390)**

Twenty-three iPad Airs for the full 4-year grant period; the iPads will be used by the teachers in classrooms. Three of the iPads will be reserved as replacements in the event of damage or theft. Twenty-three protective covers will be purchased to protect the iPads. **(\$14,010)**

Software Licenses - Annual software licensing cost to manage the iPads. This software provides the security controls to comply with the school districts COPPA requirements. **(\$1,380)**

5. Supplies - **(\$2,500)**

Supplies for Art Teams to prepare lesson materials for training and to pilot program with 2 classroom teachers and 70 students (1/4" and 1/2" colored reed, scissors, rulers, measuring tapes, spoke weights, clamps, towels, water buckets, journal materials). These supplies will be used for summer training of teachers and volunteers, as well. **(\$2,500)**

6. Contractual - **(\$223,000)**

Program Evaluation Team (consultants) @ **\$100,000** in Year One.

Technology Supervisor (consultant) @ **\$40,000** per year. The technology supervisor will chart the strategic direction for application development, guide the conversion of the curriculum in to the digital medium, visit the schools to evaluate the efficacy and engagement generated by the program 12 times during the course of the school year, produce reports on engagement and assess improvements to the program. The technology supervisor will manage the infrastructure to support the iPads in school.

Software development team (consultant) @ **\$75,500**. This will be used to cover the design, development, digitizing the curriculum, and testing of the application, online meetings, and status updates for the entire development team. This team will develop and refine the user interface of the program the students will use to learn this program with.

LBUSD's Visual and Performing Arts Curriculum Leader/Coach/Mentor @ \$50/hr. x 50 hours = **\$2,500**.

LBUSD's K-5 Math Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500**.
LBUSD's K-5 Technology Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500**.

7. Construction - **(\$-0-)** There is no construction associated with this project.

8. Other - **(\$39,550) (\$4,410 provided as non-federal funding)**

Server proxy costs to provide Internet security filtering for the teacher iPads (\$6,000).

Web and database hosting – used to compile, aggregate, and provide reports on curriculum usage (\$1,200) = **(\$7,200)**

Administrative Office Space and equipment (@\$1,850/mo. x 12 mths. x .50% allocation) = **\$11,100**.

Payroll Processing (\$1,000/year @ 50% allocation) = **\$500**

Financial Audit & Monthly Reconciliations (\$15,000/year @ 50% allocation) = **\$7,500**

Utilities @ \$300/no. x 12 months x 50% allocation) = **\$1,800**

Printing (curriculum, brochures & flyers) = **\$1,200**.

Postage ((\$1,000/year @ 50% allocation) = **\$500**.

Telephone/internet (@ \$200/mo. x 12 months x 50% allocation) = **\$1,200**.

Office supplies (@ \$150/mo. x 12 months x 50% allocation) = **\$900**.

Professional liability & Directors & Officers= Insurance @ \$14,000 per year @ 50% allocation = **\$7,000**

Food/drinks for teacher and volunteer trainings = **\$500**. **NOTE:** This service is provided as an in-kind contribution by Dramatic Results.

Translation of written materials into 2 languages @ \$5.00/pg./per language x 10 pgs. of written materials per year = **\$150**. **NOTE:** This service is provided as an in-kind contribution by LBUSD.

9. Total Direct Costs (lines 1-8) - **(\$502,410)**

10. Indirect Costs - **none**

11. Training Stipends – **(\$2,000)**

Training stipends to 2, fourth grade, teachers participating in pilot of Making It REAL: Math program (total of 44 hours over school year: 32 hours of summer training; 12 hours of after-school training in arts assessments) @ \$1,000 x 2 teachers = **\$2,000**

12. Total Costs (lines 9-11) - **(\$504,410)**

\$500,000 from federal funds
\$4,410 from non-federal funds

DRAMATIC RESULTS

84.351D 2014 Application

Budget Narrative for 84.351D: Making It REAL: Math **Year Two: First Year of Implementation**

Budget Categories:

1. **Personnel - (\$278,444) (\$3,220 from non-federal funding)**

Two teams of 3 **teaching artists (Art Teams)** each work a total of 27 hours per week, per person, for 32 weeks. Each art team works in 16, fourth grade, classrooms weekly alongside the classroom teacher on a 1:10 artist:student ratio, with an additional 15 hours a week for preparation, support of classroom teachers in language/art integration, program meetings, continuing development of arts/math/technology integrated arts curriculum, evaluation and assessments (5,184 hours). Two art teams @ \$24.15 per hour, per person = 6 people x 864 hours each = **\$125,194**.

The **Director of Arts Education @ .75FTE** will train 16, 4th grade, classroom teachers in the Making It REAL: Math curriculum and provide these classroom teachers with in-class and after-school coaching in assessments, develop and update integrated arts curriculum based on continuous monitoring, provide weekly on-site supervision for all program operations, coordinate integration and training with LBUSD visual art, math and technology specialists, order program supplies, provide oversight and coordination of campus protocols and program scheduling with campus administrators, schedule, curate and install displays of artwork within school, district and community sites and participate in evaluation, assessments and dissemination projects. (\$71,000 % .75FTE = **\$53,250**).

The **Evaluation Liaison/Dissemination Coordinator @ .50FTE** will coordinate the accurate and timely administration of print and online evaluation and assessment tools for our independent evaluator team, create and keep updated web-based sites dedicated to this project, create electronic links with community and other professionals on this project through Open Education Resources (OER), coordinate translation and printing of all program materials into Spanish and Khmer and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$50,000 % .50FTE = **\$25,000**).

The **Volunteer Coordinator @ .15FTE** will recruit, ensure compliance with LBUSD's Volunteers in Schools (VIPS) program, support training in Making It REAL: Math program and support community volunteers to work alongside the Teaching Artists and Classroom Teachers to deliver in-class programs in Years 2-5. (\$45,000 % .15FTE = **\$6,750**)

The **Project Director @ .75FTE** will administer the grant, including overseeing the iterative feedback process on this project, producing all reports and budgets, supervision of staff, facilities and consultants, raise balance of funds to support this program beyond federal support, maintain and expand community relations, process all payroll and personnel paperwork, market program to other school/districts nationally, and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$91,000 % .75FTE = **\$68,250**).

2. **Fringe Benefits - (\$55,689)**

Art team benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$125,194 = **\$25,039**

Director of Arts Education benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$53,250 = **\$10,650**

Evaluation Liaison/Dissemination Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$25,000 = **\$5,000**

Volunteer Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$6,750 = **\$1,350**

Project Director benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$68,250 = **\$13,650**

3. Travel – **(\$2,560)**

One, 3-day **84.351D project director meeting** in Washington, D.C. (Includes round-trip airfare from Long Beach, Ca. to WDC for two people (Project Director and one Evaluator) (\$950), lodgings (\$1,100 for 3 nights), food (\$360 for 3 days), land transportation and incidentals (\$150) = **\$2,560**

4. Equipment - **(\$142,620)** **(\$140,000 from non-federal funding)**

140 iPad Airls, plus protective covers, wheelie carts, annual program installation/maintenance/replacement, and tech support from LBUSD (two wheelie carts of 35 iPad Airls per cart, per campus x 2 campuses) **(\$140,000)** **NOTE:** LBUSD is providing this equipment and service as in-kind support for this project.

Two iPad Airls to be used as replacements in the event of device loss or failure; the iPads will be used by the teachers in classrooms. Two protective covers will be purchased to protect the iPads. **(\$1,240)**

Software Licenses: Annual software licensing cost to manage the iPads. This software provides the security controls to comply with the school districts COPPA requirements. **(\$1,380)**

5. Supplies - **(\$16,800)**

Supplies for 560, fourth-grade, students in 16 classrooms @ \$30.00 per student = **\$16,800**. Consumables (*supplies*) include: natural and 8 colors of ¼" and ½" reed, sea grass, paper, pencils, pastels, paints, brushes, folders, yarn, tacky glue and oil finish. Other supplies include: measuring tapes, rulers, masking tape, spoke weights, clamps and markers. These supplies will be used for summer training of teachers and volunteers, as well.

6. Contractual - **(\$127,680)**

Program Evaluation Team (consultants) @ **\$60,000** in Year Two.

Technology Supervisor (consultant) @ **\$30,000** per year. The technology supervisor will chart the strategic direction for application development, guide the conversion of the curriculum in to the digital medium, visit the schools to evaluate the efficacy and engagement generated by the program 12 times during the course of the school year, produce reports on engagement and assess improvements to the program. The technology supervisor will manage the infrastructure to support the iPads in school.

Software development team @ **\$30,180**. This will be used to cover the design, development, digitizing the curriculum, and testing of the application, online meetings, and status updates for the entire development team. This team will develop and refine the user interface of the program the students will use to learn this program with.

LBUSD's Visual and Performing Arts Curriculum Leader/Coach/Mentor @ \$50/hr. x 50 hours = **\$2,500.**

LBUSD's K-5 Math Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500.**

LBUSD's K-5 Technology Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500.**

7. Construction - **(\$-0-)** There is no construction associated with this project.

8. Other - **(\$39,550)** **(\$38,123 from non-federal funding)**

Server proxy costs to provide Internet security filtering for the teacher iPads (\$6,000).
Web and database hosting – used to compile, aggregate, and provide reports on curriculum usage (\$1,200) = **(\$7,200)**

Administrative Office Space and equipment (@\$1,850/mo. x 12 mths. x .50% allocation) = **\$11,100.**

Payroll Processing (\$1,000/year @ 50% allocation) = **\$500**

Financial Audit & Monthly Reconciliations (\$15,000/year @ 50% allocation) = **\$7,500**

Utilities @ \$300/no. x 12 months x 50% allocation) = **\$1,800**

Printing (curriculum, brochures & flyers) = **\$1,200.**

Postage ((\$1,000/year @ 50% allocation) = **\$500.**

Telephone/internet (@ \$200/mo. x 12 months x 50% allocation) = **\$1,200.**

Office supplies (@ \$150/mo. x 12 months x 50% allocation) = **\$900.**

Professional liability & Directors & Officers= Insurance @ \$14,000 per year @ 50% allocation = **\$7,000**

Food/drinks for teacher and volunteer trainings = **\$500.** **NOTE:** This service is provided as an in-kind contribution by Dramatic Results.

Translation of written materials into 2 languages @ \$5.00/pg./per language x 10 pgs. of written materials per year = **\$150.** **NOTE:** This service is provided as an in-kind contribution by LBUSD.

9. Total Direct Costs (lines 1-8) - **(\$663,343)**

10. Indirect Costs - **none**

11. Training Stipends - **(\$18,000)**

Stipends to 16, fourth grade teachers participating in Making It REAL: Math professional development (total of 44 hours over school year: 32 hours of summer training; 12 hours of after-school training in arts assessments) @ \$1,000 stipend x 16 teachers = **\$16,000**

Evaluation stipends to 16, fourth grade, control teachers for annual evaluation with evaluation team @ \$125.00/per teacher x 16 teachers = **\$2,000**

12. Total Costs (lines 9-11) - **(\$681,343)**

\$500,000 from federal funds
\$181,343 from non-federal funds

DRAMATIC RESULTS

84.351D 2014 Application

Budget Narrative for 84.351D: Making It REAL: Math **Year Three: Second Year of Implementation**

Budget Categories:

1. **Personnel - (\$243,144)**

Two teams of 2 **teaching artists (Art Teams)** each work a total of 27 hours per week, per person, for 32 weeks. Each art team works in 16, fourth grade, classrooms weekly alongside the classroom teacher and one trained volunteer on a 1:10 artist:student ratio, with an additional 15 hours a week for preparation, support of classroom teachers in language/art integration, program meetings, continuing development of arts/math/technology integrated arts curriculum, evaluation and assessments (3,456 hours). Two art teams @ \$25.36 per hour, per person = 4 people x 864 hours each = **\$87,644**.

The **Director of Arts Education @ .75FTE** will train 16, 4th grade, classroom teachers in the Making It REAL: Math curriculum and provide these classroom teachers with in-class and after-school coaching in assessments, develop and update integrated arts curriculum based on continuous monitoring, provide weekly on-site supervision for all program operations, coordinate integration and training with LBUSD visual art, math and technology specialists, order program supplies, provide oversight and coordination of campus protocols and program scheduling with campus administrators, schedule, curate and install displays of artwork within school, district and community sites and participate in evaluation, assessments and dissemination projects. (\$71,000% .75FTE = **\$53,250**).

The **Evaluation Liaison/Dissemination Coordinator @ .50FTE** will coordinate the accurate and timely administration of print and online evaluation and assessment tools for our independent evaluator team, create and keep updated web-based sites dedicated to this project, create electronic links with community and other professionals on this project through Open Education Resources (OER), coordinate translation and printing of all program materials into Spanish and Khmer and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$50,000 % .50FTE = **\$25,000**).

The **Volunteer Coordinator @ .20FTE** will recruit, ensure compliance with LBUSD's Volunteers in Schools (VIPS) program, support training in Making It REAL: Math program and support community volunteers to work alongside the Teaching Artists and Classroom Teachers to deliver in-class programs in Years 2-5. (\$45,000 % .20FTE = **\$9,000**)

The **Project Director @ .75FTE** will administer the grant, including overseeing the iterative feedback process on this project, producing all reports and budgets, supervision of staff, facilities and consultants, raise balance of funds to support this program beyond federal support, maintain and expand community relations, process all payroll and personnel paperwork, market program to other school/districts nationally, and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$91,000 % .75FTE = **\$68,250**).

2. **Fringe Benefits - (\$50,095)**

Art team benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$87,644 = **\$17,529**

Director of Arts Education benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$55,913 = **\$11,183**

Evaluation Liaison/Dissemination Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$26,250 = **\$5,250**

Volunteer Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$9,000 = **\$1,800**

Project Director benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$71,663 = **\$14,333**

3. Travel – **(\$7,560)**

One, 3-day **84.351D project director meeting** in Washington, D.C. (Includes round-trip airfare from Long Beach, Ca. to WDC for two people (Project Director and one Evaluator) (\$950), lodgings (\$1,100 for 3 nights), food (\$360 for 3 days), land transportation and incidentals (\$150) = **(\$2,560)**

Attend statewide and national conferences in the fields of arts education and educational research (e.g., NAEA, AEP, AERA) to disseminate Making It REAL: Math findings and program design to promote increased capacity and utilization of arts integration in K-12 educational settings. **(\$5,000)**

4. Equipment - **(\$16,620)** **(\$14,000 from non-federal funding)**

Annual program installation/ maintenance/replacement, and tech support from LBUSD (two wheelie carts of 35 iPad Airs per cart, per campus x 2 campuses = 140 iPads) **(\$14,000)**

NOTE: LBUSD is providing this equipment and service as in-kind support for this project.

Two iPad Airs to be used as replacements in the event of device loss or failure; the iPads will be used by the teachers in classrooms. Two protective covers will be purchased to protect the iPads. **(\$1,240)**

Software Licenses - **(\$1,380)** Annual software licensing cost to manage the iPads. This software provides the security controls to comply with the school districts COPPA requirements.

5. Supplies - **(\$16,800)**

Supplies for 560, fourth-grade, students in 16 classrooms @ \$30.00 per student = **\$16,800**. Consumables (*supplies*) include: natural and 8 colors of ¼" and ½" reed, sea grass, paper, pencils, pastels, paints, brushes, folders, yarn, tacky glue and oil finish. Other supplies include: measuring tapes, rulers, masking tape, spoke weights, clamps and markers. These supplies will be used for summer training of teachers and volunteers, as well.

6. Contractual - **(\$122,680)**

Program Evaluation Team (consultants) @ **\$60,000** in Year Three.

Technology Supervisor (consultants) @ **\$30,000** per year. The technology supervisor will chart the strategic direction for application development, guide the conversion of the curriculum in to the digital medium, visit the schools to evaluate the efficacy and engagement generated by the program 12 times during the course of the school year, produce reports on engagement and assess improvements to the program. The technology supervisor will manage the infrastructure to support the iPads in school.

Software development team @ **\$25,180**. This will be used to cover the design,

development, digitizing the curriculum, and testing of the application, online meetings, and status updates for the entire development team. This team will develop and refine the user interface of the program the students will use to learn this program with.

LBUSD's Visual and Performing Arts Curriculum Leader/Coach/Mentor @ \$50/hr. x 50 hours = **\$2,500**.

LBUSD's K-5 Math Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500**.

LBUSD's K-5 Technology Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500**.

Dissemination Specialist (consultant) @ **\$5,000**/year retainer to pitch stories, get Making It REAL: Math accepted as conference presenters and articles in peer reviewed and/or other professional and commercial publications.

7. Construction - **(\$-0-)** There is no construction associated with this project.

8. Other - **(\$39,550) (\$851 from non-federal funding)**

Server proxy costs to provide Internet security filtering for the teacher iPads (\$6,000).
Web and database hosting – used to compile, aggregate, and provide reports on curriculum usage (\$1,200) = **(\$7,200)**

Administrative Office Space and equipment (@\$1,850/mo. x 12 mths. x .50% allocation) = **\$11,100**.

Payroll Processing (\$1,000/year @ 50% allocation) = **\$500**

Financial Audit & Monthly Reconciliations (\$15,000/year @ 50% allocation) = **\$7,500**

Utilities @ \$300/no. x 12 months x 50% allocation) = **\$1,800**

Printing (curriculum, brochures & flyers) = **\$1,200**.

Postage ((\$1,000/year @ 50% allocation) = **\$500**.

Telephone/internet (@ \$200/mo. x 12 months x 50% allocation) = **\$1,200**.

Office supplies (@ \$150/mo. x 12 months x 50% allocation) = **\$900**.

Professional liability & Directors & Officers= Insurance @ \$14,000 per year @ 50% allocation = **\$7,000**

Food/drinks for teacher and volunteer trainings = **\$500**. **NOTE:** This service is provided as an in-kind contribution by Dramatic Results.

Translation of written materials into 2 languages @ \$5.00/pg./per language x 10 pgs. of written materials per year = **\$150**. **NOTE:** This service is provided as an in-kind contribution by LBUSD.

9. Total Direct Costs (lines 1-8) - **(\$496,449)**

10. Indirect Costs - **none**

11. Training Stipends - **(\$18,000)**

Stipends to 16, fourth grade teachers participating in Making It REAL: Math professional development (total of 44 hours over school year: 32 hours of summer training; 12 hours of after-school training in arts assessments) @ \$1,000 stipend x 16 teachers = **\$16,000**

Evaluation stipends to 16, fourth grade, control teachers for annual evaluation with evaluation team @ \$125.00/per teacher x 16 teachers = **\$2,000**

12. Total Costs (lines 9-11) - **(\$514,449)**

\$499,598 from federal funds
\$14,851 from non-federal funds

DRAMATIC RESULTS

84.351D 2014 Application

Budget Narrative for 84.351D: Making It REAL: Math
Year Four: Third Year of Implementation

Budget Categories:

1. Personnel - **(\$203,767)** **(\$1,080 from non-federal funding)**

Two **teaching artists** each work a total of 27 hours per week, per person, for 32 weeks. Each Teaching Artist works in 16, fourth grade, classrooms weekly alongside the classroom teacher and two trained volunteers on a 1:10 artist:student ratio, with an additional 15 hours a week for preparation, support of classroom teachers in language/art integration, program meetings, continuing development of arts/math/technology integrated arts curriculum, evaluation and assessments (1,728 hours). Two Teaching Artists @ \$26.63 per hour, per person = 2 people x 864 hours each = **\$46,017**.

The **Director of Arts Education @ .75FTE** will train 16, 4th grade, classroom teachers in the Making It REAL: Math curriculum and provide these classroom teachers with in-class and after-school coaching in assessments, develop and update integrated arts curriculum based on continuous monitoring, provide weekly on-site supervision for all program operations, coordinate integration and training with LBUSD visual art, math and technology specialists, order program supplies, provide oversight and coordination of campus protocols and program scheduling with campus administrators, schedule, curate and install displays of artwork within school, district and community sites and participate in evaluation, assessments and dissemination projects. (\$71,000 % .75FTE = **\$53,250**).

The **Evaluation Liaison/Dissemination Coordinator @ .50FTE** will coordinate the accurate and timely administration of print and online evaluation and assessment tools for our independent evaluator team, create and keep updated web-based sites dedicated to this project, create electronic links with community and other professionals on this project through Open Education Resources (OER), coordinate translation and printing of all program materials into Spanish and Khmer and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$50,000 % .50FTE = **\$25,000**).

The **Volunteer Coordinator @ .25FTE** will recruit, ensure compliance with LBUSD's Volunteers in Schools (VIPS) program, support training in Making It REAL: Math program and support community volunteers to work alongside the Teaching Artists and Classroom Teachers to deliver in-class programs in Years 2-5. (\$45,000 % .25FTE = **\$11,250**)

The **Project Director @ .75FTE** will administer the grant, including overseeing the iterative feedback process on this project, producing all reports and budgets, supervision of staff, facilities and consultants, raise balance of funds to support this program beyond federal support, maintain and expand community relations, process all payroll and personnel paperwork, market

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program to other school/districts nationally, and participate in evaluation, assessments and dissemination projects, e.g. conferences and articles. (\$91,000 % .75FTE = **\$68,250**).

2. Fringe Benefits - (**\$40,753**)

Art team benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$46,017 = **\$9,203**

Director of Arts Education benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$53,250 = **\$10,650**

Evaluation Liaison/Dissemination Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$25,000 = **\$5,000**

Volunteer Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$11,250 = **\$2,250**

Project Director benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$68,250 = **\$13,650**

3. Travel – (**\$12,560**)

One, 3-day **\$4.351D project director meeting** in Washington, D.C. (Includes round-trip airfare from Long Beach, Ca. to WDC for two people (Project Director and one Evaluator) (\$950), lodgings (\$1,100 for 3 nights), food (\$360 for 3 days), land transportation and incidentals (\$150) = (**\$2,560**)

Attend statewide and national conferences in the fields of arts education and educational research (e.g., NAEA, AEP, AERA) to disseminate Making It REAL: Math findings and program design to promote increased capacity and utilization of arts integration in K-12 educational settings. (**\$10,000**)

4. Equipment - (**\$16,620**) (**\$14,000 from non-federal funding**)

Annual program installation/ maintenance/replacement, and tech support from LBUSD (two wheelie carts of 35 iPad Airls per cart, per campus x 2 campuses = 140 iPads) (**\$14,000**)

NOTE: LBUSD is providing this equipment and service as in-kind support for this project.

Two iPad Airls to be used as replacements in the event of device loss or failure; the iPads will be used by the teachers in classrooms. Two protective covers will be purchased to protect the iPads. (**\$1,240**)

Software Licenses - (**\$1,380**) Annual software licensing cost to manage the iPads. This software provides the security controls to comply with the school districts COPPA requirements.

5. Supplies - (**\$16,800**)

Supplies for 560, fourth-grade, students in 16 classrooms @ \$30.00 per student = **\$16,800**. Consumables (*supplies*) include: natural and 8 colors of ¼" and ½" reed, sea grass, paper, pencils, pastels, paints, brushes, folders, yarn, tacky glue and oil finish. Other supplies include: measuring tapes, rulers, masking tape, spoke weights, clamps and markers. These supplies will be used for summer training of teachers and volunteers, as well.

6. Contractual - (**\$167,680**)

Program Evaluation Team (consultants) @ **\$100,000** in Year Four.

Technology Supervisor (consultants) @ **\$30,000** per year. The technology supervisor will

chart the strategic direction for application development, guide the conversion of the curriculum in to the digital medium, visit the schools to evaluate the efficacy and engagement generated by the program 12 times during the course of the school year, produce reports on engagement and assess improvements to the program. The technology supervisor will manage the infrastructure to support the iPads in school.

Software development team @ **\$25,180**. This will be used to cover the design, development, digitizing the curriculum, and testing of the application, online meetings, and status updates for the entire development team. This team will develop and refine the user interface of the program the students will use to learn this program with.

LBUSD's Visual and Performing Arts Curriculum Leader/Coach/Mentor @ \$50/hr. x 50 hours = **\$2,500**.

LBUSD's K-5 Math Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500**.

LBUSD's K-5 Technology Curriculum Specialist @ \$50/hr. x 50 hours = **\$2,500**.

Dissemination Specialist (consultant) @ **\$15,000**/year retainer to pitch stories, get Making It REAL: Math accepted as conference presenters and articles in peer reviewed and/or other professional and commercial publications.

7. Construction - **(\$-0-)** There is no construction associated with this project.

8. Other - **(\$39,550) (\$650 from non-federal funding)**

Server proxy costs to provide Internet security filtering for the teacher iPads (\$6,000). Web and database hosting – used to compile, aggregate, and provide reports on curriculum usage (\$1,200) = **(\$7,200)**

Administrative Office Space and equipment (@\$1,850/mo. x 12 mths. x .50% allocation) = **\$11,100**.

Payroll Processing (\$1,000/year @ 50% allocation) = **\$500**

Financial Audit & Monthly Reconciliations (\$15,000/year @ 50% allocation) = **\$7,500**

Utilities @ \$300/no. x 12 months x 50% allocation) = **\$1,800**

Printing (curriculum, brochures & flyers) = **\$1,200**.

Postage ((\$1,000/year @ 50% allocation) = **\$500**.

Telephone/internet (@ \$200/mo. x 12 months x 50% allocation) = **\$1,200**.

Office supplies (@ \$150/mo. x 12 months x 50% allocation) = **\$900**.

Professional liability & Directors & Officers= Insurance @ \$14,000 per year @ 50% allocation = **\$7,000**

Food/drinks for teacher and volunteer trainings = **\$500**. **NOTE:** This service is provided as an in-kind contribution by Dramatic Results.

Translation of written materials into 2 languages @ \$5.00/pg./per language x 10 pgs. of written materials per year = **\$150**. **NOTE:** This service is provided as an in-kind contribution by LBUSD.

9. Total Direct Costs (lines 1-8) - **(\$497,730)**

10. Indirect Costs - **none**

11. Training Stipends - **(\$18,000)**

Stipends to 16, fourth grade teachers participating in Making It REAL: Math coaching (total of 44 hours over school year: 32 hours of summer training; 12 hours of after-school training in arts assessments) @ \$1,000 stipend x 16 teachers = **\$16,000**

Evaluation stipends to 16, fourth grade, control teachers for annual evaluation with evaluation team @ \$125.00/per teacher x 16 teachers = **\$2,000**

12. Total Costs (lines 9-11) - **(\$515,730)**

\$500,000 from federal funds
\$15,730 from non-federal funds

DRAMATIC RESULTS

84.351D 2014 Application

Budget Narrative for 84.351D: Making It REAL: Math
Year Five: Fourth Year of Implementation
No-cost Extension to federal grant

Budget Categories:

1. Personnel - **(\$74,576)**

One **Teaching Artist** works a total of 200 hours to format and finalize professional development videos produced by classroom teachers and ensure videos are uploaded to LBUSD's PD "locker" to be viewed by any LBUSD personnel, as well as posted Open Education Resources (OER) for viewing by interested parties and for use at conference presentations and/or visual support for articles/online posting. One Teaching Artist @ \$26.63 per hour = **\$5,326**.

The **Evaluation Liaison/Dissemination Coordinator** @ .25FTE will keep updated web-based sites dedicated to this project, create electronic links with community and other professionals on this project through Open Education Resources (OER), coordinate translation and printing of all program materials into Spanish and Khmer and participate in dissemination projects, e.g. conferences and articles. (\$50,000 % .25FTE = **\$12,500**).

The **Volunteer Coordinator** @ .25FTE will recruit, ensure compliance with LBUSD's Volunteers in Schools (VIPS) program, support training in Making It REAL: Math program and support community volunteers to work alongside the Teaching Artists and Classroom Teachers to deliver in-class programs in Years 2-5. (\$45,000 % .25FTE = **\$11,250**)

The **Project Director** @ .50FTE will supervise project staff for Year Five, secure contracts/raise balance of funds to support this program beyond federal support, maintain and expand community relations, process all payroll and personnel paperwork, market program to other school/districts nationally, and participate in dissemination projects, e.g. conferences, meetings and articles. (\$91,000 % .50FTE = **\$45,500**).

2. Fringe Benefits - **(\$14,815)**

Teaching Artist benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$5,326 = **\$1,065**

Evaluation Liaison/Dissemination Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$12,500 = **\$2,500**

Volunteer Coordinator benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$11,250 = **\$2,250**

Project Director benefits (payroll taxes, workers' comp, retirement benefits and \$145/per mo. health insurance) @ 20% of \$45,000 = **\$9,000**

3. Travel – **(\$10,000)** (\$1,349 from non-federal funding)

Attend statewide and national conferences in the fields of arts education and educational research (e.g., NAEA, AEP, AERA) to disseminate Making It REAL: Math findings and program design to promote increased capacity and utilization of arts integration in K-12 educational settings. **(\$10,000)**

4. Equipment - **None**

5. Supplies - **None**

6. Contractual - **(\$10,000)**

Dissemination Specialist (consultant) @ **\$10,000/year** retainer to pitch stories, get Making It REAL: Math accepted as conference presenters and articles in peer reviewed and/or other professional and commercial publications.

7. Construction - **(\$-0-)** There is no construction associated with this project.

8. Other - **None**

9. Total Direct Costs (lines 1-8) - **(\$109,391)**

10. Indirect Costs - **none**

11. Training Stipends - **None**

12. Total Costs (lines 9-11) - **(\$109,391)**

\$0 from federal funds
\$109,391 from non-federal funds

84.351D - 2014 Application
Dramatic Results: *Making It REAL: Math*

Other Attachments Form
Bibliographical References and Support Materials

	<u>Pages</u>
• Bibliographical References (<i>cited in Project Narrative</i>)	pgs. 55-65
• Logic Model for <i>Making It REAL: Math</i>	pg. 66
• Program Delivery Plan for Classroom Teachers: <i>Making It REAL: Math</i>	pg. 67
• Technology Implementation Plan	pg. 68
• Dramatic Results' 7 Critical Elements	pg. 69
• Evaluation Highlights and Testimonials for AEMDD 2003 and 2006	pgs. 70-71
• Evaluation Timeline	pg. 72
• Project Timeline	pg. 73
• Roles and Responsibilities of Collaborators	pgs. 74-75
• Tables of National/CA Standards	pgs. 76-77
• Photos of AEMDD 2003 and 2006 Implementation and Dissemination	
• In The Classroom	pgs. 78-79
• Professional Development	pg. 80
• In The Community	pg. 81
• Storyboard Samples for iPad application	
• Sample #2: Learning About Volume, Screens 1-4	pgs. 82-83
• Sample #3: Design Your Basket, Screens 1-2	pg. 84
• Curriculum Outline: <i>Making It REAL: Math</i>	pgs. 85-88
• Curriculum Samples: <i>Making It REAL: Math</i>	
• Lesson #21: (<i>relates to Storyboard Sample #2</i>)	pgs. 89-91
• Lesson #16: (<i>relates to Storyboard Sample #3</i>)	pgs. 92-98

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• FIGURE 1: SAMPLE LOGIC MODEL—ARTS INTEGRATION TO IMPROVE CORE ACADEMIC SKILLS FOR 4TH GRADE STUDENTS

INPUTS	OUTPUTS		OUTCOMES – IMPACT		
	Activities	Participation	Short term	Intermediate	Long term
<ul style="list-style-type: none"> Funding Promising arts-integrated curriculum (<i>Math in a Basket</i>) converted to digital format iPad-based program expands and enhances MIAB curriculum Promising teacher professional development (WOA model) 	<ul style="list-style-type: none"> iPad-based program integrated into 4th grade curriculum integrating art and math (<i>MIAB</i> becomes <i>Making it REAL: Math</i>) <i>Making it REAL: Math</i> scope & sequence, lesson plans developed PD sessions and professional learning communities provided to support <i>Making it REAL: Math</i> Mini-lesson video clips developed to support teacher-to-teacher learning. 	<ul style="list-style-type: none"> Number of students in each <i>Making it REAL: Math</i> lesson Number of teachers in each PD session Number of teachers in each PLC meeting Number of teachers who viewing mini-lesson video clips 	<ul style="list-style-type: none"> Students complete weekly arts-integrated <i>Making it REAL: Math</i> activities Students utilize iPad-based program to research, explore, analyze and learn about math and art Teachers experience and, then, implement arts-integrated <i>Making it REAL: Math</i> activities, including use of iPad-based program Teachers report that PD & PLC session activities are useful, relevant, and of high quality 	<ul style="list-style-type: none"> Students' risk-taking, persistence, and engagement increases with both hands-on and iPad-based lessons Teachers learn how to implement arts-integrated <i>Making it REAL: Math</i> curriculum Teachers learn how to use iPad-based program to enhance and expand their instruction Teachers increase feelings of self-efficacy for implementing <i>Making it REAL: Math</i> arts-integrated curriculum Teachers increase self-efficacy for iPad-based programs Teachers learn how to integrate arts activities and technology into core instructional activities to increase academic learning 	<ul style="list-style-type: none"> Students' academic skills in core subject areas (math, art, technology) improve Teachers make changes in their instructional practice Technology platform (iPad-based program) successful in delivering and expanding arts education program Access to arts-integrated curriculum increases

Table 1. Making it REAL: Math Program Delivery Plan for Classroom Teachers

		Pilot	Treatment A	Treatment B
	16 Classrooms/Teachers; 1,680 Students:	2 (70)	8 (280)	8 (280)
2014-15	After-school PD w/Curriculum & Tech Coaches: Hours	12		
	Lessons integrating arts (out of 24 total)	24		
	Lessons integrating technology (out of 24 total)	4		
2015-16	Summer curriculum training w/Teaching Artists: Hrs		32	32
	After-school PD w/Curric & Tech Coaches; Teaching Artists: Hrs		12	12
	Instructional lead: Teaching Artist (TA)		3 TA	3 TA
	Support staff: Classroom Teacher (CRT)		1 CRT	1 CRT
	Lessons integrating arts (out of 24 total)		24	24
	Lessons integrating technology (out of 24 total)		8	8
2016-17	Summer curriculum training w/Teaching Artists: Hrs		32	32
	After-school PD w/Curric & Tech Coaches; Teaching Artists: Hrs		12	12
	Instructional lead: Teaching Artist (TA); Classroom Teacher (CRT)		1 CRT; 2 TA	1 CRT; 2 TA
	Support staff: Volunteer (VOL)		1 VOL	1 VOL
	Lessons integrating arts (out of 24 total)		24	24
	Lessons integrating technology (out of 24 total)		8	12
2017-18	Summer curriculum training w/Teaching Artists: Hrs		32	32
	After-school PD w/Curric & Tech Coaches; Teaching Artists: Hrs		12	12
	Instructional lead: Teaching Artist (TA); Classroom Teacher (CRT)		1 CRT; 1 TA	1 CRT; 1 TA
	Support staff: Volunteer (VOL)		2 VOL	2 VOL
	Lessons integrating arts (out of 24 total)		24	24
	Lessons integrating technology (out of 24 total)		8	16

Dramatic Results - 84.351D 2014 Application: Technology Implementation Plan

Priority 2: Technology: Projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials.

Project Goal 3: Improve students’ achievement in math and language arts, and skills in creating and responding to the arts, by integrating the arts and a newly-developed digital tool.

Who: Technology Team

		Year 1				Year 2				Year 3				Year 4			
		2014-15				2015-16				2016-17				2017-18			
J=June S=September D=December M=March		J	S	D	M	J	S	D	M	J	S	D	M	J	S	D	M
Product Stage		J	S	D	M	J	S	D	M	J	S	D	M	J	S	D	M
Reflect/revise goals (Admin, Tech & Eval Team)																	
Attend <i>Make it REAL</i> workshop (all lessons)																	
Lessons 1-4	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Lessons 11, 13-15	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Lessons 6-9	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Lessons 17-20	Convert <i>Make it REAL</i> for digital use																
	Observe <i>Make it REAL</i> digital in use																
	<u>Revise</u> and finalize <i>Make it REAL</i> digital																
Product sent to LBUSD technology review																	

Dramatic Results 7 Critical Elements



1. Arts Integration/Arts Knowledge: Lessons integrate the arts, including arts knowledge, experience, and performance, with core academic content.

How can the arts be integrated with this lesson to increase student outcomes in a core content area, as well as in an arts discipline?



2. Inquiry-based Learning: Lessons promote student-led collaborative engagement in problem-solving activities.

How can I make this lesson student-led, collaborative and emphasize problem-solving?



3. Decision Making: Lessons require students to explore options and experiment with ideas (i.e., take risks) to complete the target activity.

How can I encourage students to explore options and take risks?



4. Tactile-Kinesthetic Learning: Lessons move beyond visual and auditory learning to include tactile (touch or fine motor) and kinesthetic (movement or gross motor) experience.

How can I ensure my students are physically engaged?



5. Constructive Feedback: Lessons provide multiple opportunities for students to receive constructive feedback (teacher-student, student-student, or student-self) to improve outcomes.

How can my students and I use constructive feedback to reinforce the learning experience?



6. Assessment: Lessons incorporate assessment as a guide for learning, so each lesson objective can be assessed by both student and teacher (also known as 'assessment as learning').

How will my students and I know learning in the arts and core content area has been achieved?



7. Reflection: Lessons include opportunities for teacher and students to reflect on the target activity in relation to prior knowledge and their own learning experience.

How can I ensure that both my students and I are reflecting on our prior knowledge and learning experience?



Math in a Basket

EVALUATION HIGHLIGHTS

2008-2009 (Year Two of Three)



PROGRAM DESCRIPTION

Math in a Basket (MIAB) is an art and math integrated longitudinal program serving an entire grade level of students at five schools over three years, from 3rd to 5th grade.

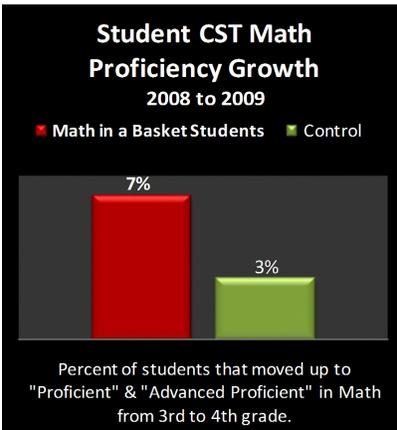
- Approximately 660 students receive 24 hours (1hr/wk for 24 weeks) of small-group, hands-on, art-integrated activities. Students plan, design, and make actual reed baskets from scratch. In this unique program, students integrate grade level geometry with art and design concepts to create functional art.
- Each week includes reflection and a compliment circle to build student social/behavioral skills.
- Teachers receive training in Math in a Basket curriculum and art s integration techniques.

PROGRAM OBJECTIVES

- 1) Improve student academic performance, particularly in Math and Visual Art
- 2) Foster student personal and social growth
- 3) Increase teacher ability to use and integrate art with other core subjects in their classrooms

METHODOLOGY

"The [Claremont Graduate University] evaluation team followed the same cohort of students from 3rd grade to 4th grade and collected multiple student/teacher surveys, focus groups, observations, and standardized test scores from the five randomly selected treatment (those receiving MIAB) and five control (those not receiving MIAB) schools to understand the impact that MIAB had on student academic and social performance."



MATH PROFICIENCY

(Based on California Standards Test (CST) Math scores)

"The treatment schools had a higher percentage of students who moved from below proficient to proficient and above when compared to control students."

TEACHER QUOTES

I leveled the playing field. Academic level did not necessarily play a part – their personalities affected their work.

I had one student who never passed a math test, pass the last two tests at 80%!

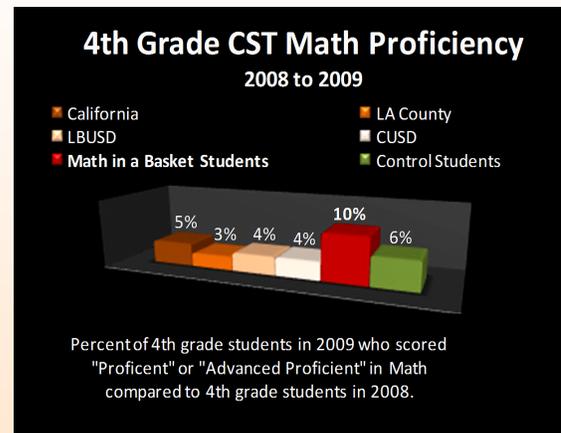
Kids at a lower level are really invested; they don't just stop and give up.

CLOSING THE ACHIEVEMENT GAP

Math in a Basket students are moving toward Math proficiency in larger numbers than their peers across the state.

(Based on data from the CA Dept of Ed: <http://dq.cde.ca.gov/dataquest/>)

One student struggles with everything across the board all day long, and he is reading at a second grade level. When he got to do his basket it shocked me, because he was the first one done. He was beaming, and I saw a different side of him, because it was something he could do well. Sometimes there isn't that outlet for kids to show their strength. (4th Grade MIAB Teacher)



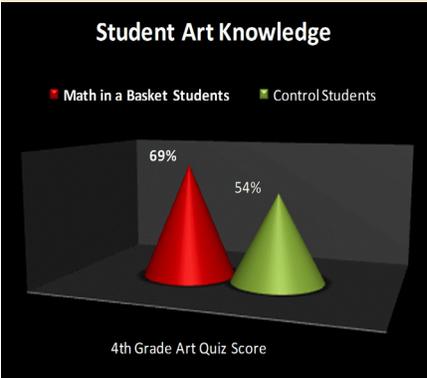
"The trend indicates that students in the treatment schools appear to be moving in larger numbers towards proficiency."

"The second year comparisons revealed that students who received MIAB had more art knowledge, art confidence, were more motivated in math, reading, and science, and (according to their teachers) had higher social and academic skills."

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Dramatic Results has been fostering CREATIVITY in children since 1992.

Our student programs and teacher trainings aim to foster 21st Century skills students need to succeed, including **problem solving, collaboration, productivity, responsibility, and flexibility.**



STUDENT ART KNOWLEDGE

Math in a Basket students...“had better knowledge of art related concepts such as the distinctions between impressionist and realistic art, art interpretation, and the various elements of art. This trend is also consistent with the previous year’s findings.”

Also, “Students in the treatment schools tended to have higher levels of art confidence and motivation.”

Oh my goodness, I loved the training that I received in the summertime...it was the best training I have been to in years.
(4th grade MIAB Teacher)

STUDENT QUOTES

If you have a family member's birthday and don't have enough money to get a gift, you can just make a basket and give it to them.

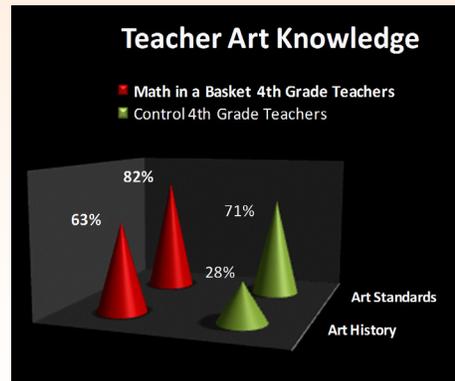
I've been feeling confident when taking tests on area and perimeter.

I'm doing 90% better in math and in school.

TEACHER ART KNOWLEDGE

“The teachers who underwent the MIAB program demonstrated a greater knowledge of art than the teachers who did not.”

Also, “MIAB teachers were more likely to invite parents to participate in art activities in the classroom and were more likely to use a visual arts textbook in the classroom than control teachers.”



“Students who would ordinarily be too embarrassed to ask for help felt more comfortable expressing their frustrations and requesting assistance with their baskets. Many teachers indicated the MIAB program provided their struggling students with the opportunity to rise to the same level as their peers (and sometimes perform better than their peers). This experience was seen as a chance for them to thrive and become confident about who they are and their contribution to the classroom.”

SOCIAL SKILLS

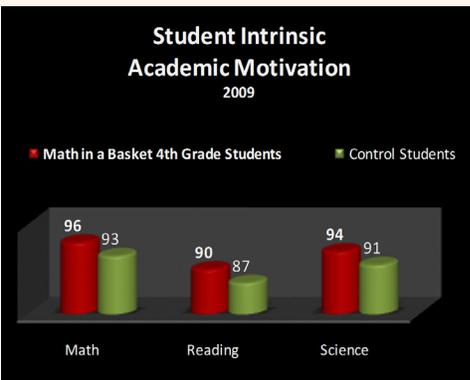
“Students in MIAB improved their ability to resolve problems with their peers on their own (communication skill), express needs and feelings appropriately (emotional regulation), and function well even with distractions (academic skills).” Also, “Teachers in the treatment schools believed that their students were generally more behaviorally and socially skilled than teachers in the control schools.”

TEACHER QUOTES

Attendance will tell you a lot about how much the kids love the program. As soon as they hear Math in a Basket, everyone is there. Kids who are sick refuse to go home.

Teamwork is key because they really learn when they teach someone else. They had a lot of that going on.

They have learned to be team players and to be respectful of other people.



ACADEMIC MOTIVATION

“Students who had received MIAB scored higher on their motivation for Math, Reading, and Science than students who had not received MIAB (control).”

If you'd like to request a copy of the entire year-end evaluation report, please email beverly@dramaticresults.org or visit www.dramaticresults.org

Dramatic Results
84.351D 2014 Application

Evaluation Timeline

	Year 1 2014-15				Year 2 2015-16				Year 3 2016-17				Year 4 2017-18			
	J	S	D	M	J	S	D	M	J	S	D	M	J	S	D	M
Component 1: Materials development and revision																
Reflect/revise goals																
Develop/revise instruments and protocols																
Lesson plan analysis (including revisions)																
Annual Performance Report & Data Summary																
Component 2: Data collection and analysis																
Students:																
Collect achievement scores (CST, District)																
Administer social-emotional surveys																
Collect standards-based art rubric data																
Teachers:																
Administer <i>TWAS & Teacher Knowledge Survey</i>																
Collect weekly reflection logs																
Collect professional learning session summaries																
Collect Coach's observation checklists																
Conduct in-class observations																
Focus group (include Teaching Artists)																
Technology:																
Download student and teacher user data																
Analyze quantitative & qualitative data																
Synthesize analyses, share w/DR staff & Tech																

Dramatic Results
841.351D 2014 Application

Making it REAL: Math overall project timeline

Who: DR Administration (Dir) and <i>Making it REAL: Math</i> teaching artists (TA), Technology Team (TT) LBUSD classroom teachers (CRT), and Evaluation Team (Eval)												
	Year 2			Year 3			Year 4					
	2015-16			2016-17			2017-18					
	J=June S=September D=December M=March											
Intermediate Milestones and Proposed Deliverables	J	S	D	M	J	S	D	M	J	S	D	M
Reflect/revise goals (Dir, TT, Eval)	█				█				█			
Schedule in-class <i>Making it REAL</i> ; Collect MOUs (Dir)		█				█				█		
1. Online resources, Lesson plans and 7 Critical Elements:						█	█	█	█	█	█	█
Reflect & revise <i>Making it REAL: Math</i> lessons (Dir & TAs)	█	█	█	█	█	█	█	█	█	█	█	█
2. <i>Make it REAL</i> successfully converted for digital use												█
Observe & revise <i>Make it REAL</i> lessons 1-4 (TT & Eval)			█	█		█	█			█	█	
Convert, observe, & revise <i>Make it REAL</i> , #11, 13-15 (TT & Eval)			█	█		█	█			█	█	
Observe, observe, & revise <i>Make it REAL</i> , #6-9 (TT & Eval)						█	█			█	█	
Observe, observe, & revise <i>Make it REAL</i> , #17-20 (TT & Eval)									█	█	█	
Product sent to LBUSD technology review (Dir & TT)	█				█				█			
3. CRTs master arts-integration strategies:												█
<i>Make it REAL</i> summer workshop (all lessons)	█				█				█			
TAs present <i>Making it REAL</i> weekly; CRTs support		█	█	█								
After-school professional development for on-going training		█	█	█		█	█	█		█	█	█
Standards-based student rubric assessments (TAs & CRTs)			█	█		█	█			█	█	
TA & CRTs present <i>Making it REAL</i> weekly; volunteer support						█	█	█				
CRTs present <i>Making it REAL</i> weekly; TA & volunteer support										█	█	█

Dramatic Results

841.351D 2014 Application

Roles and Responsibilities of Collaborators in the *Making it REAL: Math* project

Role	Responsibilities
Dramatic Results: Project Director & Fiscal Agent; Implementation & Development	
Implementation and Curriculum Development	<ul style="list-style-type: none"> • Oversee project processes, iterative development, intervention implementation and evaluation • Manage Development Team for <i>Making it REAL: Math</i>, including communication and relationships with teachers and technology team • Project reporting
Expert Consultant: Stephen Yeoh	
Technology Development Design and Implementation	<ul style="list-style-type: none"> • Manage and monitor the technology development efforts • Observe & report results of classroom implementation of iPad-based activities • Provide quality assurance review of final product
Goldfishbrain: Technology Development	
Technology Development Design	<ul style="list-style-type: none"> • Convert <i>Making it Real: Math</i> for iPad use • Revise and finalize <i>Making it Real: Math</i> for iPad use based on user feedback
Griffin Center: Evaluation	
Evaluation Design and Implementation	<ul style="list-style-type: none"> • Ensure that lessons (+/- technology) are aligned with standards • Produce instruments and ensure their reliability/validity • Manage data collection, analysis, and reporting • Support the revision of the product through iterative feedback loop

4. TAs & CRTs create PD videos for teacher-to-teacher learning			
5. Results of Randomized Control Trial:			
Administer surveys to CRTs & students			
Collect LBUSD student-level achievement data			
Conduct focus groups with Dir & CRTs & TAs & TT (Eval)			
Analyze and present summary of results (Eval)			
6. School-community partnership established:			
LBUSD Board meeting - update on <i>Making it REAL: Math</i>			
LBUSD Administrators observe program			
Family Art Workshop (Dir, TAs, CRTs, LBUSD, Community)			
Exhibit art work of students & CRTs in school or community			
7. Online dissemination of project design and results			
7. Annual Performance Report (Dir & Eval)			

DRAMATIC RESULTS

84.351D 2014 Application

Making it REAL: Math - Content Standards

	Unit 1	National Standards for Visual Arts: Content Standards (CS)	CA VAPA: Visual Arts Standards	CCSS: Math Standards
1	Introduction			
2	Color Theory and Bookmarks	CS #1, #5	1.3, 2.4, 2.8	4.G.1
3	Common Threads/ Design “Group” Baskets Part 1	CS #1, #3	1.3, 1.5	4.NBT.4
4	Common Threads/ Design “Group” Baskets Part 2	CS #3	1.3	4.NF.3, 4.MD.3
5	Prepare materials	CS #1	2.4	4.MD.1, 4.MD.3
6	Weave bases	CS #1	2.4	4.MD.3, 4.G.1
7	Weaving, Day 1	CS #1	2.4	4.MD.2, 4.MD.3, 4.G.1
8	Weaving, Day 2	CS #1	2.4	4.MD.2, 4.MD.3, 4.G.1
9	Weaving, Day 3	CS #1	2.4	4.MD.2, 4.MD.3, 4.G.1
10	Rim & Finish baskets	CS #1	1.5, 2.4	4.MD.3, 4.G.1
11	Art Talk	CS #2, #3, #5	1.5, 4.1	4.MD.3, 4.G.1
	Unit 2	National Standards for Visual Arts: Content Standards (CS)	CA VAPA: Visual Arts Standards	History-Social Science or CCSS: Math Standards
12	Native American Basketry	CS #4	3.2	4.2
13	Shell Jewelry	CS #4	4.2, 4.4	4.2

14	Geometric Abstract Art Portfolio	CS #1	1.5, 2.6	4.MD.5, 4.MD.6, 4.G.1
	Unit 3	National Standards for Visual Arts: Content Standards (CS)	CA VAPA: Art Standard	CCSS: Math Standard
15	Design Rectangular Prism Basket, Part 1	CS #1, #3	1.5, 4.1	4.MD.3
16	Design Rectangular Prism Basket, Part 2	CS #3	4.1, 4.5	4.MD.3
17	Prepare Materials	CS #1	2.4	4.MD.1, 4.MD.3
18	Weave bases	CS #1	2.4	4.MD.3, 4.G.1
19	Weaving, Day 1	CS #1	2.4	4.MD.3
20	Weaving, Day 2	CS #1	2.4	4.MD.3, 4.G.1
21	Weaving, Day 3	CS #1	2.4	4.MD.3, 4.G.1
22	Rim and Finish baskets	CS #1	1.5, 2.4	4.MD.3
23	Musical Art Critique and Journal	CS #2, #3, #5	1.5, 4.1	4.MD.3
24	Jeopardy Review and Post Quiz	CS #1, #2, #3, #4, #5	Review of all standards covered	Review of all standards covered

Math in a Basket in the Classroom



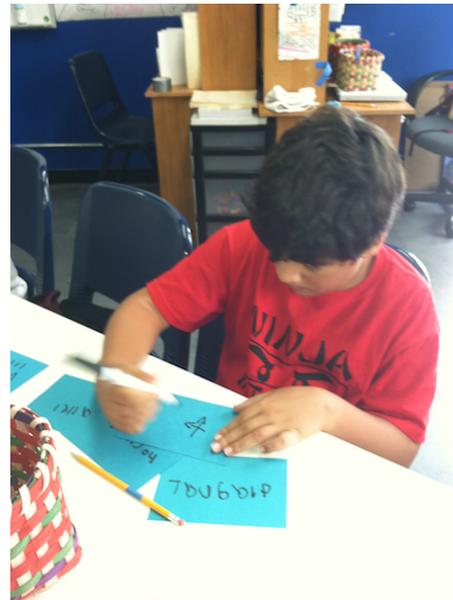
Students work in pairs to measure, calculate, and cut the correct number of spokes for baskets



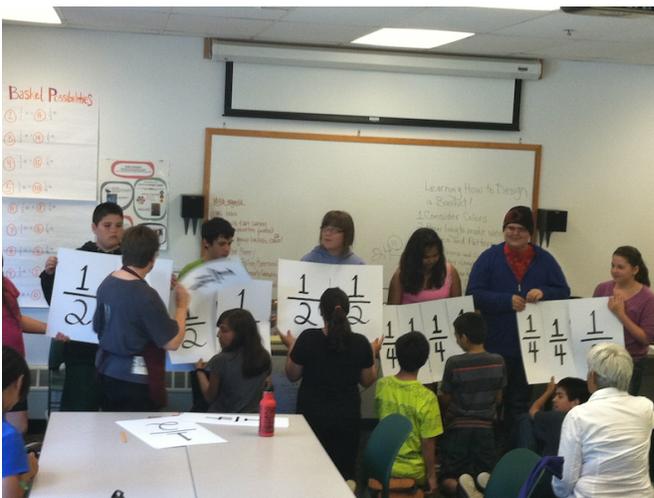
Teams showing Teaching Artist color scheme for their group identity basket



Student in our Special Ed classroom carefully weaving and looking for over-under-pattern



Student learning and making flashcards for different types of lines in our Special Ed Summer Camp



In Juneau, Alaska: Opening the Gates Academy
Students working together to represent the height of a 5 inch basket with fractions



Students participating in a "Museum Tour" to learn about basketry and the Gabrielino Tongva culture

Math in a Basket in the Classroom



Student discovering something new as he looks closer at his basket during art critique



Art Portfolio Self Portrait: Student use warm, cool, and complementary colors in each square



Student writing down response to art critique questions



Students share positives, challenges, and compliments during reflection circle



Students eager to share answer to math questions



Students proudly showing off their Group Identity Basket after art critique

Math in a Basket Professional Development



Teacher thankful to have our high school volunteer's help at the K-12 Alliance West Ed. Workshop



Just like our students! Even teachers can't resist wearing their baskets at the K-12 Alliance West Ed. Workshop



Classroom teachers' art on display at MIAB Exhibition at the Long Beach Art Museum in Toyota Gallery



Teacher beaming as she holds up her Elements of Art poster at the Beyond Basketry Teacher Workshop



Teacher weaving Wedding Basket at MIAB Teacher Workshop 2008



Group of teachers hard at work at our MIAB Teacher Workshop 2008

Math in a Basket in the Community



Proud family! Student's basket on display in MIAB Exhibition at Long Beach Art Museum



Parents make baskets in a Math in a Basket Parent Workshop and learn how math and art is integrated in an elementary school in Compton



Cal State University Long Beach President's Ambassadors help families weave baskets at the Latino Outreach Festival at Cal State Dominguez Hills



Parent and student showing off basket in joint art based summer camp with Long Beach Art Museum



Basket making booth at the International Children's Festival



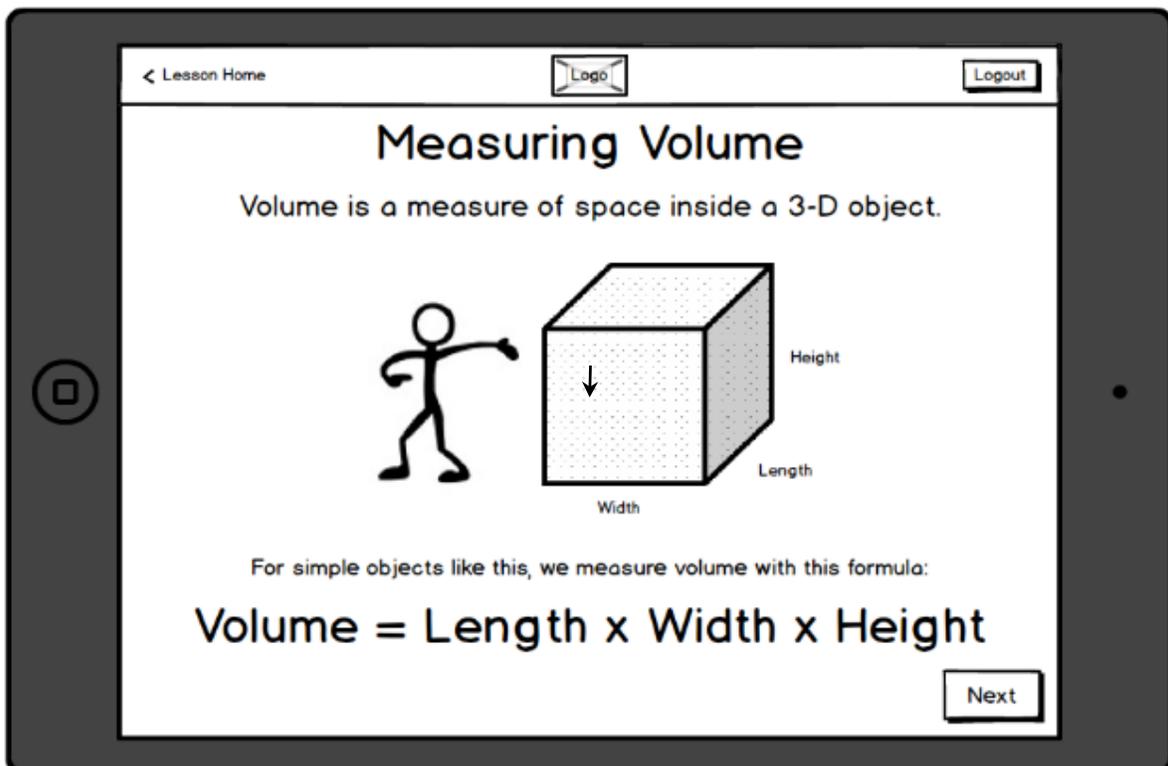
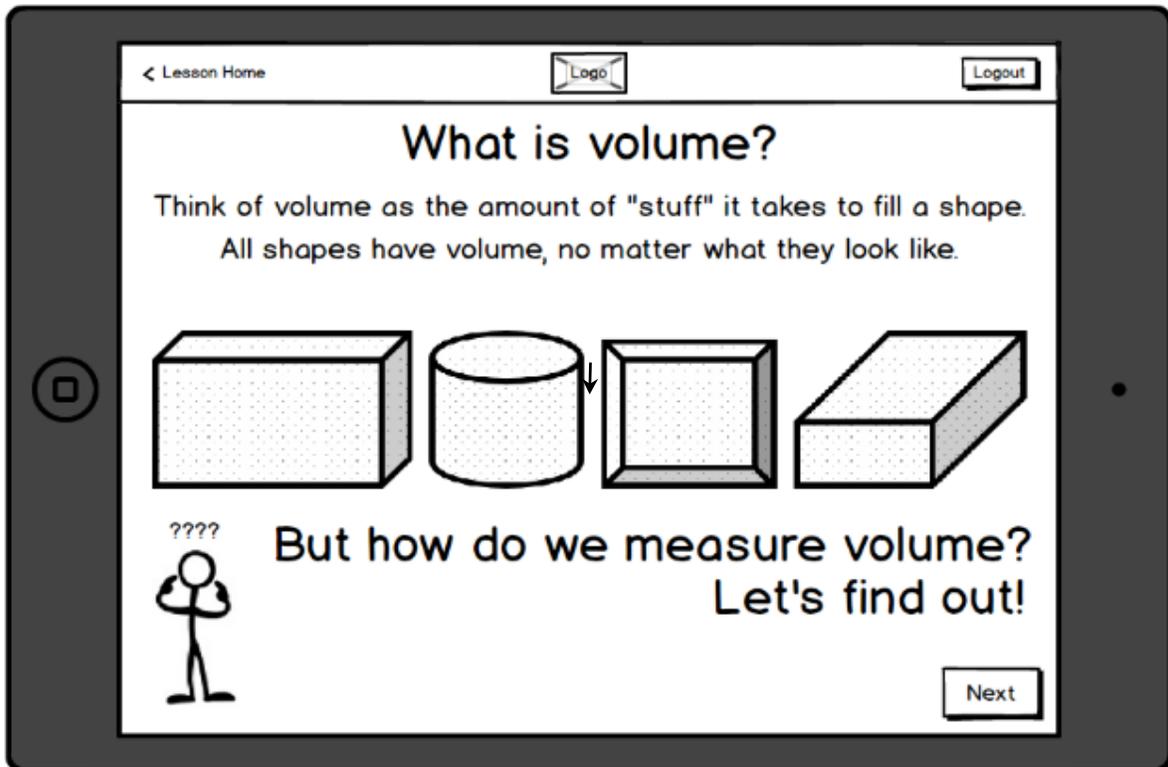
MIAB Exhibition at Long Beach Art Museum in Toyota Gallery



Smiling mom making a base for round basket at Parent Workshop at Burnett Elementary in Long Beach

Storyboard Sample #2

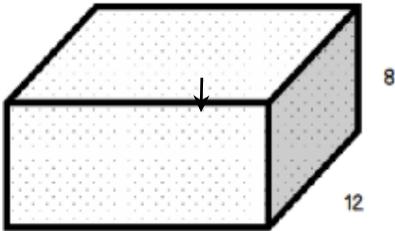
Lesson #21: Learning About Volume



< Lesson Home Logo Logout

Volume and Shape

Drag the corners of the shape to change the volume calculation.



23 12 8

Volume = x x =



< Lesson Home Logo Logout

Volume and Shape

Drag the co calculation.



23 12 8

Volume = x x =

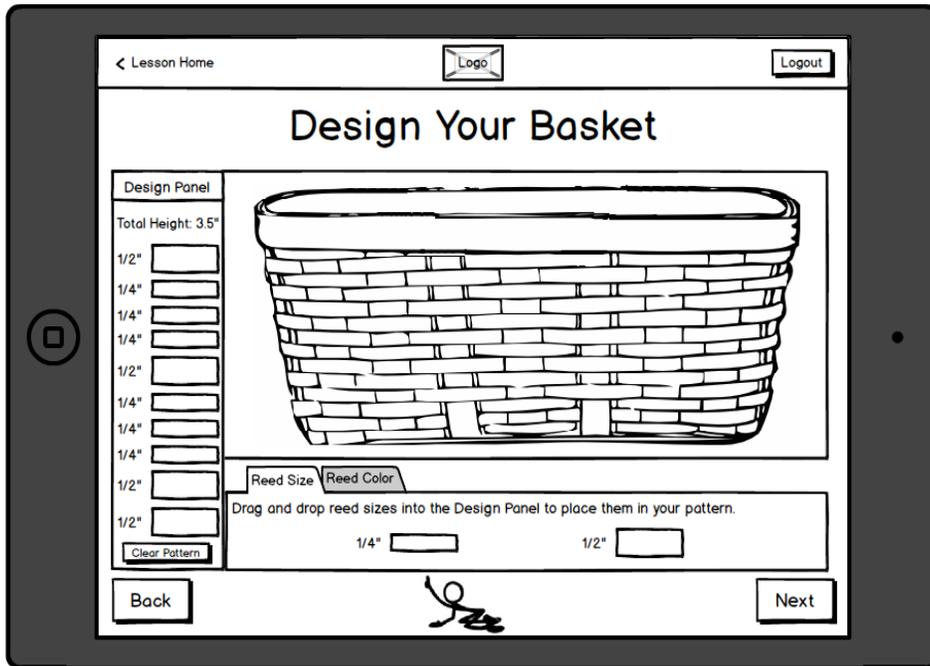


Hooray!!

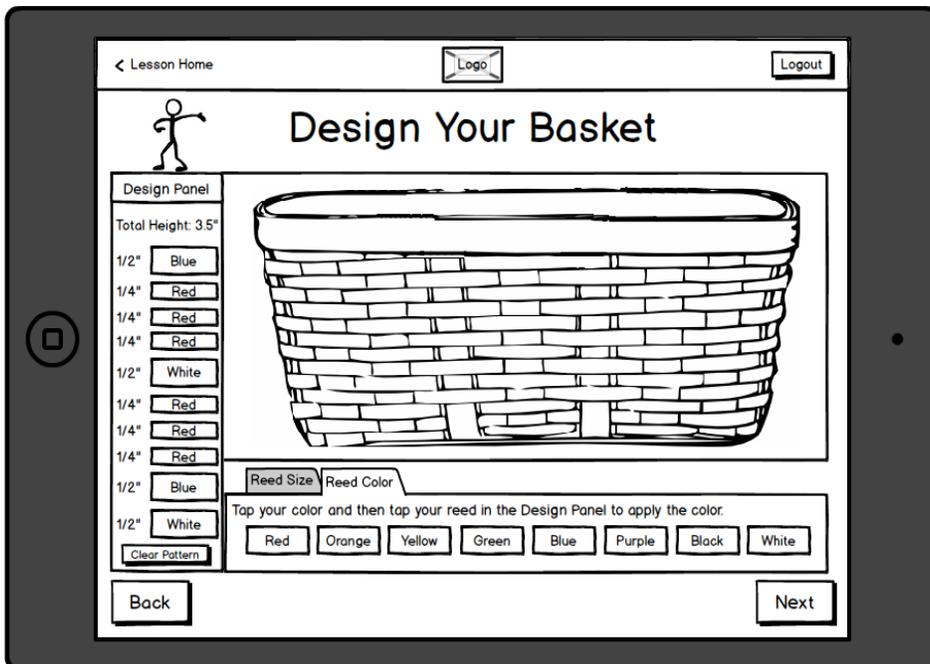


You're a Volume Master!
Let's go to the next lesson!

Storyboard Sample #3
 Lesson #16: Design Basket Pattern



NOTE: Using different tabs (**Reed Size**, **Reed Color**) in the same screen, students will explore pattern options with both reed size and reed color to design their basket.





Curriculum Outline
Grade 4
Making It REAL:
Math
School Year: 14-15
Unit 1-3

Students will explore the enduring theme of **IDENTITY** through a variety of art and math integrated projects. The goal of the program is for students to improve academic performance in math, art, classroom behavior, self-concept, motivation, academic persistence & problem solving.

Week/ Lesson #	Lesson Title	Thematic Description	Goals/Objectives	Assessment	Content Standards
	Unit 1	Exploring Group Identity and Connections Students will complete a graphic organizer that allows them to identify things that they have in common with other group members. They will then brainstorm ways they can symbolize one or more of these common traits in a basket. Students will review fractions, and then plan baskets using design sheets. On the sheet, students will determine the dimensions of their baskets, the measurement of their spokes and weavers, what sizes of reed they will use and how they will incorporate the symbol of the group's chosen common traits.			
1*	Introduction	Students will be introduced to Dramatic Results, look at the new projects they will be making, go over expectations, and discuss identity. Students will also create journals/sketchbooks and art portfolios. Students will take a pre-quiz at the beginning of MIAB to assess student knowledge of math and art.	<ul style="list-style-type: none"> • Know guidelines/expectations • Begin to understand "identity" • Review math, art & basketry terms • Introduce program/show projects • Make journals, art portfolios • Introduce Reflection: Challenges, positives and compliments • Pre-quiz (Assessment) 	Portfolio Rubric	Introduction
2*	Color Theory and Bookmarks	Students will create bookmarks in small groups to practice weaving and to explore the ideas of how color, pattern and contrast can reflect identity. Students will learn how to use emphasis, contrast, complementary, warm and cool colors to create excitement, interest and drama in their own artwork. Students will also review hand gestures & identify the elements in art on poster.	<ul style="list-style-type: none"> • Select a color scheme • Practice weaving with team bookmark • Discuss how to symbolize ideas and characteristics through art. 	Bookmark Complete project – rubric	Visual Arts 1.3, 2.4, 2.8 Mathematics 4.G.1
3*	Common Threads/ Design "Group" Baskets Part 1	Students will complete a graphic organizer that allows them to identify things that they have in common with other group members. Students will brainstorm ways they can symbolize one or more of these common traits in a basket. Students plan baskets using design sheets. On the sheet, students will determine the dimensions of their baskets, the measurement of their spokes and weavers.	<ul style="list-style-type: none"> • Discuss how to symbolize ideas and characteristics through art. • Review basketry terms, including spokes, weavers, up-set • Design a basket using design sheet 	Group Graphic Organizer Design Sheet Complete project-rubric	Visual Arts 1.3, 1.5 Mathematics 4.NBT.4

Note: Asterisk indicate lessons to integrate with technology.

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Page 1

4*	Common Threads/ Design "Group" Baskets Part 2	Students will finish design sheets, review fractions, and design their baskets on a pattern card to incorporate the group's chosen colors.	<ul style="list-style-type: none"> • Discuss how to symbolize ideas and characteristics through art • Review basketry terms, including spokes, weavers, up-set • Design a basket using design sheet • Determine sizes of reed to be used • Add fractions (reed sizes) to determine accurate basket height 	Design Sheet Pattern Card complete project – rubric	Visual Arts 1.3 Mathematics 4.NF.3, 4.MD.3
5*	Prepare materials	Using the design sheets and pattern card as a guide, students will accurately measure and cut the reed for their baskets. Students will learn about perimeter.	<ul style="list-style-type: none"> • Discuss and practice accurate measuring • Measure and cut reed • Discuss how group identity and self identity are included in designs 	Design Sheet Pattern Card	Visual Arts 2.4 Mathematics 4.MD.1, 4.MD.3
6*	Weave bases	Students will weave their spokes into a base for their baskets. They will review weaving, learn to twine, and how to up-set a basket. Students will also discuss types of lines in baskets and why it is important for reed to be parallel and perpendicular. Students will review perimeter and the formula for perimeter.	<ul style="list-style-type: none"> • Identify parallel and perpendicular lines • Use formula for perimeter to obtain correct measurements • Review basketry terminology • Review under-over weaving, twining 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
7*	Weaving, Day 1	Students will review fractions, and learn about math concept area and begin weaving their baskets. Students will review the basketry, and art vocabulary discussed in previous lessons.	<ul style="list-style-type: none"> • Review fractions • Use formula for area to obtain correct measurements • Vocabulary review • Review under-over weaving • Weave first 3 rows 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.2, 4.MD.3, 4.G.1
8	Weaving, Day 2	Students will set personal weaving goals and continue weaving baskets. In small groups, students will use the formula for area to solve problems and check in with partners to verify and discuss answers.	<ul style="list-style-type: none"> • Continue weaving baskets • Vocabulary review • Review under-over weaving • Weave remaining rows • Use formula for area 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.2, 4.MD.3, 4.G.1
9	Weaving, Day 3	Students will set personal weaving goals and continue weaving baskets. In small groups, students will use the formula for area to solve problems and check in with partners to verify and discuss answers.	<ul style="list-style-type: none"> • Continue weaving baskets • Vocabulary review • Review under-over weaving • Weave remaining rows • Use formula for area 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.2, 4.MD.3, 4.G.1
10*	Rim & Finish baskets	Students will finish their baskets and latch their rims. Students will calculate perimeter, area and practice math skills. Students will write about how their baskets relate to the group identity and their personal identities.	<ul style="list-style-type: none"> • Review math concepts • Latch rim • Discuss identity in basketry 	complete project – rubric	Visual Arts 1.5, 2.4 Mathematics 4.MD.3, 4.G.1
11	Art Talk	Students will partake in an art talk in which they get to share their own work and experience the artwork of their classmates. All students will describe, analyze, interpret, and form opinions about the artwork they see and learn to share these in both written and verbal ways.	<ul style="list-style-type: none"> • Students will identify elements of art in art work • Students will review/remember artistic process • Students will discuss artists' intent 	Student Participation Journal Entry	Visual Arts 1.5, 4.1 Mathematics 4.MD.3, 4.G.1

Note: Asterisk indicate lessons to integrate with technology.

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Unit 2		Exploring Cultural Identity			
Students will learn about some of the Native American tribes in California best known for their art, including basketry and weaving. Students will learn about the tribes' cultures and relationship to the environment. Students will discuss the material culture and identity of Native Americans and discuss their own material cultures and relationship to identity, then work with a partner to use a pump drill to create a hole in a shell.					
12*	Native American Basketry	Students will learn about some of the Native American tribes in California best known for their art, including basketry and weaving. Students will learn about the tribes' cultures and relationship to the environment. Students will discuss the material culture and identity of Native Americans and discuss their own material cultures and relationship to identity, then work with a partner to use a pump drill to create a hole in a shell.	<ul style="list-style-type: none"> Learn about Native American tribes Discuss different types of materials and patterns used by different tribes. Use a pump drill to make a hole in a shell 	Project Completed Rubric	Visual Arts 3.2 History-Social Science 4.2
13	Shell Jewelry	Students will discuss cultural identity and make shell necklaces using some of the same techniques that many California tribes, including Gabriellino-Tongva, used to make baskets and jewelry. Students will talk about cultural identity, and reflect on how their shell jewelry relates to cultural identity, then use those thoughts to write a poem.	<ul style="list-style-type: none"> Learn about traditional weaving techniques Explore idea of identity in baskets and woven jewelry Discuss how selection of media relate to meaning of art Discuss relationships tribes had with their physical environment and how it affected their way of life & art 	Project Completed Rubric Journal Reflection- Poem	Visual Arts 4.2, 4.4 History-Social Science 4.2
14*	Geometric Abstract Art Portfolio	Students will also create journals/sketchbooks and art portfolio cover. Students will design their very own geometric abstract art portfolio using, line, geometric shapes, color, measurements, and angles.	<ul style="list-style-type: none"> Students will identify elements of art in art work Students will review/remember artistic process Identify parallel and perpendicular lines Discuss and practice accurate measuring 	Project Completed Rubric Journal Reflection	Visual Arts 1.2, 1.5, 2.8 Mathematics 4.MD.5, 4.MD.6, 4.G.1
Unit 3		Exploring Identity and Rectangular Connections			
Students will build on basket weaving techniques through the planning, designing, and weaving of an original basket and explores comparative geometric sizes.					
15*	Design Rectangular Prism Basket Part 1	Students will discuss the concept of identity. They will look at various baskets and talk about what we learn about the artist from looking at each one. Students will design an original basket using a design sheet representing their identity. Students will determine the dimensions of their baskets, the measurement of their spokes and weavers, what sizes of reed they will need. Students will finish designing baskets using $\frac{1}{2}$ " and $\frac{1}{4}$ " reed using color and pattern to represent their self-identity.	<ul style="list-style-type: none"> Students will talk about the concept of identity. Students will fill in a thinking map to reveal more about their own identities Students will design their 2nd basket 	Design Sheet Identity thinking Map	Visual Arts 1.5, 4.1 Mathematics 4.MD.3
16*	Design Rectangular Prism Basket Part 2	Students will finish designing baskets, then, using the design sheets as a guide, students will accurately measure and cut the reed for their baskets.	<ul style="list-style-type: none"> Students will explore ways to share personal characteristics in art, specifically baskets Add fractions (reed sizes) to determine accurate basket height 	complete project – rubric Reflection in portfolio Perform pattern	Visual Arts 4.5 Mathematics 4.NF.3, 4.MD.3
17	Prepare Materials	Students will finish designing baskets, then, using the design sheets as a guide, students will accurately measure and cut the reed for their baskets.	<ul style="list-style-type: none"> Students will discuss and practice accurate measuring Students will measure and cut reed 	complete project – rubric Reflection in portfolio Perform pattern	Visual Arts 2.4 Mathematics 4.MD.1, 4.MD.3

Note: Asterisk indicate lessons to integrate with technology.

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18	Weave bases	Students will weave their spokes into a base for their baskets. They will also review perimeter and the formula for perimeter.	<ul style="list-style-type: none"> Identify parallel and perpendicular lines Review fractions Review basketry terminology Review perimeter Review under-over weaving, twining 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
19*	Weaving, Day 1	Students will determine the areas of their bases by using area tiles, then discuss how to use the formula $A = L \times W$ and why it works. Students will also begin weaving their baskets.	<ul style="list-style-type: none"> Discuss the concept of area Use formula to determine area Review under-over weaving Weave first 3 rows 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3
20*	Weaving, Day 2	Students will make predictions about the following two questions: Can rectangles that have the same perimeter have different areas? Different areas have different perimeters? They will re-visit the questions and use their completed baskets to prove the answers in an upcoming lesson. Students will also continue weaving their baskets.	<ul style="list-style-type: none"> Discuss how to find perimeter and area using tiles and rulers and formulas Make predictions about the relationships between area and perimeter Continue weaving baskets 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
21*	Weaving, Day 3	Students will use 1inch cubes to determine the volume of their baskets. Students will discuss how to use the formula $V = L \times W \times H$ and why it works. Students will also continue weaving their baskets	<ul style="list-style-type: none"> Discuss volume and how to calculate volume using formula Determine basket volume Continue weaving baskets 	complete project – rubric	Visual Arts 2.4 Mathematics 4.MD.3, 4.G.1
22*	Rim and Finish baskets	Students will practice measuring the dimensions of different size baskets and calculate its volume. Students will finish basket with rimming and latching.	<ul style="list-style-type: none"> Practice volume Complete weaving Latch rims 	Math Game participation complete project – rubric	Visual Arts 1.5; 2.4 Mathematics 4.MD.3
23	Musical Art Critique and Journal	Students will partake in an art talk in which they get to share their own work and experience the artwork of their classmates. All students will describe, analyze, interpret, and form opinions about the art work they see and learn to share these in both written and verbal ways.	<ul style="list-style-type: none"> Students will identify elements of art in art work Students will review/remember artistic process Students will discuss artists' intent Group baskets thematically 	complete Project- rubric	Visual Arts 1.5; 4.1 Mathematics 4.MD.3
24	Jeopardy Review and Post Quiz	Students will play games to review all of the material and concepts covered. Students will also discuss the enduring theme of identity and the real-life applications of the math, art, and basketry techniques they have studied over the year.	<ul style="list-style-type: none"> Students will review all of the art, math, and social studies material from the entire year Students will discuss what they learned with classmates 	Post Quiz	Review of all standards covered

Note: Asterisk indicate lessons to integrate with technology.



Self Identity Basket **Weaving Day 3** **Unit 3, Lesson #21**

Objective

Students will be introduced to Volume through a volume guessing game. Students will finish weaving their baskets using the over/under pattern, and begin the rim and latching process.

Common Core Standards for Mathematics

Measurement and Data

4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

Geometry

4.G.1 Draw points, lines, line segments, rays, angles (right acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Visual Arts Concepts:

1.5 Describe and analyze the elements of art (color, shape/form, line, texture, space and value), emphasizing form, as they are used in works of art and found in the environment.

2.4 Use fibers of other materials to create a simple weaving.

Materials: iPod and Music (Optional), sample baskets, zip lock bag with weavers, student baskets, student pattern card, scissors, plastic clips, water containers, towels, 1/4" reed for latching, 1/2" reed for basket rims, measuring tapes, white board, dry eraser marker

Vocabulary: Spokes, Weavers, De-air, Latching, Estimate, Volume, Cube

Music: Play Selected music in the background during weaving time. *Optional*

Anticipatory (7 Min)

Hold a student basket in your hand

We have discussed perimeter many times (trace basket perimeter). We have discussed area (run your hand over the basket base area). So you are now ready for a new math concept. It is Volume, or how many units the inside of your basket can hold (put our hand inside basket). Lets take a guess. Show tall and short basket filled with cubes. Your Teaching Artist has the Take a Guess Sheet! **(Appendix 2oB)** Use Appendix 2oB to record student responses:

- Which basket can hold more 1 inch cubes? (Tall/Short)
- How many 1 inch cubes do you think the tall one holds?
- How many 1 inch cubes do you think the short one holds?

FOURTH GRADE Making It REAL: Math (24 Weeks)

Stated Objectives

Tell students, “Our goal today is to weave in more weavers using the under, over, under pattern. Remember to focus on good basket craftsmanship, using good tension in weaving and de-airing of basket.”

Modeling (5 Min)

1. Today will be your last weaving day. Even if you don't use all of the weavers you cut, it is okay because we want you to concentrate on weaving to the best of your ability.
 - **We will tell you when to stop weaving so that you will have plenty of time to tuck and trim your spokes.**
2. Model how to **de-air** weavers (use fingers to push weaver down closing up any gaps between weavers).
3. Show students how to cut spokes at an angle if necessary (making a point-if spokes are long).
4. Demonstrate how to bend and tuck spokes under a basket weaver.
5. Show students how to secure 1/2 inch inner and outer rim pieces **with** plastic clips
6. (Optional) Model latching of basket rim using the quarter inch reed selected from available colors.

Guided practice (30 Min)

1. Students will refer to their Pattern Cards as they continue to weave.
2. Students will de-air as needed.
3. Students will cut spokes that are too long to tuck.
4. Students will bend and tuck spokes under a weaver in preparation for rimming.
5. Students will add 1/2 inch inner and outer rim pieces, securing with plastic clips.
6. (Optional) Students will latch basket rim using the quarter inch reed selected from available colors.

Check for understanding

- As student weave ask: What part of your basket can show volume? (Inside)
- Have students check their shoulder partner's basket for open windows that need de-airing.

Classroom Volunteer

- Check to make sure students weave correctly using the over/ under pattern.
- Remind students to de-air their baskets so that their basket is nice and tight.
- Assist students in the selection of rim and latching materials.
- Make sure that student's spokes are truly vertical and parallel and basket is de-aired before they cut and tuck spokes.

FOURTH GRADE Making It REAL: Math (24 Weeks)

Students who are rimming and latching only:

- Check to make sure that students use two weavers for their basket rim (one weaver inside and one weaver outside).
- When latching help students keep their ¼” reed flat in the loop.

Clean Up (5 Min)

- Clip unlatched reed to basket.
- Place Pattern Card in zip lock bags and place in the middle of the table for Teaching Artist to put away.

Reflection (8 Min)

Teaching Artist will model possible language structure to be used during reflection: share out in front of class something that was a **challenge** (hard, difficult, or confusing) during the lesson. They will then share their **positive** (what was fun, exciting, wonderful, learned) with students.

Guided Question: Do you feel that you have improved your weaving skills? What was challenging and positive about weaving your second basket?

Compliment Circle

Teaching Artists will model compliment circle based on day’s activity. Students will share a compliment with each other. Emphasize saying “thank you” after each compliment

Closure (5 Min)

Show cube filled baskets

Does anyone know of a math formula that can help us calculate how many cubes are in each of these baskets? Respond based on classroom input.

- Respond in the affirmative if answered correctly
- Inform students that everyone will learn about the formula next week, and find out who guessed the correct number of cubes!



Design Self-Identity Basket, Part 2

Unit 3, Lesson #16

Objective:

Students will create a self-identity basket and discuss how the Element of Art: **color** can be used to symbolize ideas. Students will use their symbolic colors to design their basket pattern. Students will use their design sheet to determine the dimensions of their basket and the measurement of their spokes and weavers using $\frac{1}{2}$ inch and $\frac{1}{4}$ inch reed.

Common Core Standards for Mathematics

Measurement and Data

4.MD.3 Apply the area and perimeter formulas for rectangles in real world and mathematical problems.

4.NF.3 Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

Visual Arts Standards:

4.5 Describe how the individual experiences of an artist may influence the development of specific work of art.

Materials:

iPod (optional), Student Design Sheet (Self Identity Basket), Exploration Journals, Self-Identity Basket Samples (5x5x5 and 5x3x5), Pattern Card, Reed Chips, Pencils, Crayons, Surprise Perimeter Problem Sheets

Vocabulary:

Self-Identity, Weavers, Spokes, Dimensions, Width, Length, Height, Perimeter

Anticipatory Set: (10 Min)

Say, "Today you will play a game called Surprise Perimeter Problem." Review formula for perimeter as a class before students begin. Teaching Artist will reach into a bag to randomly pull out a problem. Place the problem on the board or Elmo. Each student will solve the problem then check their work with a partner. Ask students, "Was your answer the same or different? Why or why not?" After both partners agree on the final answer, report to your Teaching Artist to check if answer is correct. Teaching Artist will say "Cha Ching" if students have the correct answer, if not, teaching artist will say "Cha-Check" so students could go back and check their work together.

Stated Objective:

Tell students, "Last week, you used the dimensions of your basket to calculate the length of your spokes. Today you will use the perimeter to figure out the length of your weavers." Tell students, "Today, we will review perimeter and continue to work on our design sheets. **You will get to design your self-identity basket using reed chips with the**

weavers.” Tell students, “Today, we will review perimeter and continue to work on our design sheets. You will get to design your self-identity basket using reed chips with the colors that you selected to create a pattern that symbolize your personal interests/characteristics.”

Modeling: (15 Min)

1. Pass out design sheet (**See Appendix 14A: Self-Identity Basket**)
 - Remind students that we are calculating weaver data for both the short (5x5x3) and tall (5x3x5) baskets.
 - Model working through design sheet using one color for tall basket data and another color for short basket data.
 - Model how to reference basket dimensions to complete **back page** of design sheet and have students participate using the “I do, you do” technique.
 - Review basket vocabulary: **Weavers** are the horizontal strips on the basket. They go around the **perimeter** of the basket.
 - Remind students that in order to figure out the length of their weavers, they must add 4 inches (the magic number). This allows for cutting and overlapping (Just like a belt).
2. Pattern Card: Show Self Identity basket sample. Explain that pattern is the principle of design that repeats.
 - Model how to design a basket pattern using 1/2” and 1/4” reed chip on Pattern Card (**Appendix 15A: Pattern Card**)
 - Model selecting reed chips from warm, cool, or neutral bags.
 - Tell students to use at least two 1/4” reed but no more than six 1/4” reed in their basket pattern.
 - Show students how to start with 1/2” reed at the bottom and end with 1/2” reed at the top on Pattern Card.
 - (Optional) Show how to color in Pattern Card using crayons.
 - Model how to record color and meaning on Pattern Card.

Guided Practice (20 Min)

Students will:

1. Calculate basket weaver length using Design Sheet with teacher.
 - Determine the perimeter and weaver lengths as a class.
2. Select reed chips according to Self-Identity color and explore pattern with Pattern Card.
 - Students will select 1/2” and 1/4” reed according to self-identity colors chosen.
 - Students will ensure that basket pattern uses at least two 1/4” reed but no more than six 1/4” reed.
 - Students need to start with 1/2” reed at the bottom and end with 1/2” reed at the top on Pattern Card.
 - Students will use crayons to color in pattern according to reed chip pattern design.
 - Students will write down colors of reed and meaning on Pattern Card.

Check for understanding:

- Ask students, “How many $\frac{1}{4}$ ” reed do you have?”
- Ask students, “Did students start with a $\frac{1}{2}$ ” reed and end with a $\frac{1}{2}$ ” reed on pattern card?”

Classroom Volunteer:

Circulate to check for correct calculations on basket design sheet and assist students if necessary. Check to make sure students start their basket pattern using $\frac{1}{2}$ ” reed at the bottom and end with a $\frac{1}{2}$ ” reed at the top. Pass out/collect reed chip, design sheet and art portfolio.

Reflection:(8 Min)

- Teacher should model possible language structure to be used during reflection: share out in front of class something that was a **challenge** (hard, difficult, or confusing) during the lesson. They will then share their **positive** (what was fun, exciting, wonderful, learned) with students.
- **Guiding Questions:** Was creating the pattern for your self-identity basket a challenge and/or positive? Why?

Compliment Circle:

Teaching Artist will model compliment circle based on day’s activity. Students will share a compliment with each other. Make sure to emphasize saying “thank you” after each compliment.

Clean Up:(2 Min)

- Students will place design sheet inside art portfolio and stack art portfolios in middle of the table groups for Teaching Artists or volunteers to collect.
- Students will stack Pattern Cards in the middle of table for Teaching Artist to collect.
- Help by putting reed chip into zip lock bags and put crayons back in boxes for volunteers to collect.

Closure: (5 Min)

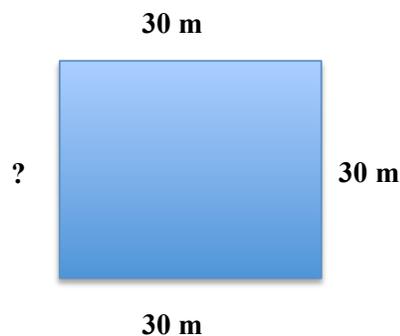
- Tell students, “Today you completed your design for your self-identity basket using art and math. This week we focused on perimeter, so let’s review the perimeter formula one more time.”
- Tell students, “I will ask what is the formula for perimeter? As class, you will have to tell me the formula and show me with your fingers.”
- Say, “Next week, you will get to find the perimeter of irregular shapes.”

Problem A

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.



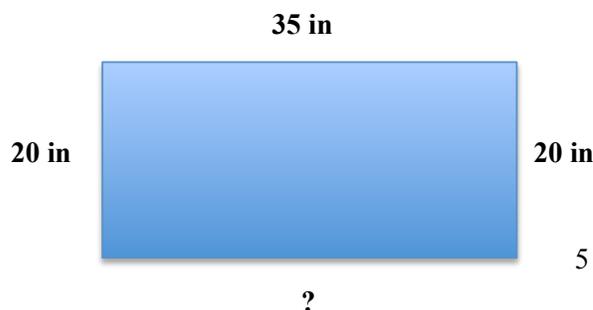
Perimeter=_____

Problem B

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.



Perimeter=_____

01/30/14 SK

Problem C

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.

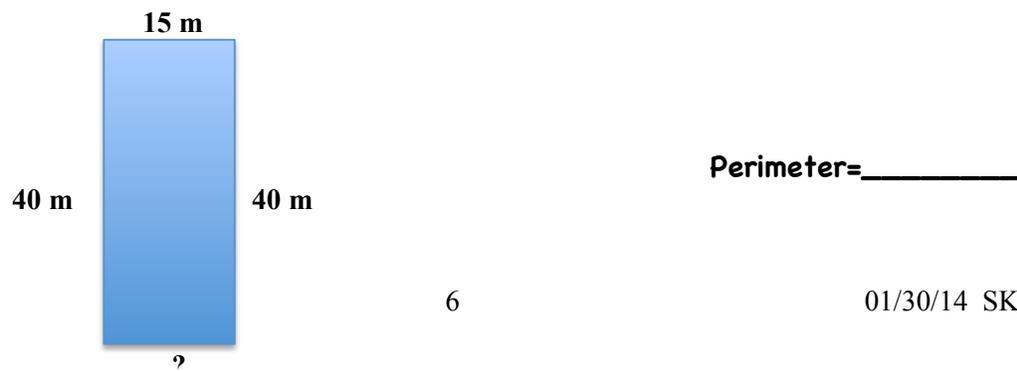


Problem D

Calculating the Perimeter of Regular Shapes

Reminder: When you are calculating the perimeter of regular shapes follow these steps.

1. Trace the outer side lengths of the shape with your finger.
2. Write the missing side length.
- 3. Add up all the side lengths.**
4. Don't forget to write the units in your final answer.



6

01/30/14 SK

ANSWER KEY:

Calculating the Perimeter of Regular Shapes

Problem A: Perimeter= 120 m

Problem B: Perimeter= 110 cm

Problem C: Perimeter= 80 in

Problem D: Perimeter= 110 m

ANSWER KEY:

Calculating the Perimeter of Regular Shapes

Problem A: Perimeter= 120 m

Problem B: Perimeter= 110 cm

Problem C: Perimeter= 80 in

Problem D: Perimeter= 110 m

**U.S. DEPARTMENT OF EDUCATION
BUDGET INFORMATION
NON-CONSTRUCTION PROGRAMS**

OMB Number: 1894-0008
Expiration Date: 04/30/2014

Name of Institution/Organization

Dramatic Results

Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.

**SECTION A - BUDGET SUMMARY
U.S. DEPARTMENT OF EDUCATION FUNDS**

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	180,808.00	275,224.00	243,144.00	202,687.00	0.00	901,863.00
2. Fringe Benefits	36,162.00	55,689.00	50,095.00	40,753.00	0.00	182,699.00
3. Travel	5,000.00	2,560.00	7,560.00	12,560.00	0.00	27,680.00
4. Equipment	15,390.00	2,620.00	2,620.00	2,620.00	0.00	23,250.00
5. Supplies	2,500.00	16,800.00	16,800.00	16,800.00	0.00	52,900.00
6. Contractual	223,000.00	127,680.00	122,680.00	167,680.00	0.00	641,040.00
7. Construction	0.00	0.00	0.00	0.00	0.00	0.00
8. Other	35,140.00	1,427.00	38,699.00	38,900.00	0.00	114,166.00
9. Total Direct Costs (lines 1-8)	498,000.00	482,000.00	481,598.00	482,000.00	0.00	1,943,598.00
10. Indirect Costs*	0.00	0.00	0.00	0.00	0.00	0.00
11. Training Stipends	2,000.00	18,000.00	18,000.00	18,000.00	0.00	56,000.00
12. Total Costs (lines 9-11)	500,000.00	500,000.00	499,598.00	500,000.00	0.00	1,999,598.00

***Indirect Cost Information (To Be Completed by Your Business Office):**

If you are requesting reimbursement for indirect costs on line 10, please answer the following questions:

(1) Do you have an Indirect Cost Rate Agreement approved by the Federal government? Yes No

(2) If yes, please provide the following information:

Period Covered by the Indirect Cost Rate Agreement: From: To: (mm/dd/yyyy)

Approving Federal agency: ED Other (please specify):

The Indirect Cost Rate is %.

(3) For Restricted Rate Programs (check one) -- Are you using a restricted indirect cost rate that:

Is included in your approved Indirect Cost Rate Agreement? or, Complies with 34 CFR 76.564(c)(2)? The Restricted Indirect Cost Rate is %.

Name of Institution/Organization Dramatic Results	Applicants requesting funding for only one year should complete the column under "Project Year 1." Applicants requesting funding for multi-year grants should complete all applicable columns. Please read all instructions before completing form.	
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**SECTION B - BUDGET SUMMARY
NON-FEDERAL FUNDS**

Budget Categories	Project Year 1 (a)	Project Year 2 (b)	Project Year 3 (c)	Project Year 4 (d)	Project Year 5 (e)	Total (f)
1. Personnel	0.00	3,220.00	0.00	1,080.00	74,576.00	78,876.00
2. Fringe Benefits	0.00	0.00	0.00	0.00	14,815.00	14,815.00
3. Travel	0.00	0.00	0.00	0.00	10,000.00	10,000.00
4. Equipment		140,000.00	14,000.00	14,000.00	0.00	168,000.00
5. Supplies	0.00	0.00	0.00	0.00	0.00	0.00
6. Contractual	0.00	0.00	0.00	0.00	10,000.00	10,000.00
7. Construction	0.00	0.00	0.00	0.00	0.00	0.00
8. Other	4,410.00	38,123.00	851.00	650.00	0.00	44,034.00
9. Total Direct Costs (lines 1-8)	4,410.00	181,343.00	14,851.00	15,730.00	109,391.00	325,725.00
10. Indirect Costs	0.00	0.00	0.00	0.00	0.00	0.00
11. Training Stipends	0.00	0.00	0.00	0.00	0.00	0.00
12. Total Costs (lines 9-11)	4,410.00	181,343.00	14,851.00	15,730.00	109,391.00	325,725.00

SECTION C - BUDGET NARRATIVE (see instructions)

U.S. DEPARTMENT OF EDUCATION
SUPPLEMENTAL INFORMATION
FOR THE SF-424

OMB Number: 1894-0007
Expiration Date: 07/31/2014

1. Project Director:

Prefix:	First Name:	Middle Name:	Last Name:	Suffix:
Ms.	Christi		Wilkins	

Address:

Street1:	3310 Lime Avenue
Street2:	
City:	Signal Hill
County:	Los Angeles
State:	CA: California
Zip Code:	90755-4612
Country:	USA: UNITED STATES

Phone Number (give area code)	Fax Number (give area code)
562-397-1155	562-595-4600

Email Address:

christi@dramaticresults.org

2. Novice Applicant:

Are you a novice applicant as defined in the regulations in 34 CFR 75.225 (and included in the definitions page in the attached instructions)?

Yes No Not applicable to this program

3. Human Subjects Research:

a. Are any research activities involving human subjects planned at any time during the proposed project Period?

Yes No

b. Are ALL the research activities proposed designated to be exempt from the regulations?

Yes Provide Exemption(s) #:

No Provide Assurance #, if available:

c. If applicable, please attach your "Exempt Research" or "Nonexempt Research" narrative to this form as indicated in the definitions page in the attached instructions.

<input type="text" value="84.351D.2014 Human Research Subjects.pdf"/>	<input type="button" value="Add Attachment"/>	<input type="button" value="Delete Attachment"/>	<input type="button" value="View Attachment"/>
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Dramatic Results

84.351D 2014 Application

Human Subjects Non-Exempt Research Narrative
Arts in Education Model Development and Dissemination, 2014(FY)
Making it REAL: Math

(1) Human Subjects Involvement and Characteristics

Participants will include 16 treatment and 8 control 4th grade teachers and the 840 students in their respective classrooms each year (approximately 2520 students across 3 years of funding). Assignment to one of two interventions or control will be determined randomly through a random number generator.

(2) Sources of Materials

Data collection involving the treatment and control teachers will include surveys, interviews and site observations linked to the *Making it REAL: Math* program or business as usual. Data collection involving students will include existing federal, state and school mandated assessments, as well as two surveys administered pre- and post-intervention each year. All data will be coded so that no student nor teacher names are associated with data.

(3) Recruitment and Informed Consent

Informed consent will be obtained from the classroom teachers, as well as their students. As a condition of participating in the study, treatment teachers will agree to implement the *Making it REAL: Math* program and (a) attend 44 hours of professional development each year on the implementation of the program; (b) provide feedback via survey and interview; and (c) allow classroom observations.

Informed consent from parents (or legal guardians) of all students involved will also be obtained. Parents of students will agree to (a) allow their child to participate in the study; and (b) allow the school to share federal, state and school required assessment scores with the evaluators.

Informed consent from students themselves will also be obtained. Students will agree to participate in the study.

Teacher, parent, and student informed consent letters will clearly communicate the research purposes, procedures, and risks and benefits. Also included in the informed consent letters are statements offering teachers, parents, and students the opportunity to ask questions and withdraw at any time. Informed consent letters will be provided in other languages, including Braille, as necessary and requested.

(4&5) Potential Risks & Protection Against Risks

The potential risks associated with participating in this study are minimal. Treatment teachers will be asked to attend professional development on the implementation of the *Making it REAL: Math* program, utilize the *Making it REAL: Math* program, to provide feedback on the program, to complete survey of instructional practices and arts knowledge, and to allow classroom observations of the *Making it REAL: Math* curricular lessons. Classroom observations will be as unobtrusive as possible. Control teachers will complete a survey of instructional practices and arts knowledge. No teacher, parent, or student names will be associated with the data collected. That is, no reference will be made in oral or written materials that could link the participants to the study. Data will be stored securely; only evaluation personnel will have access to it.

(6) Importance of the Knowledge to be Gained

Risks are considered minimal. The knowledge gained through this development effort will assist these elementary classroom teachers in improving instruction for students across all disciplines. The overall results will add to the overall knowledge on the instructional practices that can facilitate math learning as well as skills in the arts and technology.

(7) Collaborating Sites

Project Director from Dramatic Results will work with the evaluation staff at Griffin Center for Inspired Instruction to manage all project activities including facilitating the evaluation. All research activities will be conducted with participants from the select3d elementary schools in the Long Beach Unified School District, in Long Beach, California.