

## Appendix F

### Berea College Promise Neighborhood

The Berea College Promise Neighborhood has developed a comprehensive continuum of solutions to create positive education outcomes from birth to career. These solutions are connected to Indicators of Need, which are discussed in detail in the Implementation Narrative.

The solutions discussed here are the foundation of our Promise Neighborhood Implementation Plans. We have included the solution, the evidence-base, timing, the number and percentage of students served, cost per student and relevant partners.

Early Steps to School Success .....	2
Rural Literacy Program.....	6
National Math and Science Initiative’s Advanced Placement Incentive Program .....	10
High Quality Professional Development.....	14
Extended Learning Opportunities .....	26
College and Career Readiness .....	34
Longitudinal Early Warning System.....	36
Rural Scholars Mentoring Program .....	38
Families and Schools Together.....	40
Commonwealth Institute for Parent Leadership .....	42
Health and Wellness.....	44
Service Learning .....	47

***Solution: Early Steps to School Success***

***How and when this solution will be implemented:*** The Early Steps to School Success (ESSS) program targets low-income families who are expecting a child or currently have children between birth and three years of age. A locally-based coordinator delivers services directly to families through home visits and regular parent group meetings. Coordinators model pre-literacy activities and observe parents and children interacting. This solution happens throughout the five-year implementation period.

***Segmentation if any to determine who would get solution:*** Low-income families expecting children or having children between birth and three years of age.

***The partners that will implement:*** Save the Children

***Source of funds to pay for solution:*** Save the Children private funding and Promise Neighborhood Federal funding.

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Per participant cost	\$2,938	\$1,471	\$980	\$735	\$588
Number served (children ages birth to three)	170	340	510	680	850
Total number in that age group	1,100	1,100	1,100	1,100	1,100
% served in that age group	15%	31%	46%	62%	77%

***Evidence Supporting Solution: Moderate Evidence***

Early Steps to School Success (ESSS) is Save the Children’s language development and pre-literacy program. ESSS works with children and families, through home visits, parent/child groups and a book exchange program, from pregnancy until the child enters kindergarten. Connections to schools and other community partners and extensive professional development for local staff are important parts of the capacity building aspect of the program. Early Steps programs are established in rural areas where there are few other early childhood supports.

ESSS is designed to put research into practice in poor, rural communities with an affordable, best-practice, home visiting program. The four goals of the program are:

- Children will enter school with the skills necessary for school success.
- Parents will have the skills and knowledge to support their children's education.
- Home/school connections will be strong and transition to school well prepared.
- Early childhood knowledge and skills in the community will be increased.

The four goals of the ESSS program actually encompass a theory of change for producing positive early childhood outcomes. Understanding that one cannot consider the welfare of infants and young children without considering the parents, schools and communities that nurture them, ESSS seeks to improve conditions in all those domains. Although the direct services ESSS offers children are, of course, important, they will never have sufficient impact without the teaching and support for parents, the integration and preparation of schools and communities to create an environment conducive to children thriving.

To ensure cultural understanding and relevancy, the program hires Early Childhood Coordinators (ECC) from the local community. Since it is rare to find highly qualified birth to age three professionals in the rural communities served, ESSS provides intensive, ongoing and varied opportunities for professional development. This has the dual benefit of contributing both to the effectiveness of the program and to the community's capacity to sustain early childhood programming in the future.

Zero to Three and Save the Children collaborated to develop extensive curricular and procedural tools to support ECCs and Specialists. The material developed and implemented include: Plan & Play Curriculum, Coordinator and Program Specialist Guides, Parent/child Group Curriculum, Transition Curriculum, Dual language Curriculum and Book Bag Kits.

The independent evaluation of the Early Steps to School Success program serves three important purposes:

- First, it provides accountability as it calculates progress toward established performance indicators and aggregates service and outcome data presenting a comprehensive picture of both implementation and results.
- With Early Steps to School Success, Save the Children is pioneering a new model and approach to supporting the youngest children. The distinctive competence of ESSS, as compared with other early childhood education programs, is that the program works within the community in isolated rural settings and is specifically targeted toward language development and pre-literacy. It is an important function of the evaluation to test the efficacy of the model and to demonstrate the critical elements of its success.
- Finally, but no less importantly, the evaluation actively serves program improvement.

The Early Steps evaluation enlists program staff at all levels in a process of critical inquiry to foster an organizational culture that facilitates the use of evaluation results to improve practice and maximize program adaptation to local conditions. Early Steps has developed a comprehensive, web-based data collection system for tracking services, child demographics, risks and resources and outcomes for children, families and communities.

Enrollment forms, risk and resource inventories, developmental screenings, assessments of the home environment, service tracking, and other data collection protocols are integrated as part of the program.

Serving children in families facing the multiple stress of poverty often results in a very

high turnover of children served. Central to the ESSS model is the continuity of serving children from pregnancy until they are five years old. The birth to age three program maintained an overall retention rate of 78% for this year. That rate of retention is consistent with the best of the home visiting programs surveyed by the Future of Children in their cross-site study.<sup>1</sup>

Children and families in rural, resource-poor areas suffer many stresses and negative experiences. Social risk factors have been found to be especially harmful when experienced by infants and very young children in an isolated rural environment.<sup>2</sup> Any interpretation of outcomes relative to the norm must be considered in light of this disadvantage.

Early Steps tracks 30 risk factors faced by children. The children in the ESSS population this year coped with a very high average of 4.9 risks per child. The negative effects of risks on young children can, in part, be ameliorated by promoting experiences known to enrich development and promote growth and resilience.

Some children thrive despite their stressful environments. We know what kinds of experiences promote this resiliency and the ESSS program is specifically designed to enhance and increase these resiliency resources.

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<sup>1</sup> Deanna S. Gomby, Patti L. Culross and Richard E. Behrman (1999). Home Visiting: Recent Program Evaluations—Analysis and Recommendations. Future of Children Vol. 9, Number 1, p.17.

<sup>2</sup> Burchinal, Margaret, Vernon-Feagans, Lynne, Cox, Martha and Investigators, Key Family Life Project(2008)'Cumulative Social Risk, Parenting, and Infant Development in Rural Low-Income Communities',Parenting,8:1,41 — 69 citing: Duncan, G. J., Brooks-Gunn, J.,

***Solution: Rural Literacy Program***

***How and when this solution will be implemented:*** The Rural Literacy Program provides in-school tutoring for elementary students who are not reading at grade level. Tutoring will be delivered in-school through classroom and pull-out programs and after-school programming.

***Segmentation if any to determine who would get solution:*** Data segmentation shows an achievement gap, across all grade levels, between students receiving free/reduced lunch and those who do not. Females outperform males in reading at all grade levels. These segmented groups of students will receive Rural Literacy tutoring services.

***The partners that will implement:*** Save the Children

***Source of funds to pay for solution:*** Save the Children private dollars and Promise Neighborhood Federal Dollars.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$1,734	\$1,156	\$578	\$578	\$578
Number served (elementary student not reading at grade level)	173	260	519	519	519
Total number in that age group	1,353	1,353	1,353	1,353	1,353
% served in that age group	13%	19%	38%	38%	38%

***Evidence Supporting Solution: Moderate Evidence***

Save the Children (STC) has developed the Rural Literacy Program (RLP), a targeted intervention that is proven to accelerate children’s reading achievement. Developed in 2003, the RLP has consistently demonstrated success with hard-to-reach, high-need rural student populations. Since 2003, STC has worked with Policy Studies Associates (PSA) to conduct annual cycles of evaluation to assess program implementation and impact, drawing on information collected through STC’s online data system, which tracks program inputs and outcomes, including literacy growth over time as measured by the STAR Reading assessment.

The STAR Reading assessment is a nationally normed reading test for students in grades 1-12. The test uses established norms for each month of each grade, so that normative scores on the STAR Reading assessment represent an increase in reading proficiency in addition to the increase that would be expected from maturation and from attending school for any given number of months within the school year.

PSA researchers have linked student-level participation and implementation data to STAR Reading assessment data, in order to create an analysis file with comprehensive implementation and outcome data on every participant. Each child's reading growth was then assessed from the beginning to the end of the school year, in light of the child's level of participation in the program, including days of attendance, number of books read, number of quizzes passed and scores on each quiz. This quasi-experimental approach used the STAR Reading assessment's norming population as the untreated comparison group, permitting each STC participant to be matched to the students in the norming sample with the same baseline reading achievement level and at the same grade level.

As reported by PSA in the most recent evaluation report, program participants in grades 2-6 during the 2009-10 school year (N=9,700) achieved a mean gain of 7.4 NCEs, as measured using the STAR Reading assessment at the beginning and the end of the school year.<sup>3</sup> This is a net gain in reading proficiency, reflecting gains beyond the level expected from maturation and school attendance alone. The gain is statistically significant ( $p < 0.05$ ) with an effect size of 0.40.

Several implementation-related factors were positively associated with achievement gains at statistically significant levels, including (partial correlation coefficients controlling for initial reading proficiency shown): number of days attended (0.18); number of books read (0.07);

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<sup>3</sup> White, Palmiter, Arcaira, & Reisner, 16.

percent of book-specific quizzes passed (0.15); and percent of all quiz items answered correctly (0.19). These relationships support the link between participation in the RLP and reading growth.

The evaluation also examined the results of the RLP's work with emergent readers (ER)—students in kindergarten and first grade who entered STC programming not yet reading with an adequate vocabulary and comprehension to participate in the regular literacy program. Changes in the reading readiness of participants in the ER program are assessed with the STAR Early Literacy (SEL) assessment. Overall, 61% of ER participants met the goal for their grade level for expected growth in SEL scale scores and averaged gains of 139 scale score points. The proportion of ER participants who were classified as early emergent readers (the lowest category of reading proficiency) based on SEL scores decreased from 24% in the fall to 2% in the spring, while the proportion classified as probable readers (the highest reading-proficiency category) increased from 3% to 26%. This increase suggests that, despite the low levels of reading proficiency on their initial SEL assessment, participants in the ER program made larger gains than did a national sample of students in the same grade levels.

PSA conducted a supplementary analysis of the impact of the RLP. The study focused on 18 schools hosting the RLP. To further align treatment and matching populations at baseline, a well-matched group of nonparticipating students was selected to serve as a comparison group.<sup>4</sup> Comparison students were matched on grade level and on their score on their initial STAR Reading assessment administered in the fall of 2009.<sup>5</sup> After matching, the study had available an analysis file with 1,249 participants and 1,249 matched nonparticipants. Both participating and nonparticipating students used Renaissance Learning's Accelerated Reader (AR) and STAR

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<sup>4</sup> Rebecca A. Romash, Richard N. White, & Elizabeth R. Reisner, *Save the Children Literacy Programs: Results from the Comparative Pilot Study, 2009-10*. Policy Studies Associates, Inc., 2-3 (2010).

<sup>5</sup> On their initial STAR Reading Assessment, the matched pool of participants averaged 34.0 NCEs and nonparticipants 34.2 NCEs. The difference in the distribution of these scores was not statistically significant ( $p=.805$ , ANOVA). The distribution by grade level for each group matched exactly ( $p=.99$ , Chi Square)

Reading software during the school day. STAR Reading assessment scores and data on AR quiz performance were collected and analyzed for both groups of students.

The matched-comparison study found that participants improved their literacy skills substantially over the course of the program period, moving closer to grade-level performance. The average change in scores on the STAR Reading assessment among participants was a gain of 6.5 Normal Curve Equivalent (NCE), while matched nonparticipants averaged a gain of 0.6 NCEs, for a net difference of 5.9 NCEs.<sup>6</sup> The difference in gains in assessment scores was statistically significant and the effect size was +0.29. Sixty percent of participants and only 41% of comparison students increased their literacy performance by at least two NCEs. The proportion of participants reading at a level appropriate for their grade or above increased during the 2009-10 school year. Among RLP participants, 23% read at or above grade level (50 NCEs or more) on their initial STAR Reading assessment, increasing to 33% on the final assessment. Among matched nonparticipants, 23% read at or above grade level on the initial assessment, only increasing to 24% on the final assessment.

Our partner Save the Children will replicate the Rural Literacy Program within our Promise Neighborhood elementary schools. Promise Neighborhood RLP will serve struggling readers in grades K-6 during the school day, after school and during summer sessions.

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<sup>6</sup>Normal Curve Equivalent (NCE) is a standardized score based on a normal distribution in which scores represent equal intervals that range from 1 to 99. For the STAR Reading assessment, NCEs measure a child's reading achievement relative to a national norming population, and are computed to allow us to track a child's relative growth over time and compare it to the magnitude of reading growth that children typically experience.

***Solution: National Math and Science Institute***

**Advanced Placement and Teacher Incentive Program**

***How and when this solution will be implemented:*** We will provide professional development for all pre-AP and AP teachers of math, science and English through workshops, summer institutes and year-round coaching and implement the NMSI APTIP model with fidelity.

***Segmentation if any to determine who would get solution:*** None; all middle school and high school students will benefit due to increased rigor in math, science and English courses at the middle and high schools.

***The partners that will implement:*** Kentucky Science and Technology Council.

***Source of Funds to Pay for Solution:*** Kentucky Science and Technology Council private dollars and Promise Neighborhood Federal Dollars.

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Per participant cost	\$15	\$15	\$15	\$15	\$15
Number served (all middle and high school students)	2,611	2,611	2,611	2,611	2,611
Total number in that age group	2,611	2,611	2,611	2,611	2,611
% served in that age group	100%	100%	100%	100%	100%

***Evidence Supporting Solution: Strong Evidence***

The National Math & Science Initiative (NMSI) Advanced Placement Training and Incentive Program (APTIP) use the College Board Advanced Placement curriculum and exam as a framework that provides students with high academic content, standards, and assessments.

AP courses offer nationally recognized rigorous curricula and objective assessments with strong positive outcomes for students. **Research shows that passing AP exams positively**

**impacts college matriculation and graduation**<sup>7</sup> Studies find that an AP course that culminates in an AP exam grade of 3 or higher has a significant, positive impact on a student's likelihood of college success among academically comparable students. A high-quality, AP course in high school fortifies students for a successful transition into, and ultimately graduation from, college.

APTIP empowers high need, traditionally underrepresented students to succeed in rigorous courses, thereby elevating schools' expectations for their students and transforming schools' cultures into ones of college-readiness. APTIP supports students and teachers by providing intensive AP and pre-AP teacher training, teacher and student support, vertical teaming, open and encouraged enrollment in AP courses, financial incentives based on academic achievement, specific and individualized annual achievement goals, and robust data collection to ensure accountability at all levels.

Two quasi-experimental studies examined the impact of APTIP and found positive effects.<sup>8</sup> This research confirms that expected outcomes of APTIP are: (1) significantly increased numbers and diversity of students taking and scoring 3 or higher on AP math, science, and English (MSE) exams; and (2) increased college enrollment and persistence, especially for traditionally underrepresented students.

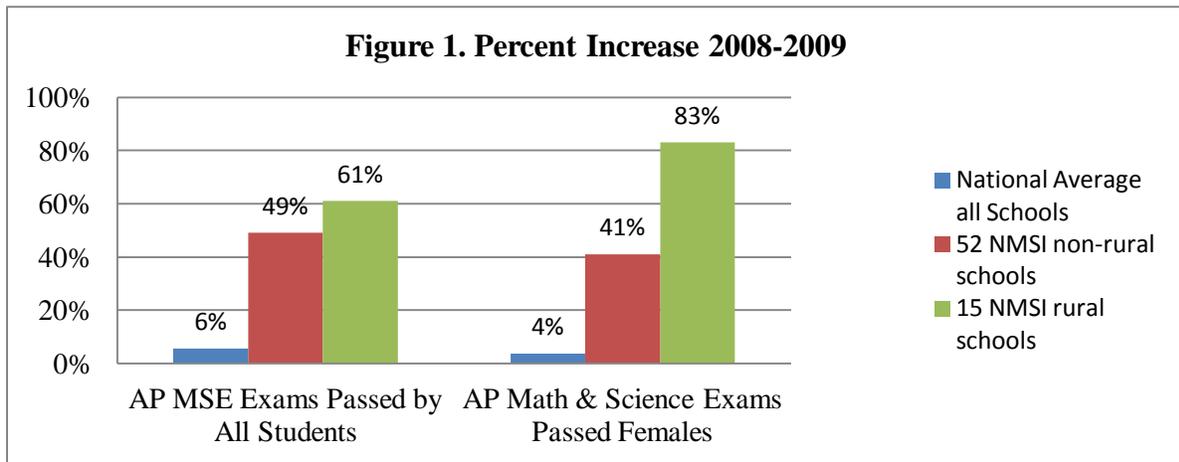
The National Math and Science Initiative (NMSI) has always included rural schools as approximately one-quarter of its APTIP partner schools. These rural schools have thrived with APTIP, improving student access, student achievement and teacher effectiveness at a pace that even outperformed their urban or suburban counterparts.

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<sup>7</sup> (Geiser, Saul, *The Role of Advanced Placement and Honors Courses in College Admissions*, <http://cshe.berkeley.edu/publications/docs/ROP.Geiser.4.04.pdf>, 2004).

<sup>8</sup> Jackson, Kirabo. *A Little Now for A lot Later: An Evaluation of a Texas AP Incentive Program*, Journal of Human Resources, 2010. Jackson, Kirabo. *A Stitch in Time: The Effects of a Novel Incentive-Based High-School*, February 2010. *Intervention on College Outcomes*, May 4, 2010, paper <http://www.nber.org/papers/w15722>

As the results for the first APTIP cohort of 67 schools, which began implementation in fall of 2008, show, APTIP created large percentage increases for all students in passing AP math, science and English (MSE) exams in rural schools in six states. Rural schools also outpaced urban or suburban counterparts in the percentages of females taking and passing AP MSE exams (Figure 1). This demonstrates that APTIP is closing the college-readiness gap for female students in math and science in rural schools at an accelerated rate. NMSI’s APTIP thus addresses the unique challenges of high-need students within rural LEAs and establishes a culture of college-readiness in rural schools at a rate faster than schools in urban areas.<sup>9</sup>



The culture in persistently lowest-achieving schools must be transformed into one that recognizes students can often achieve well beyond our expectations. A key step in replicating the NMSI model is to establish an inclusive school environment that encourages students to enroll in rigorous courses. While some schools require students to prove their way into challenging courses, which limits enrollment to just the top few, this policy erroneously reinforces stereotypes about what AP students “look like.” In contrast, APTIP schools rethink their AP culture by adopting open enrollment and recruiting more students, including high-need students, thereby allowing many more students to succeed at that level.

<sup>9</sup> Information on rural schools provided by The National Math & Science Initiative in their May 2010 Investing in Innovation Fund Grant Application

NMSI insists that those who replicate APTIP train pre-AP and AP teachers with relevant pedagogical methods and provide continual support as teachers adopt new skills. This intensive support and training is critical to building the capacity and in-depth content knowledge required to successfully teach AP courses. APTIP teacher support includes:

- A Content Director for each discipline who coordinates the subject area's curriculum to ensure consistency across the state;
- Summer Sessions for Lead Teachers regarding monitoring and mentoring for APTIP;
- Two, content-based training sessions and one for AP Teachers;
- Vertical Teams in each subject, so that instructors, beginning in 6<sup>th</sup> grade, can understand how to teach the building blocks that prepare students to comfortably achieve in the rigorous AP courses they will be offered in high school;
- Pre-AP training provided by Laying the Foundation; and
- Continuous monitoring with feedback and training by Lead Teachers and Content Directors.

Laying the Foundation provides hands-on experience in skills based model lessons. LTF is a combination of articulated lesson plans, instructional resources, testing tools and teacher training. This system connects high expectations for all students to achieve academically with preparation and the confidence and know-how to be successful. LTF lessons, labs and formative assessments are based on a cumulative progression of skills and concepts for math, science and English for grades six through 11. The resources can be embedded into existing curriculum to raise the level of instructional rigor.

***Solution: High Quality Professional Development***

***How and when this solution will be implemented:*** Professional development will be provided for teachers and early childhood providers in the Promise Neighborhood. Our partners will provide professional development during the summer with academic year coaching and follow-up.

***Segmentation if any to determine who would get solution:*** Professional development offerings for teachers will include a variety of topics along the Promise Neighborhood pipeline—topics aimed at increasing classroom rigor, integrating the arts and encouraging physical activity—will be offered to all K-12 teachers. Offerings for early childhood providers will include training on increasing or obtaining a STARS rating from the state of Kentucky, ensuring program activities are aligned with Kentucky school readiness standards. Professional development for community members will provide opportunities to learn how to open a formal in-home child care program.

***The partners that will implement:*** Eastern Kentucky Child Care Coalition and the Collaborative for Teaching and Learning.

***Source of funds to pay for solution:*** Promise Neighborhood Federal Dollars.

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Per participant cost	\$39	\$49	\$50	\$51	\$49
Number served (children in early learning programs and students in grades K-12 <sup>th</sup> )	6,467	6,467	6,467	6,467	6,467
Total number in that age group	6,467	6,467	6,467	6,467	6,467
% served in that age group	100%	100%	100%	100%	100%

***Evidence Supporting Solution: Best Practice***

A variety of professional development will be offered. A summary of the specific

professional development activities follows. This list is not exclusive and professional development will be planned annually to respond to the needs of the teachers, providers and early childhood personnel.

***Artful Reading:*** Arts educators understand that comprehension and expression in music, dance, drama and visual art require a grasp of multi-dimensional ideas and symbols. The development of literacy likewise calls on skills in multiple domains and an ability to construct a meaningful whole from a complex set of symbols. Teaching literacy through the arts while using literacy skills to expand learning in the arts is not only logical; it's powerful. The Artful Reading Model draws on the principles and elements common to both areas of study, and essential for learning in each.

The link between learning in the arts and literacy development is noted by James Catterall in a summary of the National Endowment for the Arts and United States Department of Education-funded compendium of research, *Critical Links: Learning in the Arts and Student Academic and Social Development* (ed. Deasy, 2002): "The most expansive areas where the arts pay off are...first, in basic reading skills, language development, and writing skills." His own analysis of data from the National Educational Longitudinal Survey indicates a direct, positive relationship between the implementation of a comprehensive and rich arts program and reading comprehension, including among disadvantaged students. (Catterall, 1999)

Likewise, research from the U.S. Department of Education-funded Developing Early Literacies through the Arts (DELTA) project of the Chicago Arts Partnerships in Education (CAPE) demonstrated that, "Arts learning promotes interrelated understandings of multiple symbol systems," with literacy intervention through the arts serving, "as a catalyst for cognitive, meta-cognitive, aesthetic, and social dimensions of learning largely ignored in conventional

approaches to literacy instruction.” (CAPE, 2007) Learning in the arts, in turn, is enhanced through the application of literacy skills that enrich understanding through academic dialogue, vocabulary development, and writing to deepen and extend learning. Philip Yenawine, former director of education at New York’s Museum of Modern Art, notes in “Thoughts on Visual Literacy” that the research of colleague Abigail Housen suggests, “Learning to interpret and discuss works of art promotes thinking critically and creatively... (and) can enhance the development of other meaning making systems.” (*Handbook of Research on Teaching Literacy through the Communicative and Visual Arts*, ed. Flood, 1997).

Despite such evidence, with the increasing prevalence of high stakes assessment and school accountability at the state and national levels, many school districts throughout the nation have reduced their emphasis on education in and through the arts. In its 2005 survey on the Status of Arts Education in Kentucky Public Schools, commissioned by the Kentucky Arts Council, the Collaborative for Teaching and Learning found evidence of decline in the support of arts education across the state, despite a legislative mandating arts education in grades K-12.

While this response to pressure to narrow instructional focus to core academic subjects is common, such de-emphasis of the arts runs counter to research that suggests learning in and through the arts enhances student learning. In the summary of *Critical Links* Catterall posits, “The accumulated research of skilled scholars carrying out their work in a range of established methods is unambiguous: the arts contribute in many ways to academic achievement, student engagement, motivation and social skills. Notions that the arts are frivolous add-ons to a serious curriculum couldn’t be farther from the truth.” (Catterall, *New Horizons for Learning*, 2002)

The Arts Education Partnership’s *Champions of Change* (ed. Fiske, 1999), an earlier compendium of research on the impact of arts instruction, notes further, “The arts no longer need

to be characterized solely by either their ability to promote learning in specific arts disciplines or by their ability to promote learning in other disciplines. These studies suggest a more dynamic, less either-or model for the arts and overall learning that has more of the appearance of a rotary with entrances and exits than of a linear one-way street.”

Artful Reading training will reach all Promise Neighborhood teachers, kindergarten through 4<sup>th</sup> grade (130 teachers).

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**Functional Literacy:** Research on adolescent literacy, grades 7-12, provides evidence of how teachers can develop student literacy and solve reading challenges for adolescents within English/Language Arts and across content areas. The findings of the National Reading Panel (NICHD, 2000) delineate the domains in which students should receive instruction in order to develop into fluent readers. These include phonemic awareness, which is the ability to manipulate sounds in oral language and phonics, how letters and sounds correspond; fluency, achieved through reading practice and feedback; and comprehension, including vocabulary development and procedures that guide students as they read. These findings are supported in the research of Snow, Burns and Griffin (1999) who also suggest that alphabetic principles, fluency and comprehension are the essential components of reading instruction to prevent reading difficulties and ensure success. Foundational literacy addresses all of these domains and should be the basis of English/Language Arts instruction in middle and high school, ensuring that students develop reading skills for both literary and informational types of text, with an increased emphasis on informational reading in the secondary grades.

A second and related line of research focuses on the components of effective reading instruction, specifically teaching and learning strategies (Alvermann and Moore, 1991; Kamil, 2003). Teaching strategies in foundational literacy are those that are content focused and initiated by the teacher. These include guided reading and writing, Directed Reading Activity,

questioning, reciprocal teaching, advanced organizers and graphic organizers. An analysis of the impact of teaching strategies on adolescent reading development indicate that 62% of studies reported significant effects on students' reading ability for those students in a teaching strategy group as compared with a control group of students. Learning strategies are those taught to students so that they become effective and independent readers. These strategies include summarizing, note taking, imagery, outlining and meta-cognitive training (Alvermann and Moore, 1991; Kamil, 2003) An analysis on the impact of learning strategies on adolescent students yielded similar results, with 61% of students achieving significant effects as compared with a control group. While these strategies are effective across content areas, teachers in mathematics, science, social studies and related arts are first and foremost for teaching their discipline and employ literacy strategies in service of content learning. Foundational literacy, the responsibility of English/Language Arts teachers, sets the stage for successful reading which enables students to master content in other disciplines.

This training will reach all 7<sup>th</sup> through 12<sup>th</sup> grade teachers in the Neighborhood (120 teachers).

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***Mathematics Literacy Model:*** Teaching students so that they have understanding of mathematics is different than teaching students to use a mnemonic in order to multiply two binomials. It is important that teachers present material in ways that allow students to justify their solutions, make connections between different approaches, and flexibly work with different representations of concepts. Instruction must connect mathematical practices with content to ensure that students are practitioners of the discipline of mathematics (CCSS, 2011).

A review of current teacher preparation research demonstrates that elementary mathematics teacher pre-service training continues to emphasize numeracy and basic skills instruction (Ball, Lubienski, Mewborn, 2001) even though there is wide agreement in the research literature that this is not sufficient to increase student readiness for more advanced mathematics and achievement. Since 2001, NSDC has recommended that teacher training, both pre-service and in-service, should focus on a balance between deep content understanding and development of pedagogy (NSDC, 2001). In terms of content, Blanton and Kaput (2004) suggested that teachers create lessons where students could generalize from concrete to abstract relationships. Students' use of tables, graphs, pictures, words and symbols allowed them to make sense of tasks and to express mathematical relationships. Nathan and Koedinger found that as students shift from an arithmetical approach to problem solving to an algebraic approach, teachers must change their practices and their view of the learner as capable of making this shift (2000). To do so, teachers need to build in opportunities for students to make connections between concrete and abstract concepts and to communicate those connections through a variety of interactions.

In terms of pedagogy, both TIMSS and Stigler and Hiebert's (1999) accompanying video case studies found that students learned more and at a deeper level when classroom pedagogy

emphasized active learning, discovery and student construction of knowledge. Lappan et al.(1998), and Wilson et al. (2009) in their studies of factors influencing students' mathematics learning concluded that efforts to enhance teacher pedagogy should result in teachers acquiring practices that:

- Enable students to represent ideas effectively using models or representations.
- Expect students to communicate their understanding as well as clarify their thinking about learning goals.
- Increase discourse opportunities in the classroom, including teacher-student and student-student, that guide interpretation, clarification, and reasoning about learning goals.
- Identify student prior knowledge about a general concept or idea.
- Formatively assess whether a student can use, apply, explain or otherwise demonstrate understanding of a learning goal.

The mathematical literacy professional development addresses each of these ongoing issues, by integrating content and pedagogical learning, focusing on building developmental problem solving and reasoning skills aimed at preparing students for successful completion of high school mathematics coursework. It draws on existing research by engaging teachers in grades 5-12 in classroom activities that build developmentally-appropriate understanding of Standards for Mathematical Practice, through problem solving, reasoning, and communication centered instruction that systematically prepares students for mastering the concepts, skills, and logical processes of mathematics.

This professional development will reach Promise Neighborhood teachers of 5<sup>th</sup> through 12<sup>th</sup> grades (170 teachers).

### **Mathematical Literacy Bibliography**

Ball, D., Lubienski, S., and Mewborn, D. (2001). Research on teaching mathematics: The unsolved problems of teachers' mathematical knowledge. In V. Richardson (Ed.), *Handbook of research on teaching* (4<sup>th</sup> ed.) New York: Macmillan.

Blanton, M., & Kaput, J. (2004). Design principles for instructional contexts that support students' transition from arithmetic to algebraic reasoning: Elements of task and culture. In R. Nemirovsky, B. Warren, A. Rosebery, & J. Solomon (Eds.), *Everyday matters in science and mathematics* (pp. 211-234). Mahwah, NJ: Lawrence Erlbaum.

CNET News (2001). *Fast Times at Digital High*, online article, October 7, 2001  
[news.cnet.com/Fast-times-at-digital-high/2009-1023\\_3-274033.html](http://news.cnet.com/Fast-times-at-digital-high/2009-1023_3-274033.html)

Council for Basic Education (2002). *Teachers' Professional Lives: A View from Nine Industrialized Countries*. Washington, DC, Milken Family Foundation.

Nathan, M., and Koedinger, K. (2000) Teachers' and researchers' beliefs about the development of algebraic reasoning. *Journal for Research in Mathematics Education*, 31, 168-190.

***Instructional Coaching:*** School-based coaching is a professional development model that has been increasing in popularity in recent years. According to Jim Knight in his, *Studying the Impact of Instructional Coaching*, (Knight & Cornett, 2009): "Instructional coaches are on-site staff developers who work collaboratively with teachers, empowering them to incorporate research-based instructional methods into their classrooms."

Coaches provide teachers with needed support as they develop new repertoires of teaching strategies and can take many forms as part of job-embedded professional development. Coaches work with teachers to plan and implement lessons; observe teachers in their classrooms and provide feedback; and model teaching through demonstration lessons. Researchers have found that teachers are more likely to use classroom practices that have been modeled for them (Snow-Renner & Lauer 2005; Carpenter et al., 1989; Cohen & Hill, 2001).

Neufeld & Roper (2003) based on their research of literacy coaching in urban settings, suggest that there is evidence that coaching can produce the following outcomes, which are likely to improve instruction:

- better targeted school-based professional development that addresses teacher & principal needs in light of students' needs;
- teacher learning that carries over into classroom practice because the coach helps teachers implement what they have learned;
- willingness among teachers to share their practice with one another and seek learning opportunities from their peers and their coaches, and a willingness to assume collective responsibility for all of their students' learning;
- high quality principal leadership of instructional improvement; and
- school cultures in which instruction is the focus of teacher and principal discussion, and in which teachers and principals reflect on their practice and its impact on students and use of achievement data to drive instructional improvement.

They go on to say: "Teaching has been described as an isolated profession in which individuals work in private; and school cultures discourage teachers from observing one another or inviting others into their rooms to observe and provide feedback. Coaching aims explicitly at changing that culture of isolation in which teachers have worked for decades."(Neufeld & Roper, 2003)

Cantrell & Hughes (2008) investigated the teacher effects of a year-long professional development program that included literacy coaching. They also explored the relationship between teacher efficacy and implementation of a content literacy approach –based on classroom observations. Results showed that extended professional development with coaching increased teachers' feelings of efficacy. "Teachers are strongly affected by their beliefs about their potential to impact student learning and those beliefs relate directly to their effort and persistence with students" (Cantrell and Hughes 2008, 100)

A 2009 report on professional learning (Darling-Hammond, Wei et al., 2009) suggests that school-based coaching may enhance professional learning: “Several comparison group studies have found that teachers who receive coaching are more likely to enact the desired teaching practices and apply them more appropriately than are teachers receiving more traditional professional development.”

The coaching activities will reach all teachers who participate in Promise Neighborhood professional development (300 teachers).

### **Instructional Coaching Bibliography**

Cantrell, S. C. & Hughes, H.K. (2008) *Teacher Efficacy and Content Literacy Implementation: An exploration of the effects of extended professional development with coaching. Journal of Literacy Research, 40, 95-127*

Cornett, J & Knight, J. (2009) *Studying the Impact of Instructional Coaching*. Kansas Coaching Project at the Center for Research on Learning

Darling-Hammond, L., Chung Wei, R., Andree, A., Richardson, N., and Orphanos, S. (2009) *Professional Learning in the Learning Profession: A Status Report on Teacher Development in the United States and Abroad*. National Staff Development Council and the School Redesign Network at Stanford University

Neufeld, B. & Roper, D. (2003) *Coaching: A Strategy for Developing Instructional Capacity: Promises and Practicalities*. The Aspen Institute Program on Education and the Annenberg Institute for School Reform. Available for download at: <http://www.edmatters.org/reports.html>

**Early Childhood Providers.** The Eastern Kentucky Childcare Coalition is the regional training and technical assistance provider for child care programs in the Promise Neighborhood. Through our partnership, we will expand their professional development opportunities for existing child care staff and include opportunities for potential formal in-home child care providers. The training sessions will focus on increasing the capacity of child care programs to provide a curriculum aligned with Kentucky’s standards for school readiness.

Training sessions will also work with participants to gain a STARS rating from the state or to increase a STARS rating if a center is already rating. Additional workshops will be offered to people interested in opening a formal in-home child care program.

This professional development activity will reach 25 to 40 existing child care providers and an additional 50 potential child care staff each year.

***Solution: Extended Learning Opportunities***

***How and when this solution will be implemented:*** We will offer after-school programming at elementary schools five days each week for three hours a day. Programming will be for youth K – 12. Summer programming in each county will be held for nine weeks, six hours a day.

***Segmentation if any to determine who would get solution:*** After-school programming will be modeled after 21<sup>st</sup> Century Community Learning Centers, focusing on academic support for the first 90 minutes and enrichment activities during the second 90 minutes. Students with the greatest need, as determined by our segmented data analysis, will be targeted for services aimed at improving that need. Enrichment activities will include opportunities to explore and experience the arts, increased opportunities for physical activity and better nutrition.

***The partners that will implement:*** Save the Children, local artists and craftspeople and health and wellness consultants.

***Source of funds to pay for solution:*** Save the Children private dollars and Promise Neighborhood Federal Dollars.

	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>	<b>Year 5</b>
Per participant cost	\$775	\$271	\$173	\$173	\$173
Number served (students identified as at-risk by our Early Warning System)	800	1,400	2,200	2,200	2,200
Total number in that age group	6,297	6,297	6,297	6,297	6,297
% served in that age group	13%	22%	35%	35%	35%

***Evidence Supporting Solution: Best Practices***

**Extended Learning Opportunities:** Our Promise Neighborhood continuum of solutions calls for delivery of many services through out-of-school programs—both afterschool, and

summer programming—addressing parts of the pipeline: early childhood, academics, health and fitness and the arts. “...a steady stream of afterschool evaluations are showing important gains for children, not only in terms of academic achievement but also in terms of safety, discipline, attendance and avoidance of risky behaviors....afterschool programs encourage increased parental involvement....”

A survey of independent evaluations of several afterschool programs by the Afterschool Alliance found consistent themes and conclusions suggesting afterschool programs have a positive impact on academic achievement, they positively affect behavior and discipline and they help relive parental worries about child safety. In several programs, students at the greatest risk showed the greatest academic gains.<sup>10</sup>

Promise Neighborhood afterschool programming will be modeled after 21<sup>st</sup> Century Community Learning Centers. A student of these Centers found that participating students had fewer absences, higher grades, completed homework more frequently and had parents who became more involved with their education.<sup>11</sup>

Afterschool programming can be a key to improving health and wellness for pre-teens and teens, according to a MetLife Foundation Issue Brief. “...afterschool and summer learning programs present a unique opportunity to promote healthful eating and living habits.” The Brief noted that research shows using afterschool space for physical activity and learning about healthy habits can lead to improvements in student health. One study measuring health and social benefits of afterschool programming found that the prevalence of obesity among participants was lower at 21% than the rate for nonparticipants (33%).

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<sup>10</sup> “Evaluations Backgrounder: A Summary of Formal Evaluations of Afterschool Programs’ Impact on Academics, Behavior, Safety and Family Life,” Afterschool Alliance, May 2011, [www.afterschoolalliance.org](http://www.afterschoolalliance.org).

<sup>11</sup> “Afterschool: A Vital Partner in STEM Education,” S.D. Bechtel, Jr. Foundation, Afterschool Alliance and Time Warner Cable, May 2011.

Two-thirds of the ninth grade reading achievement gap can be explained by unequal access to summer learning opportunities.<sup>12</sup> Research shows that low-income students lose more than two months of reading achievement each summer.<sup>13</sup> In addition, children gain body mass nearly twice as fast during the summer as during the school year.<sup>14</sup> Research from the National Summer Learning Association strongly suggests that children need a minimum of 150 hours of summer programming to prevent summer learning loss.<sup>15</sup>

### **Promise Neighborhood Afterschool Components**

Our Promise Neighborhood Afterschool Learning Center after-school program model focuses on math, reading, nutrition education, physical activity and character development. Promise Neighborhood's school-aged programs serve students in grades K-12 through afterschool and summer enrichment programs. The program will be coordinated by our partner Save the Children who dedicates a full-time Program Coordinator and a sufficient number of tutors to maintain a 10:1 student to staff ratio. The Program Coordinator and tutors are employed by local schools, through a contract from Save the Children, and supported by a Save the Children Program Specialist.

The afterschool programs will serve students in grades K-12, providing active learning academic enrichment activities along with personal and social development activities. Students will have a healthy snack each day, and then will rotate through activities. The afterschool program will run until 5:30pm each day, giving ample time for subject-area enrichment, physical

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<sup>12</sup> Harris Cooper, et al., *The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review*. Review of Educational Research, vol. 66(3), 227-268 (1996).

<sup>13</sup> Harris Cooper, et al.

<sup>14</sup> Paul Von Hippel, Brian Powell, Douglas Downey, & Nicholas Rowland, *The Effect of School on Overweight in Childhood: Gains in Children's Body Mass Index During the School Year and During Summer Vacation*. American Journal of Public Health 97(4) (2007).

<sup>15</sup> *Quality Standards*. National Summer Learning Association, [http://www.summerlearning.org/?page=quality\\_standards](http://www.summerlearning.org/?page=quality_standards), Last Visited 8/2/2011.

activity and social development. The extended school day will also serve parents by providing students with after-school care and decreasing the challenges of finding and affording quality childcare.

The after-school programs will use proven, research-based strategies to ensure success. Activities will be continually monitored and evaluated for effectiveness, and best-practices. The activities will align with the in-school curriculum, and will extend the learning, offering time for students to get a better understanding and hands on/activity based enrichment opportunities.

### **Literacy**

**Grades K-1** will participate in the Emergent Reader program. Beginning reading skills are practiced during our Emergent Reader Literacy Block through the following three activities:

- *Extended Read-aloud:* Reading aloud to young children enhances their understanding of emergent reading skills (such as rhyming, letter recognition, sound-symbol correspondence and beginning word recognition), increases background knowledge about important concepts, builds vocabulary and serves as a model for fluent reading behavior.
- *Reading Together Activities:* Over the course of several days, children practice reading a poem or nursery rhyme chorally. Each day, after repeated choral readings, the tutor uses the text to help the children learn emergent reading skills and enhance vocabulary development by playing fun games with letters, sounds and words.
- *Emergent Reader Modules:* Activities in the emergent reader modules provide active learning opportunities for mastering the basic skills that serve as a foundation for beginning reading success. Activities address the following skills: phonemic awareness, letter recognition, sound-symbol correspondence and beginning sight words.

**Grades 2-8** will participate in the Developing Reader Literacy Block. This block consists of three activities that were specifically selected as proven strategies to accelerate achievement for struggling readers in grades two through eight, including read-aloud, fluency and guided independent reading practice.

- *Read-aloud*: Reading aloud to children is the single most important activity for building the knowledge required for eventual success in reading.<sup>16</sup> Reading aloud builds background knowledge and vocabulary, exposes children to new ideas and concepts, and builds a love of reading.
- *Fluency Building*: Repeated readings with short texts improve pronunciation, intonation and phrasing.<sup>17</sup> Fluency-building games and activities like “Reader’s Theatre” give children the opportunity to practice reading in a fun and authentic way.
- *Guided Independent Reading Practice (GIRP)*: Giving children opportunities to practice reading through self-selected, developmentally appropriate books increases motivation and achievement.<sup>18</sup> Children participate in a guided independent reading practice each day for 30 minutes of uninterrupted time.

The literacy block for grades **9-12** will be structured as “clubs,” and will include book clubs, newsletter writing and development, drama, and creative writing clubs. High school students thrive on authentic instruction and the creation of products that will be utilized – in other words, it’s important for them to see the fruits of their labor. The Literacy block of the afterschool program for high school students will do just that, provide students with authentic learning experiences that will be developed into life-skills.

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<sup>16</sup> Anderson, Hiebert, Scott, & Wilkinson.

<sup>17</sup> Timothy Rasinski, Camille Blachowicz, & Kristin Lems, *Fluency Instruction: Research-Based Best Practices*. Guilford (2006).

<sup>18</sup> Wu & Samuels.

## **Mathematics**

**Grades K-8:** Our Math Club has the flexibility to adapt to meet the needs of students struggling to keep pace. Math Club participants learn at their own pace in a cooperative learning environment that makes math fun. Math Club utilizes *Afterschool Achievers: Math Club* curriculum, developed by Great Source Education Group. *Afterschool Achievers* provides daily and weekly activity plans that target all major math strands and have been proven effective in raising test scores.

**Grades 9-12:** For high school students, the math club focus will be on helping students meet the rigorous demands of math courses and ensure their preparation for college math. Students will be encouraged to take courses that will challenge them, with the assurance that they will have the availability of mathematics tutors during the afterschool program. Students will be given opportunities to learn more about higher-level mathematics concepts. The high school math club will also focus on preparing students for success on the ACT, helping to ensure that students do not have to take remedial courses in college.

For all grades, Math Club gives struggling students the extra time needed to improve their math skills and grow confident in their abilities through collaborative, hands-on learning activities. Research shows that increased time spent with mathematics can help students improve on areas of weaknesses that may not be addressed in a typical classroom setting (Thomas, 1984; Kane, 1994)<sup>19</sup>.

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<sup>19</sup> Thomas, E. (1984). Extending the school year and day. ERIC Clearinghouse on Educational Management. ERIC Digest, #17. Kane, C. (1994). *Prisoners of time: Research*. What we know and what we need to know. Washington, DC: U.S. Department of Education.

***Physical Activity and Healthy Snacks:*** The afterschool program also includes a healthy snack and a minimum of 30 minutes of fun, structured physical activity. CATCH (Coordinated Approach to Child Health) Kids Club for grades K-8 has shown high-levels of engagement among children and staff and significant increases in self-efficacy for healthy food choices and physical activity.<sup>20</sup> Students in grades 9-12 will be given a variety of physical activity clubs to choose from, all of which will be developmentally appropriate and potential lifelong physical activities. This component of our afterschool program removes non-academic barriers to success by improving attendance, helping children refocus on learning, and providing a small but important step in curbing the rise of childhood obesity.<sup>21</sup>

### **Summer Programming**

Two-thirds of the 9<sup>th</sup> grade reading achievement gap can be explained by unequal access to summer learning opportunities.<sup>22</sup> Research shows that low-income students lose more than two months of reading achievement each summer.<sup>23</sup> In addition, children gain body mass nearly twice as fast during the summer as during the school year.<sup>24</sup>

Research from the National Summer Learning Association strongly suggests that children need a minimum of 150 hours of summer programming to prevent summer learning loss.<sup>25</sup> In line with this recommendation, Save the Children's summer program provides six weeks of full-day, structured, supervised activities to keep students engaged in active learning. Our summer

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<sup>20</sup> Coordinated Approach to Child Health (CATCH), *Coordinated School Health Program Research*, <http://www.catchinfo.org/aboutcatchRD.asp>. Last visited 7/26/2011

<sup>21</sup> *Rural Obesity: Strategies to Support Rural Counties in Building Capacity*. National Association of Counties (2008).

<sup>22</sup> Harris Cooper, et al., *The Effects of Summer Vacation on Achievement Test Scores: A Narrative and Meta-Analytic Review*. Review of Educational Research, vol. 66(3), 227-268 (1996).

<sup>23</sup> Harris Cooper, et al.

<sup>24</sup> Paul Von Hippel, Brian Powell, Douglas Downey, & Nicholas Rowland, *The Effect of School on Overweight in Childhood: Gains in Children's Body Mass Index During the School Year and During Summer Vacation*. American Journal of Public Health 97(4) (2007).

<sup>25</sup> *Quality Standards*. National Summer Learning Association, [http://www.summerlearning.org/?page=quality\\_standards](http://www.summerlearning.org/?page=quality_standards), Last Visited 8/2/2011.

program targets the same struggling readers who participate in school year programming and are open to other interested children. Daily literacy activities mirror those offered in the afterschool program to ensure that children maintain reading achievement during the critical summer months. Our summer model also includes science, technology, engineering and math (STEM) instruction, civic engagement, recreation, enrichment activities and field trips. Similar to the afterschool program, a healthy snack and structured physical activity are important components of the summer program. In addition, energy balance and nutrition education, using the Wise Kids Outdoors<sup>26</sup> curriculum, supports our Healthy Kids initiative.

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<sup>26</sup> Sajai Foundation, Wise Kids, <http://www.sajaiwisekids.org/>. Last visited 7/31/2011.

**Solution: College and Career Readiness**

**How and when this solution will be implemented:** College and Career Readiness activities will be offered in a variety of ways to all students in grade 3<sup>rd</sup> through 12<sup>th</sup>.

**Segmentation if any to determine who would get solution:** These services will reach all students in the Promise Neighborhood with special pull-out activities for a cadre of students with college potential and who would be first-generation college attendees.

**The partners that will implement:** Promise Neighborhood staff

**Source of funds to pay for solution:** Promise Neighborhood Federal Dollars.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$10	\$10	\$10	\$10	\$10
Number served (all students, grades K-12 <sup>th</sup> )	6,297	6,297	6,297	6,297	6,297
Total number in that age group	6,297	6,297	6,297	6,297	6,297
% served in that age group	100%	100%	100%	100%	100%

**Evidence Supporting Solution: Best Practice**

**Use of College and Career Readiness:** College- and career-readiness performance targets are test scores that indicate a student is on track to be academically prepared for college by the time he or she finishes high school (Dougherty, NCEA, 2008). Once college and career readiness performance targets have been set, students can be divided into academic preparation groups and services can be targeted to students based on college and career readiness performance targets and the size of students’ academic preparation gaps.

We are partnering with the National Center for Educational Achievement (ACT/NCEA), a department of ACT, and will use the ACT/NCEA College and Career Readiness Targets (CCR Targets) for grades 3<sup>rd</sup> through 7<sup>th</sup> and the ACT College Readiness Benchmarks – EXPLORE/8<sup>th</sup> grade, PLAN/10<sup>th</sup> grade, ACT/11<sup>th</sup> grade. ACT/NCEA and the Kentucky Department of

Education will provide us with CCR Targets and ACT College Readiness Benchmarks for each individual student within the Promise Neighborhood. Thus, we can define a path to College and Career Readiness for each Promise Neighborhood student starting at grade 3 and ensure that we are providing the interventions necessary to keep our students on track for high school graduation and college and career readiness.

Promise Neighborhood staff will work closely with students to ensure that students receive both academic interventions and college and career awareness activities in line with their academic level and interest areas. Academic interventions may include tutoring, study skills, time management, and test preparation. College and career awareness activities may include college and career site visits, financial aid workshops, financial literacy training, interest inventories and learning styles assessments.

**Solution: Longitudinal Data Early Warning System**

**How and when this solution will be implemented:** The Early Warning System will reach all students in grades 3<sup>rd</sup> through 12<sup>th</sup>.

**Segmentation if any to determine who would get solution:** This solution will be one of the ways we use to segment students who show the greatest risk of not having educational success.

**The partners that will implement:** Promise Neighborhood staff

**Source of funds to pay for solution:** Promise Neighborhood Federal Dollars.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$124	\$79	\$45	\$45	\$45
Number served (students identified as at-risk by our Early Warning System)	800	1,400	2,200	2,200	2,200
Total number in that age group	4,770	4,770	4,770	4,770	4,770
% served in that age group	17%	29%	46%	46%	46%

**Evidence Supporting Solution: Best Practice**

**Use of Longitudinal Early Warning System:** Research has shown that students who eventually leave high school before graduating exhibit strong predictive warning signs, such as infrequent attendance, behavior infractions and course failure. These warning signs more accurately predict whether a student will drop out of high school than any other socioeconomic factors and can be used to predict high school graduation as early as the start of middle school (Janosz, M. Archambault, *School Engagement Trajectories and their Differential Predictive Relations to Dropout*, Journal of Social Issues, 64(1): 21-40, 2009). In partnership with our schools and the Kentucky Department of Education (KDE), we are prepared to launch a Promise Neighborhood longitudinal early warning system that tracks individual student data—socio-economic status, school data, achievement data, CCR targets and ACT benchmarks. The

backbone of this system will be Kentucky's longitudinal data system. Promise Neighborhood staff located in each of our schools will access the system to produce academic early warning reports using the student-level longitudinal data. This will enable staff to intervene early and consistently to ensure students are on-track. Interventions may include referrals to tutoring, mentoring or afterschool/summer programs. Staff will conduct home visits to connect with parents of students to encourage parent support of the interventions recommended.

The Early Warning System will be used to track students who move from school to school. Staff will follow-up with students who are mobile to ensure their new school as the necessary information to adequately serve the students.

***Solution: Rural Scholars Mentoring Programming***

***How and when this solution will be implemented:*** The Rural Schools Mentoring Program will reach students in grades 6<sup>th</sup> through 12<sup>th</sup>.

***Segmentation if any to determine who would get solution:*** Students in middle and high school who have been identified as at-risk by our Early Warning System will receive these services.

***The partners that will implement:*** College For Every Student.

***Source of Funds to Pay for Solution:*** College For Every Student private dollars and Promise Neighborhood Federal Dollars.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$688	\$344	\$229	\$172	\$138
Number served (middle and high students identified as most at-risk by our Early Warning System)	200	400	600	800	1,000
Total number in that age group	3,294	3,294	3,294	3,294	3,294
% served in that age group	6%	12%	18%	24%	30%

***Evidence Supporting Solution: Moderate Evidence***

**Rural Scholars Mentoring Program:** Research illustrates that student academic preparation initiatives alone are not enough for low-income, first-generation college students to achieve academic success (Oakes, J., *Keeping track: How schools structure inequality*. Yale University Press, 1985; McDonough, P. M., *Choosing colleges: How social class and schools structure opportunity*. SUNY Press, 1997). Social support services (e.g., networking, leadership experience, and college knowledge) are necessary to empower students to make the transition to college. College for Every Student (CFES), a national nonprofit organization, establishes partnerships between schools and colleges and deploys college students and graduates to work as

mentors in high schools to help low-income, first-generation students in high need rural communities prepare for, gain access to, and successfully make the transition to college. Berea College has partnered with CFES for more than 10 years to better serve rural Appalachian youth.

Over the last four years, out of more than 3,000 students encouraged by CFES to raise their academic performance and graduate from high school, 95% went on to college. CFES has a demonstrated success record in rural communities. For example, when CFES began working in 2001 with a rural district in New York's Adirondack region, the high school graduation and college-going rates were 54% and 43%, respectively. Eight years later, both rates exceeded 90%. An independent assessment of the CFES program attests to its strength and sustaining power.

*There has been clear and ample evidence across CFES schools and over time that the program is sustaining powerful and positive impact on students. Educators, as well as students, report that transitioning CFES Scholars adjust more quickly and successfully and their academic achievement and aspirations remain at a higher level than their classmates. . . . They plan to attend college at a higher rate than their peers.*

Morrison, J. Bart. (Fall 2009) *CFES Program assessment 2008-2009*

Promise Neighborhood middle and high school students identified through our early warning system as at-risk of not graduating from high school will be identified as Rural Scholars. CFES will assist us in launching this mentoring program which provides comprehensive mentoring, leadership through service, parent engagement and college pathways information.

***Solution: Families and Schools Together***

***How and when this solution will be implemented:*** We will implement Middle and High School FAST in all middle and high schools in the Promise Neighborhood.

***Segmentation if any to determine who would get solution:*** FAST will be offered to all families with middle and high school students.

***The partners that will implement:*** Promise Neighborhood staff and community-based partners will implement this solution.

***Source of funds to pay for solution:*** Promise Neighborhood Federal Dollars.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$480	\$480	\$480	\$480	\$480
Number served (families of middle and high school students)	150	150	150	150	150
Total number in that age group	3,294	3,294	3,294	3,294	3,294
% served in that age group	5%	5%	5%	5%	5%

***Evidence Supporting Solution: Strong Evidence***

**Families and Schools Together (FAST):** FAST is an evidence-based practice with a record of success with parents from low-income, rural backgrounds (Caspe & Lopez, *Lessons From Family-Strengthening Interventions: Learning From Evidence-Based Practice*, Harvard Family Research Project, 2006). FAST empowers parents in multi-family groups held after school, builds relationships among parents and between families and schools, enhances the parent-child bond, and improves family cohesion.

FAST is listed in the National Registry of Evidence-based Programs and Practices of the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA, 2008) and has been identified by the U.S. Department of Education (1998) and the U.S. Office of Juvenile Justice and Delinquency Prevention (2006) as an exemplary, research-based model program.

Existing experimental research establishes the effectiveness of the FAST program in engaging parents and supporting the development of young students' social skills and academic competence while reducing aggression. These findings give strong reason to believe that the FAST intervention will serve its purpose: to break down the barrier of parent disengagement by empowering parents, strengthening social networks and improving family cohesion, leading to better behavior and enhanced academic performance for children.

FAST will be implemented within the Promise Neighborhood to engage rural Appalachian parents of elementary, middle and high school students, who have been alienated from the schools and to provide them with the information needed to support their children in secondary success and college going.

***Solution: Commonwealth Institute for Parent Leadership***

***How and when this solution will be implemented:*** The Prichard Committee will offer a special Commonwealth Institute for Parent Leadership program tailored specifically for the needs of families in the Promise Neighborhood.

***Segmentation if any to determine who would get solution:*** This solution will be offered to all families in the Promise Neighborhood.

***The partners that will implement:*** Prichard Committee for Academic Excellence.

***Source of funds to pay for solution:*** Commonwealth Institute for Parent Leadership private dollars and Promise Neighborhood Federal Dollars.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$200	\$200	\$200	\$200	\$200
Number served (families of all students)	90	90	90	90	90
Total number in that age group	6,297	6,297	6,297	6,297	6,297
% served in that age group	1%	1%	1%	1%	1%

***Evidence Supporting Solution: Moderate Evidence***

**Commonwealth Institute for Parent Leadership (CIPL):** The Kentucky Prichard Committee for Academic Excellence, through its Commonwealth Institute for Parent Leadership (CIPL), has designed a training program to help participating parents (known as Fellows) broaden their involvement in schools and school reform. Parents move from being school volunteers and/or advocates for their own children to become sophisticated critics of school reform and resourceful change agents within their school.

A 2000 evaluation, with follow-up in 2007, showed that Fellows significantly increased their knowledge about schools, built their confidence to work within schools, and expanded their willingness to act for the betterment of all students in their community (*Parents Learning to be*

*Leaders Through CIPL*, 2007 [www.cipl.org/Articles/Publications/cipl\\_didnt\\_know.pdf](http://www.cipl.org/Articles/Publications/cipl_didnt_know.pdf)). We will partner with the Prichard Committee to offer a CIPL for our Promise Neighborhood rural parents.

Parents from all Promise Neighborhood schools will be recruited to participate in the Commonwealth Institute for Parent Leadership. Parents who participate will be designated as parent leaders and will assist in the facilitation and engagement of other parents.

***Solution: Health and Wellness Activities***

***How and when this solution will be implemented:*** Health and wellness solutions direct services will be provided and will be incorporated into professional development for teachers and early childhood providers, students and families.

***Segmentation if any to determine who would get solution:*** We will target low-income families and their children for many health and wellness activities; other will be offered to everyone in the Promise Neighborhood.

***The partners that will implement:*** Promise Neighborhood staff, health and wellness consultants and staff from health partners.

***Source of funds to pay for solution:*** Promise Neighborhood Federal Dollars and public and private dollars from Cumberland Valley Regional Health Department and Manchester Memorial Hospital.

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$534	\$305	\$160	\$126	\$126
Number served (students participating in Extending Learning Opportunities)	800	1,400	2,200	2,200	2,200
Total number in that age group	6,467	6,467	6,467	6,467	6,467
% served in that age group	12%	22%	34%	34%	34%

***Evidence Supporting Solution: Best Practices***

**Health and wellness solutions:** Efforts to improve the health and fitness in the Promise Neighborhood will include in- and out-of-school activities to increase physical activity, encourage healthier eating and address the childhood obesity problem.

School-based and afterschool physical education activities have many benefits, including increasing physical activity and improving physical fitness and muscular endurance ((United Health Foundation, 2009). Increasing physical activity through physical education is a public

health strategy for reducing childhood obesity. The science-based federal *Physical Activity Guidelines for Americans* states that children and adolescents should perform 60 minutes or more of physical activity daily (Foundation, 2009). Information about the research-based solutions for health and wellness are shown below.

*Sports, Play and Active Recreation for Kids (SPARK)* is a curriculum designed to encourage health related physical education by maximizing physical activity participation during physical education class improving students' fitness, skills and enjoyment. These changes may help to prevent obesity and introduce children to a lifelong physical activity lifestyle. Each lesson of this curriculum includes health-related fitness activities and skill-related fitness activities that develop manipulative and sport-related skills (McKenzie TL, 1998).

*CATCH (Coordinated Approach to Child Health)* is a program designed to promote physical activity and healthy food choices in elementary and middle school aged children. It is based on the CDC coordinated school health model that provides interaction between eight different components: health education, physical education, health services, child nutrition services, counseling and psychological services, healthy school environment, health promotion of staff, and family/community involvement. There is strong evidence-base that this program works – improves diet, increases physical activity, and prevents onset of child obesity.

**HOP Sports:** The HOP Sports mission is to help move a healthier generation forward by combining fitness and fun, learning and entertainment and by working toward the following objectives:

1. Introduce essential skills for a broad array of physical activity, encouraging healthy and sustainable lifestyles.

2. To make exercise fun through the use of our unique digital platform that incorporates physical activity, educational information and the positive social messaging of popular sport governing bodies, athletes and celebrities.
3. Align with major advocacy groups, corporations, foundations and institutions that share the common goal of improving the health of America's youth and communities.
4. Provide a platform for end users to combine entertainment, education and fitness, achieving "my health, my fitness, on my time."

HOP Sports' theory of change it takes a village to raise a child, and HOP Sports' steadfast mission is to promote healthy and active communities, one child and family at a time. HOP Sports continues to build upon a legendary 20-year reputation of pioneering innovative training techniques and technologies years ahead of their time. This includes:

- Research based content combining education and movement;
- Recognized leader in content aggregation including lessons presented by world-class athletes, doctors, [nutritionists](#), and recognized celebrities;
- First Lady Michelle Obama references HOP Sports as a curative solution to childhood obesity in her address before the National Association of Governors, February 20, 2010;
- HOP Sports' innovative platform combines physical activity, education and entertainment; and
- A global wellness network reaching classrooms, schools, homes, and community centers.

Health and wellness activities will be coordinated by Promise Neighborhood staff and partners. A comprehensive plan of activities for youth birth to career will be implemented to provide all youth and their parents opportunities to participate, both during school hours and after school hours.

***Solution: Service Learning***

***How and when this solution will be implemented:*** Service learning activities will be a part of solutions aimed at middle and high school youth.

***Segmentation if any to determine who would get solution:*** We will target at-risk middle and high school students identified by our Early Warning System for service learning opportunities.

***The partners that will implement:*** Promise Neighborhood staff.

***Source of funds to pay for solution:*** Promise Neighborhood Federal Dollars

	Year 1	Year 2	Year 3	Year 4	Year 5
Per participant cost	\$250	\$125	\$83	\$63	\$50
Number served (students participating in Mentoring Opportunities)	200	400	600	800	1,000
Total number in that age group	3,294	3,294	3,294	3,294	3,294
% served in that age group	6%	12%	18%	24%	30%

***Evidence Supporting Solution: Best Practice***

Dropping out is a process that begins long before a student enters high school. Research shows that a student’s decision to drop out stems from loss of interest and motivation in middle school, often triggered by academic difficulties and resulting grade retention. Research also shows that a major cause of retention is failure to master content needed to progress on time, which in many cases, is the result of not being able to read proficiently as early as the 4<sup>th</sup> grade. Our service learning project activities will substantially increase the number of struggling students reading at grade level by 5<sup>th</sup> grade, reduce chronic absenteeism, and improve student motivation at key transition points (elementary to middle school and middle to high school) – strategies recommended by the “Civic Marshall Plan.” (Building a Grad Nation, 2010)

Service Learning activities promote early reading. Reading at the primary level in our Neighborhood is significantly below the state's average. Two of the elementary schools in Clay County exhibit some of the lowest scores in the state. The third grade students at Paces Creek scored 36.36% on reading compared to the state score of 76.74%. The third grade students at Big Creek scored 47.83%, which is more than 25% lower than the state. The Rural Literacy Program will be implemented in each elementary to provide struggling readers the opportunity to increase their reading achievement by supplying the tools they need to develop reading skills. PN staff will work with high school teachers and their students to develop service learning activities that can assist the literacy program. High School students will serve as tutors, host book drives, and plan and implement reading nights for elementary youth and their parents. College students, majoring in early childhood or elementary education, will work with high school students to develop creative classroom projects that promote reading.

Service Learning activities reduce absenteeism. Our school leaders point to chronic absenteeism as the first warning sign of a potential dropout and our attendance rates are consistently below the states. Starting in the 6<sup>th</sup> grade we see a consistent and gradual decline in attendance each year. High School students, working with teachers trained in quality service learning, and with Berea College students will develop programs aimed at increasing student attendance at the middle and elementary schools.

Service Learning Activities increase motivation. The transition points—elementary to middle school and middle to high school— are key times where motivation and interest can be lost. Peer Mentoring has been shown to be an effective practice in ensuring a successful transition between elementary and middle school, and between middle and high school, creating a sense of belonging, building higher self-esteem, and raising aspirations and motivation among

mentees. At each high school, teams of students, led by the Service Learning Coordinators and teachers, will design and implement a peer mentoring program aimed at motivating and engaging students at these key transition points.