



Software For Your State

Orchard Research Summary Booklet

RESEARCH SUMMARY

Orchard Software is research-based software with strong evidence of success. It is based upon time-tested instructional practices that current research has proven to be effective across a large number of students. For example, the content and instructional design of Orchard’s Reading Skill Trees directly correlate to the National Reading Panel’s scientific research on early reading instruction. Specifically, these programs provide systematic and explicit instruction in the following key components of early reading: phonemic awareness, phonics, vocabulary, comprehension, and fluency.

According to Valerie Renya, a senior research advisor for the U.S. Department of Education, there are four levels of research educators can use. The most comprehensive method is a randomized trial where approaches are tested with a wide range of subjects and several variables (such as teacher quality and student ability) are taken into account. Another acceptable level of evidence is a quasi-experiment with statistical controls where approaches are tested randomly within a single school. Another option is a correlation study without statistical controls. A final, acceptable method is a case study.

This Orchard Research Summary Booklet summarizes the research basis of Orchard’s instructional methods and any studies conducted to date. Also available is [The Orchard Research Book](#), which presents Orchard’s complete research basis and more detailed research reports. Please note that both research books are “living documents” that will be updated periodically to include additional research results as they become available. These will include results from multiple third party evaluations currently in progress.

RESEARCH-BASED BACKGROUND

Orchard's Language Arts Skill Trees are based on current scientific research regarding effective reading and writing instruction (see chart below). In addition, in accordance with the findings of the National Reading Panel (NRP), and the guidance set forth by Reading First, five series of programs in Orchard's Language Arts K-3 Bundle provide systematic and explicit instruction in the essential components of early reading instruction. (See the following pages for more details.)

RESEARCH

- Using a word processor, which provides efficient and easy manipulation of text, can significantly improve students' writing. *Cochran-Smith, Paris & Kahn (1991); Moore (1988); Owston, Murphy, & Weidman (1992); Parr (1994-95); Robinson-Staveley & Cooper (1990); Silvren (1988); Williamson & Pence (1989)*
- The use of a process-oriented approach and software that emphasizes the use of editorial strategies improves the quality of students' writing. *MacArthur, et al (1995)*
- Feedback is an essential component of the instructional process and an effective means of motivating students' academic performance. *Sales (1998)*
- Through guided modeling, understanding of clear assessment criteria, and practice in editing and revision, students' writing develops in both style and structure. *Graham & George (1992)*
- Computer-assisted instruction that incorporates modeling, explanations, and guided practice has a positive impact on student achievement. *Soe, Koki, & Chang (2000)*

ORCHARD

- **Book Maker** is an easy-to-use, versatile word processing tool students can use to publish their writing.
- **Writing Assessment** is a user-friendly word processing tool with a story analysis option that allows both teacher and student to review words used and identify issues such as misspellings or overuse.
- Skill Trees use a step-by-step process-oriented approach, which emphasizes content and organization. Students are prompted to complete pre-writing activities and to improve their writing through rearranging, adding, removing, or editing as necessary.
- Provides students with multiple practice opportunities for key reading and writing skills and provide immediate feedback to students.
- Skill Trees provide a variety of editing and revision opportunities for students. Answers are immediately evaluated and modeling of correct responses is provided.
- Provides direct instruction with modeling, explanation, guided practice, and assessment of correct language usage.

* Book Maker; Grammar Usage; Grammar Skills; Guided Comprehension; Writing Process Series; Reading Comprehension; Reading For Critical Thinking; Reading, Research, & Language Skills; Reading Links; Vocabulary Builders; Spelling Series; Writing Assessment; Writing & Media Literacy

** SkillBuilder Skill Trees: Grammar; Parts of Speech; Phonemic Awareness; Phonics Sequences; Punctuation; Reading & Writing Strategies

LANGUAGE ARTS K-3

RESEARCH-BASED BACKGROUND

~PHONEMIC AWARENESS~

*Upon analysis of 52 scientifically based reading research studies, the NRP concluded that **phonemic awareness** is an essential component of reading instruction.*

NRP Definition: The ability to hear, identify, and manipulate the individual sounds, or phonemes, in spoken words.

NRP Finding

- It is important to teach students how to use letter-sound relations to read, spell, or write words.
- Instructing children explicitly and systematically to manipulate phonemes in words is highly effective in improving reading ability.
- Instruction must be suited to student's level of development.
- It is important to teach children letter shapes, names, and sounds so that they can use letters to acquire phonemic awareness.
- Single sessions averaging 25 minutes can be effective.

Phonemic Awareness Series

- Evaluation, Instruction, Practice, and Review components of the Phonemic Awareness Skill Trees emphasize letter-sound relationships.
- The Phonemic Awareness series systematically teaches phonemic awareness and verifies it has been mastered and can be recalled for future use.
- A pretest determines which phonemes need instruction and places a student at the appropriate instructional level. Teachers may set parameters for individualized instruction.
- The alphabetic system (including letter shapes, names, and sounds) is reinforced through lessons involving consonants, consonant blends, vowels, digraphs, diphthongs, and phoneme word families.
- Students can exit the program at any time. The program will bookmark where the students left off and begin there for the next session.

Program description

Phonemic Awareness, a three-level series, grew out of a ten-year research and development effort by educators in Gainesville, Florida. Students are able to hear, identify, and repeat over 100 phonemes in spoken words. The program demonstrates to students how the sounds of spoken language work together to make words. Students must demonstrate 100 percent mastery of sounds to letters, sounds to pictures, and sounds to words. This 100 percent mastery requirement, with continual evaluation and review, ensures not only mastery of each phoneme, but retention as well.

~PHONICS SEQUENCES~

*Upon analysis of 38 scientifically based reading research studies, the NRP concluded that **phonics** is an essential component of reading instruction.*

NRP Definition: The understanding that there is a predictable relationship between the sounds of spoken language (phonemes) and the letters of written language (graphemes).

NRP Finding

- Systematic phonics instruction produces significant benefits for elementary students and for children having difficulty learning to read. Some benefits of systematic phonics instruction are improved decoding, spelling, comprehension, and oral reading skills.
- Effective phonics programs provide ample opportunities for application of learning about letters and sounds to reading of words, sentences, and stories.
- Systematic phonics programs should be implemented as early as kindergarten and first grade.
- Teachers need to be flexible in their phonics instruction in order to adapt it to individual student needs.
- A phonics program (techniques and activities) should be relevant and motivating.

Phonics Sequences Series

- The Phonics Sequences series systematically teaches students how to form words phonetically and use these words immediately in sentences and stories. Systematic progression leads to acquisition of word recognition, decoding, spelling, comprehension, and oral reading skills.
- Phonics Sequences activities give students multiple opportunities to practice and apply what they have learned. Sentences and short stories present opportunities for students to move from decoding to sight word recognition.
- The Phonics Sequences series is available for grades K-2.
- A pretest determines skills that need remediation and places students at the appropriate instructional level within the series. Teachers may then set parameters for individualized instruction.
- A variety of activities and constructive feedback reflect a positive approach to reading instruction.

Program description

Phonics Sequences, a series of four systematic phonics instruction programs, empowers early and emergent readers to increase decoding and word recognition skills. Students do this by recognizing how letters and sounds are connected and then applying this knowledge to meaningful text. Using a sequential approach, students are introduced to letters, learn key sounds and blends, and then transfer their learning to read sight words, sentences, and paragraphs.

LANGUAGE ARTS K-3

RESEARCH-BASED BACKGROUND

~READING LINKS~

*Upon analysis of 47 scientifically based reading research studies, the NRP concluded that **fluency** is an essential component of reading instruction.*

NRP Definition: The ability to read text accurately and quickly.

NRP Finding

- Fluency requires high-speed word recognition practiced in a meaningful context.
- Students can become more fluent readers if provided with models of fluent reading.
- Repeated oral reading practice has a positive impact on word recognition, fluency, and comprehension.
- Students must be able to divide text into meaningful chunks, including phrases and clauses, in order to read with expression.

Reading Links Series

- Students see and hear focus words that will be encountered in the story and subsequent activities. Teachers are able to evaluate a reader's accuracy, speed, and expression.
- Several Reading Links activities give students the opportunity to reread text by following along with a narrator who models appropriate reading techniques. Students are also given the opportunity to reread the passage orally themselves with a recording feature.
- Students engage in repeated oral reading to improve fluency and word recognition. Comprehension skills are reinforced throughout the program through various reading, spelling, and writing activities.
- Fluent reading is modeled in story reading, including phrase reading.

Program Description

The Reading Links series consists of five grade-specific programs (covering pre-primer through third grade) that teach the basic components of reading and writing. Eleven sequential activities are designed to build skills from basic word recognition and fluency to comprehension and evaluation. Teachers can change the order of the activities if necessary. The activities emulate auditory and visual approaches often used in successful early education and primary reading programs. Books on tape, read-alouds, shared reading, sentence strips, guided question-and-answer sessions, modeling, reviewing texts to locate answers, and using conventions of print are examples of such practices.

~VOCABULARY BUILDERS~

*Upon analysis of 50 scientifically based reading research studies, the NRP concluded that **vocabulary development** is an essential component of reading instruction.*

NRP Definition: Development of stored information about the meanings and pronunciation of words necessary for communication. There are four types of vocabulary: listening, speaking, reading, and writing.

NRP Finding

- Vocabulary instruction leads to gains in comprehension.
- The larger the reader’s vocabulary (either oral or print), the easier it is to make sense of the text.
- The use of computers in vocabulary instruction can be more effective than some traditional methods.
- Repetition and multiple exposures to vocabulary items are important.
- Vocabulary instruction should actively engage the student.

Vocabulary Builder Series

- The Vocabulary Builder series offers opportunities to identify key sight words in a sentence. Students spend less time decoding, which impacts fluency and leads to gains in comprehension.
- The Vocabulary Builder series provides exposure to over 600 grade-level words that are found in basal reading series.
- The Vocabulary Builder series provides bimodal (aural-visual) word presentation. Speaking rates can be adjusted to suit the individual learner.
- The repeated exposure technique is used to enhance vocabulary development and to speed lexical retrieval through the delivery of vocabulary and spelling instruction.
- A variety of activities and constructive feedback reflect a positive approach to reading instruction.

Program Description

The Vocabulary Builder series is designed to improve aural and visual word recognition, enhance fluency, and speed lexical retrieval through the delivery of vocabulary and spelling instruction. New vocabulary words are introduced in meaningful sentence contexts. Students automatically decode the most common words of English while drawing on background knowledge to construct meanings for texts. This effective series of programs, developed by a Title I teacher, helps learners progress more efficiently from their initial guesses about new words to the automatic processing needed for fluent reading. The Vocabulary Builder series cultivates an essential ingredient for lifelong literacy – vocabulary – by tailoring the content to students’ developing needs in reading and other curricular areas.

LANGUAGE ARTS

RESEARCH-BASED BACKGROUND

~GUIDED COMPREHENSION~

*Upon analysis of 205 scientifically based reading research studies, the NRP concluded that **comprehension** is an essential component of reading instruction.*

NRP Definition: Strategies for understanding, remembering, and communicating with others about what has been read.

NRP Finding

- Vocabulary development and instruction play a major role in understanding what has been read.
- Comprehension is an active process requiring interaction between the reader and the text.
- Comprehension is most effectively improved when a combination of specific cognitive strategies or techniques is used, such as:
 1. Comprehension monitoring
 2. Story maps or other graphic organizers
 3. Question answering
 4. Story structure
 5. Summarization

Guided Comprehension Series

- Writing activities are provided throughout the program to encourage students to interact with the concepts in the text.
- Writing activities are provided throughout the program to encourage students to interact with the concepts in the text.
- This series incorporates multiple comprehension strategies and techniques such as:
 1. Highlighted text for answer help provides guidance and encourages students to monitor their comprehension.
 2. Story maps help students organize story elements.
 3. Students answer comprehension questions and receive immediate feedback.
 4. Interactive concept maps and visual clues reinforce the story structure.
 5. Students summarize by retelling and paraphrasing.

Program Description

Using intriguing themes, the Guided Comprehension series offers students the chance to explore different reading environments (such as narrative, informative, persuasive, and work texts) while strengthening their comprehension, creativity, and higher order thinking skills. Emphasis is placed on mastering comprehension and literary skills rather than decoding. Forty-two literal, inferential, critical, and visual reading skills are emphasized throughout the Instruction, Practice, and Application phases of the programs. Students are encouraged to make predictions about what they will read, learn new vocabulary words, develop literacy skills, and reflect upon progress.

RESEARCH-BASED BACKGROUND

Orchard’s Math Skill Trees help answer the instructional challenge of helping every child develop a solid mathematical foundation. Skill Trees in these bundles are based on current research supporting the best practices. Before compiling these Standards, the Research Advisory Committee commissioned a set of “white papers” summarizing the current state of education research in the areas of mathematics teaching and learning to serve as background for the Writing Group. These papers, provide the research basis for the development of the Standards.

Skill Trees in the Math bundles are organized into three different instructional approaches: Math Concepts, SkillBuilders and Learning Games. The Math Concepts Skill Trees include highly interactive and graphic tutorials and age-appropriate activities to help students understand key concepts stressed in the NCTM Standards. SkillBuilders Skill Trees provide direct step-by-step instruction with helpful tutorials and motivating reward games when mastery is achieved. Finally, Learning Games Skill Trees help students practice key skills in a highly graphic environment.

According to the findings of the research review, *Effects of Using Instructional Technology in Elementary and Secondary Schools: What Controlled Evaluation Studies Say*, students’ math achievement improves with the use of software programs that combine drill and practice questions with tutorial lessons, require students to respond frequently, provide students with immediate feedback on their answers, and keep detailed records on student performance. As seen in the chart below, the combination of Math Concepts, SkillBuilders, and Learning Games Skill Trees clearly has the essential components of a successful mathematics software program.

Research Shows

Students benefit from mathematical software programs that have the following components:

1. Drill and practice questions
2. Tutorial lessons
3. Require students to respond frequently
4. Provide students with immediate feedback
5. Keep detailed records on student performance

Orchard Math

The combination of Math Concepts, SkillBuilders, and Learning Games Skill Trees have the essential components of a successful mathematics software program.

1. Learning Games Skill Trees provide students multiple practice opportunities for key skills
2. Both Math Concepts and SkillBuilders Skill Trees provide tutorials and step-by-step instruction in key concepts.
3. The Math Skill Trees are robust programs which provide multiple opportunities to practice key concepts.
4. All Math Skill Trees provide immediate feedback to students. In addition, most Skill Trees also provide instruction when students answer questions incorrectly.
5. All Orchard programs work under the same simple, yet powerful universal management system, which provides educators an easy way to obtain a variety of reports such as time-on-task, raw scores, and percentage scores by student and by class.

RESEARCH-BASED BACKGROUND

~MATH CONCEPTS SERIES~

Skill Trees: Algebra; Algebra/Patterning/Logic; Basic Operations/Order of Operations; Data Management & Probability; Fraction Concepts; Geometry; Geometry/Spatial Sense; Graphing/Managing Data; Integers; Measurement; Number Sense; Numeration; Patterning & Algebra; Percent; Probability

Series Description

This series identifies and addresses specific skills using an approach that integrates tutorials, practice, exploratory activities, and assessment. Experienced educators developed the Math Concepts Series as a comprehensive mathematics instructional program that applies current educational research in mathematics instruction supporting the best practices outlined in the National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics as detailed below.

Research Supporting NCTM Standards

- Students must learn mathematics with understanding, actively building new knowledge from experience and prior knowledge, i.e. iterative learning.
- Instructional programs should enable students to communicate their mathematical thinking coherently and clearly to peers, teachers, and others.
- The contexts for the development of mathematical skills and knowledge should relate to other disciplines.
- Variety in teaching strategies that address multiple intelligences and different learning styles are critical for mathematical thinking.
- Assessment should support the learning of important mathematics and furnish useful information to both teachers and students.
- Calculators can enhance students' learning in mathematics.

Math Concepts Series

- The Math Concepts Series promotes iterative learning through active engagement in problem solving and real world connections, both within a mathematical context and linkages to careers in mathematics.
- The Math Journal tool available in many Math Concepts Skill Trees nurtures written communication of mathematical ideas.
- The Math Concepts Series provides a range of connections to language, social studies, business, physical education, and the arts. Segments involving careers in mathematics and using mathematics in the world of work are incorporated throughout the programs.
- The Math Concepts Series provides audio support and interactive manipulations.
- The Math Concepts Series provides ongoing assessment and feedback. Information is available on activities completed, time-on-task, and achievement results.
- The Math Concepts Series includes a calculator as a learning tool in the solving of problems and arithmetic calculations. Students in later grades use dynamic geometry explorers within the Skill Trees.

~MATH SKILLBUILDERS~

Skill Trees: Decimals; Fractions: Advanced; Fractions: Beginning; Perimeter/Area/Volume; Whole Numbers: Advanced; Whole Numbers: Beginning

Series Description

SkillBuilders Skill Trees provide direct step-by-step instruction with helpful tutorials and motivating reward games when mastery is achieved. Current textbooks by major publishers form the content basis of the SkillBuilder Skill Trees. Authors chose common topics that are addressed in several major textbooks used in classrooms across the country. The Math SkillBuilders Series is a comprehensive mathematics instructional program that applies current educational research in mathematics instruction supporting the best practices outlined in the National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics as detailed below.

Research Supporting NCTM Standards

- Instructional programs should teach students to compute fluently.
- Research and experience have clearly demonstrated the potential of calculators to enhance students' learning in mathematics.
- Some students may require additional assistance to meet high math expectations.
- Assessment should support the learning of important mathematics skills and furnish useful information to both teachers and students.

Math SkillBuilder Series

- Math SkillBuilder Skill Trees teach students to compute fluently through step-by-step, tutorial explanation and practice modes of instruction.
- Teachers can choose to give students access to an online calculator for even more assistance when necessary.
- Programs in the SkillBuilder series diagnose each step the student takes by providing tutorial feedback and prompts, rather than just letting the student answer the question incorrectly and progress to the next question and lesson.
- Constructive feedback is provided for incorrect answers, and students can print their scores at the end of their session to further enhance progress and confidence.

MATH

RESEARCH-BASED BACKGROUND

~MATH LEARNING GAMES~

Skill Trees: Money; Number Facts:Advanced; Number Facts:Beginning; Number Facts:Mixed Practice; Time

Description

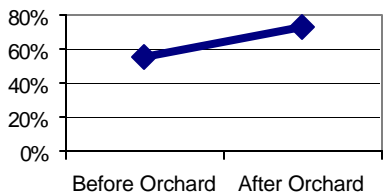
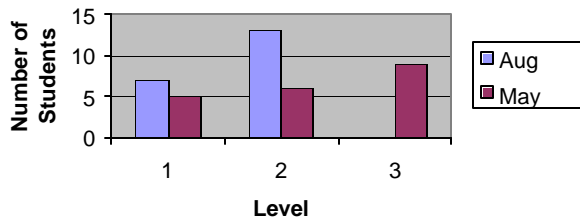
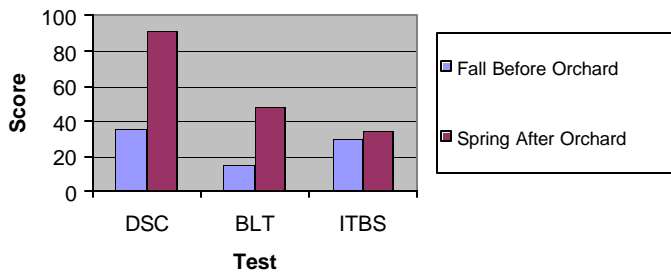
Math Learning Games improve skill fluency and are intended for students who need extra motivation and reinforcement, not tutorials. These fast-paced learning games strengthen students' accuracy and speed as they work toward quick recall of basic math facts. These games provide practice and assessment beyond the textbook. The two-player games, perfect for learning centers, provide students with a wide variety of carefully leveled activities where correct answers lead to progress in a motivating game. The Math SkillBuilders Series is a comprehensive mathematics instructional program that applies current educational research in mathematics instruction supporting the best practices outlined in the National Council of Teachers of Mathematics (NCTM) Principles and Standards for School Mathematics as detailed below.

Research Supporting NCTM Standards

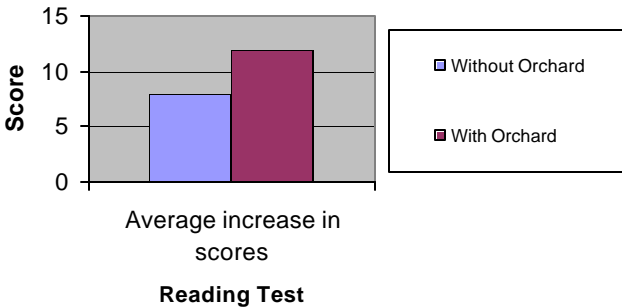
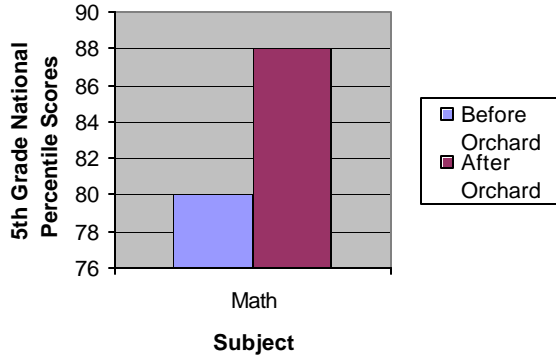
- Meaningful practice is necessary to develop computational fluency.
- Some students may need increased time to complete assignments.
- Assessment should support the learning of important mathematics skills and furnish useful information to both teachers and students.

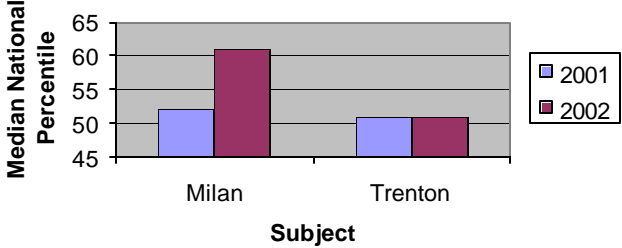
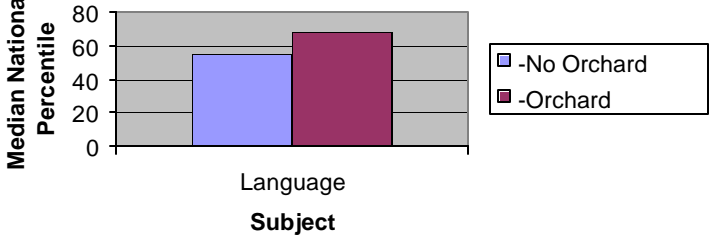
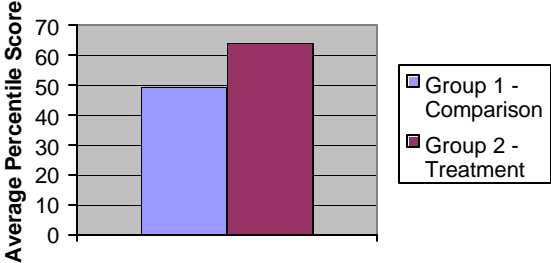
Math Learning Games Series

- Learning Games provide unlimited practice opportunities for students to develop computational fluency in a variety of areas.
- Teachers can adjust difficulty levels, speed, and time limits to meet individual students' needs.
- Students see correct answers to missed problems. Students' progress on each factor attempted or completed is tracked within the programs.

Profile	Findings												
<p>Bethel Junior High School Spanaway, Washington</p> <p><u>Target Population</u> 7th – 8th Grade</p> <p><u>Orchard Bundle</u> Math 4-6, Math 7-9</p>	<p>In the Spring the students in the LAP Math group were administered the Iowa Test of Basic Skills (ITBS). The same group of students was administered the ITBS again in the Fall. Students’ Normal Curve Equivalent (NCE) scores showed significant improvement.</p> <p style="text-align: center;">NCE Score Gains</p>  <table border="1"> <caption>NCE Score Gains</caption> <thead> <tr> <th>Time</th> <th>NCE Score Gains</th> </tr> </thead> <tbody> <tr> <td>Before Orchard</td> <td>~55%</td> </tr> <tr> <td>After Orchard</td> <td>~75%</td> </tr> </tbody> </table>	Time	NCE Score Gains	Before Orchard	~55%	After Orchard	~75%						
Time	NCE Score Gains												
Before Orchard	~55%												
After Orchard	~75%												
<p>Bonlee Elementary School Pittsboro, North Carolina</p> <p><u>Target Population</u> 3rd Grade</p> <p><u>Orchard Bundle</u> K-3 Language Arts</p>	<p>State end-of-grade (EOG) tests show that after using Orchard software, half of the “At Risk” students progressed to the “Proficient” level.</p> <p style="text-align: center;">EOG Test Results</p>  <table border="1"> <caption>EOG Test Results</caption> <thead> <tr> <th>Level</th> <th>Aug</th> <th>May</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7</td> <td>5</td> </tr> <tr> <td>2</td> <td>13</td> <td>6</td> </tr> <tr> <td>3</td> <td>0</td> <td>9</td> </tr> </tbody> </table>	Level	Aug	May	1	7	5	2	13	6	3	0	9
Level	Aug	May											
1	7	5											
2	13	6											
3	0	9											
<p>Cartersville Primary School Cartersville, Georgia</p> <p><u>Target Population</u> Kindergarten - 2nd Grade</p> <p><u>Orchard Bundle</u> K-3 Language Arts</p>	<p>Significant overall gains in performance were observed using the following test instruments: Developing Skills Checklist (DSC), Bloomer Learning Test (BLT), and the Iowa Test of Basic Skills (ITBS).</p> <p style="text-align: center;">Score</p>  <table border="1"> <caption>Score</caption> <thead> <tr> <th>Test</th> <th>Fall Before Orchard</th> <th>Spring After Orchard</th> </tr> </thead> <tbody> <tr> <td>DSC</td> <td>38</td> <td>92</td> </tr> <tr> <td>BLT</td> <td>15</td> <td>48</td> </tr> <tr> <td>ITBS</td> <td>32</td> <td>38</td> </tr> </tbody> </table>	Test	Fall Before Orchard	Spring After Orchard	DSC	38	92	BLT	15	48	ITBS	32	38
Test	Fall Before Orchard	Spring After Orchard											
DSC	38	92											
BLT	15	48											
ITBS	32	38											

EFFECTIVENESS STUDIES SUMMARY

Profile	Findings						
<p>Hagemann Elementary St. Louis, MO</p> <p><u>Target Population</u> 5th Grade</p> <p><u>Orchard Bundle</u> 4-6 Language Arts</p>	<p>After only eight weeks of Orchard instruction, students who used Orchard had a larger average increase in reading scores than students who did not use Orchard.</p>  <table border="1"> <caption>Average increase in scores - Reading Test</caption> <thead> <tr> <th>Group</th> <th>Average increase in scores</th> </tr> </thead> <tbody> <tr> <td>Without Orchard</td> <td>8</td> </tr> <tr> <td>With Orchard</td> <td>12</td> </tr> </tbody> </table>	Group	Average increase in scores	Without Orchard	8	With Orchard	12
Group	Average increase in scores						
Without Orchard	8						
With Orchard	12						
<p>Lang Ranch Elementary</p> <p><u>Target Population</u> 2nd Grade</p> <p><u>Orchard Bundle</u></p> <p>4-6 Math</p>	<p>Second grade Stanford Achievement Test – Ninth Edition (SAT-9) math scores showed significant gains after a one year exposure to Orchard software.</p>  <table border="1"> <caption>SAT-9 Test Results</caption> <thead> <tr> <th>Time Point</th> <th>5th Grade National Percentile Scores</th> </tr> </thead> <tbody> <tr> <td>Before Orchard</td> <td>80</td> </tr> <tr> <td>After Orchard</td> <td>88</td> </tr> </tbody> </table>	Time Point	5th Grade National Percentile Scores	Before Orchard	80	After Orchard	88
Time Point	5th Grade National Percentile Scores						
Before Orchard	80						
After Orchard	88						

Profile	Findings									
<p>Milan Elementary School Milan, Tennessee</p> <p><u>Target Population</u> 3rd Grade</p> <p><u>Orchard Bundle</u> K-3 Language Arts</p>	<p>Students Terra Nova/Tennessee Comprehensive Assessment Plan (TCAP) median national percentile ranking increased by 15% in reading.</p> <p style="text-align: center;">Terra Nova TCAP Test Results</p>  <table border="1"> <caption>Terra Nova TCAP Test Results</caption> <thead> <tr> <th>Subject</th> <th>2001</th> <th>2002</th> </tr> </thead> <tbody> <tr> <td>Milan</td> <td>~52</td> <td>~61</td> </tr> <tr> <td>Trenton</td> <td>~51</td> <td>~51</td> </tr> </tbody> </table>	Subject	2001	2002	Milan	~52	~61	Trenton	~51	~51
Subject	2001	2002								
Milan	~52	~61								
Trenton	~51	~51								
<p>Piedmont Elementary Dandridge, TN</p> <p><u>Target Population</u> 4th Grade</p> <p><u>Orchard Bundle</u> K-3 Language Arts 4-6 Language Arts</p>	<p>The treatment group's Terra Nova/Tennessee Comprehensive Assessment Plan (TCAP) median national percentile rankings were 19% higher than the comparison group in the area of Language.</p> <p style="text-align: center;">TCAP Achievement Test Results</p>  <table border="1"> <caption>TCAP Achievement Test Results</caption> <thead> <tr> <th>Subject</th> <th>-No Orchard</th> <th>-Orchard</th> </tr> </thead> <tbody> <tr> <td>Language</td> <td>~55</td> <td>~70</td> </tr> </tbody> </table>	Subject	-No Orchard	-Orchard	Language	~55	~70			
Subject	-No Orchard	-Orchard								
Language	~55	~70								
<p>Wilson's Mills Elementary Wilson's Mills, NC</p> <p><u>Target Population</u> 3rd Grade</p> <p><u>Orchard Bundle</u></p> <p>K-3 Math 4-6 Math</p>	<p>State end-of-grade (EOG) tests showed that students who used Orchard Software had higher average test scores than those who did not.</p> <p style="text-align: center;">End of Grade Test Results</p>  <table border="1"> <caption>End of Grade Test Results</caption> <thead> <tr> <th>Group</th> <th>Average Percentile Score</th> </tr> </thead> <tbody> <tr> <td>Group 1 - Comparison</td> <td>~50</td> </tr> <tr> <td>Group 2 - Treatment</td> <td>~65</td> </tr> </tbody> </table>	Group	Average Percentile Score	Group 1 - Comparison	~50	Group 2 - Treatment	~65			
Group	Average Percentile Score									
Group 1 - Comparison	~50									
Group 2 - Treatment	~65									

STORIES OF SUCCESS

*The following people have agreed to be listed as references for Orchard Software.
Feel free to contact them and hear first-hand their stories of success.*

Rita Andrews
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Schools
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Church Street
Elementary
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Schools
South Haven, MI
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Douglas Elementary
Lawton, OK
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Rod Page Middle School
Monticello, MS
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Cindy Ginger
Prospect Elementary
School
Monroe, NC
704-764-2920

Belinda Goolsby
Scarritt Traditional
Elementary School
Kansas City, Missouri
816-418-3800

Rose Grode
Waubay Elementary School
Waubay, SD
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Greg Hession
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Fayette, Missouri
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Cathy Kasten
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Alton, IL
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Susan Kelly
Ferguson Middle School
Ferguson, MO 63135
314-506-9621

Jean Kennedy
St Aloysius Catholic
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Springfield, IL 62702
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Mary Koury
Holbrook School District
Holbrook, AZ
928-524-6144

Robert Kuhn
Potter School/Flint
Community School
Flint, MI
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Cecilia Leach
Senatobia School
District
Senatobia, MS
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Kathy Lucky
Ranger Elementary
Ranger, TX
254-647-1138

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Glendale, OR
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Cornelius, NC
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Crane, TX
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Wilson's Mills Elementary
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Dave Stanulis
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Baldwin, MI
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West Amory
Elementary
Amory, MS
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Stage Stanton
Weirsdale Elementary
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