WHITEPAPER

Waterford

Reaching ELL Students

www.waterford.org

Reach all Students with Personalized Early Learning

Waterford Early Learning ensures all children gain and maintain grade level reading proficiency from the outset, regardless of primary language or prior knowledge.

Waterford Early Learning brings personalized reading, math, and science instruction in a technology-enabled environment to your classroom. Empowered with proven tools and strategies, teachers all over the world use Waterford Early Learning to individualize instruction, maximize direct intervention, and analyze unique student needs.

What Is Waterford Early Learning?

Waterford Early Learning is personalized reading, math and science software for students in preschool through second grade.

Waterford Reading

Students begin with the alphabet and learn everything they need to become fluent readers—including phonics, vocabulary, grammar, and comprehension.

Waterford Math and Science

Students learn basic math and science skills through step-by-step instruction and practice—not drills and repetition. Interactive, hands-on activities nurture students' curiosity as they learn about their world.

TUCSON STUDY

Recent studies in Tucson Unified School District demonstrate that while all Waterford subgroups outperformed their non-Waterford counterparts, English language learners made the most gains.

READ MORE ABOUT THE TUCSON STUDY ON PAGE 14.

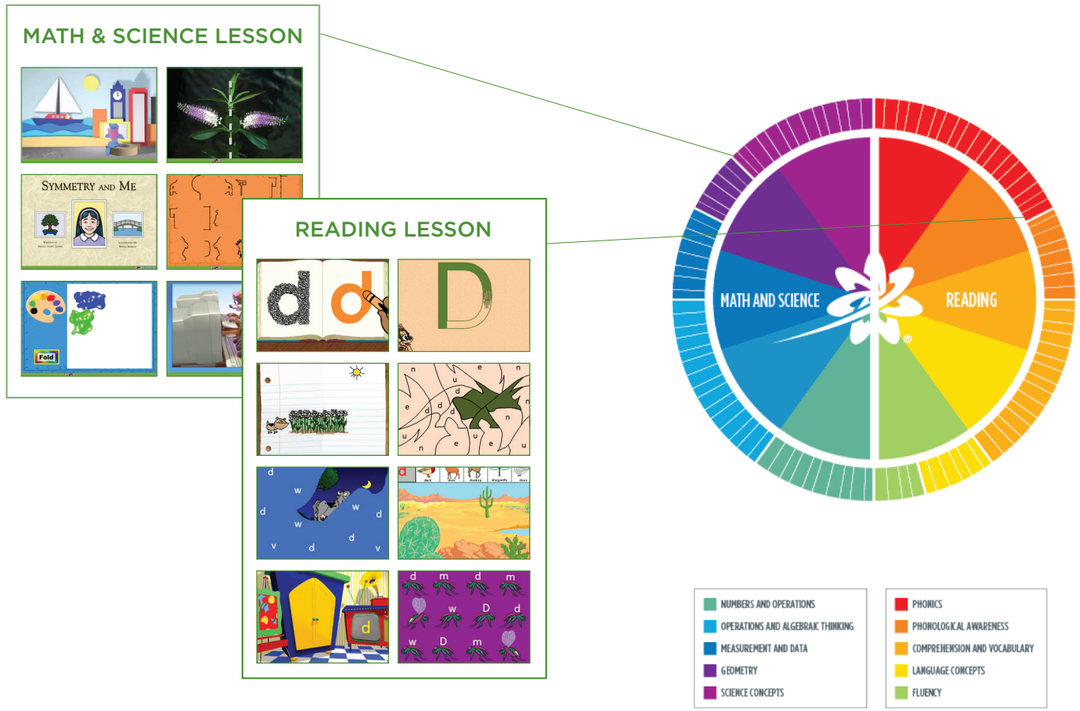
Effectiveness with English Language Learners

The best programs for limited English proficient (LEP) students engage them at their own pace. Effective programs encourage language proficiency with interactive, context-rich, multi-cultural content delivered in a safe, personalized learning environment (Kelso 2010).

Waterford Early Learning leverages its deep library of over 8,000 engaging activities to maximize student exposure and comprehension to oral language.

Waterford Early Learning effectively addresses the unique instructional needs of LEP students with five key strategies:

- Build language skills through regular exposure to oral English and opportunities to practice speaking aloud.
- Personalize instruction, which allows students to learn at their own level and pace.
- Emphasize high learning standards while respecting individual strengths and needs.
- Celebrate student diversity.
- Encourage language minority parents to be more active participants in their child's education.



Build English language skills through regular exposure to oral English and opportunities to practice speaking aloud.

Learners make sense of language in a variety of ways. For LEP students, it is important to provide extra support as they transition to English.

Research asserts that for young English language learners, the initial instructional priority should be developing children's oral proficiency in English (Samson and Collins 2012).

Waterford Early Learning supports this instructional objective by exposing children to oral English with a rich vocabulary in a non-threatening and highly engaging multimedia format. Children learn oral English in songs, rhymes, and stories, as well as in verbal directions and instruction provided in fun interactive activities. Fluency activities in Waterford Reading also provide opportunities for learners to record themselves reading aloud.

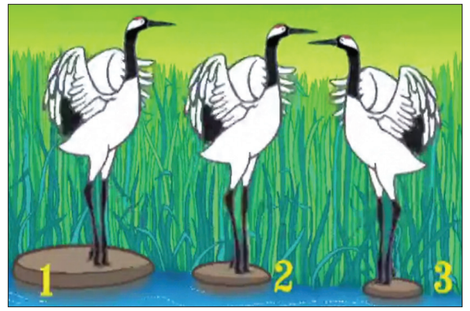
Lessons in Waterford Early Learning are often introduced through memorable songs that provide exposure to oral language. The Show-n-Tell Sound Song introduces letter sounds as part of a reading lesson on the alphabetic principle.

The 1, 2, 3 Song introduces students to the number three through sets, written symbols and counting as part of a math lesson.

Students can listen to or read books aloud. All books are interactive; students can click on any word to hear it read aloud. In Waterford Reading, the software defines new vocabulary words and sounds out pattern words when clicked. These reading selections and interactive tools expose learners to a wide variety of rich, early academic vocabulary putting them on the patch to cognitive academic language proficiency.

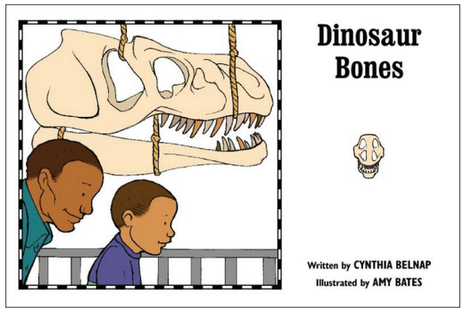
Songs

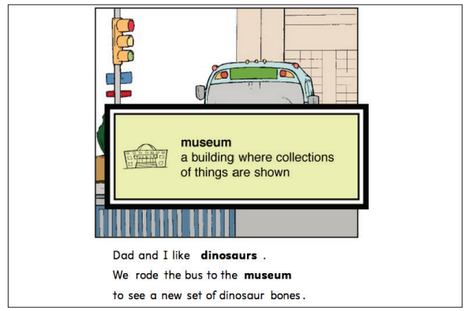
Show 'n Tell Sound Song introduces several lessons in Waterford Reading.



1, 2, 3 Counting Song reinforces math concepts in Waterford Math and Science

Interactive Books





Interactive features encourage students to actively engage with the text:

- Clickable audio for each word
- Vocabulary words defined on-click
- Difficult words sounded out phonetically
- Toggling rebus words
- Key-word guides

Provide intense, individualized instruction, which allows students to learn at their own level and pace.

The typical school environment is often unable to meet the needs of LEP students. According to the U.S. Department of Education, there is only 1 English language learner (ELL) instructor on average for every 150 ELL students (CDE 2014). Such limited one-on-one learning is not enough to address the significant learning and language deficits many English language learners bring to the classroom.

Waterford's ability to provide powerful individualized instruction can exponentially increase the amount of individualized instruction teachers can provide for children, particularly in skills that are key early indicators of future academic success, like letter recognition, phonemic awareness, and print concepts (Crawford-Brooke 2013).

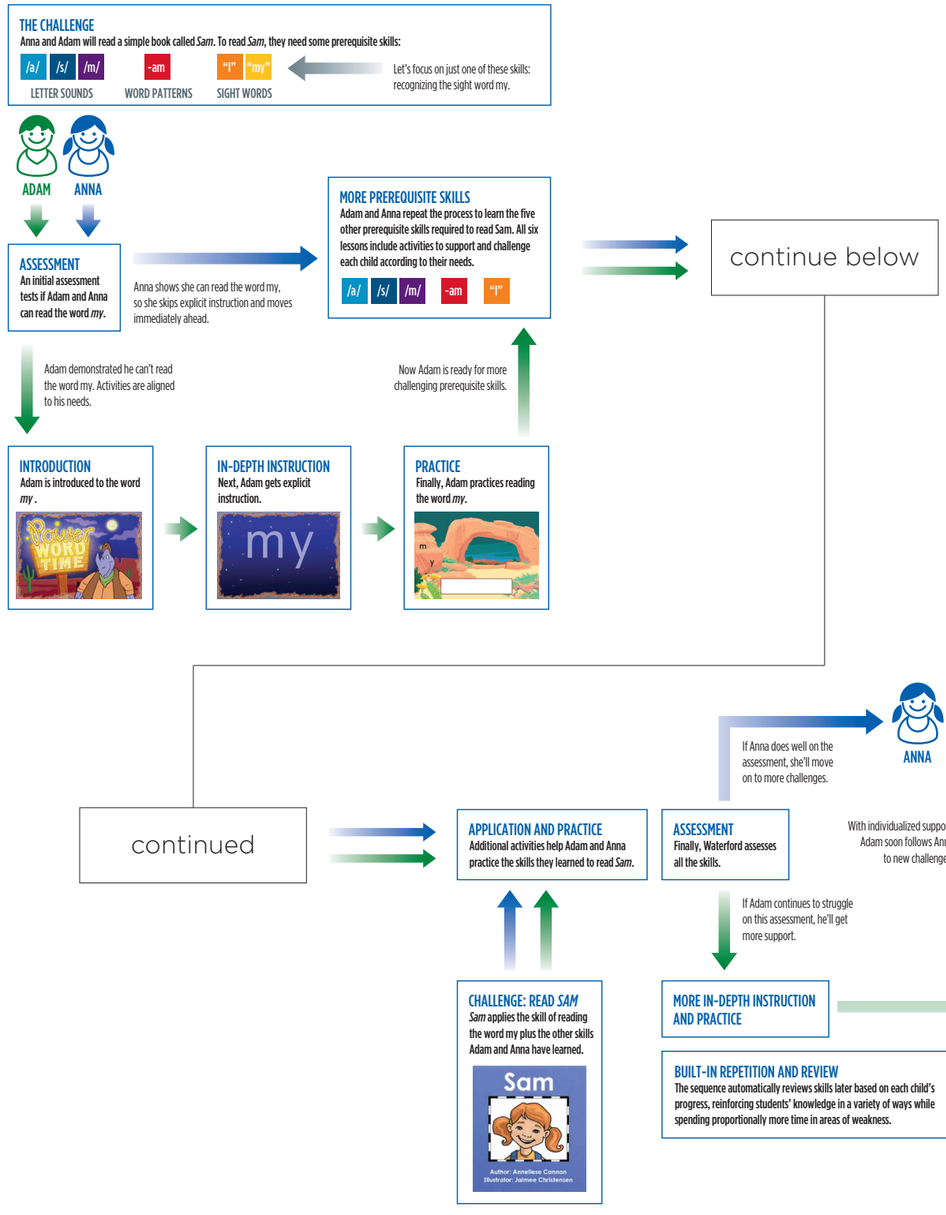
The program's adaptive sequence plots an individual course for each student through the curriculum's 2,700 learning objectives based on each learner's individual strengths and weaknesses.

Even though students may begin instruction in the same spot within the curriculum, the adaptive sequencer quickly begins creating a customized path for each individual learner based on individual needs while instruction is taking place.

In order to ensure LEP students are supported as they transition to English, built-in remediation tools determine whether students need additional scaffolded support—including roll-over audio, audio repeat, video, animation, and modeling—in order to be successful.

Through the program's ongoing, automatic differentiation, the skill gap between these students closes. The program's ongoing, embedded assessments continuously monitor progress and automatically apply performance data to personalize the learning path based on each student's individual needs.

Example of a personalized learning lesson



Emphasize high learning standards while respecting individual strengths and needs.

Waterford Early Learning supports teachers with a research-based and comprehensive curriculum built on the best pedagogical practices and highest learning standards. Waterford Early Learning is aligned to individual state and Common Core State Standards and is well-correlated to Teachers of English to Speakers of Other Languages (TESOL) standards and to those of the Sheltered Instruction Observation Protocol (SIOP) model.

TUCSON STUDY

[With Waterford Early Learning,] motivation remained high, even at the end of the year, in contrast to other computer-based instructional programs. The program engaged students who were not usually engaged.

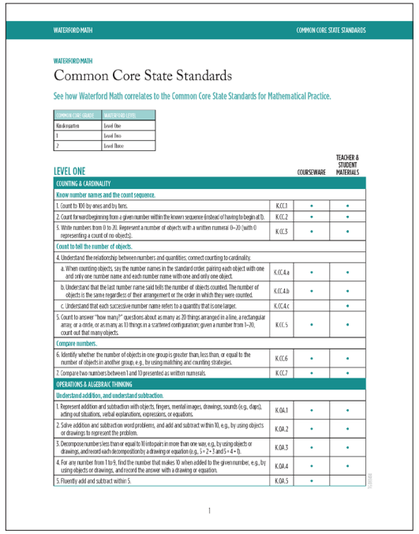
- Stephen Powers, PhD

READ MORE ABOUT THE TUCSON STUDY ON PAGE 14.

Waterford Early Learning is unique because it automatically provides LEP students with the additional practice and review that they need to achieve high standards. And because the program is aligned to individual state and Common Core State Standards, Waterford Early Learning prepares young students for the challenges they'll face when high-stakes assessment begins at grade three.

A complete correlation guide highlights the connections between the Waterford Early Learning curriculum and specific Common Core State Standards to clearly demonstrate how the program supports these new academic requirements.

Common Core Correlation Guides


WATERFORD.MATH COMMON CORE STATE STANDARDS

WATERFORD.MATH

Common Core State Standards

See how Waterford Math correlates to the Common Core State Standards for Mathematical Practice.

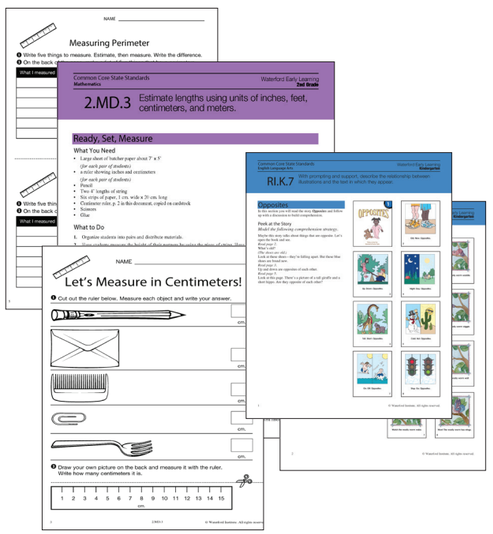
GRADES OR COURSE	MORE DETAILS
Kindergarten	Level One:
1	Level Two:
2	Level Three:

LEVEL ONE		COURSEWARE	TEACHER & STUDENT MATERIALS
COUNTING & CARDINALITY			
Know number names and the count sequence.			
1. Count to 100 by ones and by tens.	K.CC.1	•	•
2. Count forward beginning from a given number within the known sequence (instead of having to begin at 1).	K.CC.2	•	•
3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0–20 (with 0 representing a count of no objects).	K.CC.3	•	•
Count to tell the number of objects.			
4. Understand the relationship between numbers and quantities; connect counting to cardinality.			
a. When counting objects, say the number names in the standard order, pairing each object with one and only one number name and each number name with one and only one object.	K.CC.4.a	•	•
b. Understand that the last number name said tells the number of objects counted. The number of objects is the same regardless of their arrangement or the order in which they were counted.	K.CC.4.b	•	•
c. Understand that each successive number name refers to a quantity that is one larger.	K.CC.4.c		•
5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.	K.CC.5	•	•
Compare numbers.			
6. Identify whether the number of objects in one group is greater than, less than, or equal to the number of objects in another group, e.g., by using matching and counting strategies.	K.CC.6	•	•
7. Compare two numbers between 1 and 10 presented as written numerals.	K.CC.7	•	•
OPERATIONS & ALGEBRAIC THINKING			
Understand addition, and understand subtraction.			
1. Represent addition and subtraction with objects, fingers, mental images, drawings, sounds (e.g., claps), acting out situations, verbal explanations, expressions, or equations.	K.OA.1	•	•
2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.	K.OA.2	•	•
3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).	K.OA.3	•	•
4. For any number from 1 to 9, find the number that makes 10 when added to the given number, e.g., by using objects or drawings, and record the answer with a drawing or equation.	K.OA.4	•	•
5. Fluently add and subtract within 5.	K.OA.5	•	

Common Core Correlation guides let teachers know what type of material is available for each standard. Material is available as courseware (activities), student books, and additional offline student and teacher materials.

The Search tool in the manager lets you filter search results by Common Core standards.

Common Core PDFs



For each Common Core standard, download and print a PDF that suggests relevant Waterford resources and tips for teaching the standards.

Celebrate student diversity with a variety of relevant, multicultural content.

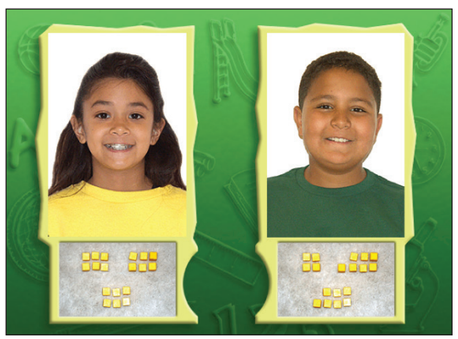
An exemplary practice of schools serving language minority students is celebrating student diversity, both culturally and linguistically(Samson and Collins 2012).

Waterford Early Learning's rich representation of diverse cultures is one of its most powerful components. In fact, 22 different languages and 37 different cultures are represented, ranging from Swahili to Russian to Navajo.

The software frequently utilizes peer models, who are representative of the diverse ethnic and cultural landscape found in most of today's classrooms, to help students connect learning to their own lives.

Impressionable early learners see positive images of themselves reflected back in videos, animations, and stories, as well as biographies of notable historical figures like Bessie Coleman, Sequoyah, and Srinivasa Ramanujan.

Waterford Early Learning includes folk songs from around the world sung in both English and the language of the country of origin. This is just one example of how children are able to see images of themselves reflected throughout the software activities. Great attention was given to make sure that the courseware is both culturally sensitive and culturally responsive.

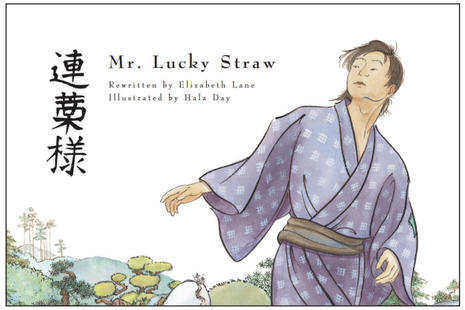


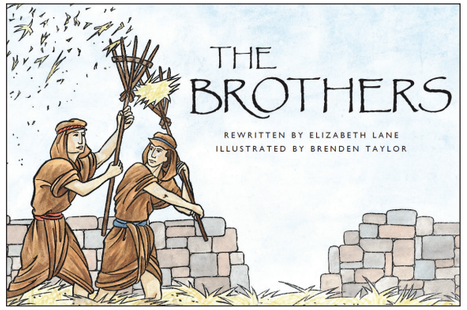
You Be the Teacher activities in Waterford Math and Science use peer models from a variety of ethnic backgrounds.

Sing Around the World

Sing Around the World songs celebrate traditional folk songs from many different countries. Students learn the songs in English and in the song's original language.

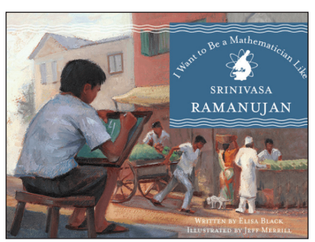
Traditional Tales

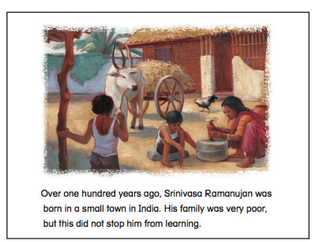




Traditional Tales introduce children to well-loved stories from around the world.

Biographies





Students learn about the different paths scientists and mathematicians took on their road to discovery.

Help language minority parents to be more active participants in their child's education.

Experience and research has shown that language minority parents care deeply about their children's schooling. However, language, cultural, and economic barriers often preclude their active involvement in their child's education. Providing language and racial minority families with learning activities and materials for the home, as well as guidance in using those materials effectively, has proven to be an important and successful strategy for enabling parents to become involved in their children's education (Clair 2011).

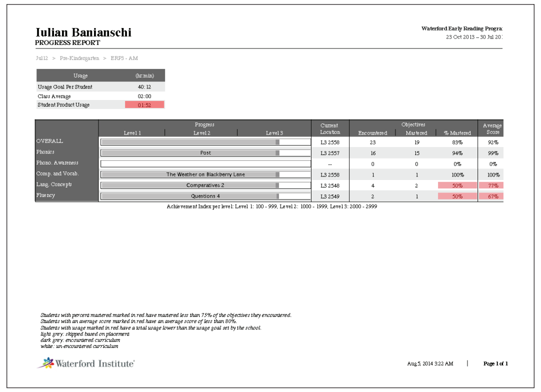
Waterford Early Learning gives teachers the data and tools to encourage language minority parents to be more active participants in their child's education.

Reporting tools monitor student progress and provide ongoing student data that teachers can use to inform their instructional decision with individual students and the whole class. They are powerful tools for helping teachers better understand each student's unique strengths and needs.

Teachers can stay apprised of and share student performance details with parents using individual student reports.

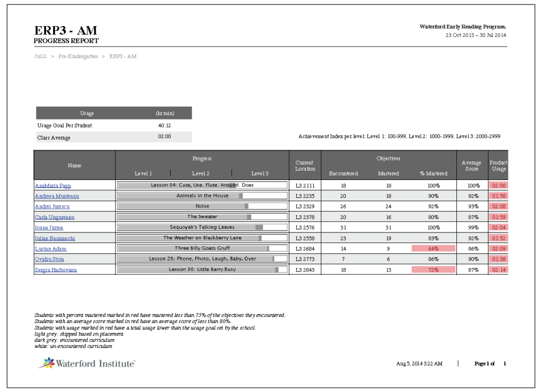
In addition, ongoing professional development and support from expert trainers is available for continuous improvement.

Progress Reports



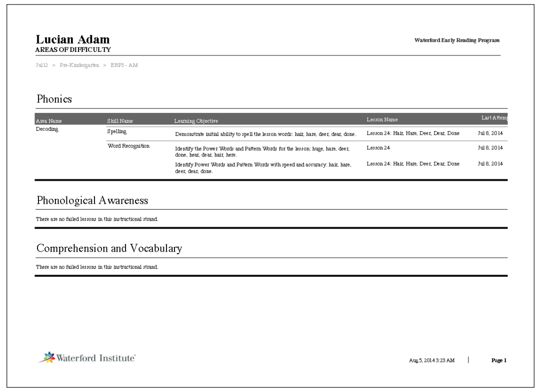
Individual reports show:

- Initial placement
- Current placement
- Usage
- Progress in a level
- Numbers of objectives encountered and mastered
- Average score on assessments



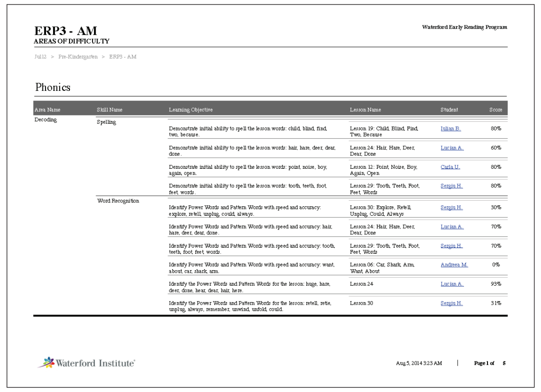
Class reports display information from the individual progress report for all students in the class.

Area of Difficulty Reports



Individual reports highlight:

- Content with which students are struggling
- Students' average scores for specific lessons



Class reports show information from the individual reports, and also show which students share similar deficits.

Proven Effective

Waterford Early Learning offers the personalized instruction that limited English proficient students need.

For nearly 40 years, Waterford has been an integral part of the dialogue and research around integrating technology and early learning. Waterford and its partners have invested over $135 million in researching and developing methodologies that reach early learners everywhere.

Based on decades of research and used successfully by millions of students, Waterford Early Learning is a comprehensive, cloud-based K-2 curriculum designed to deliver online instruction tailored to each student's individual learning needs.

Learn more at www.waterford.org.

Tucson Study

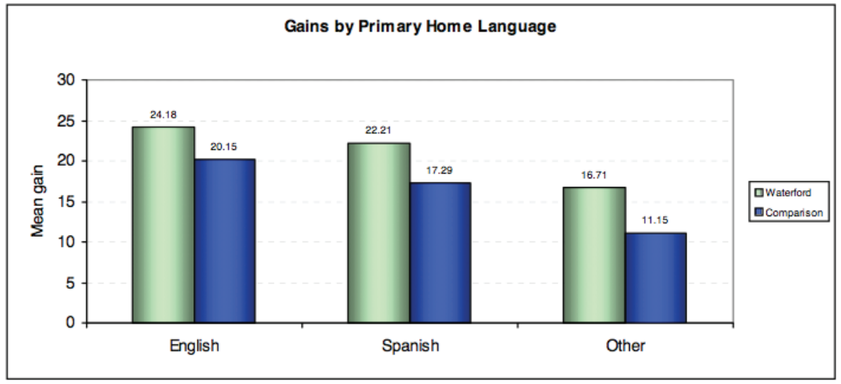
Recent studies in Tucson Unified School District demonstrate that while all Waterford subgroups outperformed their non-Waterford counterparts, English language learners made the most gains.

In fact, LEP students using Waterford Reading outperformed the English-speaking students in the comparison group in gains.

Read this study and other studies evaluating the effectiveness of Waterford Early Learning at www.waterford.org/proven-results.

From the Evaluation of Waterford Reading in the Tucson Unified School District

Figure 11. Gains by Primary Home Language



Whether their primary home language was English, Spanish or another language, Waterford Reading students outperformed their counterparts in the comparison group on the DIBELS Total Reading Score. This difference was statistically significant for the English and the Spanish home language groups (Powers 2007).

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About Waterford Institute

Waterford Institute is a nonprofit research center that creates personalized, cloud-based instruction for children in preschool to second grade. Founded by Dr. Dustin Heuston in 1976, Waterford's educational software takes a research-based approach to create its award-winning, proven curriculum, content and assessment.

Waterford's nonprofit status uniquely positions it to focus on providing accessibility, equity and excellence for all of our youngest learners.

Waterford