

# Florida Center for Reading Research

## Waterford Early Reading Program

### What is Waterford Early Reading Program?

The *Waterford Institute*, a non-profit educational organization, devoted many years developing the *Waterford Early Reading Program*. The *Waterford Early Reading Program (WERP)* is a comprehensive early intervention curriculum designed to develop literacy for kindergarten through third grade students. The three levels of the program are for emerging, developing, and fluent readers and include multi-media technology to provide daily, research-based, individualized instruction for every student in the classroom. Each of the three levels contains one school year's worth of instructional material so students work at their instructional level regardless of the grade level in which they are placed. *Waterford* provides all the materials necessary for implementation including the teacher guides (teacher-led or center-based off-line activities), CD's, videotapes, audiotapes, student materials, parent resources, hardware, software (curriculum that students engage in on the computer), and earphones with microphones. The computers can be in a lab setting or at a center in the classroom that contains three to four computers. Guidelines for teachers to follow in order to place students at appropriate levels of the program are also delineated in the *Waterford 'Getting Started Guide'*. For the software component, engaging tutorials regarding how to use the mouse are available for young children.

Pre-readers and kindergarten students participate in Level 1 to develop phonological awareness, build automatic letter name and letter sound recognition, understand print concepts, and build vocabulary through engaging activities, songs, and rhymes. The software component of Level 1 contains 45 hours of instruction and is designed to prepare students for beginning reading instruction. These emerging readers spend approximately fifteen minutes per day using the software portion of *Waterford*. There are suggested off-line activities that correlate to the content of the software for teachers to implement in the classroom in either small groups or with the entire class. In order to reinforce and practice skills, the stories the students encounter in the software are sent home to become part of the student's personal library and include twenty-six Sing a Rhyme Books and 26 Read with Me Books.



Level 2 builds on the foundation provided at Level 1 and teaches beginning reading skills for the developing reader. Ninety hours of instruction are included within the software component at this level and students spend approximately 30 minutes per day at the computer reinforcing phonological awareness skills, letter sound recognition, word recognition skills, and comprehension. Teacher guides offer off-line teacher-led activities that provide explicit and systematic lessons to review phonological awareness, letter sounds, word recognition, and spelling. Explicit and systematic instruction for teaching comprehension strategies, such as prediction and sequencing is also delineated in the teacher guides. These teacher guides follow effective teacher practices when introducing concepts and skills (introduce, model, practice, evaluate) and provide students with ample independent practice. Lessons from the teacher guides can be implemented in large or small groups. The stories that students engage in with the software are also sent home to add to each student's personal library. These books include 16 large, full-color traditional tales and 63 decodable books.

Level 3 moves students from the beginning reading skills learned at Level 2 toward developing fluency and comprehension. At this level, students learn more complex word patterns, more advanced spelling and writing skills, higher level comprehension strategies, and practice building reading fluency. Ninety hours of instruction are provided by the software component at this level and each student spends approximately 30 minutes per day at the computer. Students receive copies of the 84 books that accompany the software activities to add to their personal library. These books include 30 decodable (called Readables) books, which every student should be able to read independently and 54 Read-Along books that students can read independently or with a family member. Teacher led activities are provided in the teacher guides and can be implemented in small or large groups. These activities accompany each Readable and each Read-Along Book and include building skills, word work, spelling, writing, and comprehension.

*Keyboarding to Read & Write* is incorporated into levels one and two and helps students learn to keyboard without looking at their fingers. This interactive software program teaches keyboarding skills and basic word processing skills in a way that is engaging and motivating for the students.

The *Waterford School Manager* allows teachers to manage the software program and adapt the activities to specific needs of the students. Teachers use the *Waterford School Manager* to begin sessions, store student information, form reading groups, listen to students read (students build fluency by recording themselves reading stories and teachers have the capability of listening to these recordings), assign courses, track student progress, and print student and class reports. The *Manager* software is teacher-friendly and provides step-by-step directions both within the software as well as in an instructional manual.

## Is Waterford Early Reading Program aligned with Current Reading Research?

The content of the *Waterford* program was founded on current, research-based principles of reading instruction. The *Waterford Early Reading Program* includes the five essential components for effective reading instruction: phonemic awareness, phonics, vocabulary, fluency, and comprehension. These components are organized in a cohesive manner and are taught explicitly and systematically within the program.

Phonological awareness is incorporated within Levels 1 and 2 of the software program. Activities progress through the appropriate developmental hierarchy. Broader phonological awareness skills such as listening to nursery rhymes and identifying and making rhymes are introduced before segmenting words into syllables. Finally, students engage in phonemic awareness activities such as blending and segmenting words and manipulating sounds in words at the phoneme level. Students are provided ample opportunities to practice phonological awareness as they engage in each activity more than once. The number of times a student sees an activity is determined by the ease with which he or she masters the skill. Off-line phonological awareness activities arranged by increasing difficulty for the teacher to implement with students in small groups are included in the teacher guides.

Level 1 provides systematic instruction in phonics to prepare students to decode simple words. Level 2 builds on the phonic skills mastered in Level 1 by providing further instruction and practice in decoding strategies. This instruction addresses letter sounds, letter patterns, consonant blends, long and short vowel patterns, common irregular words, vowel digraphs, word families, key words, and

context clues. Level 3 extends these skills to help students become fluent readers. Phonics instruction is blended throughout the *Waterford Program* such that activities that teach letters or words are always followed by books that use the letters or words in familiar as well as new situations.

All three Levels of *Waterford* are designed to expose students to a rich and comprehensive vocabulary foundation. Level 1 focuses on readiness skills and vocabulary that all children must know to be successful in school. Level 2 extends this knowledge and teaches students to use reading “tricks” such as using context to discover word and sentence meanings and using known words to help identify unknown words. Finally, Level 3 incorporates interactive book activities that allow students to click on “vocabulary words” as they appear in the text to hear the words pronounced and defined.

Teachers are encouraged to read to students daily to provide a model of fluent reading. Level 1 engages students in rich language and print experiences while fostering the development of print awareness and letter automaticity. Decodable texts, called *Readables*, are central to the instruction provided at Levels 2 and 3. The text of the *Readables* correspond to the letter-sound relationships the students are learning in other activities. Fluency building strategies, such as repeated readings, are incorporated within Levels 2 and 3. Students listen to a skilled reader and try to imitate the reader’s expression and rate as they record themselves reading stories. Students listen and correct themselves as they replay their recordings. Teachers can also use these recordings to regularly assess each student’s reading fluency progress. Students read familiar passages for speed in Level 3. After reading and recording the passage, the student receives feedback on how many words were read per minute. Students take home the books from which they are reading within the program and are encouraged to practice silent reading or reading aloud with family members.

Students are taught to think about text before, during, and after they read throughout all levels of the *Waterford Program*. Beginning in Level 1, students are focused on the meaning of the text and are taught comprehension strategies, such as sequencing, in a way that is developmentally appropriate. Ten important comprehension strategies, such as previewing (peek at the story) and summarizing (sum up), are explicitly taught and practiced throughout Level 2. Every Read-Along book is accompanied by Get Ready activities (prereading) and Think About It activities (after reading). Level 3 provides students opportunities to practice the comprehension strategies learned in Level 2 and introduces four more advanced strategies. These advanced comprehension strategies include story structure and semantic organizers. Teacher guides encourage teachers to implement off-line activities for students to practice using comprehension strategies with the variety of books that accompany the program.

The professional development that accompanies the *Waterford Early Reading Program* is extensive and ongoing. It includes a three-year commitment to training and support. A Pre-Training meeting with a district or school administrator determines the program’s usage expectations, a strategy for optimal implementation, and a plan for future professional development. An initial on-site training day consists of an overview of the program, demonstrations, hardware and software management, and effective implementation. The follow-up visits include classroom observations and feedback, tracking student progress, and customizing the program. A three-year subscription to the *Best Practice Newsletter* is provided as part of the program’s professional development. Teachers can also receive phone and electronic mail support from their Educational Trainer and Customer Care hotline.

## Research Support for Waterford Early Reading Program

*Waterford Early Reading Program (WERP)* was found to have large, positive effects for phonemic awareness, word reading, and invented spelling for students using the program and no effect on concepts of print, phonics, and vocabulary. A number of studies have been conducted. However, this report summarizes one study that had a quasi-experimental design. This study, summarized below, examined the effect of *WERP* on reading (Hecht & Close, 2002). See FCRR's standards for research designed to examine program effectiveness:

[http://www.fcrr.org/FCRRReports/PDF/Research\\_Criteria.pdf](http://www.fcrr.org/FCRRReports/PDF/Research_Criteria.pdf)).

A kindergarten study (Hecht & Close, 2002) was conducted with students from primarily low socio-economic status and racial minority families at inner city and rural public schools during the 1999-2000 school year. Seventy-six kindergarten students (42 in the treatment group, 34 in the control group) participated in this study. There were no significant differences between the treatment and control groups in the majority of the measures assessed at the beginning of the study. However, students in the treatment group knew sounds for more letters than those in the control group ( $p < .05$ ). The following nine tasks were used to assess students' emergent literacy and literacy skills: phonemic awareness (Blending and Segmenting tasks of CTOPP), letter name and sound knowledge, letter writing (Spelling subtest of WRAT), invented spelling (Spelling subtest of WRAT), word reading (Letter Word Identification subtest of the Woodcock-Johnson Tests of Achievement-Revised), vocabulary (Stanford-Binet: Fourth Edition), and print concepts (Clay, 1979).

The post-test showed that children who received *WERP* computer assisted instruction outperformed children in the control group in phonemic awareness, word reading, and invented spelling. The authors reported large effect sizes for these skills (ranging from 1.11 to 1.20). It should be noted that the authors' calculation of the effect sizes was based on the number of children while the treatment was assigned at the school level. Thus, the statistical significance may not be precise.

## Conclusion

The instructional design and content of the *Waterford Early Reading Program* is consistent with what we know from current research for teaching beginning reading. There is an initial level of research on the use of *WERP* to develop a basic foundation in the alphabetic principle. Additional well-designed studies, using random assignment, matched units for assignment and analysis, and equivalent scores on pretest between the experimental and control groups should be useful in determining the efficacy of this program.

## Strengths & Weaknesses

Strengths of *Waterford Early Reading Program*:

- There is a strong Home-Connection component to *Waterford* that consists of a Home Link Newsletter with suggestions for continued learning at home. Additionally, each student is provided with personal copies of the videotapes, books, and music that accompany the program. There are also activities from the software that the teacher can print out and send home as homework or use in the classroom for extra practice.
- *Waterford* is correlated with the Sunshine State Standards Grade Level Expectations for Language Arts. Specific activities that match each GLE are outlined in the materials.

- Students are provided with ample practice reading decodable stories and more sophisticated text such as nonfiction, poetry, biography, and folktales with appropriate scaffolding.
- The multi-sensory approach and combination of animation, sound, music, and singing can be motivating for many students, especially those with special needs and second language learners.
- The *Waterford School Manager* ensures that students are working at their instructional level and provides teachers specific reports so that they may adapt instruction to meet individual needs.
- Immediate feedback and appropriate error correction and scaffolding are built into the computer program at each Level.
- Explicit and systematic spelling and writing instruction is included in the *Waterford Early Reading Program*.
- The efficacy of the *Waterford Early Reading Program* is supported by scientific research.

Weaknesses of *Waterford Early Reading Program*:

- None were noted.

### Florida counties that have schools that implement Waterford Early Reading Program:

Alachua County	352-955-7300	Leon County	850-487-7100
Bay County	850-872-4100	Manatee County	941-741-7200
Brevard County	321-631-1911	Marion County	352-671-7700
DeSoto County	863-494-4222	Martin County	772-219-1200
Duval County	904-390-2000	Miami-Dade County	305-995-1000
Flagler County	386-437-7526	Orange County	407-317-3200
Gadsden County	850-627-9651	Osceola County	407-870-4600
Glades County	863-946-2083	Palm Beach County	561-434-8000
Hamilton County	386-792-1228	Pinellas County	727-586-1818
Hendry County	863-674-4550	Saint Lucie County	772-468-5000
Highlands County	863-471-5555		
Hillsborough County	813-272-4000		
Holmes County	850-547-9341		

### For More Information

<http://www.waterford.org/institute/werp.html>

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Important Note: FCRR Reports are prepared in response to requests from Florida school districts for review of specific reading programs. The reports are intended to be a source of information about programs that will help teachers, principals, and district personnel in their choice of materials that can be used by skilled teachers to provide effective instruction. Whether or not a program has been reviewed does **not** constitute endorsement or lack of endorsement by the FCRR.

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