

# Educator Overview

## for Waterford Early Learning Reading Curriculum



# Contents

|   |           |
|---|-----------|
| <b>Introduction</b>                         | <b>1</b>  |
| Who Is Waterford.org™?                      | 1         |
| Waterford Mission Statement                 | 1         |
| Waterford Beliefs                           | 1         |
| Waterford Early Learning™                   | 2         |
| <b>Research Basis</b>                       | <b>3</b>  |
| How the Brain Learns to Read                | 3         |
| Frameworks for Literacy Instruction         | 6         |
| <b>Reading Curriculum</b>                   | <b>8</b>  |
| Instructional Strands for Literacy          | 8         |
| Instructional Strand Overview Guides        | 10        |
| Research in Action                          | 11        |
| Principles of Effective Instruction         | 12        |
| Program Efficacy                            | 13        |
| Scope and Sequence                          | 14        |
| Adaptive Learning Path                      | 15        |
| Levels and Segments                         | 15        |
| Learning Objectives                         | 16        |
| Pacing                                      | 18        |
| Scaffolded Support, Review, and Remediation | 18        |
| Library of Books                            | 20        |
| Content Development Cycle                   | 23        |
| Curriculum Correlations                     | 24        |
| Student Engagement                          | 24        |
| <b>Classroom Instruction</b>                | <b>27</b> |
| Adaptive Learning Path                      | 27        |
| Assigned Playlists                          | 27        |
| Guided Instruction                          | 27        |

|  |           |
|--|-----------|
| <b>Getting Started</b> .....                               | <b>28</b> |
| For Administrators .....                                   | 28        |
| For Teachers .....   | 28        |
| For Students .....   | 28        |
| System Requirements .....                                  | 28        |
| <b>Student Progress Data</b> .....                         | <b>29</b> |
| Waterford Assessment of Core Skills .....                  | 29        |
| Adaptive Learning Path: Embedded Assessment .....          | 29        |
| Placement Assessment .....                                 | 29        |
| Ongoing Formative Assessment .....                         | 30        |
| Dashboards and Reports .....                               | 31        |
| <b>Reaching All Learners</b> .....                         | <b>32</b> |
| Universal Design for Learning .....                        | 32        |
| Diverse Learning Needs .....                               | 33        |
| Striving Learners .....                                    | 33        |
| Accelerated Learners .....                                 | 33        |
| Students with Learning Disabilities .....                  | 35        |
| Multi-tiered Systems of Support .....                      | 36        |
| Multilingual Learners .....                                | 37        |
| Adaptive Learning Path: Spanish Language Support .....     | 38        |
| Offline Resources: Support for Multilingual Learners ..... | 40        |
| Proven Results for All Learners .....                      | 41        |
| Representing All Learners .....                            | 42        |
| Third-Party Curriculum Reviews .....                       | 42        |
| <b>Engaging Families</b> .....                             | <b>43</b> |
| What Is Family Engagement? .....                           | 43        |
| Why Family Engagement? .....                               | 43        |
| Resources for Educators .....                              | 43        |
| Resources and Support for Families .....                   | 44        |

**Effective Practices for Educational Technology and Young Learners** ..... 47

- Establish Clear Classroom Routines ..... 47
- Create a Closed-Loop Online Environment ..... 47
- Connect Digital Learning and Classroom Instruction ..... 47

**Waterford Services** ..... 48

- Professional Learning and Partner Success ..... 48
- Technical Support ..... 48

**Conclusion: Toward Universal Literacy** ..... 49

**References** ..... 51

To experience Waterford Early Learning firsthand, please [request a demo account](#). Without a demo account or other Waterford account, you will not be able to access the program hyperlinks (displayed in orange) in this guide.

# Introduction

## Who Is Waterford.org™?

Waterford.org is a national early education nonprofit that provides research-backed PreK–2nd grade reading, math, and science programs that children can use wherever they learn. Our tailored programs help children reach critical milestones by 3rd grade, laying the foundation for future success for every child.



## Waterford Mission Statement

Waterford combines the science of learning, the power of mentoring, and the promise of technology to build family and community partnerships that deliver access, excellence, and equity in early education for all children.



## Waterford Beliefs

- Ensuring **positive early learning experiences** is the foundation for a lifetime of growth and success.
- **Working together**, caring adults at school and at home help children build confidence, curiosity, and a sense of belonging.
- **Individualizing instruction** meets every child's needs, improves engagement, and accelerates learning.
- Acting on **research and data** that are valid, reliable, and inclusive leads to better learning outcomes.
- Leveraging **innovative technologies** is essential to delivering excellence and equity for all children.
- Providing **equitable access** to evidence-based programs and resources gives all children the opportunity to thrive.



## Waterford Early Learning™

Waterford Early Learning is an evidence-based supplemental early learning program that engages PreK–2nd grade learners with research-based, adaptive instruction in reading, math, and science.

Waterford Early Learning’s reading curriculum helps children reach critical literacy milestones by 3rd grade, laying the foundation for their future success. Developed beginning in the early 1990s and first released in 1998, the reading curriculum provides a comprehensive, adaptive digital curriculum for PreK–2nd grade students along with supporting resources and actionable data for educators and families.

The initial content for Waterford Early Learning’s reading curriculum was developed in consultation with Dr. Marilyn Jager Adams and in alignment with the principles set forth in her landmark book *Beginning to Read: Thinking and Learning About Print* (1990). In addition, recommendations from the National Research Council (1998), the National Reading Panel (2000), the National Early Literacy Panel (2008), and the What Works Clearinghouse (WWC) K–3 Reading Practice Guide (Foorman et al., 2016) have guided the reading curriculum development. These major research syntheses emphasize the importance of phonological awareness, phonics, vocabulary, fluency, and comprehension as critical components of effective reading instruction. Through the years, Waterford has relied on the work of many experts in the field of reading development, including Ehri, Torgersen, Stanovich, Snow, Beck, Moats, Kilpatrick, and Dehaene.

Today, the model is the same—providing students with effective instruction while empowering the educators and families that support them in their learning journeys through learning science, innovative technologies, and home, school, and community partnerships that deliver excellence and equity for all learners.

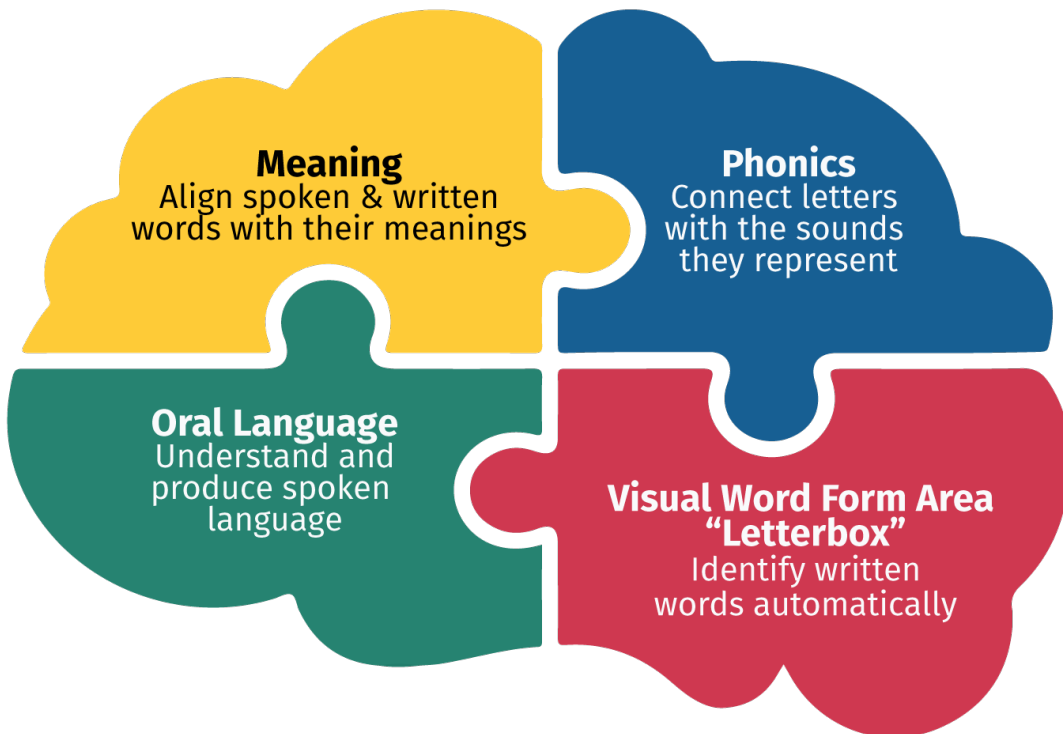


# Research Basis

## How the Brain Learns to Read

For most young children, learning to speak unfolds naturally through exposure to oral language. By contrast, learning to read requires years of intentional instruction. In other words, the human brain is wired for speech but must be deliberately trained to read (Lyons, 1998).

Today, we are living in the midst of what neuroscientist Stanislas Dehaene calls a “neuroscientific revolution” in which emerging brain imaging technologies increasingly reveal how the brain’s reading network is formed and how it functions. An introductory view of how the brain learns to identify written words in three stages—pictorial, phonological, and orthographic (Frith, 1985)—provides a good starting point.



*The Brain's Reading Network*



## **Pictorial Stage**

As they build oral language skills, young children learn the pronunciations and meanings of thousands of words. This information is stored in separate areas of the brain (Willingham, 2017), represented by the meaning and oral language puzzle pieces shown on the previous page. As they begin to attend to printed language, and before they have significant knowledge of letter-sound relationships, children enter the pictorial stage of word identification. During this stage, children rely heavily on the brain's visual system, perceiving words as wholes with little or no regard to letters and the sounds they represent.

They learn to identify a limited number of words based on their overall visual appearance, often depending on font, color, and logos typically associated with those words (think environmental print such as *STOP* or *McDonald's*). Students may also identify some high-frequency words (*me, the*, etc.) or familiar words such as their own name. The word identification processes that characterize the pictorial stage are insufficient for the development of proficient reading. The lack of correlation between visual memory tasks and word-level reading tasks (Kilpatrick, 2015) is evidence that reading is not simply a visual task. Learning to read in an alphabetic system such as English requires the coordination of additional systems within the brain.

## **Phonological Stage**

During the phonological stage, children decode words, isolating individual letters within a word and associating them with speech sounds in grapheme-to-phoneme conversions. This allows the child to identify the pronunciation of the printed word (retrieved from the oral language area of the brain), which then activates its meaning. However, the connections between these areas of the brain are not prewired. Neural pathways must be established through effective instruction and extensive practice. In the phonological stage, the child is beginning to read, but the ability to decode print is not sufficient to produce fluent reading.



## Orthographic Stage

Finally, in the orthographic stage, children begin to recognize an increasing number of words automatically, freeing the brain from the cognitive load required for decoding those words letter by letter. What makes this shift from methodical decoding to instant recognition of words possible? The answer is that learning to read literally changes the brain. In response to the unique demands presented by reading acquisition, a specialized area is developed within the brain's visual system—the visual word form area, referred to as the “letterbox” by Stanislas Dehaene (2009). Learning to read “transform[s] some of the visual structures of our brain in order to turn them into a specialized interface between vision and language” (Dehaene, 2011, p. 20).

The brain's letterbox supports orthographic mapping, the process that permanently bonds the speech sounds in a word (phonemes) with the spellings of those sounds (graphemes) and anchors the word's spelling to its pronunciation and meaning. The word is now a sight word for the reader; it is instantly recognizable and no longer requires decoding.

As a result of the orthographic mapping process, a proficient reader can instantly recognize between 30,000 and 80,000 words (Moats, 2010). Again, the necessary neuronal pathways for this process are not pre-paved. They must be forged through instruction and practice. As a student develops reading fluency, activity in the area of the brain that supports decoding decreases as activity in the letterbox (central to the mapping process) increases. It is important to note that orthographic memory is not visual memory. Instead, it is letter-by-letter, sound-symbol memory. Studies reveal that even the most fluent readers still attend to the letter-sound correspondences within words (Kilpatrick, 2015).

In summary, when a reader encounters a novel word, they rely on decoding to identify it. As the word is identified, its pronunciation and then its meaning are activated. When the same reader encounters a word that has already been added to long-term memory through the orthographic mapping process, the word is instantly recognized,

automatically activating the pronunciation and meaning of the word. The orthographic mapping process makes fluent reading possible.

When young children begin to read, their brains are maximally plastic. With the “right type of training” (Shaywitz & Shaywitz, 2020), the process of learning to read creates neural pathways between the visual areas and language areas in the brain’s left hemisphere. In the words of Maryann Wolf, “We can learn to read only because the brain has this capacity to change” (Wolf, 2007).

## Frameworks for Literacy Instruction

Two literacy instruction frameworks, the Simple View of Reading and Scarborough’s Reading Rope, are particularly relevant. These frameworks align well with the findings of modern neuroscience despite the fact that they pre-date much of that research.

Developed by Gough and Tunmer (1986), the Simple View of Reading states that reading comprehension is the product of word recognition and language comprehension.



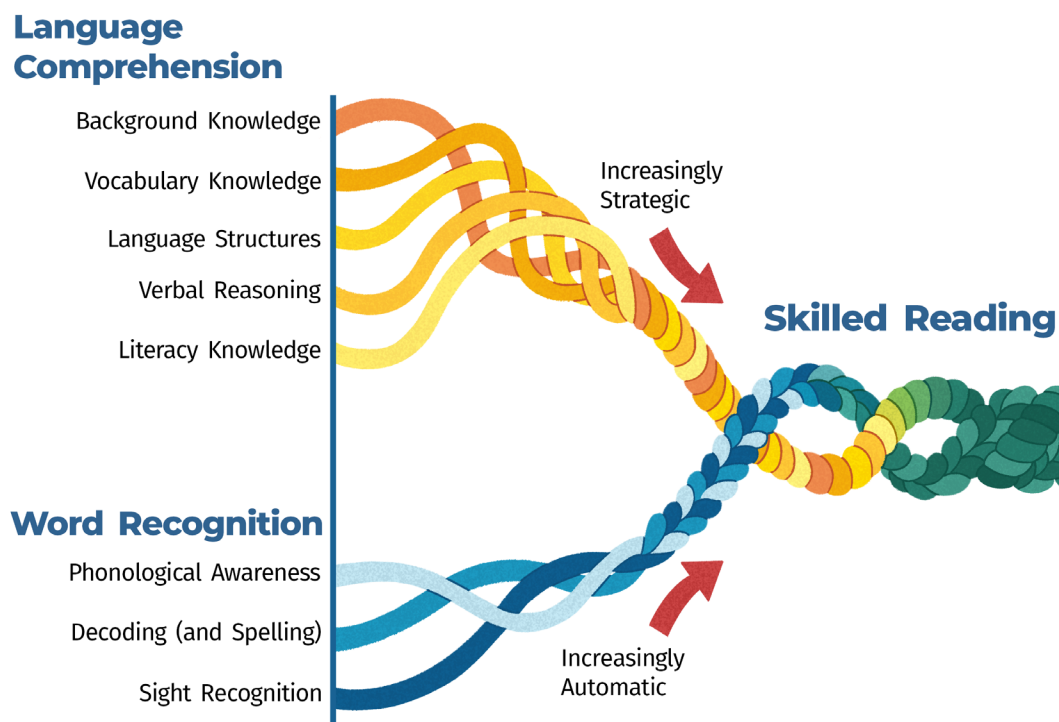
*The Simple View of Reading*

Struggles in either or both of these areas will negatively affect reading comprehension. The Simple View of Reading framework is referenced widely by those who seek to align instruction with the science of reading. Recent research has confirmed that word recognition and language comprehension account for almost all variance in reading comprehension (Lonigan et al., 2018). Word recognition skills help students lift words from the page, answering the question, “What do the words say?” Language comprehension skills help students



answer the question, “What do the words *mean*?” When students can answer these questions in connection with a particular text, reading comprehension is the product.

Scarborough’s Reading Rope (Scarborough, 2001) elaborates on the Simple View of Reading by identifying component skills within the two domains of word recognition and language comprehension.



Scarborough, H. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97–110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy*. NY: Guilford Press

### *Scarborough's Reading Rope*

Foundational word recognition skills are woven together to support increasingly automatic reading, while language comprehension skills work together so that reading can become increasingly strategic.

Use → [this checklist](#) to consider how your instruction is aligned with research-based practices. For more information about the science of reading and how Waterford’s reading curriculum is aligned with the research, see → [The Science of Reading: From Research to Instruction](#).



# Reading Curriculum

## Instructional Strands for Literacy

Waterford Early Learning’s reading curriculum is rooted in the science of reading, as described throughout this document, and organized around a systematic, explicit, and research-based scope and sequence for six instructional strands for literacy.

The National Reading Panel conducted a review of several hundred studies to determine what makes effective reading instruction, particularly in the critical years from kindergarten through 3rd grade. The chart below shows the alignment of Waterford Early Learning’s instructional strands for literacy with the five essential components of reading identified by the National Reading Panel (2000).



*Waterford Early Learning’s Six Instructional Strands for Literacy*



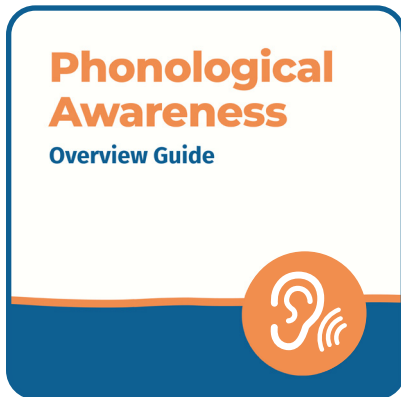
| <b>National Reading Panel:<br/>Five Essential<br/>Components</b>  | <b>Waterford Early<br/>Learning: Instructional<br/>Strands for Literacy</b>   |
|---|---|
| <p><b>Phonemic Awareness</b><br/>The ability to hear and manipulate individual phonemes in spoken words</p>   | <p><b>Phonological Awareness</b><br/>A broader set of skills that includes the ability to hear and manipulate units of sounds, including syllables, onset/ rime, and individual phonemes, in spoken words</p> |
| <p><b>Phonics</b><br/>Knowledge of the connections between letters and sounds (phoneme-grapheme relationships) that allows students to read and spell words</p> | <p><b>Phonics</b><br/>Knowledge of the connections between letters and sounds (phoneme-grapheme relationships) that allows students to read and spell words</p>   |
| <p><b>Fluency</b><br/>The ability to read text at an appropriate rate, with accuracy and expression</p>   | <p><b>Fluency</b><br/>The ability to read text at an appropriate rate, with accuracy and expression</p>   |
| <p><b>Vocabulary</b><br/>Knowledge of word meanings</p>   | <p><b>Comprehension &amp; Vocabulary</b><br/>The ability to make meaning from text, based on a foundation of vocabulary knowledge and content knowledge</p>   |
| <p><b>Comprehension</b><br/>The ability to make meaning from text</p>   |   |
|   | <p><b>Language Concepts</b><br/>The understanding of how written language is organized</p>  |
|   | <p><b>Communication</b><br/>The ability to share and receive information through the four domains of language: reading, writing, listening, and speaking</p>  |



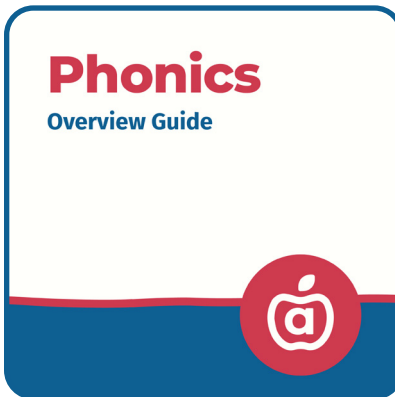
## Instructional Strand Overview Guides

The Instructional Strand Overview Guides linked below provide detailed information about each strand and include the following sections:

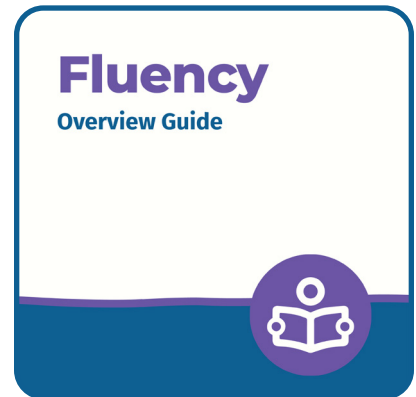
- Research-Based Principles
- Skills Development
- Waterford Instruction
- Waterford Resources
- Waterford Instructional Routines



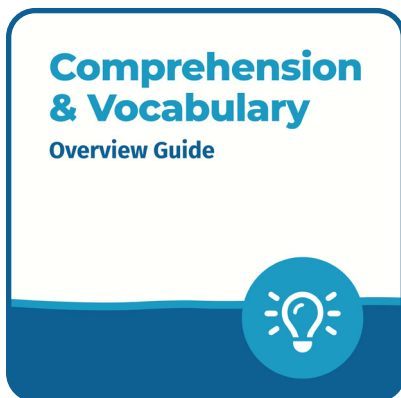
→ [Phonological Awareness Overview Guide](#)



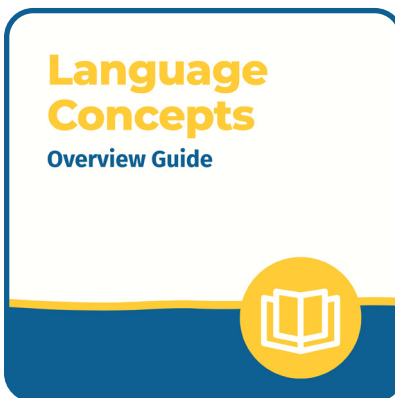
→ [Phonics Overview Guide](#)



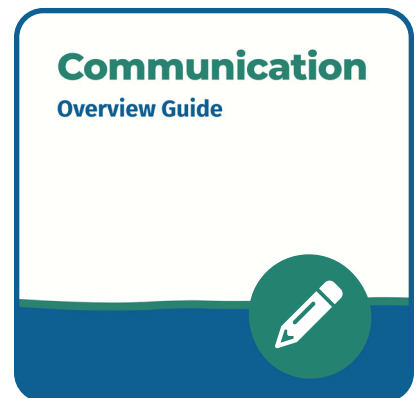
→ [Fluency Overview Guide](#)



→ [Comprehension & Vocabulary Overview Guide](#)



→ [Language Concepts Overview Guide](#)



→ [Communication Overview Guide](#)

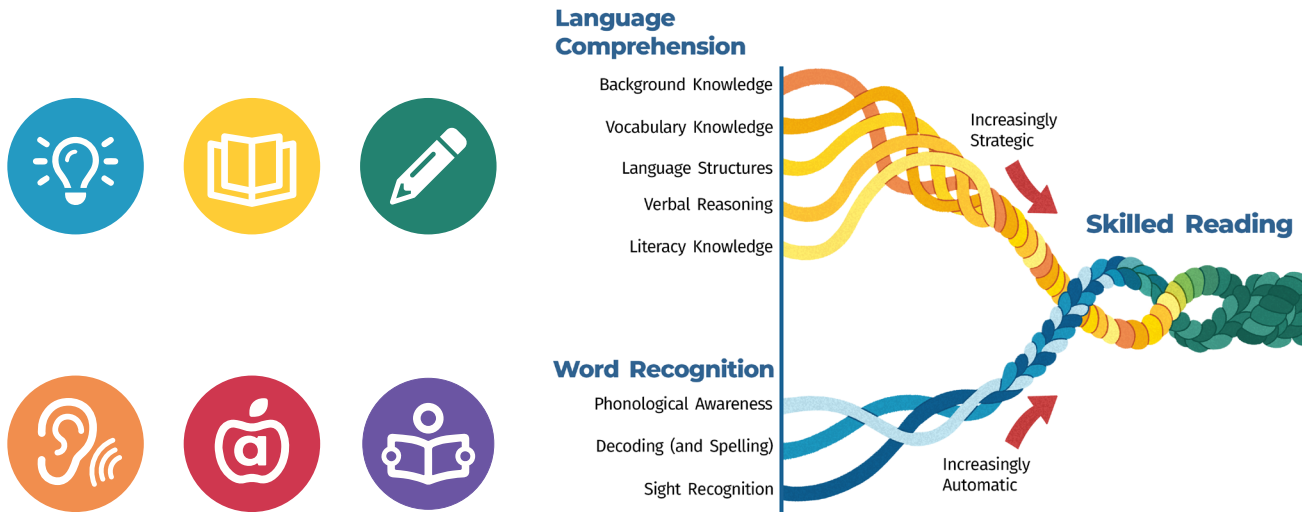


# Research in Action

Waterford Early Learning's instructional strands for literacy align with the Simple View of Reading (Gough and Tunmer, 1986) and Scarborough's Reading Rope (Scarborough, 2001), providing research-based learning experiences to build the word recognition and language comprehension skills that are woven together to produce proficient reading.



*Waterford Early Learning's Instructional Strands for Literacy Aligned with the Simple View of Reading*



Scarborough, H. 2001. Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. Pp. 97-110 in S. B. Neuman & D. K. Dickinson (Eds.) *Handbook of Early Literacy*. NY: Guilford Press

*Waterford Early Learning's Instructional Strands for Literacy Aligned with Scarborough's Reading Rope*

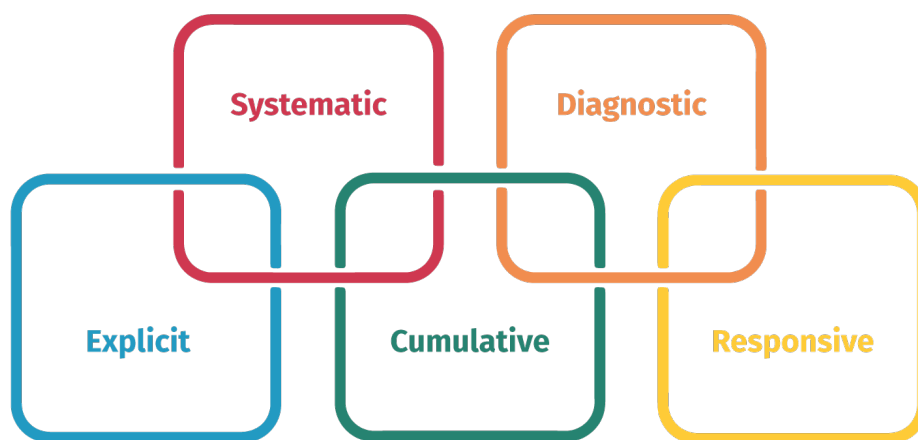


Through the reading curriculum, students develop foundational phonological awareness and phonics skills. They combine and apply those skills to develop proficiency in word recognition through word mapping practice that supports the brain's orthographic mapping process to build a large bank of sight words, making fluent reading possible.

In parallel, the reading curriculum fosters language comprehension by developing vocabulary and background knowledge, building student understanding of how written language is organized, and providing structured practice with communication skills. Our eBook → [Get Practical with the Science of Reading: A short guide for early childhood educators](#) includes more details.

## Principles of Effective Instruction

Waterford Early Learning's reading curriculum follows a structured literacy approach in which instruction is explicit, systematic, cumulative, diagnostic, and responsive (Spear-Swerling, 2018).



*Principles of Effective Instruction*

**Explicit instruction** is clear and direct and includes guided and independent practice, prompt feedback, scaffolding, distributed practice, and ongoing review.





**Systematic instruction** is carefully planned and ordered so that there are no gaps in understanding; concepts are broken into component skills so that they can be more easily learned.

**Cumulative instruction** builds logically from simple to more complex; skills learned today serve as a support for what students will learn tomorrow.

**Diagnostic instruction** gathers actionable data through ongoing assessment.

**Responsive instruction** is tailored to meet the needs of each learner and adapts to meet the changing needs of individual learners.

## Program Efficacy

Waterford Early Learning\* is built on strong research-based principles, and efficacy studies demonstrate that Waterford’s research-based instruction drives measurable learning outcomes. → [Waterford conducts regular third-party research studies](#) to evaluate the effectiveness of the reading curriculum. Over the past 10 years, Waterford has conducted 53 studies—32 of which are peer-reviewed or evaluated by a board of researchers not affiliated with the organization.



Waterford Early Learning meets the highest levels of → [ESSA efficacy](#) as evidenced by numerous research studies, including three randomized control trial studies published in the prestigious What Works Clearinghouse. Results consistently demonstrate effectiveness regardless of school or district size, location, or demographics.

Across all studies evaluating Waterford Early Learning over the past 10 years, students exhibit an average reading effect size of 0.47. This is nearly twice as large as the effect size criterion of 0.25, the cutoff that is widely considered to indicate a meaningful impact on student learning (What Works Clearinghouse, 2022).

\*Children have accessed the reading curriculum through *Waterford Early Learning*, *Waterford Reading Academy*, *Waterford Early Reading Program*, and *Waterford Upstart*. Though research studies reference these different names, they all represent the same curriculum.



# Scope and Sequence

The → [scope and sequence](#) for Waterford Early Learning’s reading curriculum outlines the skills taught within each of the instructional strands. The reading curriculum includes:

- 2,000+ learning objectives
- 7,000+ digital activities
- 180+ instructional songs
- 250+ decodable, narrative, and informational books
- 225+ hours of instruction

Waterford Early Learning’s reading curriculum has a greater depth and breadth of content than many other solutions. The adaptive learning path includes more than 2,000 explicit reading lessons and over 7,000 individual activities that are organized in a systematic, research-based sequence that keeps young learners engaged and on the edge of their learning curve.

An extensive library of print resources to accompany the instruction provided in the adaptive learning path and to support learning in the classroom and at home is available in Waterford Early Learning’s → [Resources & Activities](#). The → [Types of Resources](#) document serves as an overview of contents of the resource library.

**SCOPE & SEQUENCE**  
Waterford Early Learning Reading Curriculum Index Map

This visual representation provides an overview of skills students encounter as they move through Waterford.

| AREA                      | SKILL   | ENCOUNTERED DURING LEVEL(S) | APPROXIMATE LOCATION |      |      |      |      |      |      |      |      |  |
|---------------------------|---|-----------------------------|----------------------|------|------|------|------|------|------|------|------|--|
|                           |   |                             | PR-1                 | PR-2 | PR-3 | BR-1 | BR-2 | BR-3 | FR-1 | FR-2 | FR-3 |  |
| <b>PHONICS</b>            |   |                             |                      |      |      |      |      |      |      |      |      |  |
| Letters and Letter Sounds | Letter Recognition  | PR 1-ER 2                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Letter Sounds Introduction and Practice                   | PR 1-ER 2                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Letter Sounds Mastery                                     | PR 3-ER 1                   |                      |      |      |      |      |      |      |      |      |  |
| Power Words               | Power Words Recognition (Level 1 words)                   | PR 3                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Power Words Read and Spell (Levels 1 and 2 words)         | BR 1-BR 3                   |                      |      |      |      |      |      |      |      |      |  |
| Decoding                  | Power Words Read and Spell (Level 3 words)                | FR 1-FR 3                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Decode Three-Letter Words                                 | PR 3-ER 1                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Patterns (A/, /I/, /O/)                              | PR 3                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Decodable Books (A/, /I/, /O/)                            | PR 3                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Patterns (short vowels, digraphs, blends)            | BR 1-BR 2                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Readable Books (short vowels, digraphs, blends)           | BR 1-BR 2                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Letter Substitution and Deletion                          | BR 2                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Patterns (silent e and vowel teams)                  | BR 3                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Readable Books (silent e and vowel teams)                 | BR 3                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Multisyllabic Words                                       | BR 3-FR 3                   |                      |      |      |      |      |      |      |      |      |  |
| Word Mapping              | Readable Books (r-controlled vowels, variant vowel teams) | BR 3-FR 1                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Patterns (r-controlled vowels, variant vowel teams)  | BR 3-FR 1                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Patterns (advanced vowel patterns)                   | FR 2                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Patterns (review and automaticity)                   | FR 3                        |                      |      |      |      |      |      |      |      |      |  |
|                           | Readable Books  | FR 1-FR 3                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Orthographic Mapping                                      | PR 3-ER 3, FR3              |                      |      |      |      |      |      |      |      |      |  |
| Word Mapping              | Six Syllable Types  | BR 1-FR3                    |                      |      |      |      |      |      |      |      |      |  |
|                           | Word Recognition Automaticity                             | PR 3-FR 3                   |                      |      |      |      |      |      |      |      |      |  |
|                           | Spelling  | PR 3-FR 3                   |                      |      |      |      |      |      |      |      |      |  |

www.waterford.org | info@waterford.org 5 877-299-7997

## Scope and Sequence

To experience Waterford Early Learning firsthand, please [request a demo account](#). Without a demo account or other Waterford account, you will not be able to access the program hyperlinks (displayed in orange) in this guide.

## Adaptive Learning Path

The heart of Waterford Early Learning’s reading curriculum is the adaptive PreK–2nd grade learning path, available to students at school and at home.

Students begin their experience with the adaptive learning path by taking an initial → [placement assessment](#) to determine the optimal starting point for instruction. From that point forward, progress is proficiency-based. Each student’s adaptive learning path continuously responds to individual needs, adjusting to provide reteaching, remediation, or acceleration. Embedded, formative assessments drive the learning path, generating actionable data for educators that highlights achievements and identifies areas where reinforcement and intervention may be needed. → [Watch this video](#) for an introduction to how Waterford Early Learning’s adaptive learning path tailors instruction to meet each student’s needs.

## Levels and Segments

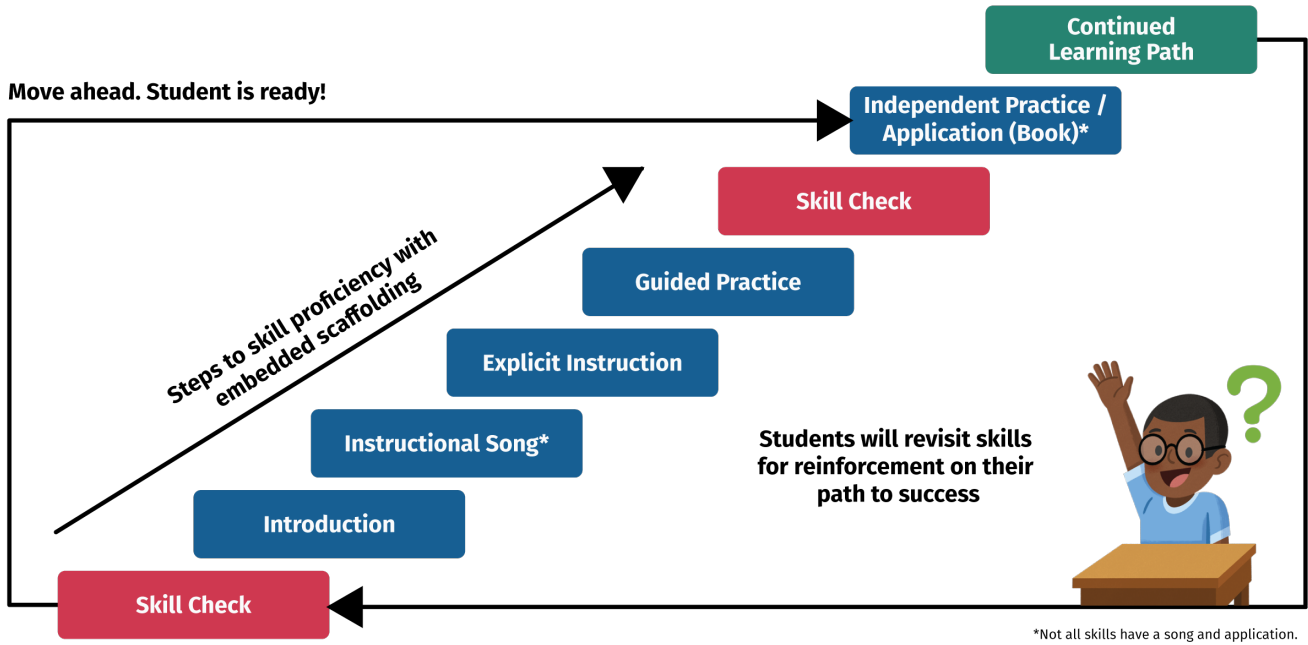
Waterford Early Learning’s reading curriculum is organized in three levels: Pre-Reading, Basic Reading, and Fluent Reading. There are three segments within each level as follows:

- Pre-Reading 1
- Pre-Reading 2
- Pre-Reading 3
  
- Basic Reading 1
- Basic Reading 2
- Basic Reading 3
  
- Fluent Reading 1
- Fluent Reading 2
- Fluent Reading 3



# Learning Objectives

Instruction is organized by learning objectives. The graphic below illustrates the structure of a typical learning objective within the reading curriculum.



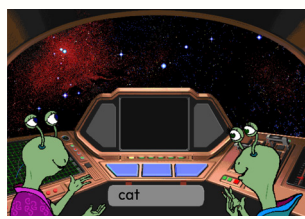
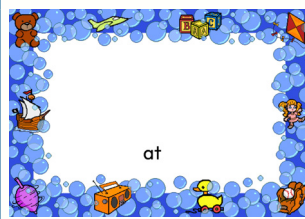
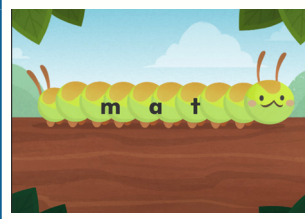
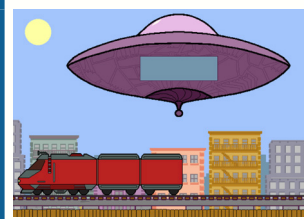


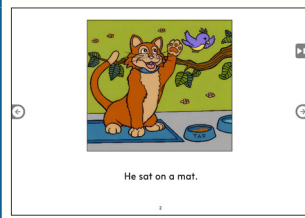
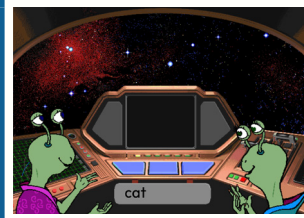
*Waterford's Proficiency-Based Adaptive Learning Path*

Most learning objectives begin with an embedded skill check (pre-assessment) activity. If a student demonstrates proficiency with the skill, the adaptive learning path provides them with activities that extend and apply their knowledge or move them ahead to the next skill in the learning path. Students who need practice with the skill work through the learning objective, which includes explicit instruction and embedded scaffolded feedback that meets their unique needs as they engage in productive struggle. At the conclusion of the learning objective, students who need more practice enter an intervention cycle that provides additional support.



For all students, skills are revisited periodically to ensure retention and to deepen learning. An example learning objective is illustrated below:

### Skill: Word Pattern *-at*

| 1. Skill Check  | 2. Introduction<br>I DO   | 3. Explicit Instruction<br>I DO  |  |
|---|---|--|--|
| <b>Key Word Screening</b><br>      | <b>Word Pattern Introduction</b><br> | <b>Word Blending</b><br>                   | <b>Spell and Blend</b><br>      |
| 4. Guided Practice<br>WE DO   |   | 5. Independent<br>Practice/Application<br>YOU DO   | 6. Skill Check   |
| <b>Word Pattern Spelling</b><br> | <b>Word Pattern Spelling</b><br>   | <b>Matt's Hat:<br/>Readable Book</b><br> | <b>Key Word Screening</b><br> |

*Example of Learning Objective Path*

→ [This resource](#) provides information about the learning objectives students encounter in each segment of the reading curriculum along with the percentage requirements for demonstrating proficiency for each objective. Objectives with a mastery requirement of “0” are designed to provide initial exposure to concepts that will be revisited and mastered later.



## Pacing

The adaptive learning path delivers instruction at a pace that is tailored to each student's needs. Because progression is proficiency-based, students will move through the instruction at different rates.

The → [Usage and Milestones](#) resource serves as a pacing guide that outlines

- weekly usage recommendations for each grade level;
- average end-of-month locations in the adaptive learning path when the usage recommendations are followed; and
- milestone skills students will acquire in each level of the program in alignment with grade-level expectations.

End-of-year goals can be set and adjusted in → [Courses & Goals](#) and monitored in the → [Progress Graph Dashboard](#).

## Scaffolded Support, Review, and Remediation

As students practice skills in their adaptive learning path, scaffolded support is scaled to meet individual needs. These supports do not simply provide the correct answer, but instead guide students to confirm or self-correct their thinking to arrive at and select the correct answer. As students grow in proficiency, scaffolding is decreased.

Review and reinforcement are built into the adaptive learning path for all students. Here are some examples:

- Letters and letter sounds are taught individually and are grouped for systematic review and reinforcement.
- Decodable books provide review and reinforcement of previously taught phonics patterns and Power Words.
- Comprehension strategies are reviewed and reinforced as they are applied to increasingly complex texts.



If students need support as they review skills, corrective feedback, explicit reteaching, and new practice items are automatically provided to address any gaps in retention.

Instruction in the adaptive learning path is organized around a real-time feedback loop of formative assessment, adapted instruction, further formative assessment, and further adapted instruction. This ongoing embedded assessment drives the adaptive learning path for each student, seamlessly triggering reteaching and remediation as needed.

If a student does not demonstrate proficiency after instruction and practice, reteaching and remediation can happen in one or more ways:

- Relevant foundational skills are revisited immediately or at a prescribed time later in the adaptive learning path.
- The skill is reintroduced at a prescribed time later in the adaptive learning path.
- The skill is practiced in a new context immediately or at a later time in the adaptive learning path.

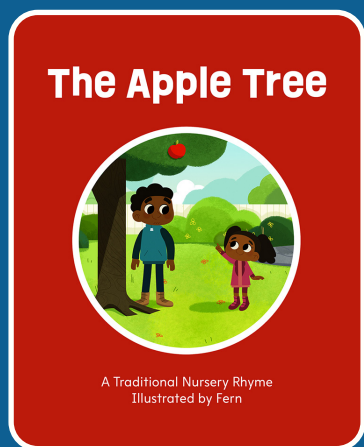
Following reteaching and remediation, the skill is assessed again. Multiple cycles of remediation are triggered as needed. Tailored instruction and positive reinforcement help students build the competence and confidence that fuel growth mindsets, intrinsic motivation, and a love of learning.

For example, after letter recognition is assessed, students receive additional instruction in letters for which they have not demonstrated proficiency.

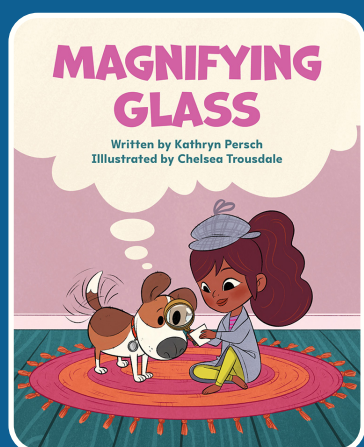
Families and educators also have access to data to support each child's learning. The dashboard couples with the objective details and area of difficulty reports, allowing the adults supporting each child to have the data to provide further intervention and support. → [Resources & Activities](#) include a library of print and digital resources to support this one-on-one or small-group intervention.



Informational books featured in Waterford Early Learning’s math and science curriculum can be accessed in PDF format in → [Resources & Activities](#) and used in conjunction with the reading curriculum to build the vocabulary and background knowledge that are the key supports for reading comprehension.



*Sing a Rhyme Book:  
The Apple Tree*



*Read with Me Book:  
Magnifying Glass*

## Library of Books

Waterford Early Learning includes a library of more than 300 carefully crafted books. A full index of Waterford titles, including informational books featured in Waterford Early Learning’s math and science curriculum, is available in the → [Book Readability](#) resource.

Waterford Early Learning helps all children see themselves as readers and build motivation and confidence in engaging with books. At the earliest age and skill levels, books are presented as read-aloud experiences. As they build skills, children engage in independent reading with increasingly complex texts.

The reading curriculum includes a range of different types of books that are built to serve different instructional purposes. A combination of decodable texts, narrative texts, and knowledge-building informational texts addresses the components of the Simple View of Reading (Gough & Tunmer, 1986) and Scarborough’s Reading Rope (2001).

**Sing a Rhyme songs and books** help students learn about the rhythm of language as they build print concepts, rhyme, and letter recognition skills.

**Read with Me books** engage students in visual and auditory exploration with letter recognition and letter sounds.

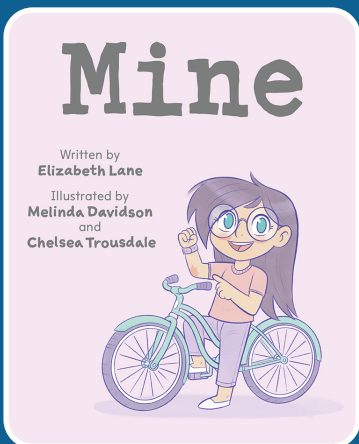
**Power Words Readable books** help students build fluency with a group of the most common high-frequency words (for example, *is*, *a*, *I*). Waterford Early Learning includes → [Power Words](#), which are high-frequency words and other common words that support students’ independent reading of books and are explicitly taught before they are encountered



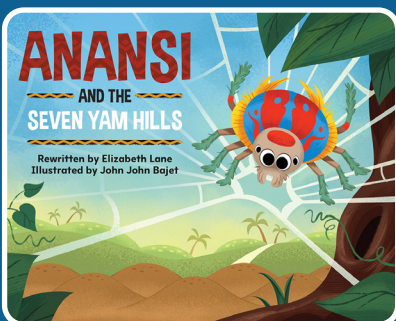




*Readable Book:*  
*Dev and His New Pet*



*Read-Along Book:*  
*Mine*



*Traditional Tale Book:*  
*Anansi and the Seven Yam Hills*

in decodable texts. Instruction is focused on the phoneme-grapheme correspondences within each Power Word.

**Readable books** are specifically crafted with phonetically controlled language to help early readers practice and reinforce their phonics skills by decoding words using the principles they have learned. This series of books begins with a focus on CVC words and early Power Words and progresses to include more complex skills such as long vowels, vowel teams, *r*-controlled vowels, and multisyllabic words. Readable books are placed systematically within the adaptive learning path to ensure that they are fully decodable when they are encountered by students.

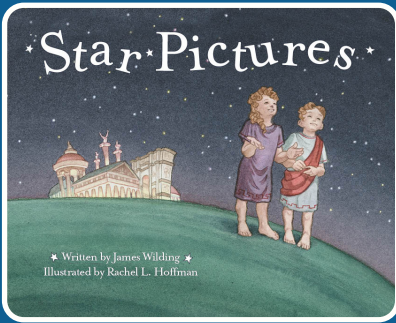
**Review Readable books** are a group of decodable books (one for each unit) that include the phoneme-grapheme correspondences and Power Words for that unit. These opportunities for cumulative review and reinforcement help early readers build fluency and aid retention.

**Read-Along books** focus on vocabulary development and comprehension. The narrators of these books incorporate variations in pitch, tone, and pace to model fluent reading that students can follow.

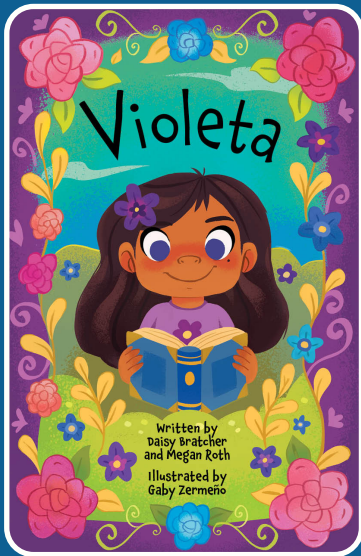
**Traditional Tale books** are based on narratives passed down orally or through written means, often rooted in cultural heritage. They feature a clear story structure and central message.

**Informational books**, featured in the reading and the math and science adaptive learning paths, are designed to provide factual and educational content in a clear and engaging way to help students build content knowledge and vocabulary, the foundational building blocks for comprehension.

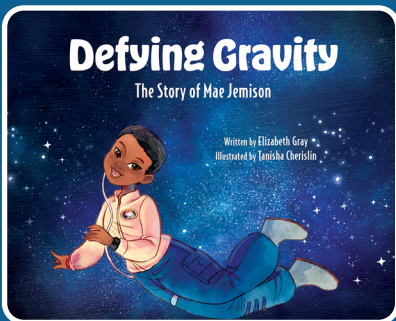




*Informational Book:  
Star Pictures*



*Chapter Book:  
Violeta*



*Hero Series Book:  
Defying Gravity  
The Story of Mae  
Jemison*

**Chapter books** are longer-form narratives that provide a more in-depth and sequential storytelling structure.

**Hero Series books** are biographies that highlight individuals who have positively impacted our world.

Waterford Early Learning’s library of engaging narrative and informational texts builds the foundational reading skills that lead to reading fluency and, in parallel, builds vocabulary and background knowledge to foster reading comprehension.

Experiences with Waterford digital books include a variety of embedded supports, including:

- Preview activities for Readable Books that provide guided practice with decoding and serve as a “first read”
- Title-page audio that sets the purpose for reading
- Clickable words for support in decoding individual words and using spelling patterns to decode groups of words
- Clickable words to support vocabulary development
- “Inspector Detector” audio that models a think-aloud approach to support students in self-monitoring of comprehension
- The ability to move forward and back between pages to explore the text independently for multiple readings

For additional reading practice in the classroom and at home, the full library of books is also available in digital format as well as PDF format (in English and Spanish) in → [Resources & Activities](#).



## Content Development Cycle

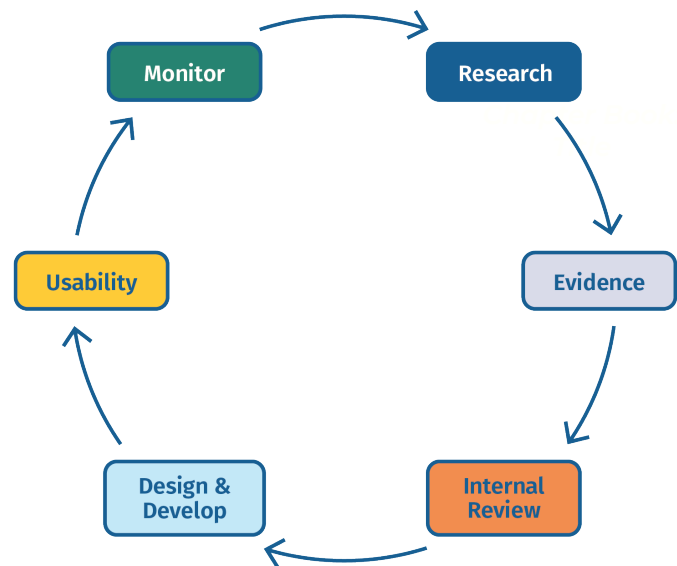
Waterford creates instructional content that is:

- Research-based, rooted in the science of reading
- Aligned to skills
- Engaging and relevant
- Accessible to learners
- Invitational and empowering for children, families, and educators

The reading curriculum uses the Waterford Universal Skills Library, which identifies 635 discrete skills for literacy development and the order in which they should be learned, moving from simple to complex. For details on skill areas, please see the → [skills taught documents](#).

Developing instructional content for Waterford Early Learning is based on a continuous cycle. The teams within our Curriculum and Instruction department design research-aligned learning experiences, create engaging visuals, and ensure the efficacy of the content. The teams within our Product and Technology departments make the digital activities intuitive and accessible and do the coding work to bring the instruction to life.

Central to the content development cycle is a focus on meeting the diverse needs of the students we serve. See the → [Reaching All Learners](#) section of this overview guide to learn more.



*Waterford's Content Development Cycle*



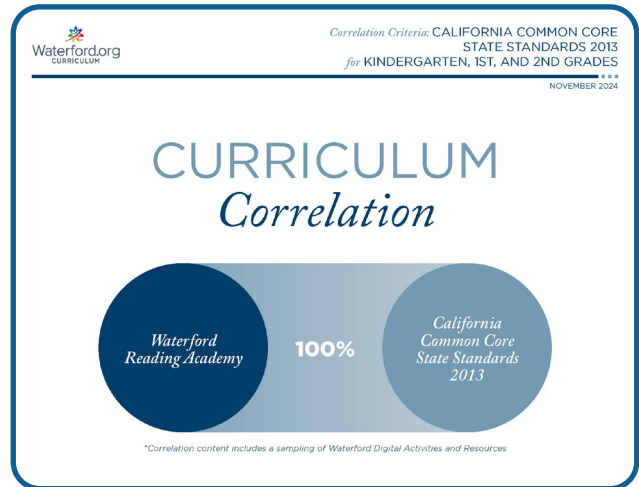
## Curriculum Correlations

Effective learning occurs when instructional materials are aligned with a cohesive teaching, learning, and professional development plan. Educators often dedicate significant time to curriculum mapping to ensure instruction is carefully orchestrated. To support standards-aligned instruction and streamline this process for educators, correlations provide clear alignments of Waterford Early Learning's reading curriculum with a variety of standards.

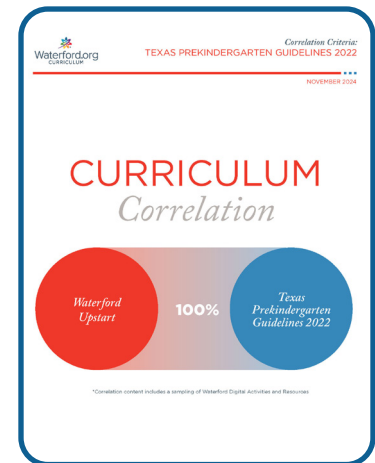
Correlations offer comprehensive standards alignments to help align digital playlists with popular core reading materials, intervention solutions, and assessments. Some examples include Scholastic PreK on My Way™ and Core Knowledge Sequence ELA. Correlations are continuously updated to ensure educators have access to the most relevant and effective instructional resources. Alignments to assessments, such as DIBELS and NWEA, are also available. Correlations can be accessed → [here](#).

## Student Engagement

Broader K–5 solutions must necessarily adopt more age-neutral approaches and interfaces in order to serve a broad range of ages. In contrast, Waterford Early Learning is intentionally designed for PreK–2 students, with a clear focus on the unique developmental needs of young learners. Each activity undergoes usability testing with young learners before



*English Language Arts Correlation*



*PreK Correlation*



it is added to the reading curriculum. Our curriculum is rooted in early childhood science to support young students as they build the essential foundational literacy skills that will set a trajectory for a lifetime of learning and success.

Keeping students actively engaged and motivated as they interact with Waterford Early Learning is an essential part of ensuring positive learning outcomes. Design features, including easy navigation with multimedia prompts and clear instructional tutorials, help students engage with independence.

Adaptive learning path experiences are hosted by an engaging cast of Waterford characters. Rusty, Rosy, and Scout are featured in Waterford Early Learning’s reading curriculum. Read [→ here](#) to learn more about these endearing friends who facilitate learning.

Activities within the adaptive learning path are infused with inviting audio and backgrounds, frequent interactions, opportunities to explore and play, and reward animations that foster student engagement. These elements are thoughtfully designed to serve as supports for engagement by creating context and sparking interest without being distracting or chaotic. Extraneous elements recede during instruction, practice, and assessment to ensure students are focused on the learning at hand.

At key points in the adaptive learning path, students earn animated [→ learning certificates](#), presented by Rusty and Rosy, that highlight and celebrate specific learning accomplishments. At the end of each



*Learning Certificate*



adaptive learning session, students interact with the → [virtual awards](#) feature. A variety of progress trackers are available in → [Resources & Activities](#) to allow learners to take ownership and track their learning time.

Waterford Early Learning features multimodal instruction in alignment with the principles of the Universal Design for Learning (UDL) framework. Multimodal instruction engages multiple senses and modes of accessing and expressing information to aid memory and retention. The human brain has evolved to learn and grow in a multisensory environment (Shams and Seitz, 2008). According to the Whole Brain learning theory, brain functions are interconnected for this reason (Basar, 2006).

The benefits of multimodal learning have been verified by research in the field of cognitive science. A 2018 study using fMRI technology, which measures brain activity by detecting changes in blood flow, found that children with the strongest literacy skills had more interactivity between different regions in their brains (Smith et al, 2018). When instruction engages multiple areas of the brain, learning is strengthened. This suggests that the multimodal approach used in Waterford Early Learning's reading curriculum is a key part of what makes the program engaging and effective.

**When instruction engages multiple areas of the brain, learning is strengthened. This suggests that the multimodal approach used in Waterford Early Learning's reading curriculum is a key part of what makes the program engaging and effective.**



# Classroom Instruction

Waterford Early Learning includes both online and offline components and is used in three primary ways in the classroom. The combination of these use cases leads to the richest outcomes for young learners and helps students make the transition from learning online to the physical world, where they can continue to practice skills guided by the adults who leverage the data and resources to support their learning.

## Adaptive Learning Path

This is the primary use case and is described extensively in the → [Reading Curriculum](#) section. Students engage with the adaptive learning path daily and experience a tailored learning experience.

## Assigned Playlists

→ [Playlists](#) are skill-aligned collections of Waterford Early Learning digital activities that can be assigned to groups or individual students for targeted intervention and enrichment informed by data found in → [Dashboards](#) and → [Reports](#).

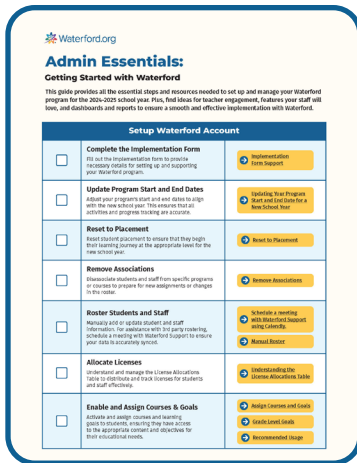
The playlists can be used to customize learning experiences to local needs (local standards, pacing guides, alignment with other learning materials, etc). Names of specific learning objectives can be copied from the → [Area of Difficulty Report](#) and pasted in the search bar in → [Resources & Activities](#) to access playlists aligned with specific skills.

## Guided Instruction

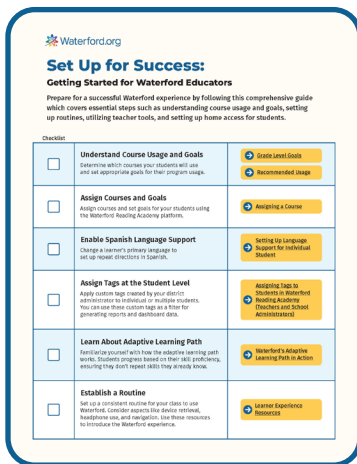
Teachers engage students in targeted Waterford Early Learning playlists or individual digital activities to introduce or reinforce a concept. Print resources can also be used to supplement instruction.

An → [extensive library](#) of print resources is available in → [Resources & Activities](#). The resources support classroom instruction and learning at home and provide a helpful bridge between the digital learning space and the physical learning done at home or school. Many resources are provided in English and Spanish.

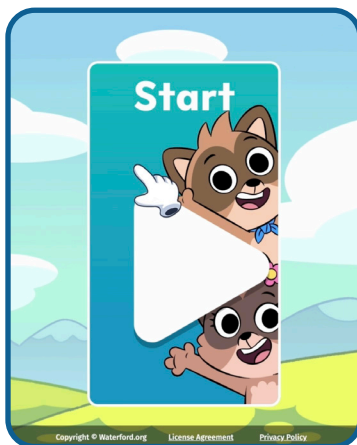




### Admin Essentials



### Set Up for Success for Waterford Educators



### Getting Started with Waterford

# Getting Started

The following resources to support administrators, teachers, and students can ensure a smooth start and a successful implementation with Waterford Early Learning.

## For Administrators

- [Getting Started Hub for Administrators](#)
- [Help Guides for Administrators](#)
- [Admin Essentials: Getting Started](#)

## For Teachers

- [Getting Started Hub for Teachers](#)
- [Help Guides for Teachers](#)
- [Set Up for Success: Getting Started for Waterford Educators](#)

## For use with students:

- [Preparing for Success deck](#)
- [Set Up for Success](#)
- [Routine Chart](#)

## For Students

- [Getting Started Hub for Students](#)
- [Getting Started with Waterford: English](#)
- [Getting Started with Waterford: Spanish](#)

## System Requirements

System requirements for the successful implementation of Waterford Early Learning are outlined → [here](#).





# Student Progress Data

## Waterford Assessment of Core Skills

Waterford Assessment of Core Skills (WACS) is a powerful, valid, and reliable tool that measures students' reading abilities across a wide range of literacy domains. It is administered independently of the adaptive learning path and can be given several times a year to measure student progress.

The assessment is broken into discrete skills checks, called *challenges*. To support the accuracy of the assessment, students begin with a child-friendly tutorial and introduction hosted by Wyatt, an engaging character who provides guidance before each new challenge.

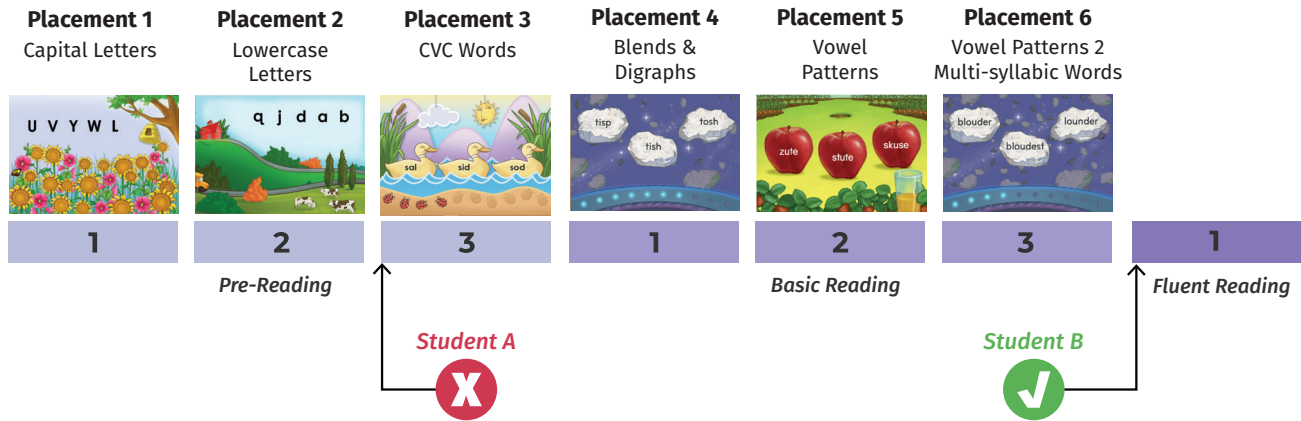
→ [WACS](#) is adaptive, presenting a more or less challenging question depending on whether the student answers the previous question correctly.

## Adaptive Learning Path: Embedded Assessment

### Placement Assessment

The placement assessment runs automatically as each student's first experience within Waterford Early Learning's reading curriculum. Phonics skills are assessed, beginning with capital and lowercase letter recognition and progressing to recognition of real words and non-words that include increasingly complex spelling patterns. The student is placed at one of seven possible entry points based on their current skill level. When a student scores less than 80% on an individual placement activity, the assessment ends and the student begins their adaptive learning path.





### Placement Assessment Examples

In the example above, student A demonstrated proficiency with placement activities 1 and 2 but not with placement activity 3. Student A will begin their adaptive learning path at the beginning of the Pre-Reading 3 segment. Student B demonstrated proficiency with all placement activities and will begin their adaptive learning path at the beginning of the Fluent Reading 1 segment.

Because phonological awareness skills are so foundational, students who are placed at Pre-Reading 2 or Pre-Reading 3 will encounter the phonological awareness instruction that is part of the previous segments.

Educators may → [reset](#) students to the placement assessment or manually → [adjust](#) placement levels based on other assessment data, to reflect student learning progress through other resources and programs, or to align with adjusted learning goals for individual students.

When a student takes the placement assessment again, the new scores will replace all previous scores, and the student will be placed in the reading curriculum accordingly.



## Ongoing Formative Assessment

Assessment is embedded throughout the adaptive learning path. Some instances of formative assessment are explicitly introduced by Waterford characters to help students prepare to show what they know. Many instances of formative assessment are infused in students' interactions with individual items in digital activities and are not discernible from ongoing instruction and practice.

Within the → [adaptive learning path](#), ongoing formative assessment triggers scaffolded instruction, reteaching, and remediation for students who need those supports. It also includes acceleration for students who are ready to put their knowledge into practice with an extension activity and to move on to more complex skills.

Data from ongoing formative assessment is included in → [Dashboards](#) and → [Reports](#) so that teachers have actionable data to inform instruction and intervention.

## Dashboards and Reports

Waterford Early Learning → [Dashboards](#) and → [Reports](#) provide actionable data to support responsive planning for effective whole-class instruction as well as differentiated instruction for individual students and small groups.

→ [Dashboards](#) provide a clear overview of usage, performance, and progress at the class and student levels.

→ [Reports](#) include filter options and visual tools like scatter plots, pie charts, circle views, stacked bar charts, and summary data points in a variety of exportable formats. Color codes within the displays are tied to school goals for usage and progress and are used to highlight progress trends across a district, within a school, in a single class, and for individual students.

Educators are empowered to use data to answer questions, make critical comparisons, set and track goals for student learning, and analyze progress according to benchmarks and goals. Using color codes, educators can identify areas for deeper analysis and plan instruction in a tiered intervention model.



# Reaching All Learners

## Universal Design for Learning

Waterford Early Learning's reading curriculum is aligned with the Universal Design for Learning framework (also known as *UDL* or *universal learning*) developed by CAST (Guidelines 3.0, 2024). Its goal is to help educators develop learning environments that reduce instructional barriers and enable all students to succeed. The framework emphasizes three principles and proposes that instruction must provide multiple means for:

- Engagement (the *why* of learning), including fostering autonomy and motivation for learning
- Representation (the *what* of learning), including ensuring that instruction is clear, accessible, and easily navigable
- Action and Expression (the *how* of learning), providing students with various means for interacting with instruction and demonstrating their learning

At the core of the UDL framework is providing students with the individualized support they need to succeed, recognizing that many barriers to learning are the result of environmental circumstances (Posey). The best way to address these barriers, according to UDL, is to focus on reaching all learners through tailored learning strategies and by promoting inclusion for all students.

At the core of the UDL framework is providing students with the individualized support they need to succeed, recognizing that many barriers to learning are the result of environmental circumstances (Posey).

The combination of independent, adaptive, tailored learning and small-group and whole-group classroom learning in the reading curriculum provides this individualized support. → [This video](#) illustrates how the adaptive logic in the adaptive learning path accelerates learning or provides more instruction and practice as needed.



## Diverse Learning Needs

Waterford Early Learning provides research-aligned instruction for all learning contexts: independent tailored learning through the adaptive learning path as well as whole-group, small-group, and individual instruction.

### Striving Learners

Waterford Early Learning's reading curriculum tailors instruction to meet the needs of striving learners—students who are currently reading below grade level. Students begin with an embedded placement test that automatically moves them to the appropriate starting point within the adaptive learning path according to their areas of strength and need. From there, the adaptive path is continuously adjusted in response to students' interactions with the digital activities. Students progress through the content in each instructional strand at the rate that meets their needs, independently of their progress in other instructional strands.

→ [Dashboards and Reports](#) give educators the insights they need to craft targeted classroom instruction to reinforce skills. Waterford Early Learning digital playlists and print resources provide effective tools, enabling teachers to vary instructional approaches and incorporate multimodal approaches to meet students' needs. Learn more → [here](#).

### Accelerated Learners

Some students build literacy skills at a faster pace. The PreK–2nd grade Waterford Early Learning adaptive learning path keeps these students on the edge of their learning curve through the end of the program. Instruction is accelerated at the individual activity level as a student enters answers accurately and quickly, bypassing the scaffolded feedback that is available as needed. Instruction is accelerated at the learning objective level as a student demonstrates proficiency through a skill pre-assessment, triggering the adaptive learning path to bypass instruction and practice.



Data is gathered for educators to support each child with supplemental activities. Resources in → [Resources & Activities](#)—including the ability for a teacher to assign interactive, comprehension-focused book experiences called Curriculets—offer opportunities to provide practice at a variety of levels throughout any implementation.

Reading extension guides for educators (see an example → [here](#)) provide a variety of collaborative, communication-focused activities that create meaningful learning conversations for all learners. These guides provide the opportunity for educators to extend learning for accelerated students.

Curriculets are interactive book experiences that are accessed outside of the adaptive learning path and can be assigned to students who are ready for more of a challenge. Students encounter a variety of skill-building checkpoints in Curriculet experiences to support foundational skills development and comprehension. Text, image, and video annotations provide supporting instruction and build background knowledge. Embedded comprehension questions and a culminating comprehension quiz are presented in multiple-choice, multiple-answer, fill in the blank, sorting, and open-ended formats.

You can browse and assign Curriculets in → [Resources & Activities](#) by filtering for **Curriculets**. Curriculets for Waterford books provide students with more independent and rigorous reading experiences with texts they may have previously encountered in the adaptive learning path. The texts are presented digitally, with seamlessly embedded checkpoints. Curriculets for trade books span Lexile levels and interest levels appropriate for grades 2–6 and feature both narrative and informational texts, including many Newberry and Caldecott award-winning titles. For these Curriculets, students encounter the checkpoints side by side with a hard copy or digital version of the book accessed from another source.

**Taking Flight:**  
The Story of Bessie Coleman

READING EXTENSION

Fluent Reading | Grade 2

LITERACY MINDSET

**Why is Bessie Coleman an important person in history?**  
Use this essential question to guide student learning with class discussion and inquiry activities.

**1. DESCRIBE BESSIE COLEMAN (20 MINUTES)**  
Print out a picture of Bessie Coleman and post it on a classroom wall. During or after reading the book, have the class brainstorm adjectives that describe Bessie based on the details in the story. Some suggested adjectives include brave, courageous, determined, and caring. As the class brainstorms these adjectives, write each one on a large sticky note and post them on the wall around the picture of Bessie.

**2. SUPPORT AN IDEA WITH DETAILS (20 MINUTES)**  
Provide each student with a copy of the **Main Idea and Supporting Details** graphic organizer. (This can be either printed out or shared as a fillable PDF.) Have the sentence frame **Bessie Coleman is \_\_\_\_\_** prewritten in the **Main Idea** box for students to fill in on their own). Instruct students to fill in the blank with an adjective that describes Bessie. (They can use one of the adjectives brainstormed in the first activity.) Then have students write 2–3 details from the book in the **Detail** boxes to provide evidence for the main idea.  
**PRINTABLE Main Idea and Supporting Details** <https://resources.waterford.org/practice-material/2026/2899.pdf>

**3. ANALYZE MEDIA (45 MINUTES)**  
Share with students that in the year 2023, the toy maker Mattel released a Bessie Coleman doll for their **Inspiring Women** series of Barbie dolls. Show students the product page for this doll (or have them navigate to the page on their device) <https://bit.ly/49JiA5O>  
Provide students with a printed or digital copy of the Think-Pair-Share graphic organizer with these questions in the first column.  
• Why do you think this company made this doll?  
• What do you like or not like about the doll?  
• Who might want to have this doll?  
• Why are there both words and pictures on this webpage?

© Waterford Institute, Inc. All rights reserved. 1

Waterford.org

### Reading Extension Example



## Students with Learning Disabilities

Differentiating instruction is essential if we are to meet the needs of all students. In many cases, a specific learning disability does not apply to all learning but rather to a specific area of learning. For example, students with dyslexia may struggle with how quickly and easily the brain can learn to map sounds to letters to develop knowledge of phoneme-grapheme correspondences. Students with this learning disability are just as capable of learning as their peers, but their brains are wired in a way that makes anchoring and retrieving the information much more effortful. Whereas many students can connect the meaning, pronunciation, and spelling of a new word so well that they can automatically retrieve that information after just a few trials, children with dyslexia may need to practice hundreds of times before their brains achieve automaticity (Ehri et al. 2001; Ehri, 2014).

**Students with dyslexia are just as capable of learning as their peers, but their brains are wired in a way that makes anchoring and retrieving the information much more effortful.**

The keys to supporting students with specific learning disabilities are clear: assess their readiness, ensure that the foundational skills of phonological awareness and phonics are taught explicitly and systematically, and provide the hundreds of practice trials students need to achieve automaticity. This is the great gift of adaptive instruction like Waterford Early Learning. Every student completes an initial placement assessment and then receives targeted explicit and systematic instruction with sufficient meaningful practice and immediate corrective feedback. The adaptive learning path is recursive, building on itself, so as to provide many, many trials with key skills in a variety of contexts.

The use of a research-aligned program such as Waterford Early Learning's reading curriculum also provides teachers with the time, flexibility, and actionable data they need to differentiate instruction with small groups and individual students. The reading curriculum's digital learning experiences are complemented by a vast library of offline resources, equipping teachers with the tools to provide



the extensive practice some learners require and offering different modes of access, engagement, and expression for all learners. Waterford reports can group learners by areas of difficulty to make small-group interventions even more effective. (For more details, see the → [Dashboards and Reports](#) section within this overview guide).

**Learn more here:**

→ [Evidence-Based Interventions for Children with Disabilities](#)

→ [Using Waterford with Students in Special Education Programs](#)

## **Multi-tiered Systems of Support**

Using the multi-tiered systems of support (MTSS) framework is a powerful way to support literacy development for all students. The framework includes four essential components: screening, progress monitoring, multi-level prevention system, and data-based decision making.

Waterford Early Learning's reading curriculum supports all three levels of prevention within MTSS: primary (Tier 1), secondary (Tier 2), and intensive intervention (Tier 3). Tier 1 is focused on high-quality, differentiated, evidence-based core instruction for the whole class. Tier 2 identifies students who are at risk for poor learning outcomes and delivers targeted, supplemental instruction to small groups. Intensive intervention, Tier 3, includes individualized intervention for students who have little response to the primary or secondary prevention levels.

The adaptive learning path delivers Tier 1, 2, and 3 instruction for each student as the learning path continuously adapts to meet their needs. Educators can use → [Dashboards and Reports](#) to select Waterford playlists and print resources for targeted instruction at all three tiers and to gain insights for progress monitoring and data-based decision making.





## Multilingual Learners

According to the Comprehensive Center Network, more than 10 percent of students in the United States live in multilingual households. Multilingual students need individualized instruction to develop literacy and communication skills. In addition, multilingual families need resources they can use to support their child by engaging in learning activities in their preferred language (Center on Improving Learning and Academic Achievement, n.d.).

Biliteracy is defined as the ability to communicate and read in all of the languages a student speaks. A common misconception is that bilingual students have a harder time learning to read than students who know only one language, yet research points to the opposite. Children who are biliterate tend to have stronger reading skills in all languages they speak when they are provided with support, particularly in letter decoding, phonological awareness, and concepts of print (Bialystok, 2005). Bilingualism is associated with many other cognitive benefits like stronger multitasking skills, creativity, and working memory.

Waterford Early Learning is designed to encourage the development of biliteracy for Spanish speaking children by providing accompanying family and educator resources in Spanish. Research tells us that bilingual children's brains thrive when there is an emphasis on developing the child's home language alongside English (Relyea & Amendum, 2019). As educators, it is important that we recognize and support biliteracy as a tremendous asset for our students.

Waterford Early Learning is designed following the guidelines and recommendations for culturally responsive teaching practices (Ladson-Billings, 1995, 2014; Hammond, 2015) to create content that is asset-based and culturally affirming. Regular audits are conducted to evaluate our representation of cultures and communities and to inform ongoing updates. We partner with a wide variety of experts to create and update songs and books and to translate child- and family-facing materials into Spanish.



Read more here:

→ [Supporting Multilingual Learners in Early Elementary Education](#)

→ [Why Bilingual Students Have a Cognitive Advantage for Learning to Read](#)

→ [Support Your Multilingual Learners with Waterford.org Programs](#)

## Adaptive Learning Path: Spanish Language Support

Students can access embedded Spanish language support in many activities within the adaptive learning path. The largest concentration of Spanish language support is available in the Pre-Reading level of the program. After initial instructions are presented in English, students can select the repeat audio button to hear instructions repeated in Spanish. When scaffolded support is needed, guidance is shared in Spanish.



### *Initial Instruction in English*

Select letter o. How many can you find? As you select each letter, say its name.

### *Available Repeat*

### *Instruction in Spanish*

Escoge la letra o. ¿Cuántas puedes encontrar? Al seleccionar cada letra, dí su nombre.

Instructions for enabling the Spanish language support feature for students are available → [here](#).



Materials are provided for Spanish speakers to support connections across languages. In the Spanish language version of books (such as → [A través de la cerca trasera: Through the Back Fence](#)), specific instructions are provided for Spanish-speaking family members or educators to better understand the English phonemes and graphemes highlighted in the text.

|   |  |
|---|--|
| <p><i>A través de la cerca trasera: Through the Back Fence</i> incluye texto lado a lado en español e inglés para ayudar a los lectores a hacer conexiones entre los dos idiomas.</p> <p><b>Sugerencias para leer juntos</b></p> <ul style="list-style-type: none"> <li>• Animar a los niños a leer independientemente, dando apoyo como sea necesario.</li> <li>• Recordarles a los niños que lean cada palabra en lugar de decir las palabras de memoria. El señalar cada palabra puede ayudar.</li> <li>• Trabajar en pronunciar algunas de las palabras. Por ejemplo, /s/ /o/ /l/ = <i>iso!</i></li> <li>• Al leer, haga preguntas para ayudar a los niños a entender la historia.</li> <li>• Repase las palabras al final de cada libro. ¿Las puede encontrar en las páginas de la historia?</li> <li>• ¡Lean nuevamente! Es útil leer los libros muchas veces.</li> </ul> | <p>Este libro está diseñado para ayudar a los niños a leer</p> <ul style="list-style-type: none"> <li>★ las Palabras de Poder (<i>after, gone</i>).</li> </ul> <p>¡Las Palabras de Poder les da a los niños el poder para leer! Incluyen palabras comunes tales como <i>the, to</i> y <i>said</i>, así como palabras que son específicas del libro.</p> <ul style="list-style-type: none"> <li>★ las Palabras Modelo que incluyen el <b>sonido /s/</b>, escrito con las letras <i>ce</i> (<i>dance</i>). En español, vemos este patrón en la palabra <i>quince</i>.</li> <li><b>sonido /j/</b>, escrito con las letras <i>ge</i> (<i>change</i>). Este patrón no existe en español.</li> </ul> <p>Las Palabras Modelo tienen un grupo común de letras que hacen el mismo sonido. Por ejemplo, <i>-at</i> es el modelo en <i>cat, hat, y mat</i>.</p> |
|---|--|

**Example of Spanish Language Support in Waterford Books**

Waterford Early Learning offers an extensive library of phonics transfer playlists to support multilingual learners. These playlists foster the development of phonics skills in particular areas where phonemes and graphemes differ between English and other languages and are currently available for Cantonese, French, Haitian Creole, Hmong, Korean, Portuguese, Spanish, and Vietnamese. To access these playlists, go to → [Resources & Activities](#), filter for **Resource Type>All Playlists**, and search phonics transfer.

**Example of a Phonics Transfer Playlist**



## Offline Resources: Support for Multilingual Learners

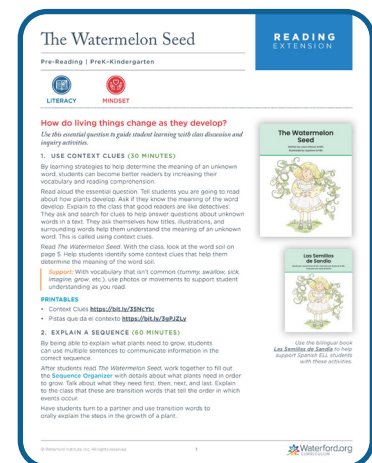
Waterford Early Learning includes an extensive library of resources for classroom instruction and learning at home.

Resources for educators include embedded callouts for supporting multilingual learners to help teachers apply differentiation strategies in every lesson. Narrations throughout the program provide learners with exposure to a range of English language varieties. To experience the narrations, go to → [Resources & Activities](#) and enter “natural language” in the search bar.

All resources designed for families are available in English and are translated into Spanish to address the needs of the largest group of multilingual learners in U.S. schools. Because literacy skills are transferable from one language to another and practicing skills in any language supports the development of those same skills in English, we encourage families to engage in fun learning experiences at home together in their native language (Cárdenas-Hagan, Carlson, & Pollard-Durodola, 2007).

→ [Resources & Activities](#) offer a vast array of family resources in Spanish, including more than 300 books. Many resources include callout sections highlighting opportunities to support multilingual learners. Examples can be seen in our reading extension resources for the following titles: [Violeta](#), [The Watermelon Seed](#), and [Mine](#).

Students with varied language backgrounds may need additional practice in sounds and spellings that do not transfer from their home language. Playlists are provided for teachers to provide additional learning opportunities for those specific language backgrounds. Playlists can be used for small-group instruction or one-on-one intervention, or they can be assigned to learners for individual practice during their time in Waterford Early Learning.



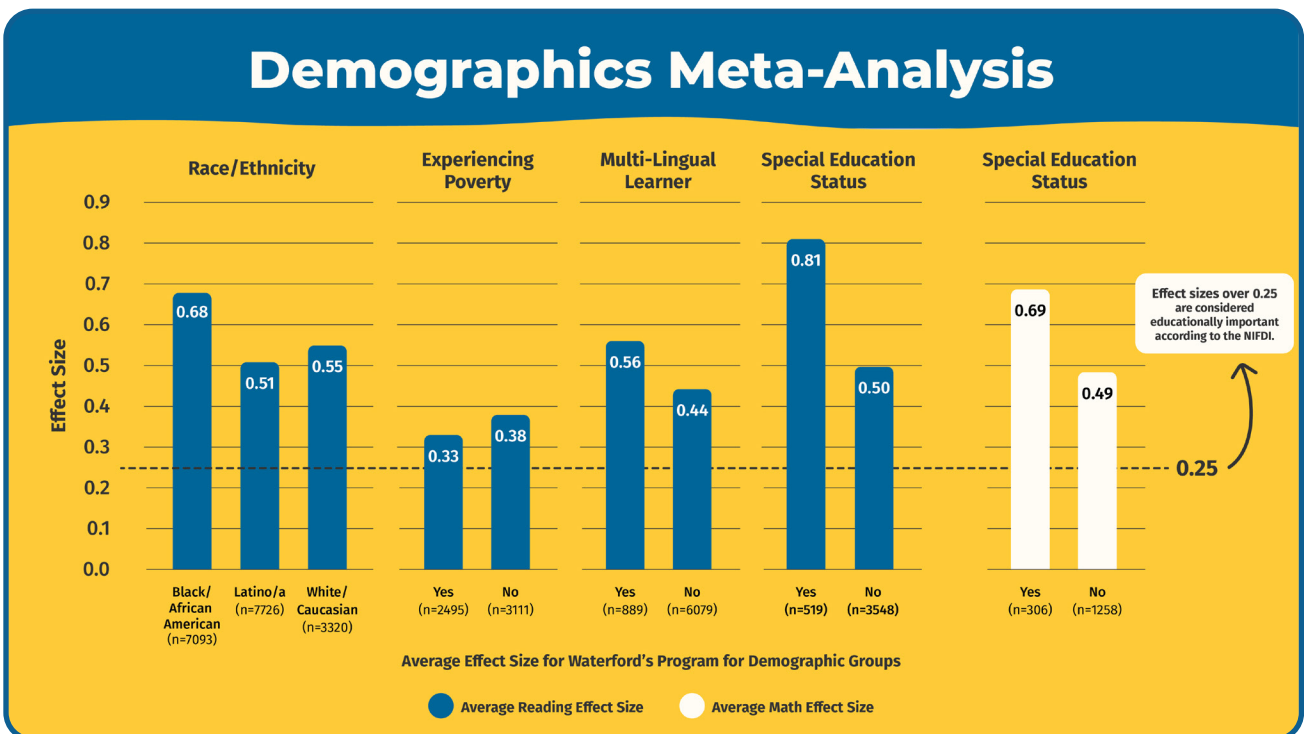
*Reading Extension for The Watermelon Seed*



## Proven Results for All Learners

A meta-analysis was recently conducted to measure the efficacy of Waterford Early Learning across a variety of moderators, including demographics such as students' race and ethnicity, whether students were experiencing poverty, whether students received special-education services, and whether students were multilingual learners. Using a final set of 38 studies, average effect sizes were calculated to determine the magnitude of Waterford Early Learning's impact on students' literacy and math skills.

Moderator analysis for all groups assessed revealed average effect sizes higher than 0.25 (see figure below), the cutoff that is widely considered to indicate a meaningful impact on student learning (What Works Clearinghouse, 2022). Notably, the average effect sizes of Waterford Early Learning's reading curriculum for Black and African American students and Waterford Early Learning's reading and math curriculums for students receiving special-education services were especially large (0.68, 0.81, and 0.69, respectively). These positive results for historically underserved populations highlight Waterford's potential to bridge achievement gaps and promote educational equity.



## Representing All Learners

Waterford Early Learning uses a → [Windows and Mirrors](#) framework (Seed, 1996). Careful consideration is taken to ensure learners can see themselves *mirrored* through positive representation. Students are also provided respectful, accurate, inclusive *windows* into the experiences of others through authentic storylines, songs, illustrations, and narration.

We strive to include authentic context, avoid expressing a moral stance or view, and ensure that content reflects the diversity of the students we serve and the communities they live in. Content is research-based, following guidelines and recommendations for culturally responsive teaching practices (Hammond, 2015; Ladson-Billings, 2014), and is developed in collaboration with subject matter experts from across the globe. Based on audit results and partner feedback, content is continuously updated with an eye toward respectful, accurate, and inclusive representation.

## Third-Party Curriculum Reviews

Waterford Early Learning’s reading curriculum is WIDA-aligned, is an IBCCES certified autism resource, and is endorsed by CASE.



# Engaging Families

## What Is Family Engagement?

Waterford defines family engagement as the purposeful and equitable synergy between families, educators, and community partners with the shared goal of equipping children with the tools for lifelong learning and success.

## Why Family Engagement?

The importance of family involvement in education is clear, and the benefits are profound. In a retrospective that evaluated 50 studies, researchers found strong connections between family engagement and academic achievement (Hill, 2009).

Waterford honors families as their child's first teacher and respects the important role parents and caregivers play in their children's learning success. A bright academic future begins at home. That's why resources and support for families are an integral part of the reading curriculum.



Waterford defines family engagement as the *purposeful and equitable synergy* between families, educators, and community partners with the *shared goal* of equipping children with the tools for lifelong learning and success.

## Resources for Educators

Use the → [Family and Community Engagement Ideas](#) resource to consider new and engaging ways to build partnerships.

Two Waterford eBooks are helpful guides for educators:

- [Partnering for Student Success: Family Engagement Strategies for Early Education Leaders](#) This resource outlines five keys to effective family engagement and provides guidance for building family and community partnerships.



- [The CARES Framework for Building Family Engagement](#)

With CARES, the goal is to build a foundation of mutual respect, collaboration, and trust through positive relationships, effective communication, transparency about academic expectations, and concrete support. Learn more about the Waterford CARES offering in the → [Waterford Professional Learning](#) section of this overview.

CARES stands for:

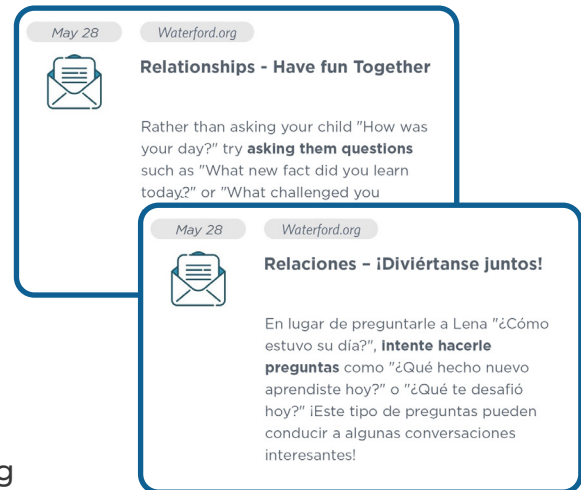
- **C**ommunication
- **A**cademic Content
- **R**elationships
- **E**xpectations
- **S**upport

## Resources and Support for Families

Students can engage with their adaptive learning path at home. Families can access information and resources at → [mentor.waterford.org](https://mentor.waterford.org).

In → [My Household](#), families can enter a Mentor Code provided by a teacher or administrator, granting access to three personalized messages each week. The messages are sent automatically, are aligned with the child's age and progress, and can be delivered in English or Spanish.

- On Monday, information about weekly usage and tips for establishing effective learning routines and habits is delivered.
- On Wednesday, families receive a simple interactive activity suggestion aligned to skills the child is currently practicing in the adaptive learning path.
- On Friday, simple interactive activity suggestions for relationship building are sent out.



*Mentor Message Examples  
in English and Spanish*

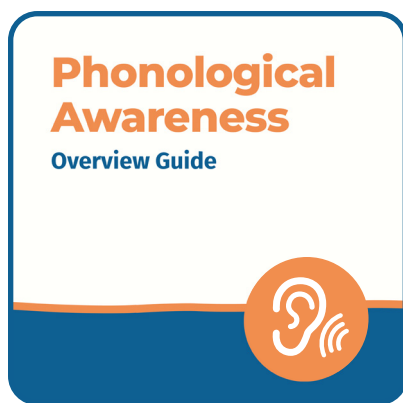




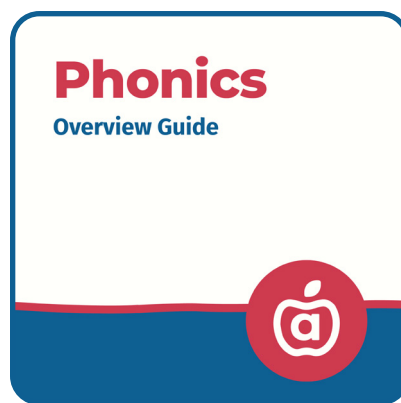
→ [Dashboards](#) display information about their child's usage and progress.

→ [Resources & Activities](#) includes more than 300 illustrated digital books, along with hundreds of activities and printable worksheets—all available in English and Spanish.

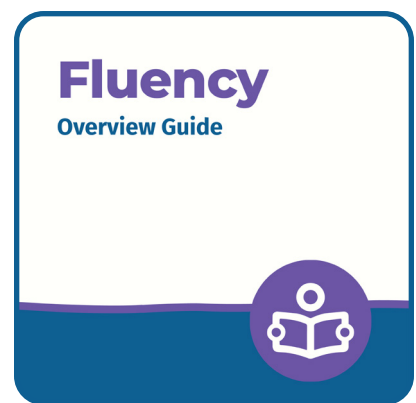
Many resources (available in English and Spanish) that are designed to help families support learning at home are linked in the instructional strand overview guides:



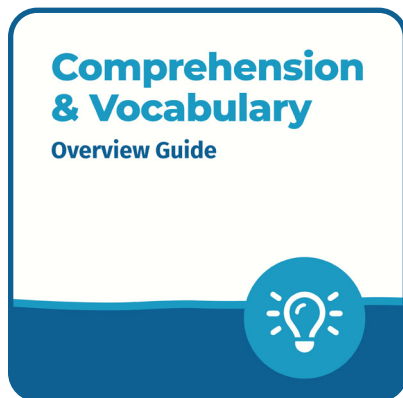
→ [Phonological Awareness Overview Guide](#)



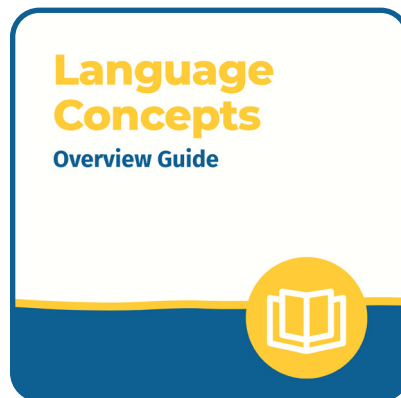
→ [Phonics Overview Guide](#)



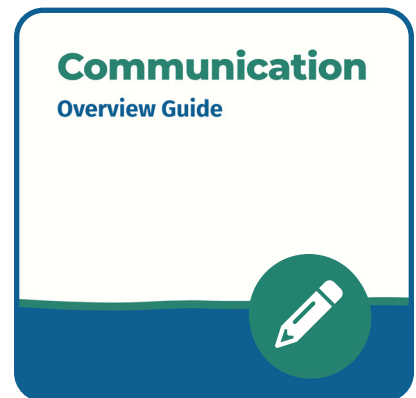
→ [Fluency Overview Guide](#)



→ [Comprehension & Vocabulary Overview Guide](#)



→ [Language Concepts Overview Guide](#)



→ [Communication Overview Guide](#)



**Additional resources for families include:**

- [Waterford’s Six Instructional Strands for Reading](#)  
[Las seis líneas de instrucción para lectura de Waterford](#)
- [Family Activities with Letters and Sounds](#)  
[Actividades familiares con letras y sonidos](#)
- [Family Reading Activities](#)  
[Actividades en familia para la lectura](#)
- [Family Writing Activities](#)  
[Actividades de escritura en familia](#)
- [Family Reading and Writing Activities](#)  
[Actividades familiares de lectura y escritura](#)
- Monthly Learning Together Calendars: In [Resources & Activities](#), go to **Collections>Learning Together Calendars (Families)**.
- Learning Together Activity Sets: In [Resources & Activities](#), go to **Collections>Learning Together Activity Sets (Families)**.
- More resources: In [Resources & Activities](#), go to **Collections>Family Engagement Resources**.

The → [Waterford Professional Learning](#) team is available to deliver Family Engagement Workshops and Waterford Family Academy curriculum for school communities in virtual, on-site, or hybrid formats.

## APRIL

PREK-KINDERGARTEN

Learning Together  
*Use these simple activities to have fun and learn each day!*

|               |   |   |  |  |   |
|---------------|---|---|--|--|---|
| <b>WEEK 1</b> | Can your child find the number 6 on a gas station sign? What about at the grocery store or in an advertisement? See who can find the most 6s.   | Using sidewalk chalk, write the Power Words <i>l</i> , <i>and</i> , <i>on</i> , <i>my</i> , <i>a</i> , <i>he</i> , <i>is</i> , and <i>the</i> . As you call out words, have your child jump on each word. | Use sticky notes to label your home. Label the wall, a clock, door, bed, chair, etc. This is a great way to help your child automatically recognize words. | Look for subtraction in daily life! For example, "There are 5 possibilities in the freezer. We are eating 3 of them. How many will be left?"               | Families, like teams, work together to accomplish goals. Find examples of how your family works together. Point out these examples to your child.     |
| <b>WEEK 2</b> | A great way to practice letters is to say a letter name and ask your child to tell you the sound it makes. Help your child if they get stuck.   | Count to 10! Ask your child to count all of their fingers. Then ask them to count the fingers on one of their hands and one of their feet. Next, count 10 toes.   | Play "I Spy" to find items made from wood, paper, and cloth. For example, "I spy something that is made from wood." You use it for writing." A pencil!     | Start with 4 items and ask your child to take away 3 of them. Ask, "How many are left?" Say, "4 take away 3 is 1." Repeat with groups of 5 or fewer items. | Ask your child to help with a task around your home. Doing the task together helps your child learn how to help others and how to complete a task.    |
| <b>WEEK 3</b> | Look closely at a sentence with your child. Point out the capital letter at the beginning of the sentence and the punctuation mark at the end.  | Help your child understand a story by thinking about the main character. Read a book together. Talk about the main character during and after reading.  | Use sidewalk chalk to draw a line with evenly spaced marks. Number the marks 0-10. Ask your child to start at 0 and hop to a number you call out.          | Take a walk outside. Encourage your child to ask questions about the outdoors. For example, your child might ask, "Why is it cooler in the shade?"         | Think about the TV shows and the books your child likes. Which characters are respectful and kind? Talk to your child about how those characters act. |
| <b>WEEK 4</b> | How fast can your child read the Power Words <i>l</i> , <i>and</i> , <i>on</i> , <i>my</i> , <i>a</i> , <i>he</i> , <i>is</i> , and <i>the</i> ? Using flash cards and a timer, see how quickly your child can read them. | Take turns completing this sentence: "In the ocean, you might see/ hear/feel _____." How many sentences can you and your child make?  | Once it gets dark, play "Spot the Word." With a flashlight, point to an object. Your child names the object and the letter the object starts with!         | Gather some items of various sizes. Ask your child to order them by size— from smallest to largest or from largest to smallest.                            | Give your child chances to succeed. If needed, you can tell them the steps for completing a task—like setting the table—while they do the task.       |

© Waterford Worksheets, Inc. All rights reserved.

Find more on [www.waterford.org](http://www.waterford.org) or [www.waterford.us](http://www.waterford.us)

*Learning Together Calendar*

LEARNING TOGETHER

PRE-READING  
Activity Set 10 of 26

### Letter Jj

Practice letter *Jj*. Help your child learn to match the numbers 1-5 with sets of objects.

**Number Fun**

To help your child practice matching numbers 1-5 with sets of objects, help them make a number book. Write a number on a page and let your child draw or paste pictures of objects to match the number. You can begin with the number 1's and add more as your child learns them. After your child finishes their number book, have them share it with other family members and tell them about each page.

**Guess That Name**

Create a card that describes a friend's or family member's name. Ask your child to think of the name that matches your clue. For example, you might say, "I'm thinking of someone whose name begins with *Jj*!" Write the first letter of the name. When your child correctly identifies the name, write it and say it, emphasizing the beginning sound. Ask your child if they can think of anyone else whose name begins with the same sound.

Give your child a turn to read the game. They can give a clue to help you identify a name.

**Letter Name, Shape, and Sound**

**WATERFORD SONGS**

Find these songs on the Waterford.org YouTube channel.

- Practice recognizing capital *J* and lowercase *j* with the **Alphabet Songs** playlist.
- Practice the *Jj* sound with the **Letter Sound Songs** playlist.
- Sing along with "Jack and Jill" in the **Sing Around the World** playlist.

\**Jj* is the first sound in Jack and Jill.

You can find these Waterford.org books and practice pages—and many more—in the **Resources & Activities** tab at [www.waterford.org](http://www.waterford.org)

**WATERFORD BOOKS**

- Read *Jumbled Together*. Have your child listen for the words beginning with *Jj* and match them to the corresponding objects in the story.
- Read *Jack and Jill Together*. Have fun reading with expressions. Read the rhyme again, adding hand motions and actions to act it out.

© Waterford Worksheets, Inc. All rights reserved.

*Learning Together Activity*



# Effective Practices for Educational Technology and Young Learners

*Screen time* is a phrase that can elicit uncertainty, but the use of educational technology can have a significant positive impact on learning outcomes. What's true about screens is true about tools in general: there are ways to use them effectively, and they can help build structures we need.

Balance is key. Digital technology should complement rather than interfere with a range of experiences and activities that build relationships and foundational academic skills through interactive learning time with teachers and peers.

## Establish Clear Classroom Routines

Ensure that students have a clear understanding of how and when they will engage with Waterford Early Learning. The resources listed in the → [Getting Started: For Students](#) section of this overview can be helpful.

## Create a Closed-Loop Online Environment

Work with your school or district technology experts to keep students safe from inappropriate online content. Consider content blockers and privacy and security settings to control data access. Monitor students while they are engaged with Waterford Early Learning in the classroom.

## Connect Digital Learning and Classroom Instruction

There are endless opportunities to connect what students learn through technology to activities and experiences away from screens. Waterford Early Learning → [Dashboards and Reports](#) provide actionable data that can inform the use of the resources available in → [Resources & Activities](#).



# Waterford Services

## Professional Learning and Partner Success

→ [Waterford's Professional Learning](#) team equips educators and families with knowledge and resources to improve student outcomes. → [Offerings](#) can be delivered virtually, onsite, or through a hybrid model.

Waterford's Partner Success team builds and maintains strong relationships with our partners by ensuring they are actively engaged and supported in achieving their goals. Partners can contact the team by emailing [partnersuccess@waterford.org](mailto:partnersuccess@waterford.org) or scheduling a meeting via this → [link](#).

Visit the → [Waterford.org webinar library](#) to access a series on the science of reading, an extensive range of resources to learn about family engagement and the CARES Framework, and much more.

## Technical Support

Our team is here to seamlessly support your implementation of Waterford Early Learning.

- Find key information at [help.waterford.org](http://help.waterford.org)
- Connect with us through our → [Waterford.org Help Center](#).
- Email us at [support@waterford.org](mailto:support@waterford.org).
- Call us at 977-499-7997.

On the Waterford Early Learning homepage, reach out via live chat by selecting the question mark in the bottom right corner. Then select **Chat Now**.



# Conclusion: Toward Universal Literacy

In 1998, the National Research Council wrote that “the demands for higher literacy are ever increasing, creating more grievous consequences for those who fall short.” More than 25 years later, this is increasingly true. Students must have strong literacy skills to successfully navigate our 21st-century society, yet too much reading instruction is based on “outdated assumptions about reading and development that make learning to read harder than it needs to be, a sure way to leave many children behind” (Seidenberg, 2014, p. 340).

Learning to read is seemingly effortless for only a small percentage of students—around 5%. The vast majority of students need several years of systematic and explicit instruction to build reading proficiency. Investing in early childhood literacy programs—from PreK to 2nd grade—is essential not only as a support for academic achievement but to provide students with the skills that will allow reading to be a lifelong tool for learning.

That’s why choosing research-based programs for core, supplemental, and intervention instruction is so important. Curriculum built on the science of reading provides instruction that is aligned with how the brain learns to read, helping students learn most effectively and most efficiently. The most successful literacy programs are those both driven by the science of reading and proven by peer-reviewed research.

With over 40 years of experience creating accessible and high-quality learning content, Waterford Early Learning’s reading curriculum is aligned with the science of reading. It is also backed by third-party research that demonstrates Waterford Early Learning’s effectiveness in helping students develop strong, lasting literacy skills.

Learning to read is seemingly effortless for only a small percentage of students—around 5%. The vast majority of students need several years of systematic and explicit instruction to build reading proficiency.



Cognitive scientist Mark Seidenberg observes that “there is remarkable consensus about the basic theory of how reading works and the causes of reading successes and failures” (2014, p. 332). The convergence of neuroscientific and educational research points to the key elements of effective literacy instruction. The power to leverage the science is in hand, putting universal literacy within reach.

**Teaching young children and giving them the foundation for a lifetime of learning and success is enormously rewarding. It is also complex and challenging.**

Teaching young children and giving them the foundation for a lifetime of learning and success is enormously rewarding. It is also complex and challenging. Waterford Early Learning’s reading curriculum is a powerful and highly effective resource for successfully engaging your students on their literacy journeys. We are grateful for the opportunity to partner with you to build a bright future for your students.



# References

- Adams, M. J. (1990). *Beginning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.
- Archer, A. L., & Hughes, C. A. (2011). *Explicit instruction: Effective and efficient teaching*. New York, NY: Guilford Press.
- August, D., & Shanahan, T. (2006). *Developing literacy in second-language learners: Report of the National Literacy Panel on Language-Minority Children and Youth*. Center for Applied Linguistics, Lawrence Erlbaum Associates.
- Başar, E. (2006). The theory of the whole-brain-work. *International Journal of Psychophysiology*, 60(1), 133-138.
- Beck, I. L., McKeown, M. G., & Kucan, L. (2002). *Bringing words to life: Robust vocabulary instruction*. New York, NY: Guilford Publications.
- Biemiller, A. (2010). *Words worth teaching: Closing the vocabulary gap*. Columbus, OH: SRA/McGraw-Hill.
- Berninger, V., & Amtmann, D. (2003). Preventing written expression disabilities through early and continuing assessment and intervention for handwriting and/or spelling problems: Research into practice. In H. Swanson, K. Harris, & S. Graham (Eds.), *Handbook of learning disabilities* (pp. 551-579). New York, NY: Guilford Press.
- Bialystok, E., Luk, G., & Kwan, E. (2005). Bilingualism, biliteracy, and learning to read: Interactions among languages and writing systems. *Scientific Studies of Reading*, 9(1), 43-61.
- Brillante, P. (2017). *The essentials: Supporting young children with disabilities in the classroom*. Washington, DC: National Association for the Education of Young Children.
- Brimo, D., Apel, K., & Fountain, T. (2017). Examining the contributions of syntactic awareness and syntactic knowledge to reading comprehension. *Journal of Research in Reading*, 40(1), 57-74.
- Cabell, S. Q., & Hwang, H. (2020). Building content knowledge to boost comprehension in the primary grades. *Reading Research Quarterly*, 55(Suppl. 1).



- Cárdenas-Hagan, E., Carlson, C. D., & Pollard-Durodola, S. D. (2007). The cross-linguistic transfer of early literacy skills: The role of initial L1 and L2 skills and language of instruction. *Language, Speech, and Hearing Services in Schools*, 38(3), 249–259. [https://doi.org/10.1044/0161-1461\(2007/026\)](https://doi.org/10.1044/0161-1461(2007/026))
- CAST. (2024). *Universal Design for Learning Guidelines version 3.0*. Retrieved from <https://udlguidelines.cast.org>
- Castles, A., Rastle, K., & Nation, K. (2018). Ending the reading wars: Reading acquisition from novice to expert. *Psychological Science in the Public Interest*, 19(1), 5-51.
- Catts, H. W., Adlof, S. M., & Weismer, S. E. (2006). Language deficits in poor comprehenders: A case for the Simple View of Reading. *Journal of Speech, Language, and Hearing Research*, 49(2), 278-293. [https://doi.org/10.1044/1092-4388\(2006/023\)](https://doi.org/10.1044/1092-4388(2006/023))
- Center on Improving Learning and Academic Achievement. (n.d.). Retrieved December 9, 2024, from <https://compcenternetwork.org/>
- Chall, J. S. (1967). *Learning to read: The great debate*. New York, NY: McGraw-Hill.
- Chall, J. S. (1983). *The stages of reading development*. New York, NY: McGraw-Hill.
- Chard, D. J., Vaughn, S., & Tyler, B.-J. (2002). A synthesis of research on effective interventions for building reading fluency with elementary students with learning disabilities. *Journal of Learning Disabilities*, 35(5), 386-406.
- Chiang, H., Walsh, E., Shanahan, T., Gentile, C., Maccarone, A., Waits, T., Carlson, B., & Rikoon, S. (2017). An exploration of instructional practices that foster language development and comprehension: Evidence from prekindergarten through grade 3 in title I schools (NCEE 2017-4024). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Cutting, L. E., Materek, A., Cole, C., Levine, T. M., & Mahone, E. M. (2009). Effects of fluency, oral language, and executive function on reading comprehension performance. *Annals of Dyslexia*, 59(1), 34-54.
- Dehaene, S. (2009). *Reading in the brain*. New York, NY: Penguin Viking.
- Dehaene, S. (2011). The massive impact of literacy on the brain and its consequences for education. *Human Neuroplasticity and Education*, 117(1), 19-32, 237-238. Retrieved from <https://www.semanticscholar.org/paper/The-Massive-Impact-of-Literacy-on-the-Brain-and-its-Dehaene/cff456fd014295ce33eec5692e24b832f9d1e7bd>





- Digital Promise. (2018). *Learner variability is the rule, not the exception*. Retrieved from <https://digitalpromise.org/wp-content/uploads/2018/06/Learner-Variability-Is-The-Rule.pdf>
- Duke, N. K., & Pearson, P. D. (2004). Effective practices for developing comprehension of informational text. In R. B. Ruddell & M. R. Ruddell (Eds.), *Reading research in context: Fourth language education research report* (Vol. 8, pp. 20-54). International Reading Association.
- Ecalte, J., Dujardin, E., Gomes, C., Cros, L., & Magnan, A. (2021). Decoding, fluency and reading comprehension: Examining the nature of their relationships in a large scale study with first graders. *Reading and Writing Quarterly*, 37(5), 444-461.
- Ehri, L. C. (2000). Learning to read and learning to spell: Two sides of a coin. *Topics in Learning Disorders*, 20(1), 19-49.
- Ehri, L. C., Nunes, S. R., Willows, D. M., Schuster, B. V., Yaghoub-Zadeh, Z., & Shanahan, T. (2001). Phonemic awareness instruction helps children learn to read: Evidence from the National Reading Panel's meta-analysis. *Reading Research Quarterly*, 36(3), 250-287. <https://doi.org/10.1598/RRQ.36.3.2>
- Ehri, L. C. (2005). Learning to read words: Theory, findings, and issues. *Scientific Studies of Reading*, 9(2), 167-188.
- Ehri, L. C. (2014). Orthographic mapping in the acquisition of sight word reading, spelling memory, and vocabulary learning. *Scientific Studies of Reading*, 18(1), 5-21. <https://doi.org/10.1080/10888438.2013.819356>
- Ehri, L. C. (2020). The science of learning to read words: A case for systematic phonics instruction. *Reading Research Quarterly*, 55(S1), S45-S60. <https://doi.org/10.1002/rrq.337>
- Elkonin, D. B. (1973). U.S.S.R. In J. Downing (Ed.), *Comparative reading: Cross-national studies of behavior and processes in reading and writing* (pp. 551-579). New York, NY: Macmillan.
- Foorman, B., Coyne, M., Denton, C., Dimino, J., Hayes, L., Justice, L., Lewis, W., & Wagner, R. (2016). *Foundational skills to support reading for understanding in kindergarten through 3rd grade*. Retrieved from Institute of Education Sciences: What Works Clearinghouse: [https://ies.ed.gov/ncee/WWC/Docs/PracticeGuide/wwc\\_foundationalreading\\_040717.pdf](https://ies.ed.gov/ncee/WWC/Docs/PracticeGuide/wwc_foundationalreading_040717.pdf)



- Foulin, J. N. (2005). Why is letter-name knowledge such a good predictor of learning to read? *Reading and Writing, 18*(2), 129-155.
- Frith, U. (1985). Beneath the surface of developmental dyslexia. In K. Patterson, J. Marshall, & M. Coltheart (Eds.), *Surface dyslexia: Neurological and cognitive studies of phonological reading* (pp. 301-330). Hillsdale, NJ: Lawrence Erlbaum.
- Golinkoff, R. M., Hoff, E., Rowe, M. L., Tamis-LeMonda, C. S., & Hirsh-Pasek, K. (2019). Language matters: Denying the existence of the 30-million-word gap has serious consequences. *Child Development, 90*(3), 985-992.
- Goodwin, A. P., Cho, S.-J., Reynolds, D., Silverman, R., & Nunn, S. (2021). Explorations of classroom talk and links to reading achievement in upper elementary classrooms. *Journal of Educational Psychology, 113*(1), 27-48. <https://doi.org/10.1037/edu0000462>
- Gough, P. B., & Tunmer, W. E. (1986). Decoding, reading, and reading disability. *Remedial and Special Education, 7*(1), 6-10. <http://dx.doi.org/10.1177/074193258600700104>
- Graham, S. (2020). The sciences of reading and writing must become more fully integrated. *Reading Research Quarterly, 55*(S1), S35-S44. <https://www.jstor.org/stable/48587602>
- Graham, S., Liu, X., Aitken, A., Ng, C., Bartlett, B., Harris, K., & Holzapfel, J. (2017). Effectiveness of literacy programs balancing reading and writing instruction: A meta-analysis. *Reading Research Quarterly, 53*(3), 279-304.
- Graham, S., & Hebert, M. (2011). Writing to read: A meta-analysis of the impact of writing and writing instruction on reading. *Harvard Educational Review, 81*(4), 710-744.
- Graves, M. F. (2006). *The vocabulary book: Learning and instruction*. Teachers College Press.
- Hammond, Z. L. (2015). *Culturally responsive teaching and the brain*. Corwin Press.
- Hart, B., & Risley, T. (1995). *Meaningful differences in the everyday lives of American children*. Baltimore, MD: Brookes Publishing.
- Hasbrouck, J., & Glaser, D. R. (2012). *Reading fluency: Understanding and teaching this complex skill*. Austin, TX: Gibson Hasbrouck & Associates.
- Hattie, J. A. C., & Jaeger, R. (1998). *Visible learning: The significance of effect size*. London: Routledge.



- Hebert, M., Bohaty, J. J., Nelson, J. R., & Brown, J. (2016). The effects of text structure instruction on expository reading comprehension: A meta-analysis. *Journal of Educational Psychology, 108*(5), 609-629.
- Hiebert, E. H. (2019). *The words attacked: Teaching vocabulary in literature*. Teachers College Press.
- Hjetland, H. N., Brinchmann, E. I., Scherer, R., Hulme, C., & Melby-Lervåg, M. (2020). Preschool pathways to reading comprehension: A systematic meta-analytic review. *Educational Research Review, 30*, Article 100323.
- Hogan, T. P., Adlof, S. M., & Alonzo, C. N. (2014). On the importance of listening comprehension. *International Journal of Speech-Language Pathology, 16*(3), 19.
- Hwang, H., Cabell, S. Q., & Joyner, R. E. (2023). Does cultivating content knowledge during literacy instruction support vocabulary and comprehension in the elementary school years? A systematic review. *Reading Psychology, 44*(2), 145-174. <https://doi.org/10.1080/02702711.2022.2141397>
- Jones, D., & Hodson, P. (2011). *Unlocking speaking and listening: Developing spoken language in the primary classroom*. London: Routledge.
- Kentucky Department of Education. (2021, February 18). Universal Design for Learning (UDL). Retrieved from <https://education.ky.gov/educational/diff/Pages/UDL.aspx>
- Kilpatrick, D. A. (2015). *Essentials of assessing, preventing, and overcoming reading difficulties*. Hoboken, NJ: John Wiley & Sons.
- Kirby, J. R., Deacon, S. H., Bowers, P. N., Izenberg, L., Wade-Woolley, L., & Parrila, R. (2012). Children's morphological awareness and reading ability.
- Kirby, J. R., Deacon, S. H., Bowers, P. N., Izenberg, L., Wade-Woolley, L., & Parrila, R. (2012). Children's morphological awareness and reading ability. *Reading and Writing, 25*(2), 389-410.
- Ladson-Billings, G. (1995). But that's just good teaching! The case for culturally relevant pedagogy. *Theory into Practice, 34*(3), 159-165.
- Ladson-Billings, G. (2014). Culturally relevant pedagogy 2.0: a.k.a. the remix. *Harvard Educational Review, 84*(1), 74-84.
- Lonigan, C. J., Burgess, S. R., & Schatschneider, C. (2018). Examining the simple view of reading with elementary school children: Still simple after all these years. *Remedial and Special Education, 39*(5), 260-273. <https://doi.org/10.1177/0741932518764833>



- Lyon, G. R. (1998). Why reading is not a natural process. *Educational Leadership*, 55(6), 14-18.
- Maree, N., & Van der Westhuizen, G. J. (2021). How classroom talk contributes to reading comprehension. *Per Linguam*, 36(2). <https://doi.org/10.5785/36-2-910>
- McArthur, G., Castles, A., Kohnen, S., Larsen, L., Jones, K., Anandakumar, T., & Banales, E. (2015). Sight word and phonics training in children with dyslexia. *Journal of Learning Disabilities*, 48(4), 391-407.
- McKeown, M., Beck, I., & Blake, R. (2009). Rethinking reading comprehension instruction: A comparison of instruction for strategies and content approaches. *Reading Research Quarterly*, 44(3), 218-253.
- Moats, L. C. (2010). *Speech to print: Language essentials for teachers*. Baltimore, MD: Brookes Publishing.
- Moats, L. C. (2017). Can prevailing approaches to reading instruction accomplish the goals of RTI? *Perspectives on Language and Literacy*, 43, 15-22.
- Nagy, W., & Townsend, D. (2012). Words as tools: Learning academic vocabulary as language acquisition. *Reading Research Quarterly*, 47(1), 91-108. <https://doi.org/10.1002/RRQ.011>
- National Center on Improving Literacy. (2022). Phonological awareness: What is it and how does it relate to phonemic awareness. Washington, DC: U.S. Department of Education, Office of Elementary and Secondary Education, Office of Special Education Programs, National Center on Improving Literacy. Retrieved from <https://www.improvingliteracy.org>
- National Early Literacy Panel. (2008). *Developing early literacy: Report of the National Early Literacy Panel*. Washington, DC: National Institute for Literacy.
- National Literacy Trust. What is literacy? Retrieved from <https://literacytrust.org.uk/information/what-is-literacy/>
- National Reading Panel. (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). National Institute of Child Health & Development. Retrieved from <https://www1.nichd.nih.gov/publications/pubs/nrp/Documents/report.pdf>
- National Research Council. (1998). *Preventing reading difficulties in young children*. Washington, DC: The National Academies Press.



- Perfetti, C. A. (2007). Reading ability: Lexical quality to comprehension. *Scientific Studies of Reading, 11*(4), 357-383. <https://doi.org/10.1080/10888430701530730>
- Petscher, Y., Cabell, S., Catts, H. W., Compton, D. L., Foorman, B. R., Hart, S. A., Lonigan, C. J., Phillips, B. M., Schatschneider, C., Steacy, L., Terry, N. P., & Wagner, R. K. (2020). How the science of reading informs 21st-century education. *The Reading Teacher, 55*(S1), S267-S282. <https://doi.org/10.1002/rrq.352>
- Posey, A. Universal Design for Learning (UDL): A teacher's guide. Understood. Retrieved from <https://www.understood.org/articles/en/understanding-universal-design-for-learning>
- Pressley, M., & Gaskins, I. C. (2008). Comprehension instruction: Research-based best practices.
- Recht, D. R., & Leslie, L. (1988). Effect of prior knowledge on good and poor readers' memory of text. *Journal of Educational Psychology, 80*(1), 16-20. [https://www.researchgate.net/publication/232584848\\_Effect\\_of\\_Prior\\_Knowledge\\_on\\_Good\\_and\\_Poor\\_Readers%27\\_Memory\\_of\\_Text](https://www.researchgate.net/publication/232584848_Effect_of_Prior_Knowledge_on_Good_and_Poor_Readers%27_Memory_of_Text)
- Relyea, J. E., & Amendum, S. J. (2019). English reading growth in Spanish-speaking bilingual students: Moderating effect of English proficiency on cross-linguistic influence. *Child Development, 91*(4). <https://doi.org/10.1111/cdev.13288>
- Rose, J. (2006). Independent review of the teaching of early reading: Final report. Department of Education & Skills. Retrieved from <https://dera.ioe.ac.uk/5551/2/report.pdf>
- Scarborough, H. S. (2001). Connecting early language and literacy to later reading (dis)abilities: Evidence, theory, and practice. In S. Neuman & D. Dickinson (Eds.), *Handbook for research in early literacy* (pp. 97-110). New York, NY: Guilford Press.
- Scott, C. M. (2009). A case for the sentence in reading comprehension. *Language, Speech & Hearing Services in Schools, 40*(2), 184-191.
- Schwanenflugel, P. J., Hamilton, A. M., Wisenbaker, J. M., Kuhn, M. R., & Stahl, S. A. (2004). Becoming a fluent reader: Reading skill and prosodic features in the oral reading of young readers. *Journal of Educational Psychology, 96*(1), 119-129. <https://doi.org/10.1037/0022-0663.96.1.119>
- Seed, E. (1996). Curriculum as window and mirror. *Social Science Record, Fall*.



- Seidenberg, M. (2014). The science of reading and its educational implications. *Language Learning and Development, 9*(4), 331-360.
- Seidenberg, M. (2017). *Language at the speed of sight: How we read, why so many can't, and what can be done about it*. New York, NY: Basic Books.
- Seidenberg, M., & MacDonald, M. (2018). The impact of language experience on language and reading. *Topics in Language Disorders, 38*(1), 66-83.
- Shamir, H., Tom, M., Pocklington, D., Houchins, A., & Yoder, E. (2024). *The efficacy of Waterford's programs: A meta-analysis of a decade of research* [White paper]. Waterford Research Institute. White Paper in Preparation.
- Shanahan, T., Callison, K., Carriere, C., Duke, N. K., Pearson, P. D., Schatschneider, C., & Torgesen, J. (2010). Improving reading comprehension in kindergarten through 3rd grade: A practice guide (NCEE 2010-4038). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.
- Share, D. L. (1999). Phonological recoding and orthographic learning: A direct test of the self-teaching hypothesis. *Journal of Experimental Child Psychology, 72*(1), 95-129. <https://doi.org/10.1006/jecp.1998.2481>
- Share, D. L. (2004). Orthographic learning at a glance: On the time course and developmental onset of self-teaching. *Journal of Experimental Child Psychology, 87*(1), 267-298. <https://doi.org/10.1016/j.jecp.2004.01.001>
- Shaywitz, S., & Shaywitz, J. (2020). *Overcoming dyslexia*. New York, NY: Alfred A. Knopf.
- Shams, L., & Seitz, A. R. (2008). Benefits of multisensory learning. *Trends in Cognitive Sciences, 12*(11), 411-417.
- Shanahan, T. (2016). Relationships between reading and writing development. In C. A. McArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 194-207). New York, NY: The Guilford Press.
- Silva, M., & Cain, K. (2015). The relations between lower and higher level comprehension skills and their role in prediction of early reading comprehension. *Journal of Educational Psychology, 107*(2), 321-331.
- Smith, G. J., Booth, J. R., & McNorgan, C. (2018). Longitudinal task-related functional connectivity changes predict reading development. *Frontiers in Psychology, 9*, 411-417.



- Snow, C. E. (2017). The role of vocabulary versus knowledge on children's language learning: A fifty year perspective. *Journal for the Study of Education and Development*, 40(1), 1-18.
- Sorenson Duncan, T., Mimeau, C., Crowell, N., & Deacon, S. H. (2020). Not all sentences are created equal: Evaluating the relation between children's understanding of basic and difficult sentences and their reading comprehension. *Journal of Educational Psychology*. <http://dx.doi.org/10.1037/edu0000545>
- Spear-Swerling, L. (2018). Structured literacy and typical literacy practices: Understanding differences to create instructional opportunities. *Teaching Exceptional Children*, 50(1), 1-11.
- Sperry, D. E., Sperry, L. L., & Miller, P. J. (2019). Reexamining verbal environments of children from different socioeconomic backgrounds. *Child Development*, 90(4), 1303-1318.
- Stanovich, K. E., & West, R. F. (1989). Exposure to print and orthographic processing. *Reading Research Quarterly*, 24(4), 402-433. <https://doi.org/10.2307/747605>
- Steady, L. M., Wade-Woolley, L., Rueckl, J. G., Pugh, K. R., Elliott, J. D., & Compton, D. L. (2019). The role of set for variability in irregular word reading: Word and child predictors in typically developing readers and students at-risk for reading disabilities. *Scientific Studies of Reading*, 23(6), 523-532. <https://doi.org/10.1080/10888438.2019.1620749>
- Suggate, S. P. (2016). A meta-analysis of the long-term effects of phonemic awareness, phonics, fluency, and reading comprehension interventions. *Journal of Learning Disabilities*, 49(1), 77-96. <https://doi.org/10.1177/0022219414528540>
- The Nation's Report Card. (2022). National achievement-level results. Retrieved from <https://www.nationsreportcard.gov/highlights/reading/2022/>
- The Reading League. (2022). *Science of reading: Defining guide*.
- Torres, J. (2022). *Curriculum Design and Families: Centering Families in a National Non-Profit Literacy Program*. (Publication No. 29069039) [Doctoral dissertation, American University]. ProQuest Dissertations & Theses Global: <https://www.proquest.com/docview/2670066666?pq-origsite=gscholar&fromopenview=true>.



- Tunmer, W. E., & Chapman, J. W. (2012). Does set for variability mediate the influence of vocabulary knowledge on the development of word recognition skills? *Scientific Studies of Reading, 16*(2), 122-140. <https://doi.org/10.1080/10888438.2010.542527>
- Vellutino, F. R., Tunmer, W. E., Jaccard, J., & Chen, S. (2007). Components of reading ability: Multivariate evidence for a convergent skills model of reading development. *Scientific Studies of Reading, 11*(1), 3-32.
- Weinstein, Y., Sumeracki, M., & Caviglioli, O. (2019). *Understanding how we learn: A visual guide*. Routledge.
- What Works Clearinghouse. (2022). What Works Clearinghouse standards handbook (Version 5.0). National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. <https://ies.ed.gov/ncee/wwc/handbooks>
- Willingham, D. T. (2006). The usefulness of brief instruction of reading comprehension strategies. *American Educator, Winter 2006/2007*.
- Willingham, D. T. (2017). *The reading mind: A cognitive approach to understanding how the mind reads*. John Wiley & Sons.
- Wolf, M. (2007). *Proust and the squid: The story and science of the reading brain*. New York, NY: Harper Collins.
- World Literacy Foundation. (2015). *The economic and social cost of illiteracy: A snapshot of illiteracy in a global context*. Retrieved from <https://worldliteracyfoundation.org/wp-content/uploads/2022/08/The-Economic-Social-Cost-of-Illiteracy-2022.pdf>
- Wright, T. S., & Cervetti, G. N. (2017). A systematic review of the research on vocabulary instruction that impacts text comprehension. *Reading Research Quarterly, 52*(2), 203-226.

