



Reading by Design: An Individualized Literacy Intervention

Region 4 Education Service Center (ESC)
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Table of Contents

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| STATE BOARD OF EDUCATION-APPROVED PROCEDURES CONCERNING DYSLEXIA | 2 |
| READING BY DESIGN OVERVIEW | 2 |
| READING BY DESIGN COMPONENTS | 3 |
| DELIVERY OF READING BY DESIGN | 8 |
| RESEARCH-BASED INSTRUCTION | 9 |
| STATE LAWS RELATED TO DYSLEXIA | 9 |

State Board of Education-Approved Procedures Concerning Dyslexia

The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders contains the State Board of Education-approved procedures concerning dyslexia and related disorders. The Texas Education Agency (TEA) provides guidelines for school districts to follow as they identify and provide services for students with dyslexia.

Once it has been determined that a student has dyslexia, the school district or charter school shall provide an appropriate instructional program for the student as required in Texas Education Code (TEC) §38.003(b):

“In accordance with the program approved by the State Board of Education, the board of trustees of each school district shall provide for the treatment of any student determined to have dyslexia or a related disorder” (The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders, p. 39).

The following procedures must be followed (The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders):

- Instructional decisions for students with dyslexia must be made by a committee (§504 or ARD) that is knowledgeable about the instructional components and approaches for students with dyslexia (p. 39).
- Each school must provide students identified with dyslexia access to an instructional program that meets requirements in 19 TAC §74.28(c) (p.39).
- Districts shall purchase or develop an evidence-based reading program for students with dyslexia and related disorders that incorporates all the components of instruction and instructional approaches described in *The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders* (p. 39).

Reading by Design Overview

The Region 4 ESC Reading by Design Program is a systematic, multisensory set of instructional routines which include content and pedagogically appropriate practices compiled from sources, such as *Foundations for Literacy: Structures and Techniques for Multisensory Teaching of Basic Written English Language Skills* by Aylett Royall Cox (1980). This program is aligned with research-based practices for developing literacy and is designed for students with basic reading difficulties, such as dyslexia. This intervention follows an intensive, explicit, and cumulative design for remediation of reading and writing skills at all grade levels. Reading by Design includes all of the components of instruction and instructional approaches supported through research as cited in the *The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders* (pp. 40-41).

Reading by Design Program Components

The following section outlines the *Critical, Evidence-Based Components of Dyslexia Intervention* (pp. 40-41) included in *The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders* aligned with the Region 4 ESC Reading by Design Program:

- **Phonological Awareness**
 - **Phonological Awareness:** The purpose of the phonological awareness activities is to foster development in the understanding of the internal linguistic structure of words. These activities are broken into four developmental levels: word, syllable, onset–rime, and phoneme. As students progress through the levels, they learn to blend, segment, and manipulate words, syllables, onsets–rimes, and phonemes through various activities.
 - **Application - Auditory Discrimination:** Students detect initial, medial, and final sounds in spoken language.
 - **Spelling Deck:** The Spelling Deck cards contain the spelling rules and regular sound–symbol patterns in the program. The teacher says the phoneme and instructs students to echo, name, and write the associated grapheme. The Spelling Deck is reviewed daily and is designed to move sound–symbol recognition toward automaticity.
 - **Spelling:** Students are taught how to scientifically spell words by applying the appropriate spelling rules and by mastering the phoneme-grapheme correspondence. Words are divided into 3 categories, phonetic words (complete sound-symbol relationship), rule words (affixes added) and structural analysis words (spelling by morpheme).
 - **Introduction of a New Concept:** Auditory discovery is used in the introduction of a new concept. Students listen to words that contain the new concept and identify the phoneme that is similar in all the discovery words.

- **Sound-Symbol Association**
 - **Alphabet Activities:** The alphabet activities promote development in alphabetic knowledge of letter names and letter shapes. The Alphabet Arc is used to match the letters of the alphabet with increased fluency and automaticity. In addition, students learn how to use the alphabet as a sequencing tool to transfer to dictionary skills. Knowledge of the letter names and shapes serves as a prerequisite for the mastery of sound–symbol association (alphabetic principle).

- **Reading Deck:** The Reading Deck cards include the letter name, key word, and sound represented by the letter or letters on the card. The Reading Deck is divided into sections: consonants; vowels (closed syllable and open syllable); consonant combination; vowel-consonant-e syllable; vowel pair syllable; vowel-r syllable; final stable syllable; and special situation. Only those graphemes that have been taught are reviewed daily; this review is designed to move from sound–symbol recognition to automaticity.
- **Spelling Deck:** The Spelling Deck cards contain the spelling rules and regular sound–symbol patterns in the program. The teacher says the phoneme and instructs students to echo, name, and write the associated grapheme. The Spelling Deck is reviewed daily and is designed to move sound–symbol recognition toward automaticity.
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- **Linkages:** Students link the letter to sound as they skywrite and complete the linkage boxes tracing with fingers and writing utensils. This practice moves the student explicitly from gross to fine motor formation of letters.
- **Introduction of a New Concept:** Auditory, visual, and kinesthetic discovery are used in the introduction of new concepts. Graphemes are linked with sounds and with key words which aids students with retaining the sounds. New learning is explicitly tied to old learning.
- **Syllabication:** Sequential introduction of the six basic types of syllables in the English language occur in the part of the lessons. The syllable types include: closed, open, vowel consonant-e, vowel-r, vowel pair, and final stable. Rules for dividing multisyllabic words into individual syllables are directly taught and practiced in relation to the word structure.
- **Reading Application:** Students learn to code words to provide kinesthetic and visual cues for pronunciation. As repeated practice with coding allows for automatic recognition of syllables, students will read without manually coding all words. Accuracy in reading is stressed, and students read all words or sentences silently before reading aloud. Students read with phonemes and graphemes that have been introduced through the new concept. First words are read, then phrases, sentences, and decodable texts. In this section of the lesson, students are also taught a structured process for syllable division.

- **Orthography**

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- **High Frequency Words:** The high frequency word deck is reviewed daily. The deck includes irregular words that do not follow the regular pattern(s) of the English language, as well as, words that follow regular patterns that are used most frequently in the English language. These words are learned as units and are reviewed to build automaticity with recognition.
- **Spelling Deck:** The Spelling Deck cards contain the spelling rules and regular sound–symbol patterns in the program. The teacher says the phoneme and instructs students to echo, name, and write the associated grapheme. The Spelling Deck is reviewed daily and is designed to move sound–symbol recognition toward automaticity.
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- **Linkages:** Students link the letter to sound as they skywrite and complete the linkage boxes tracing with fingers and writing utensils. This practice moves the student explicitly from gross to fine motor formation of letters.
- **Introduction of a New Concept:** Auditory, visual, and kinesthetic discovery are used in the introduction of new concepts. Graphemes are linked with sounds and with key words which aids students with retaining the sounds. New learning is explicitly tied to old learning.
- **Morphology:** Throughout Reading by Design, affixes (prefixes and suffixes) are introduced. Students not only learn how to code affixes, but also learn the meanings of the different affixes and how they impact the overall meaning words. Volume 5 of Reading by Design is dedicated to studying morphological awareness, introducing Latin and Greek roots and reinforcing the relationship of roots for word reading, spelling, and meaning.

- **Morpheme Deck:** The Morpheme Deck contains common affixes and roots that appear in multisyllabic words. The Morpheme Deck includes information on the etymology of the morpheme, the definition of the morpheme, and derivative spellings for the morphemes.
- **Introduction of New Morphemes:** Auditory, visual, and kinesthetic discovery are used in the introduction of new morphemes. New learning is explicitly tied to old learning.
- **Reading Application:** Explicit instruction of new learning is modeled and explained before students apply the new learning in text. This practice includes reading words with the morphemes and applying knowledge of the morpheme to different tasks prior to application to connected text on individual student reading levels.
- **Spelling:** Students are explicitly taught the regularity of the orthographic patterns and affixes of the English language with systematic, regular review. The purpose of this practice is for students to apply the current and previously taught morphemes and spelling rules.
- **Syntax** (sentence structure), **semantics** (ways that language conveys meaning), and **pragmatics** (how to use language in a particular context).
 - **Components of Language:** Students will work on a variety of activities in the components of language, beginning with listening comprehension and interactive writing that progresses to fluency, reading comprehension, and independent writing. A progression of genres from nursery rhymes to expository text will expose students to a variety of text structures. Weekly repeated readings of the text with different targeted lessons will foster the development of accurate and fluent word recognition, oral language development, background knowledge, syntax, and use of strategies to aid reading comprehension.
 - **Reading Application:** Students learn to code words to provide kinesthetic and visual cues for pronunciation. As repeated practice with coding allows for automatic recognition of syllables, students will read without manually coding all words. Accuracy in reading is stressed, and students read all words or sentences silently before reading aloud. Students read with phonemes and graphemes that have been introduced through the new concept. First words are read, then phrases, sentences, and decodable texts. In this section of the lesson, students are also taught a structured process for syllable division.

- **Riddle:** Students listen to riddles linking new phonemes to graphemes. Students must listen and understand clues that reveal the answer (key word) to the riddle.
- **Reading Comprehension**
 - **Components of Language:** Students will work on a variety of activities in the components of language, beginning with listening comprehension and interactive writing that progresses to fluency, reading comprehension, and independent writing. A progression of genres from nursery rhymes to expository text will expose students to a variety of text structures. Weekly repeated readings of the text with different targeted lessons will foster the development of accurate and fluent word recognition, oral language development, background knowledge, syntax, and use of strategies to aid reading comprehension.
 - **Reading Application:** Students learn to code words to provide kinesthetic and visual cues for pronunciation. As repeated practice with coding allows for automatic recognition of syllables, students will read without manually coding all words. Accuracy in reading is stressed, and students read all words or sentences silently before reading aloud. Students read with phonemes and graphemes that have been introduced through the new concept. First words are read, then phrases, sentences, and decodable texts. In this section of the lesson, students are also taught a structured process for syllable division.
- **Reading Fluency**
 - **Reading Application:** Students learn to code words to provide kinesthetic and visual cues for pronunciation. As repeated practice with coding allows for automatic recognition of syllables, students will read without manually coding all words. Accuracy in reading is stressed, and students read all words or sentences silently before reading aloud. Students read with phonemes and graphemes that have been introduced through the new concept. First words are read, then phrases, sentences, and decodable texts. In this section of the lesson, students are also taught a structured process for syllable division.
 - **High Frequency Words:** The High-Frequency Word Deck contains words that frequently appear in text and should be coded by sight. Some of these words are irregular and have uncommon sound–symbol relationships that cannot be phonetically decoded. The High-Frequency Word Deck is reviewed daily for automaticity.
 - **Spelling Deck:** The Spelling Deck cards contain the spelling rules and regular sound–symbol patterns in the program. The teacher says the phoneme and instructs students to echo, name, and write the associated grapheme. The

Spelling Deck is reviewed daily and is designed to move sound–symbol recognition toward automaticity.

- **Reading Deck:** The Reading Deck cards include the letter name, key word, and sound represented by the letter or letters on the card. The Reading Deck is divided into sections: consonants; vowels (closed syllable and open syllable); consonant combination; vowel-consonant-**e** syllable; vowel pair syllable; vowel-**r** syllable; final stable syllable; and special situation. Only those graphemes that have been taught are reviewed daily; this review is designed to move from sound–symbol recognition to automaticity.
- **Alphabet Activities:** The alphabet activities promote development in alphabetic knowledge of letter names and letter shapes. The Alphabet Arc is used to match the letters of the alphabet with increased fluency and automaticity. In addition, students learn how to use the alphabet as a sequencing tool to transfer to dictionary skills. Knowledge of the letter names and shapes serves as a prerequisite for the mastery of sound–symbol association (alphabetic principle).

Delivery of Reading by Design Program

The following section outlines the *Delivery of Dyslexia Instruction* (pp. 41-42) included in *The Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders* aligned with the Region 4 ESC Reading by Design Program:

- **Simultaneous, Multisensory (VAKT)**
 - Reading by Design teaches reading, writing, spelling, and verbal and written expression by engaging the visual, auditory, and kinesthetic modalities simultaneously (i.e., mirrors, skywriting, sound boxes, syllable boards, linkages).
- **Systematic and Cumulative**
 - The Reading by Design lesson format is systematic and the scope and sequence is sequential and cumulative. It progresses from the syllable types (i.e. closed syllable, open syllable, vowel-consonant-e syllable, vowel pair syllable, final stable syllable and vowel-r syllable) through structural analysis of multisyllabic words, including morphological awareness.
- **Explicit Instruction**
 - The Reading by Design lesson format is explicitly taught by the teacher through direct instruction, modeling, guided practice, and independent practice.

- **Diagnostic Teaching to Automaticity**
 - Students enter the Reading by Design Program based on the initial dyslexia assessment data and the specific learning needs for each individual student. Reading by Design contains review lessons and Mastery Checks throughout each of the five volumes of the intervention to ensure adequate student progress and learning.

- **Synthetic Instruction**
 - Reading by Design presents the parts of the alphabetic language that teach how the word parts work together to form a whole during the new learning, syllabication practice, and reading application.

- **Analytic Instruction**
 - Reading by Design teaches how whole words may be broken into component parts (i.e. syllables, morphemes) during new learning, syllabication practice, reading application, and extended reading passage practice.

Research-based Instruction

The research that supports dyslexia instruction can be found in the *Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders* beginning on page 46. These data sources support the components and instructional techniques used in the Reading by Design program and can be reviewed using the link below.

State Laws Related to Dyslexia

The state laws in regards to dyslexia instruction can be found in the *Dyslexia Handbook – Revised 2018: Procedures Concerning Dyslexia and Related Disorders* on page 99. The requirements laid out by the legislation supports the use of the Reading by Design program and can be reviewed using the link below.

Link to Dyslexia Handbook:

<https://tea.texas.gov/WorkArea/DownloadAsset.aspx?id=51539627235>.

Reading by Design

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| Critical, Evidence-Based Components of Dyslexia Instruction | | | | | | | | |
|--|------------------------|--------------------------|---------------|-------------|------------|--------|-----------------------|-----------------|
| The Dyslexia Handbook –Revised 2018: Procedures Concerning Dyslexia and Related Disorders (p. 39) | | | | | | | | |
| Lesson Components | Phonological Awareness | Sound-symbol Association | Syllabication | Orthography | Morphology | Syntax | Reading Comprehension | Reading Fluency |
| Phonological Awareness | ✓ | ✓ | ✓ | | ✓ | | | ✓ |
| Alphabet | | ✓ | | | | | | ✓ |
| Morpheme Deck | | | ✓ | | ✓ | | ✓ | ✓ |
| High-Frequency Word Deck | | | | ✓ | | | ✓ | ✓ |
| Reading Deck | | ✓ | | ✓ | | | | ✓ |
| Spelling Deck | ✓ | ✓ | | ✓ | | | | ✓ |
| New Learning <i>Auditory Discovery</i> <i>Visual Discovery</i> <i>Riddle</i> <i>Skywriting</i> <i>Linkages</i> <i>Reading Application</i> <i>Extended Reading Practice</i> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Handwriting | | ✓ | | ✓ | | | | |
| Spelling | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | |
| Components of Language | ✓ | | | | | ✓ | ✓ | |

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Delivery of Dyslexia Instruction

The Dyslexia Handbook –Revised 2018: Procedures Concerning Dyslexia and Related Disorders (p. 41)

| Lesson Components | Simultaneous, Multisensory (VAKT) | Systematic and Cumulative | Explicit Instruction | Diagnostic Teaching to Automaticity | Synthetic Instruction | Analytic Instruction |
|--|-----------------------------------|---------------------------|----------------------|-------------------------------------|-----------------------|----------------------|
| Phonological Awareness | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Alphabet | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Morpheme Deck | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| High-Frequency Word Deck | ✓ | ✓ | ✓ | ✓ | | |
| Reading Deck | ✓ | ✓ | | ✓ | | |
| Spelling Deck | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| New Learning <i>Auditory Discovery</i> <i>Visual Discovery</i> <i>Riddle</i> <i>Skywriting</i> <i>Linkages</i> <i>Reading Application</i> <i>Extended Reading Practice</i> | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Handwriting | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Spelling | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Components of Language | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mastery Checks | | ✓ | | ✓ | | |