

SUCCESS IN



# ACADEMIC CONTENT CLASSES

**SCIENCE**

**VOCABULARY**

*Plus*

**Reading and Spelling Intervention**

- *Parallels important science vocabulary and improves content area reading, spelling, and writing*
- *Helps at-risk students while teaching important content for all students*

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# Teacher's Guide

With *Success in Academic Content Classes, Science Vocabulary*, science teachers provide powerful reading and spelling intervention in just a couple of hours a week for seven weeks, helping at-risk students succeed and teaching important content to all students.

## Introduction

For many students, reading and spelling problems that begin in elementary school lead to academic failure in middle school and high school. Students who read far below grade level are denied access to school success and are at risk of failing and dropping out of school. The present school drop out rate is over 25 percent.

Middle school and high school students must decode, read fluently, and interpret books with complex words and technical information. Traditional reading intervention methods have not worked for most of the students. Even when students make progress in traditional interventions, they are not connected to the academic curriculum and its domain specific vocabulary.

Matthew Glavach, Ph.D., has designed three easy-to-use intervention programs that parallel important English, science, and social studies vocabulary while improving content area reading, spelling, and writing. He refers to this intervention method as parallel reading intervention, a method that greatly increases the possibility for struggling and all students to succeed in academic classes.

*Success in Academic Content Classes, Science Vocabulary*, is a program that includes instruction in advanced decoding, domain specific vocabulary (science vocabulary), spelling, and reading fluency (with oral and silent speed reading). Students reading at grade three through high school levels benefit from the program.

*Success in Academic Content Classes, Science Vocabulary*, has seven lessons (with a packet for each lesson). Each of the seven lessons has the same structure, making the program comfortable for students and easy for teachers to present. Presenting the program requires only that teachers become familiar with the lesson structure by using the "For the Teacher" directions given for lesson 1, following in the Teacher's Guide.

Most words students encounter after fifth grade are complex, content-specific words.<sup>(1)</sup>

EASY TO USE IN THE REGULAR CLASSROOM.

The unique program design makes it possible for all students to benefit from the same program.

IMPROVED CLASSROOM BEHAVIOR

Successful students are not focused on inappropriate classroom behavior.

# LESSON 1 (and lesson structure for LESSONS 2 through 7)

## ● For the Teacher:

For each student, duplicate and staple pages 2, 3, 4, 5, 6, and 7 to make the lesson 1 packet. (When you are ready to begin lesson 1, give a lesson packet to each student.) Also for each student, duplicate page 8, Spelling Test, Lesson 1, page 9, Vocabulary Tests 1 and 2, Lesson 1, and page 10, Science Word Search 1, to be given after the lesson 1 packet is completed.

## ● PAGE 1. (LESSON DIVIDER)

## ● PAGE 2. (WORD SORT)

**Instruction 1.** Pronounce the words in the word box with students. (The words are separated by syllables to help with pronunciation and spelling.) Discuss the general word meanings with students. Students tell words with which they are familiar.

**Instruction 2.** Students write the words under the correct ending spelling patterns. They write each word as one word.

## **Instruction 3. (OPTIONAL BUT RECOMMENDED)**

Students cut out the word cards and use them for word sorting activities. Students practice sorting the words into the appropriate categories. They say the words as they sort them. Later, they practice speed sorts to help them work toward automatic word recognition. Speed sorts work well with students in pairs or cooperative groups. Members of the pair or group that completes the word sort in the shortest time are the winners. Winners usually receive bonus points or prizes.

## ● PAGE 3. (VOCABULARY STUDY 1)

**Part 1. Instruction.** Students write definitions for the Vocabulary Study 1 words. Definitions are given on page 5. Tell students to study the definitions as they write

Presenting words by syllables helps students break words into manageable parts.

Sorting words into categories helps students see features common to each word group.

Extra word exposure helps cement words into long-term memory.

*When students are thousands of words behind in vocabulary, the solution is teaching domain specific vocabulary.*

Writing definitions helps imprint word meanings to memory and is an activity where all students can succeed.

Seeing words in different contexts aids in putting words into long-term memory.

A strong content area vocabulary improves text comprehension.

If decoding is slow, not automatic, students will have a difficult time comprehending what they read.  
"High speed word recognition frees a reader's cognitive resources so that meaning of the text can be the focus of attention." <sup>(2)</sup>

them because they will be tested on them. Discuss word meanings and examples with students.

**Part 2. Instruction.** Individual students draw personal pictures of vocabulary words they select for themselves. For words that are difficult to draw with pictures, students write each word in an interesting, decorative way. (Personal drawings help students remember word meanings.) After students have completed the drawings, they write a sentence about each picture they have drawn. To reinforce word meanings with all students, display selected drawings in the classroom, and discuss the word meanings.

### ● PAGE 4. (VOCABULARY STUDY 2)

**Instruction.** Students complete Vocabulary Study 2 the same as they completed Vocabulary Study 1, with the addition of three extra credit vocabulary words that students find in a dictionary.

(Depending on the group, students may complete this page at a later time or on another day.)

### ● PAGE 5. (VOCABULARY DEFINITIONS)

### ● PAGE 6. (RAPID WORD READING)

**Part 1. Instruction.** Students draw an arc under each syllable in the words. They complete this part independently or you may read the words at a quick, challenging pace, while students follow along and draw arcs under the syllables. Students make greater progress when you read the words. The words are in the same sound, visual patterns as the Rapid Word Reading Card in part 2.

**Part 2. Rapid Word Reading Card (timed).** Timed reading increases student reading speed and automatic word recognition. The words are grouped by specific sound, visual patterns.

**Instruction 1.** Before the timing, you and all students read the words aloud together.

“Reading fluency refers to the ability of readers to read quickly, effortlessly, and efficiently with good, meaningful expression.” <sup>(3)</sup>

Research has demonstrated that helping students read in phrases will improve their reading fluency and overall reading achievement. <sup>(4), (5)</sup>

Good oral reading leads to better silent reading.

Silent reading’s focus is on meaning, the goal of reading.

**Instruction 2.** Then individually, students read as many words as they can in one minute aloud softly to themselves or to you or to a student partner. If students finish reading the words, they start again at the beginning and add to the total number of words they have already read. One point is subtracted for each missed word. Students write their scores at the bottom of the page. (Limit or have no interruptions of oral timed reading. If students need help say the word and let them continue reading.)

## ● **PAGE 7. (TIMED ORAL AND SILENT SPEED READING)**

### **Part 1. (ORAL)**

**Instruction 1.** Before the timing, you and all students read the phrases and sentences aloud together.

**Instruction 2.** Then individually, students read as many words in the phrases and sentences as they can in one minute aloud softly to themselves or to you or to a student partner. If students finish reading, they may start again at the beginning and add to the total number of words they have already read. One point is subtracted for each missed word. Students write their scores at the bottom of the page.

### **Part 2. (SILENT READING PRACTICE AND TEST) (OPTIONAL BUT RECOMMENDED)**

Tell students that: The Timed Silent Speed Reading will train their eyes for silent, fast reading. They will learn to see words in groups, or clumps. They will stop regressions, having their eyes go back as they are reading. To do this they will try not to subvocalize, to say the words in their heads.

Students complete the Timed Silent Reading Practice before the Timed Reading Test.

**PRACTICE. Instruction.** (SAY AND DEMONSTRATE TO THE STUDENTS:)

● First you will complete the Silent Reading Practice. Then you will take the Silent Reading Practice.

"The average person speaks at 150 to 200 words per minute. If you vocalize as you read, you can't read faster than this rate. By contrast, speed readers read above 400 words per minute." <sup>(6)</sup>

Improving reading speed slows regressions, going back and rereading.

The spelling test improves decoding, pronunciation, and spelling.

The brain organizes words by patterns. Learning consistent word patterns helps students with spelling and word pronunciation.

- Take out a pencil, but do not write on the page.
  - You will move your pencil smoothly, from left to right on the page under the phrases and sentences, as if you were quickly underlining. Follow the movement of the pencil with your eyes as you read.
  - It is all right if your eyes are not moving exactly with the pencil. For now, the goal is to move the pencil smoothly.
  - Try not to subvocalize, to say the words in your head.
  - When I say "begin", you will practice for one minute, and I will time you. If you finish start again at the beginning and add to the total number of words you have already read. Remember, try to follow the pencil with your eyes.
  - Begin. (TIME FOR ONE MINUTE.)
- (NOTE: USE THE PRACTICE WITH THE PENCIL FOR LESSON 1 THROUGH LESSON 4 ONLY.)

**TEST. Instruction.** (SAY TO THE STUDENTS:)

- Now we will take the Silent Speed Reading Test. For this timing do not use a pencil. Try to look at the words in groups, or clumps, as you go down the page. Try to see the words in groups of three or more. Seeing multiple words trains your peripheral vision, the area of vision just outside the line of direct sight. When I say "begin", I will time you for one minute.
- Begin. (TIME FOR ONE MINUTE.)
- Write your scores and times at the bottom of the page.

● **PAGE 8. (SPELLING TEST)**

**Instruction 1.** The Spelling Test words are on page 73. Before administering the test, write the words on the chalkboard and review them with students.

**Instruction 2.** (SAY TO THE STUDENTS:)

I will say each word. You will write the letters on the lines to complete each word.

Number 1 is solar. Write the letters on the lines to complete the word solar.

**Solar** means relating to or involving the sun (REPEAT)  
**solar.**

Number 2 is **polar**. (CONTINUE THE PATTERN OF SAYING THE WORD, USING THE WORD IN A PHRASE OR SENTENCE, AND REPEATING THE WORD.)

● **PAGE 9.** (VOCABULARY TEST 1 AND VOCABULARY TEST 2, LESSON 1)

Each Vocabulary Test reviews nine vocabulary words. Vocabulary Test 1 is based on Vocabulary Study 1. Vocabulary Test 2 is based on Vocabulary Study 2.

**TEST 1. Instruction.**

Before administering Vocabulary Test 1, review the words and the word definitions from Vocabulary Study 1 orally using a general review or a game with all students in the class together. It is important that the review or the game is oral and that all students are involved.

**TEST 2. Instruction.**

Follow Vocabulary Test 1 instruction. Add bonus points for each extra credit word completed.

● **PAGE 10.** (WORD SEARCH PUZZLE 1)

The Word Search Puzzle reinforces lesson 1 words.

For additional timed reading practice, **25 Graded Reading Passages** (for science and social studies at approximately grade 3 through grade 10 readability levels) is offered at **[www.StrugglingReaders.com](http://www.StrugglingReaders.com)**.

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- (4) Rasinski, T.V. (1990). The effects of phrase boundaries in texts. Bloomington, IN: ERIC Clearinghouse on Reading and Communication Skills (ED 313 689).
- (5) Rasinski, T.V., Padak, N., Linek, W., & Sturtevant, E. (1994). The effects of fluency development instruction on urban second grader readers. *Journal of Educational Research*, 87, 158-164.
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