

# Essential features of effective reading instruction for struggling readers in grades 4-12

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# A Window of Opportunity

A young child with a joyful expression is looking out from a window. The child is wearing a dark blue long-sleeved shirt with white stripes on the cuffs and a red collar. The window frame is dark, and the background outside is bright and slightly blurred, suggesting an outdoor setting. The overall tone is optimistic and hopeful.

To every complex problem, there is  
a simple solution...  
*that doesn't work.*

*Mark Twain*

We are going to have to work both harder and smarter before we are successful

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We need improvements in:

1. State level policies and support
2. District level support and organization
3. School organization, scheduling, and management
4. Quality and consistency of classroom instruction
5. Intervention systems and supports

All parts of our very complex school/instructional systems need to work together much more effectively

# The Many Strands that are Woven into Skilled Reading

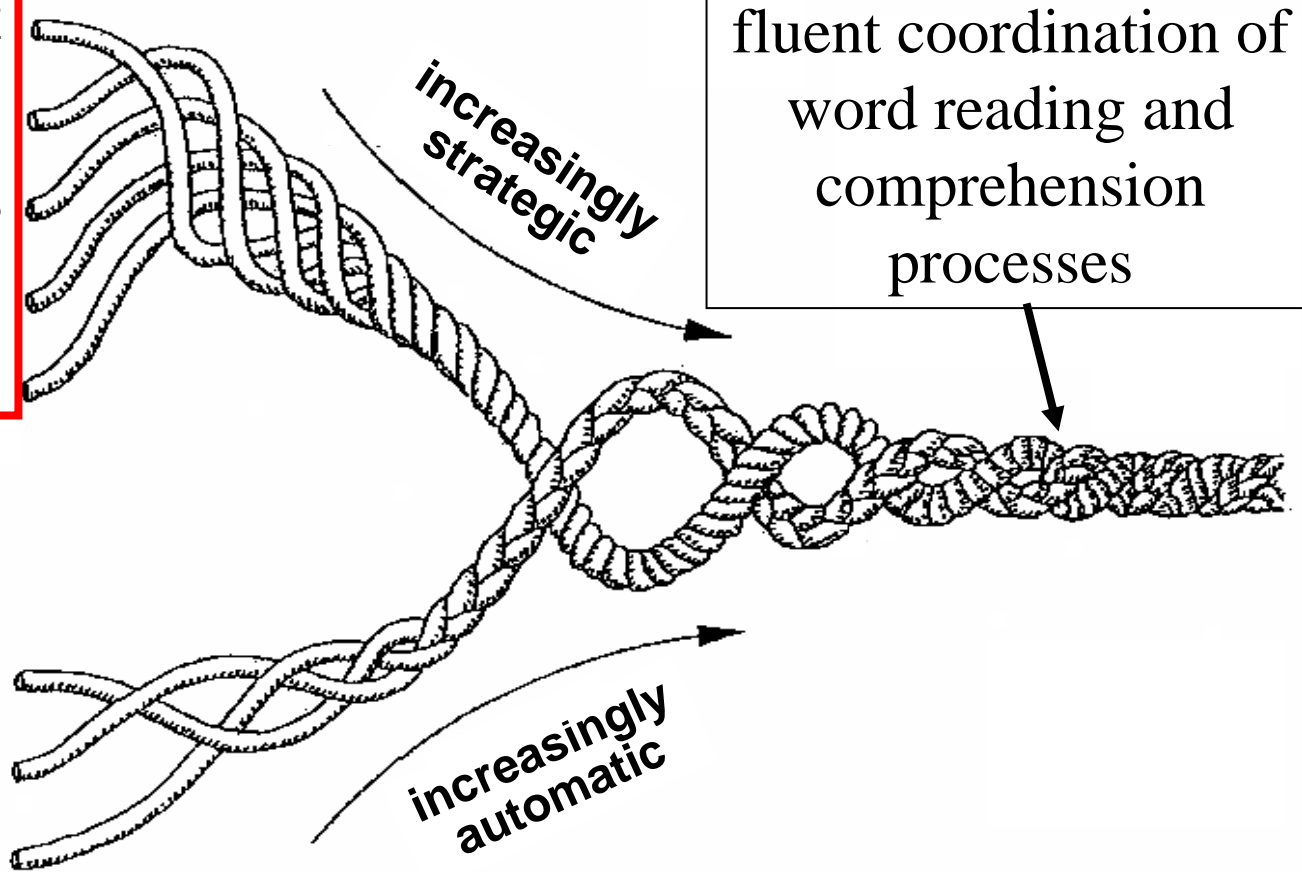
(Scarborough, 2001)

## LANGUAGE COMPREHENSION

BACKGROUND KNOWLEDGE  
VOCABULARY KNOWLEDGE  
LANGUAGE STRUCTURES  
VERBAL REASONING  
LITERACY KNOWLEDGE

## WORD RECOGNITION

PHON. AWARENESS  
DECODING (and SPELLING)  
SIGHT RECOGNITION



Skilled Reading-  
fluent coordination of  
word reading and  
comprehension  
processes

Reading is a multifaceted skill, gradually acquired over years of instruction and practice.

# A study of one State's accountability measure of reading comprehension

Gave 2 hour battery of language, reading, nonverbal reasoning, and memory tests to approximately 200 children in each grade (3<sup>rd</sup>, 7<sup>th</sup>, and 10<sup>th</sup>) at 3 locations in the state

Language – Wisc Vocab and Similarities

Listening comprehension with FCAT passage

Reading– Oral reading fluency, Decoding Fluency

NV Reasoning – Wisc Matrix Reasoning, Block Design

Working Memory– Listening span, Reading Span

## A couple of important points about the FCAT

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It requires students to read relatively long passages before asking them to answer questions. This places special demands on reading fluency.

Passage length at different levels

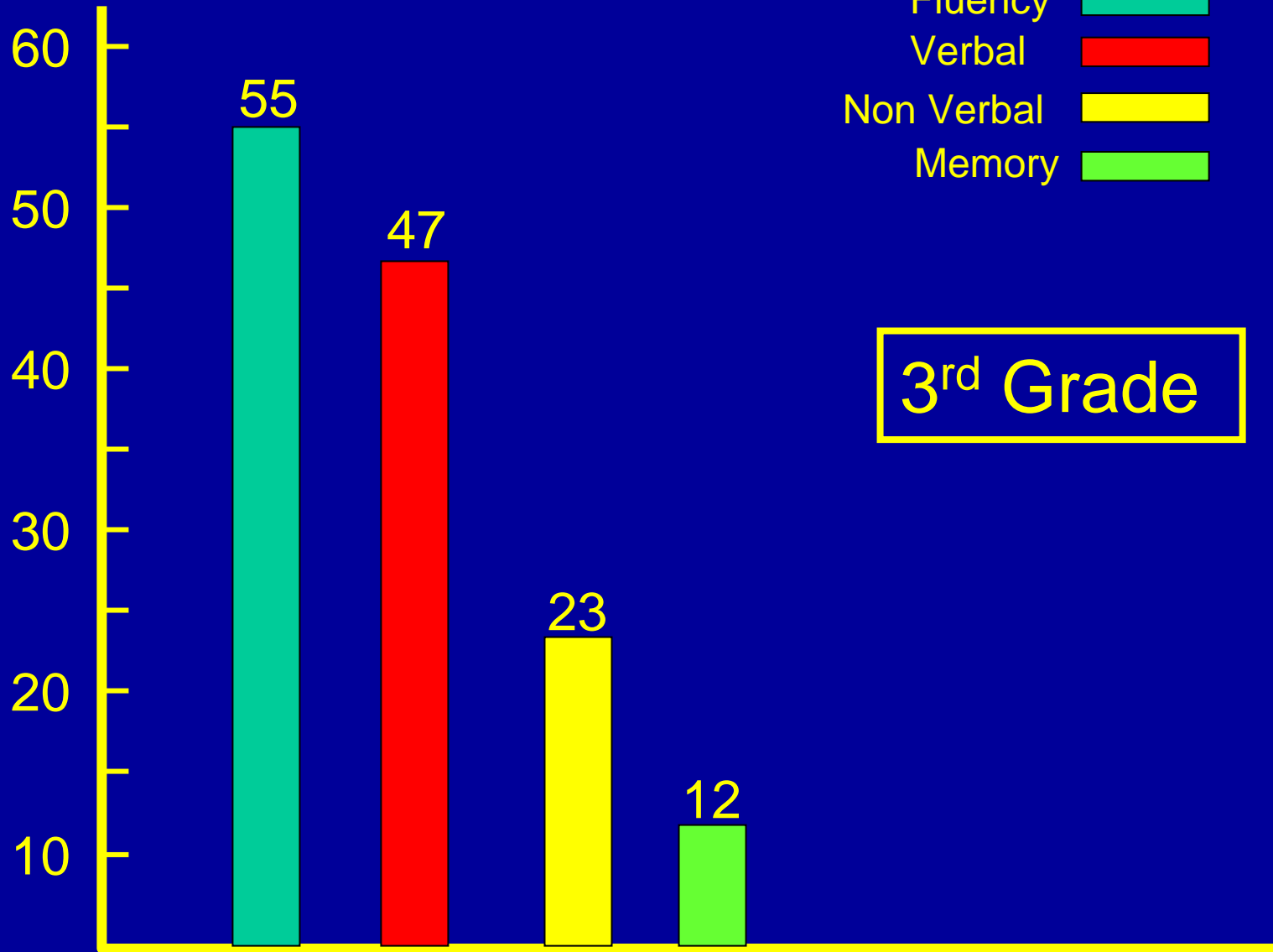
3<sup>rd</sup> grade – 325 words

7<sup>th</sup> grade – 816 words

10<sup>th</sup> grade – 1008 words

The percentage of questions requiring “complex thinking skills” increases from 30% in 3<sup>rd</sup> to 70% in 10<sup>th</sup> grade

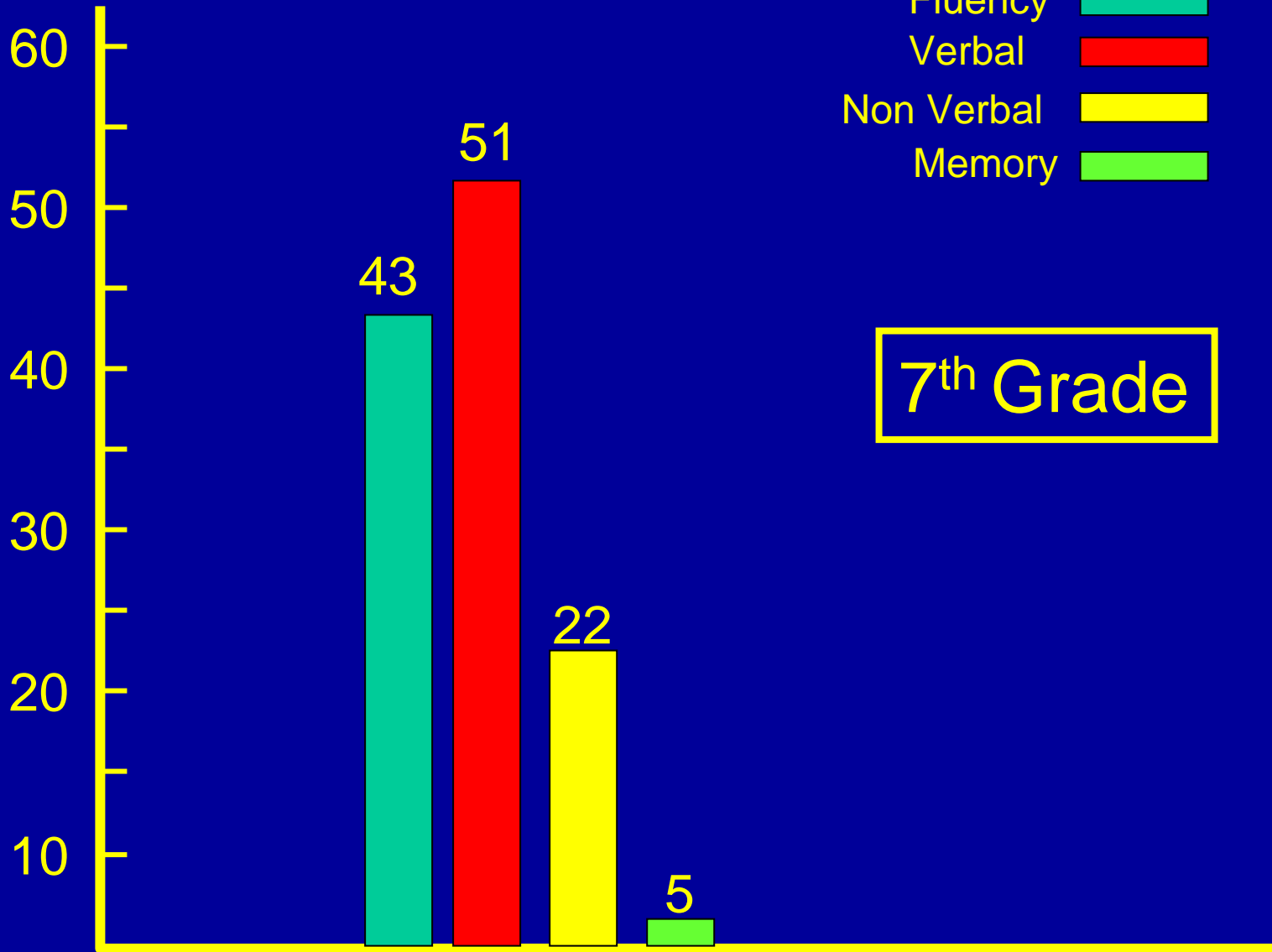
Percent of variance accounted for



- Fluency
- Verbal
- Non Verbal
- Memory

3<sup>rd</sup> Grade

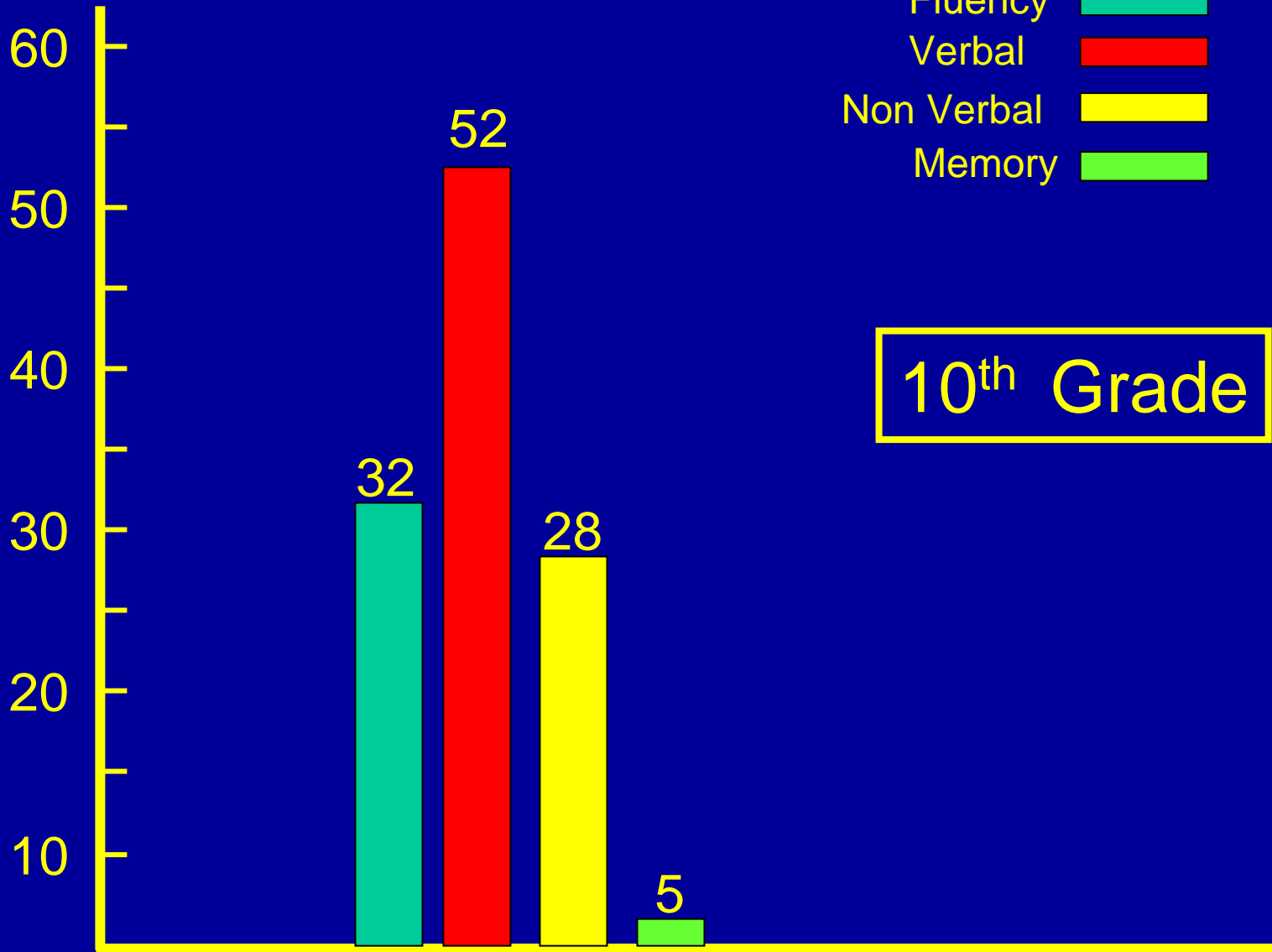
Percent of variance accounted for



- Fluency
- Verbal
- Non Verbal
- Memory

7<sup>th</sup> Grade

Percent of variance accounted for



10<sup>th</sup> Grade

# What skills are particularly deficient in level 1 and level 2 readers at 10<sup>th</sup> grade?

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<u>Skill/ability</u>	<u>FCAT Performance Level</u>				
	1	2	3	4	5
WPM on FCAT	130	154	175	184	199
Fluency percentile	8 <sup>th</sup>	30 <sup>th</sup>	68 <sup>th</sup>	87 <sup>th</sup>	93 <sup>rd</sup>
Phonemic decoding	18 <sup>th</sup>	27 <sup>th</sup>	45 <sup>th</sup>	56 <sup>th</sup>	72 <sup>nd</sup>
Verbal knowledge/ reasoning	30 <sup>th</sup>	60 <sup>th</sup>	66 <sup>th</sup>	84 <sup>th</sup>	89 <sup>th</sup>

# Big Points:

Individual differences among students in broad verbal knowledge and reasoning skills become an increasingly important factor explaining differences in performance on measures of comprehension of complex text as we go from grades three to ten

A lot of the growth required to maintain grade level skills in reading from grade 3 to 10 is growth in general cognitive, or intellectual ability and knowledge



# Big Points amplified:

To maintain grade level reading skills between 3 and 10, students must:

Learn to recognize many thousands of new words “by sight” in order to maintain fluency

One interesting fact and one interesting estimate:

Printed school English (through 8<sup>th</sup> grade) contains around 88,500 distinct word families (persecute, persecution, persecutor, persecuting)

The average fifth grader encounters around 10,000 new words per year.

# Big Points amplified:

To maintain grade level reading skills between 3 and 10, students must:

Learn to recognize many thousands of new words “by sight” in order to maintain fluency

Learn the meaning of many thousands of new words

Grow in knowledge of the world and how it works

Improve their thinking and reasoning skills

Learn to utilize more complex reading strategies

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In middle and high school, reading can be increasingly defined as “thinking guided by print.”

# Primary Characteristics of Struggling Readers in Middle and High School

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They are almost always less fluent readers—sight word vocabularies many thousands of words smaller than average readers

Usually know the meanings of fewer words

Usually have less conceptual knowledge

Are almost always less skilled in using strategies to enhance comprehension or repair it when it breaks down

# Teaching Reading is Urgent

A student at the 10<sup>th</sup> percentile reads about 60,000 words a year in 5<sup>th</sup> grade

A student at the 50<sup>th</sup> percentile reads about 900,000 words a year in 5<sup>th</sup> grade

Average students receive about 15 times as much practice in a year

Percentile Rank	Minutes Per Day		Words Read Per Year	
	Books	Text	Books	Text
98	65.0	67.3	4,358,000	4,733,000
90	21.2	33.4	1,823,000	2,357,000
80	14.2	24.6	1,146,000	1,697,000
70	9.6	16.9	622,000	1,168,000
60	6.5	13.1	432,000	722,000
50	4.6	9.2	282,000	601,000
40	3.2	6.2	200,000	421,000
30	1.8	4.3	106,000	251,000
20	0.7	2.4	21,000	134,000
10	0.1	1.0	8,000	51,000
2	0	0	0	8,000

# Closing the gap in middle and high school: the fundamental challenge

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Each year, the demands of text become more challenging

## Approximately 1<sup>st</sup> grade level

“Clifford loves to go visiting. When he visits his sister in the country, he always calls ahead. Clifford always arrives on time. Don’t be late. Knock before you walk in. He knocks on the door before he enters. He wipes his feet first. Wipe your feet. Clifford kisses his sister. He shakes hands with her friend. Shake hands. Wash up before you eat. Clifford’s sister has dinner ready. Clifford washes his hands before he eats. Clifford chews his food with his mouth closed. He never talks with his mouth full. Don’t talk with your mouth full. Help clean up. Clifford helps with the clean-up. Say good-bye. Then he says thank you and good-bye to his sister and to his friend. Everyone loves Clifford’s manners” --  
Norman Bridwell - *Clifford’s Manners*

## NAEP 4<sup>th</sup> grade level

Just what Tom's thoughts were, Ned, of course, could not guess. But by the flush that showed under the tan of his chum's cheeks the young financial secretary felt pretty certain that Tom was a bit apprehensive of the outcome of Professor Beecher's call on Mary Nestor. "So he is going to see her about something important, Ned?" "That's what some members of his party called it." "And the're waiting here for him to join them?" "Yes, and it means waiting a week for another steamer. It must be something pretty important, don't you think, to cause Beecher to risk that delay in starting after the idol of gold?" "Important? Yes, I suppose so," assented Tom. – Victor Appleton, *Tom Swift in the Land of Wonders*

## NAEP Grade 12

Pierre had been educated abroad, and this reception at Anna Pavlovna's as the first he had attended in Russia. He knew that all the intellectual lights of Petersburg were gathered there and, like a child in a toyshop, did not know which way to look, afraid of missing any clever conversation that was to be heard. Seeing the self-confident and refined expression on the faces of those present, he was always expecting to hear something very profound. At last he came to Mono. Here the conversation seemed interesting and he stood waiting for an opportunity to express his own views, as young people are fond of doing – Leo Tolstoy War and Peace

# Closing the gap in middle and high school: the fundamental challenge

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Each year, the demands of text become more challenging

- New words appear for the first time

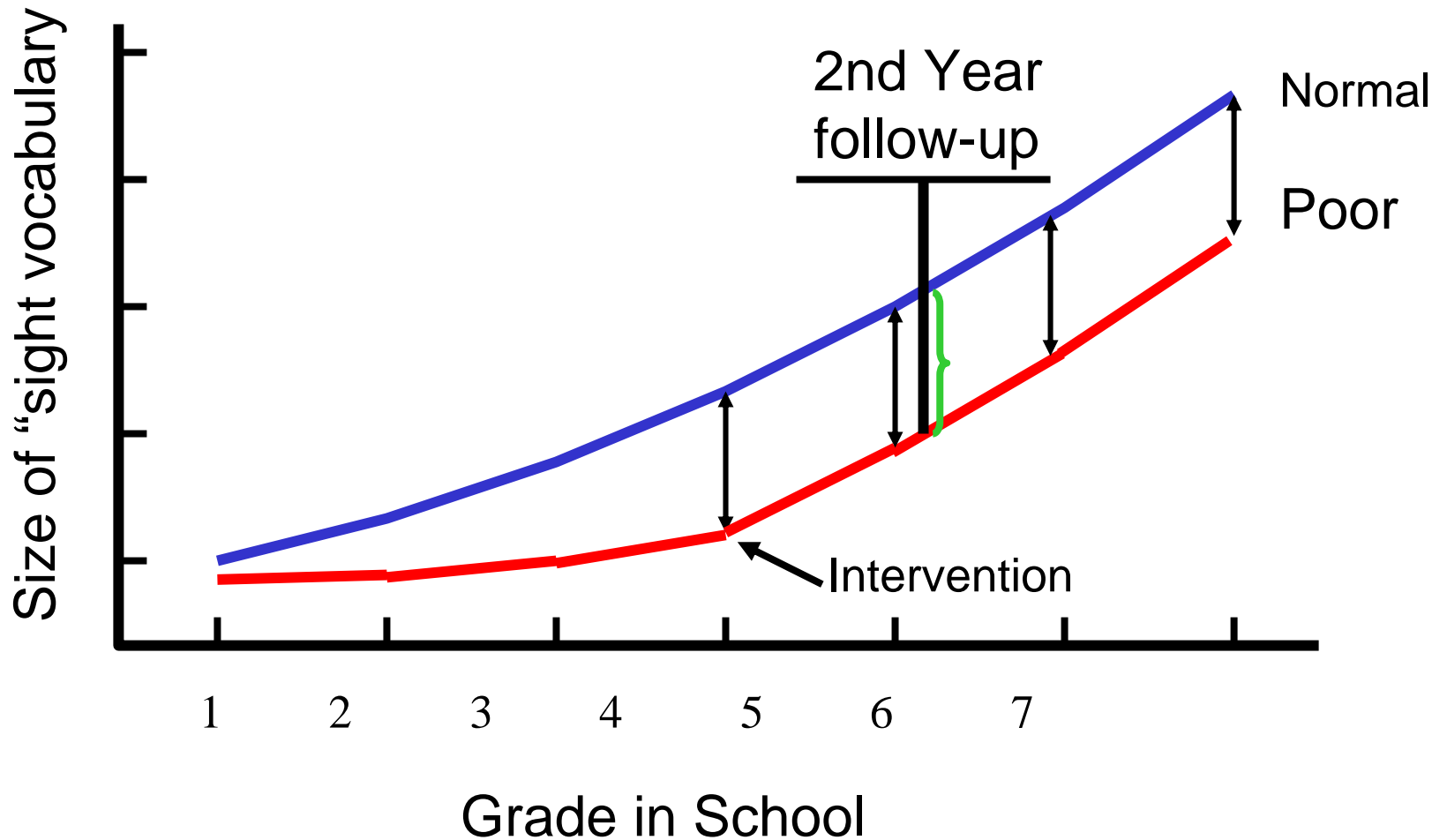
- Sentences become longer and more complex

- Correct interpretation requires a broader range of knowledge

- The length of what you are expected to read increases

How do you “close the gap” when the requirements for “grade level proficiency” increase every year?

# Projected growth in “sight vocabulary” of normal readers and struggling readers before and after remediation



# Improving reading skills in middle and high school

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1. Intensify our efforts to prevent reading difficulties in the first place
2. Be sure we have powerful remedial programs in place in 4<sup>th</sup> and 5<sup>th</sup> grade
3. Offer a continuum of intensity in reading instruction while also improving the contribution of content area teachers to literacy growth.

# Improving reading skills in middle and high school

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1. Schedule a three hour block every day for students with reading skills more than two years below grade level

Word level skills- accuracy and fluency

Strategy instruction and engagement in thinking about text

Both embedded and systematic vocabulary instruction

Lots of guided, supported practice in reading

What do we know about the effectiveness of interventions for older students who continue to struggle in reading?

Can phonics be successfully taught to students who still struggle in this area as fourth graders?

Should phonics be taught to students beyond early elementary school who still do not have proficient skills in this area?

# A study of intensive, highly skilled intervention with 60 children who had severe reading disabilities

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Children were between 8 and 10 years of age

Had been receiving special education services for an average of 16 months

Nominated as worst readers: at least 1.5 S.D's below grade level

Average Word Attack=69, Word Identification=69, Verbal IQ=93

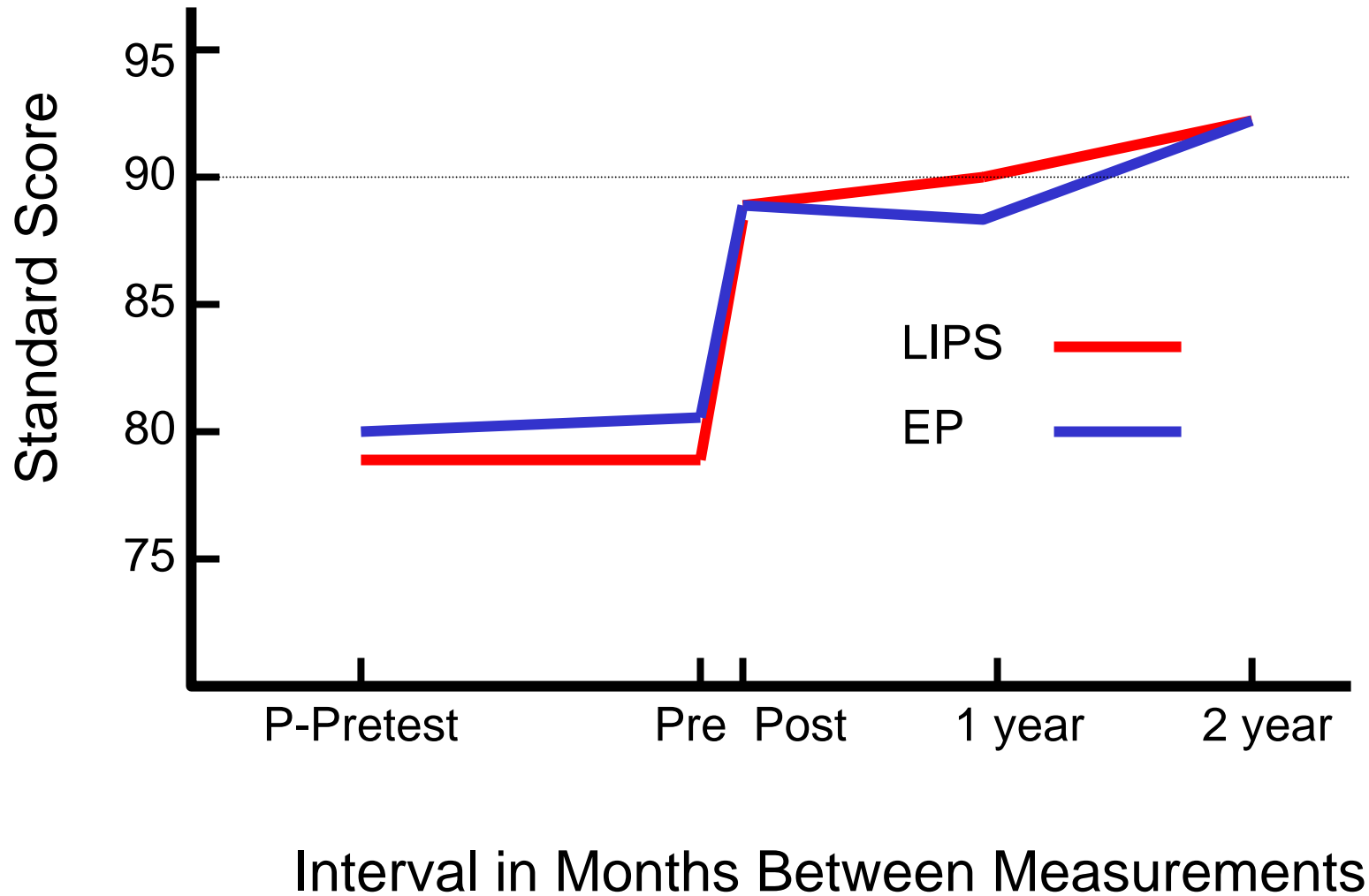
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Randomly assigned to two instructional conditions that both taught “phonics” explicitly, but used different procedures with different emphasis

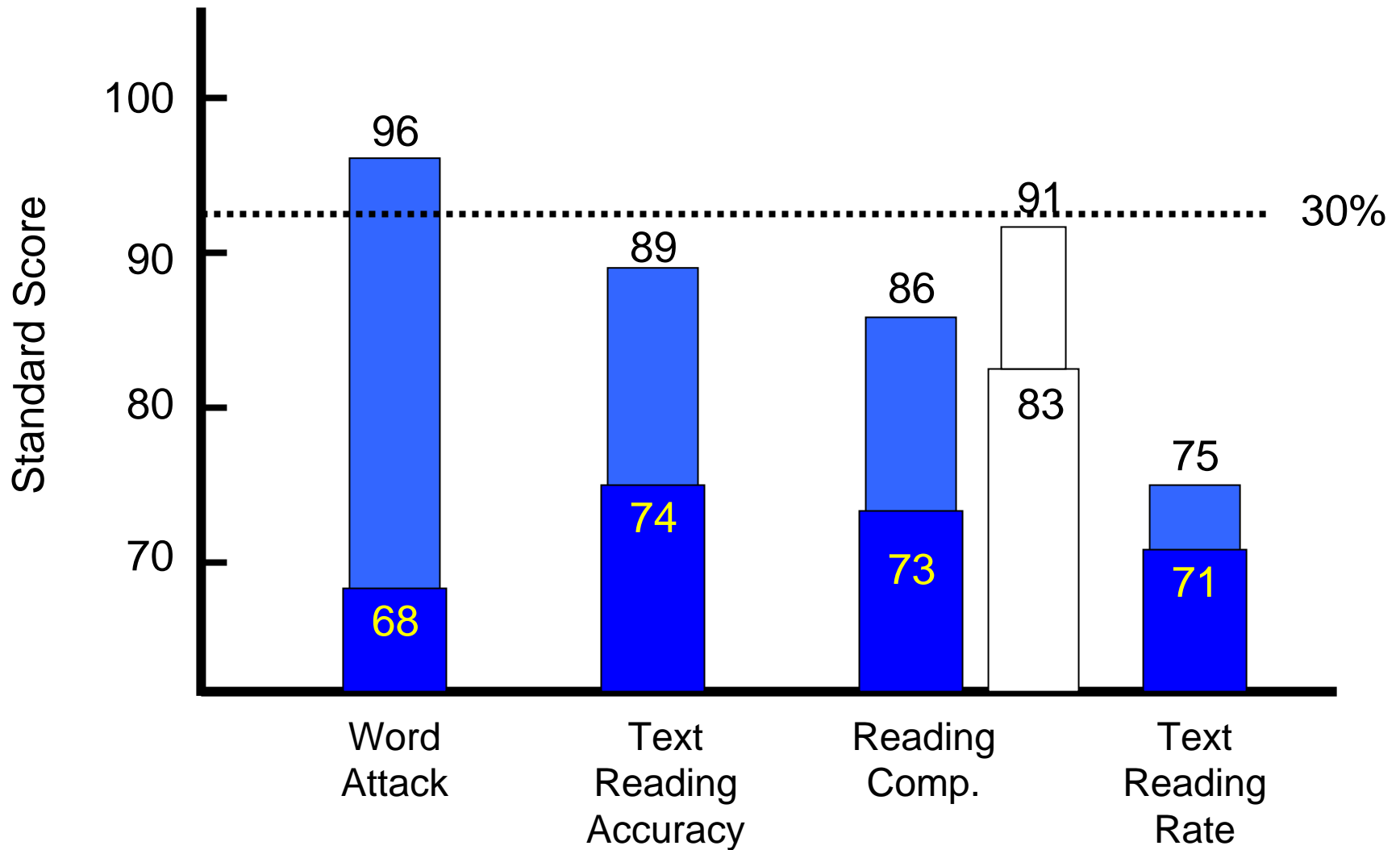
Children in both conditions received 67.5 hours of one-on-one instruction, 2 hours a day for 8 weeks

Children were followed for two years after the intervention was completed

# Growth in Total Reading Skill Before, During, and Following Intensive Intervention



# Outcomes from 67.5 Hours of Intensive intervention



# Oral Reading Fluency was much improved on passages for which level of difficulty remained constant

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Absolute change in rate from pretest to 2-year follow-up.

Most difficult  
passage

Pretest -- 38 WPM, 10 errors

Posttest -- 101 WPM, 2 errors

Next most difficult  
passage

Pretest -- 42 WPM, 6 errors

Posttest -- 104 WPM, 1 error

A School-based, treatment control study of 40 students

60% Free and reduced lunch

Mean Age 12 years (range 11-14)

45% White, 45% Black, 10% other

53% in special education

Received 94-108 hours (mean=100) hours of instruction

Intervention provided in groups of 4-5

Remedial Methods: Spell Read P.A.T.

Mean Word Identification Score = 83

Children begin with word level skills around 10th percentile

## A Brief Description of the Spell/Read P.A.T. program

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Distribution of activities in a typical 70 minute session:

40 minutes -- Phonemic awareness/phonics

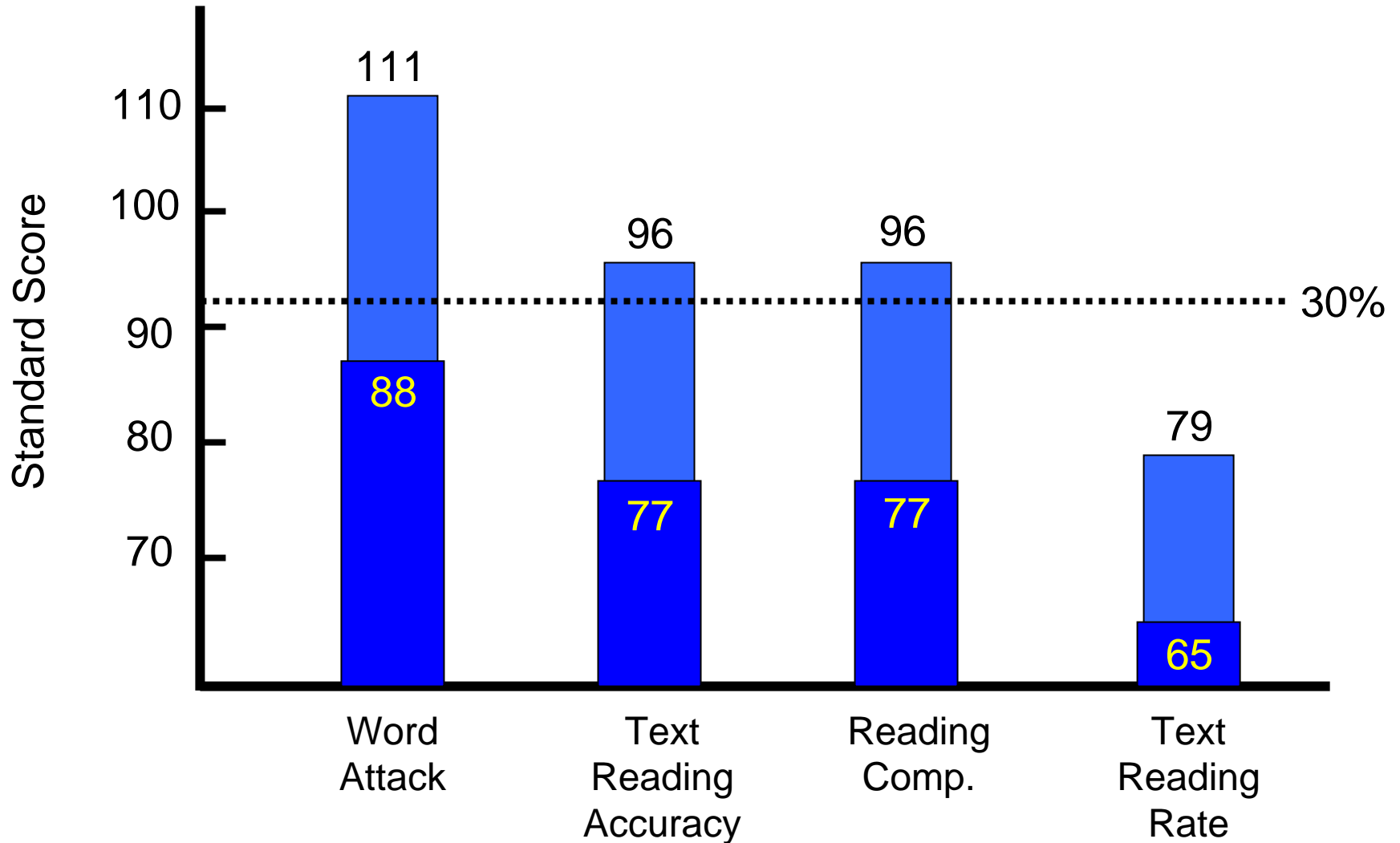
20 minutes -- shared reading

7 minutes -- writing about what was read

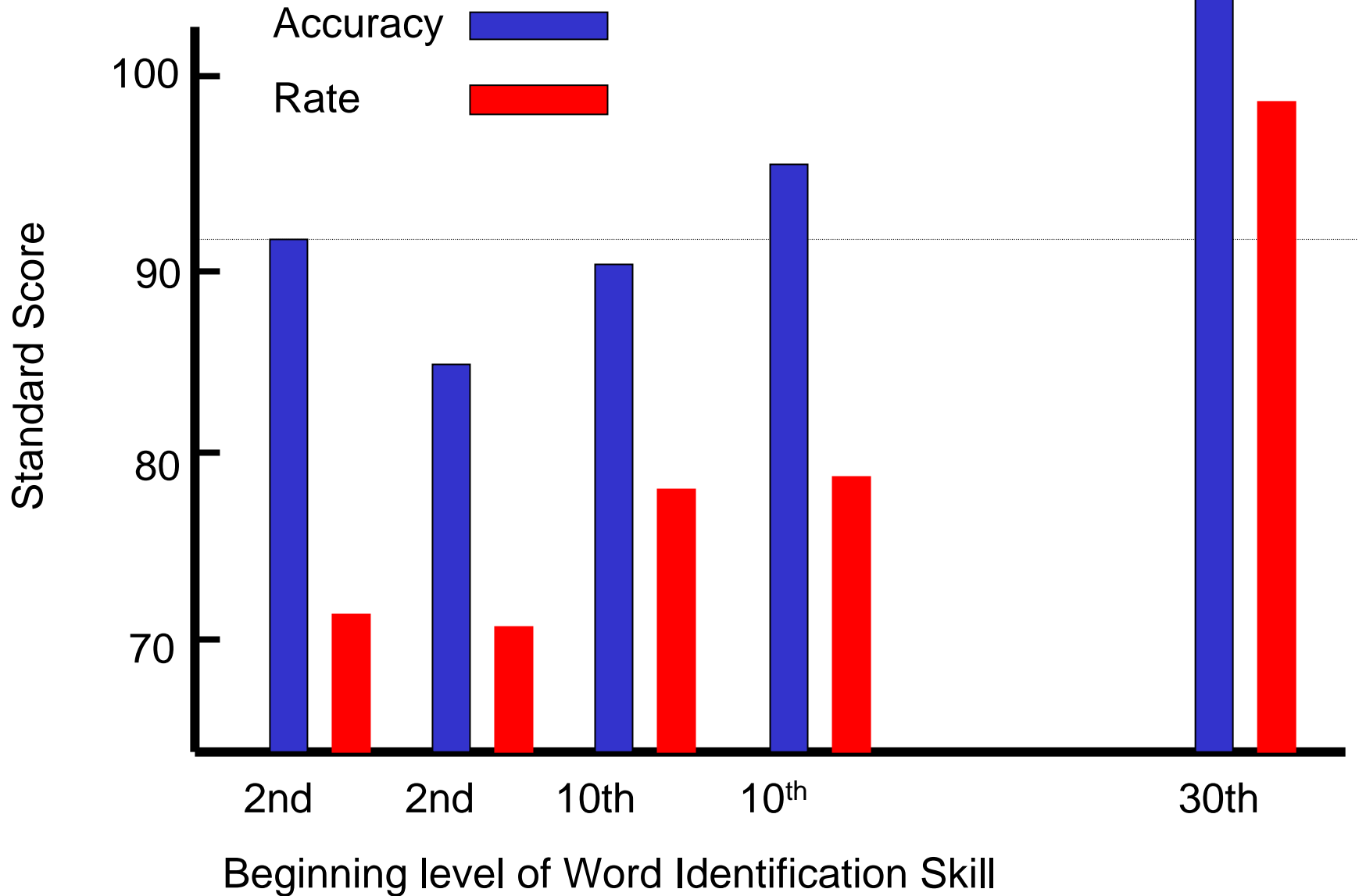
3 minutes -- wrap up

Systematic instruction in phonic elements beginning with mastery of 44 phonemes at single syllable level through multi-syllable strategies. Fluency oriented practice from beginning of instruction. Discussion and writing to enhance comprehension.

# Outcomes from 100 Hours of Small Group Intervention--Spell Read



# Disparity in outcomes for rate vs. accuracy in five remediation studies



# Improving reading skills in middle and high school

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1. Schedule a 90 minute block every day for other students reading below grade level

Word level skills- fluency

Strategy instruction and engagement in thinking about text

Both embedded and systematic vocabulary instruction

Lots of guided, supported practice in reading

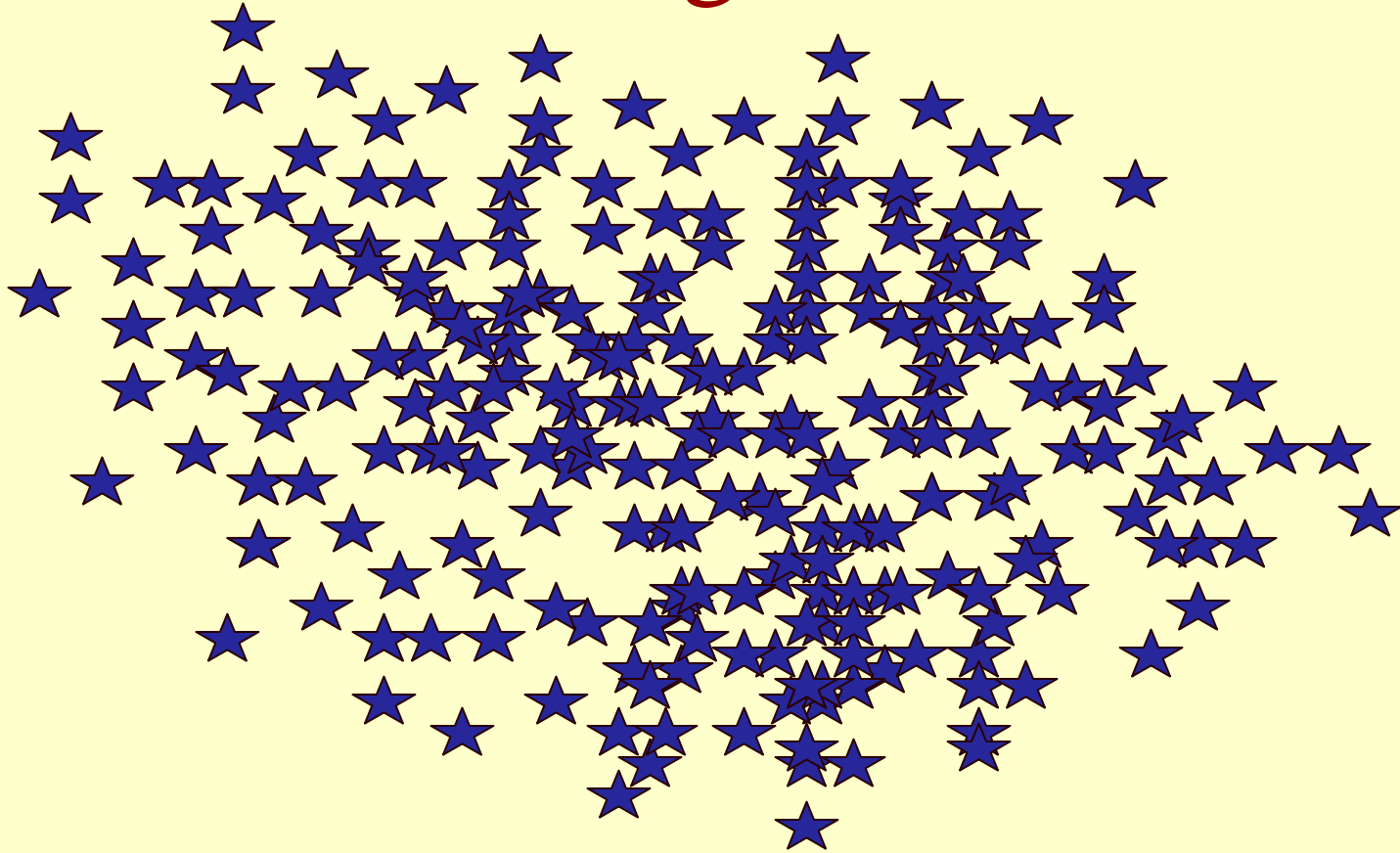
# The Content Literacy Continuum

<http://smarttogether.org/clc/index.html>

1. Intensive remedial work for students with serious reading difficulties
2. More powerful instruction in the content areas so that all children learn essential content-even poor readers
3. Embedded instruction in strategies for learning and performance-content teachers

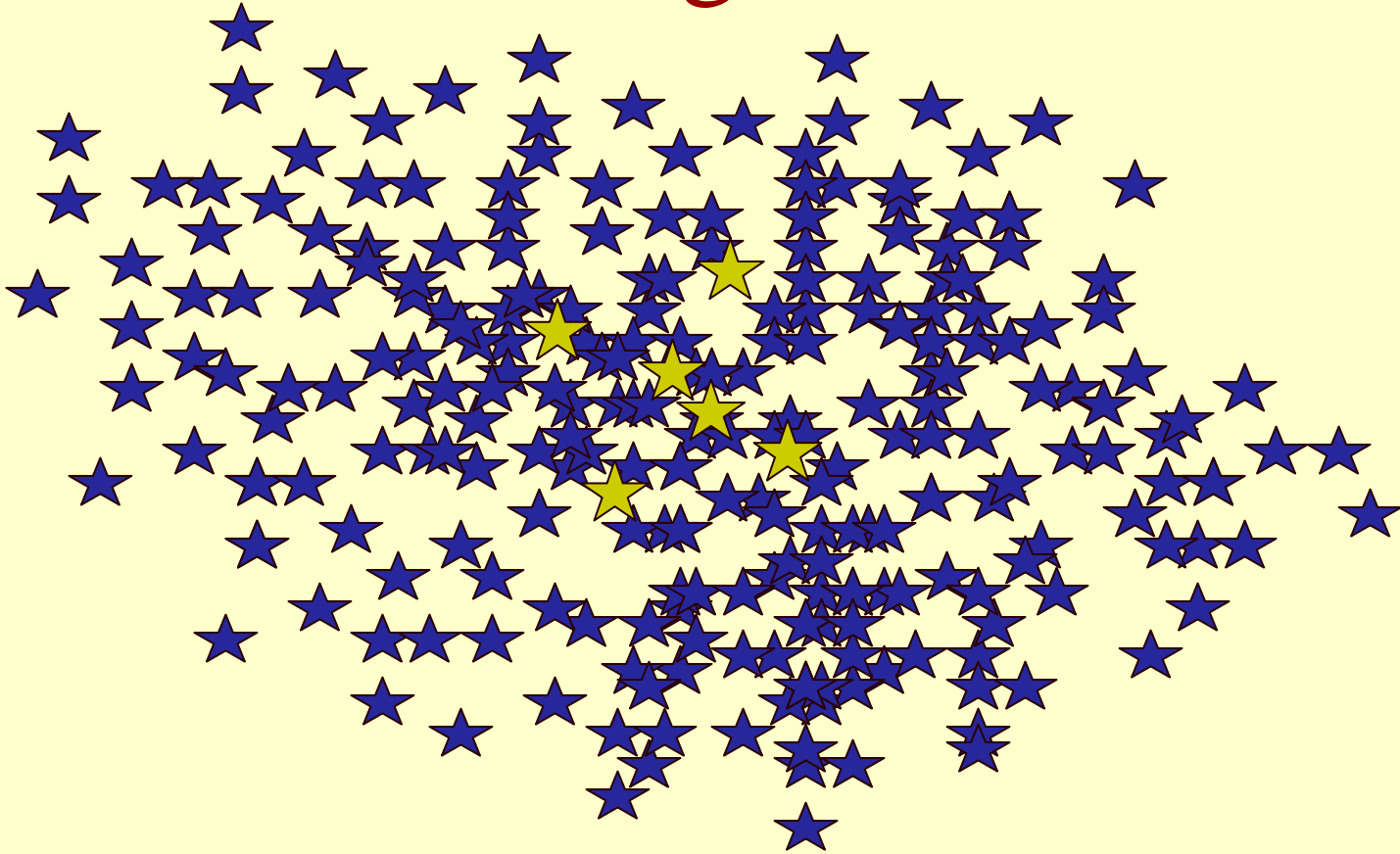
# Thinking About Critical Content

## Knowledge



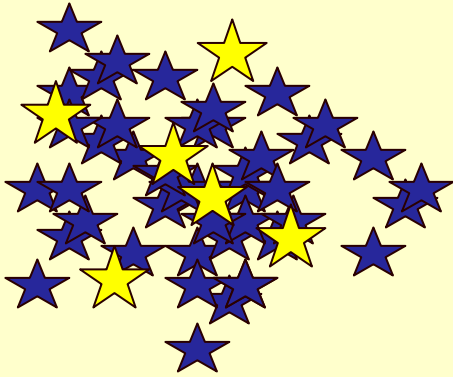
# Thinking About the Curriculum...

## Knowledge

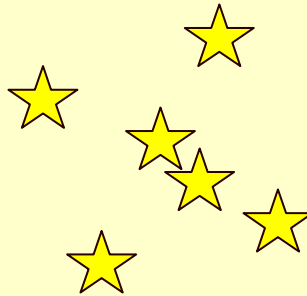


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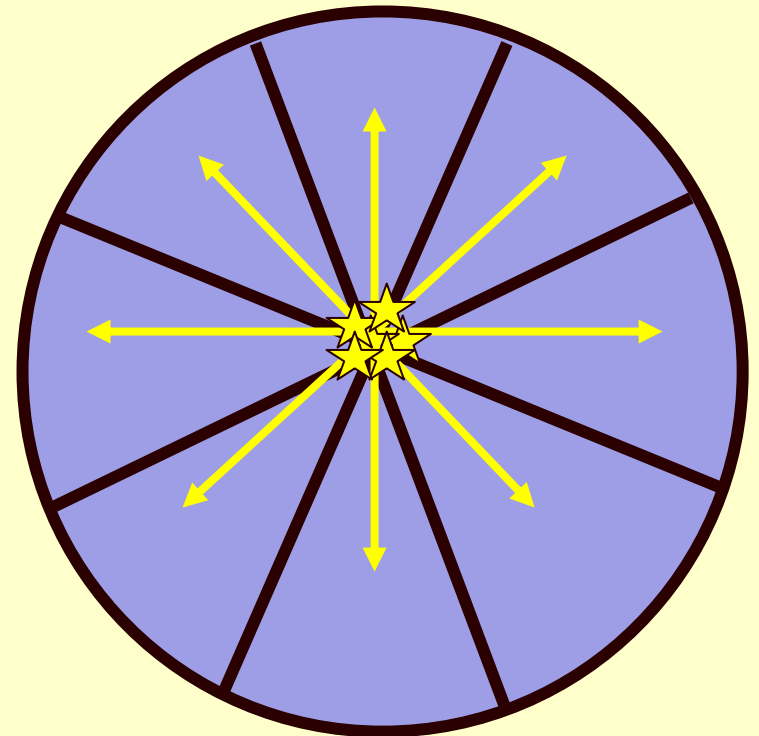
Knowledge

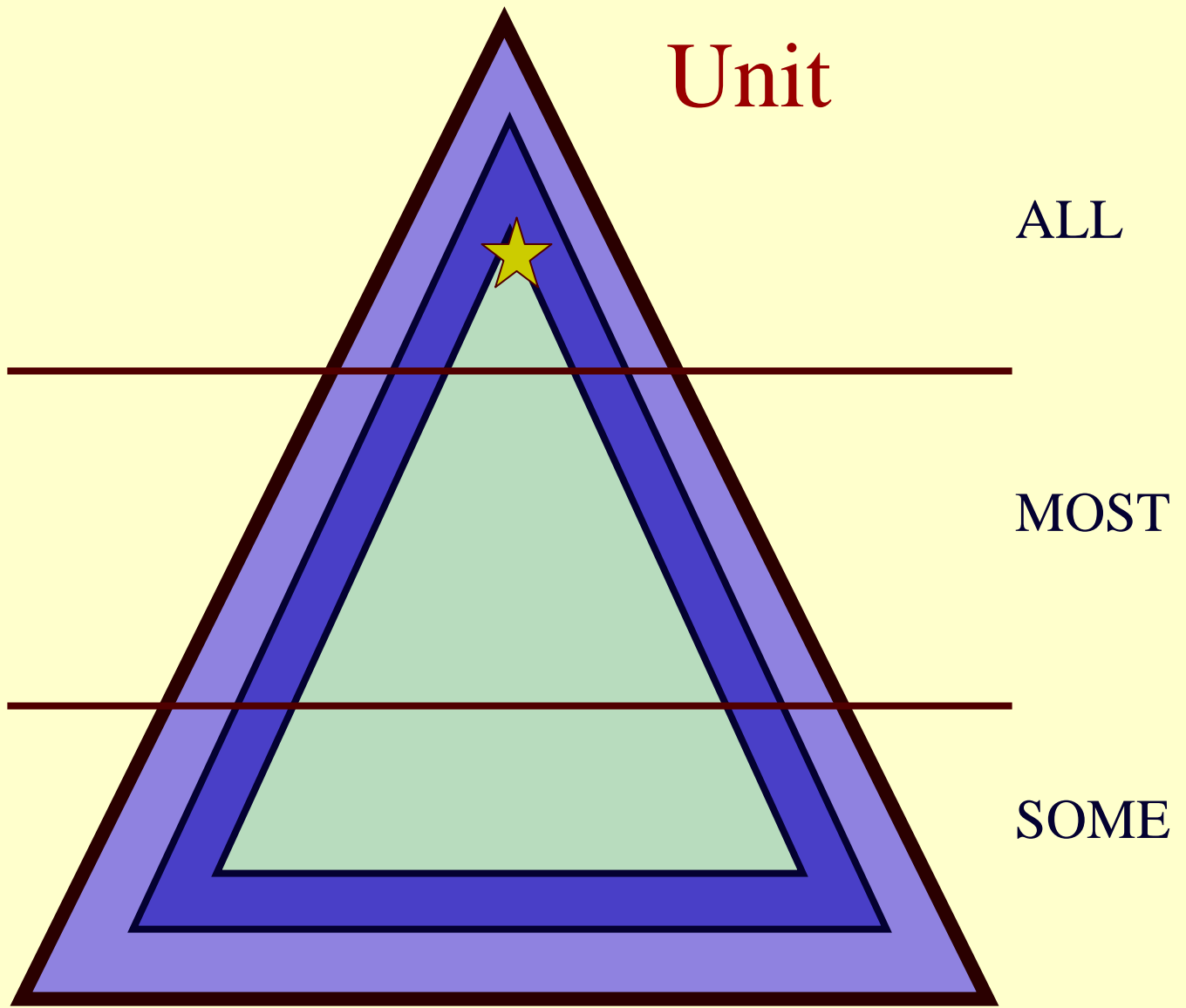


Critical Content



Course





Unit

ALL

MOST

SOME

# Content Enhancement Teaching Routines

## Planning and Leading Learning

Course Organizer  
Unit Organizer  
Lesson Organizer

## Explaining Text, Topics, and Details

Framing Routine  
Survey Routine  
Clarifying Routine

## Teaching Concepts

Concept Mastery Routine  
Concept Anchoring Routine  
Concept Comparison Routine

## Increasing Performance

Quality Assignment Routine  
Question Exploration Routine  
Recall Enhancement Routine

“If it weren’t for students impeding our progress in the race to the end of the term, we certainly could be sure of covering all the content.”

However, the question should not be whether we are covering the content, but whether students are with us on the journey.” Pat Cross

“Give me a fish while you’re teaching me how to catch my own. That way I won’t starve to death while I’m learning to tie flies.”

# Learning Strategies Curriculum

## Acquisition

Word  
Identification

Paraphrasing

Self-  
Questioning

Visual  
Imagery

Interpreting  
Visuals

Multipass

## Storage

First-Letter  
Mnemonic

Paired Associates

Listening/Notetaking

LINCS Vocabulary

## Expression of Competence

Sentences

Paragraphs

Error  
Monitoring

Themes

Assignment  
Completion

Test-Taking

# A comprehensive literacy solution for middle and high school

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1. Remember that the thinking and knowledge demands for literacy increase every year

Content area teachers must teach content more powerfully, and they must help students think about text more effectively

2. Remember the struggling readers are far behind their peers in many areas

Teach them reading skills as intensively and skillfully as you can manage

# Thank You

[www.fcrr.org](http://www.fcrr.org)

Science of reading section