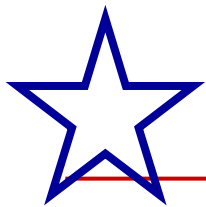
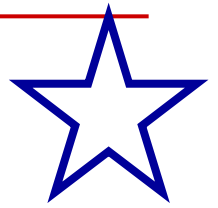


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# Children with Mental Retardation Can Learn to Read: Setting and Achieving Goals



March, 2006

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# Project Staff



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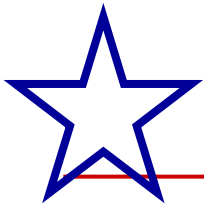
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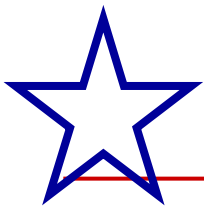
Dawn Levy



# Multi-Site Research



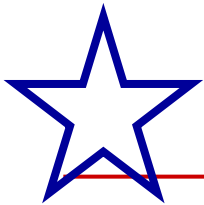
- £ Research is funded by Institute of Education Sciences (IES)
- £ Coordinated with other research projects
  - Š University of North Carolina – Charlotte
  - Š Georgia State University



# Overview of Session

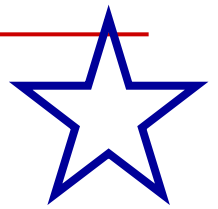


- £ Brief overview of research project
- £ Important literacy goals and how our intervention addressed them
- £ Case studies of students in the project

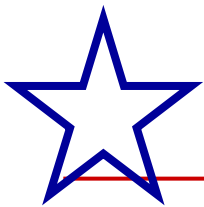


# Why do the project?

## Review of Research Literature



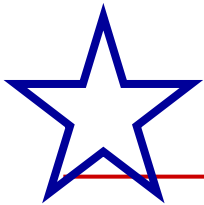
- £ Some research supporting sight word instruction
- £ Some research supporting phonics instruction
- £ But...
  - Š No studies were large scale
  - Š No studies employed a comprehensive reading program that included explicit, systematic phonics instruction



# Research Questions



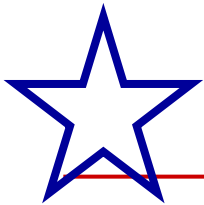
1. Are *reading interventions* that have been proven to be effective in teaching children who are very low readers also effective for teaching children with *cognitive disabilities or borderline IQ scores*?
2. What *level of reading competence* can be achieved by these students with the use of these interventions across several years?



# Research Questions



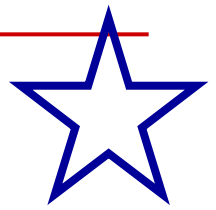
3. When provided with this type of instruction, are these students afforded greater *access to participation in the general education curriculum?*







# Participants



£ Total: 158

Š 102 “Borderline”

- <sup>a</sup> according to *WASI: Wechsler Abbreviated Scales of Intelligence*  
OR school-testing
- <sup>a</sup> IQ 70-79

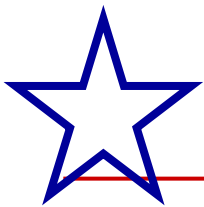
Š 36 Mild range

- <sup>a</sup> IQ 55-69

Š 20 Moderate range

- <sup>a</sup> IQ 40-54

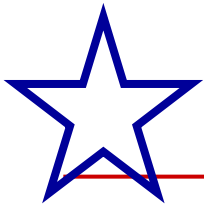
£ Students randomly assigned to experimental or contrast group



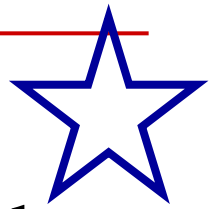
# Intervention



- £ Comprehensive, explicit, systematic phonics-based reading program
- £ Implemented daily by research teachers
- £ 35- to 45-minute sessions
- £ The intervention will be the **FOCUS** of **TODAY'S SESSION**



# Curriculum: Proactive Reading



(Published as *Early Interventions in Reading* by SRA)

## £ “Foundation” Level

- Š Skills typically taught in kindergarten
- Š Unpublished

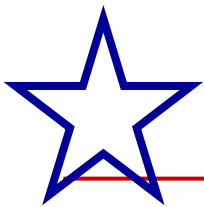
## £ Level One

- Š Skills typically taught in first grade
- Š Published

## £ Level Two

- Š Skills typically taught in second grade
- Š Recently published

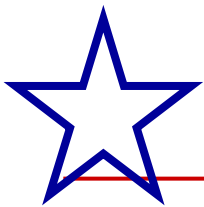
*Students began in either “Foundation” or Level One*



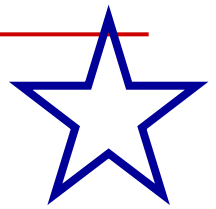
# Curriculum: Critical Features



£ Explicit and Systematic 7770R#Q%



# Preliminary Findings: Progress Monitoring Data (DIBELS)



## £ Initial Sound Fluency

§ Measure of ability to identify the first sound in a word

§ Which word begins with /c/?

## £ Phoneme Segmentation Fluency

§ Measure of ability to segment words into individual phonemes

§ Tell me the sounds in cat. /c/ /a/ /t/

§ Partial credit is given

## £ Nonsense Word Fluency

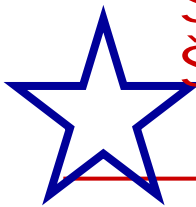
§ Measure of ability to say the sounds in a list of CVC non-words

§ Students can go “sound by sound” or read whole words

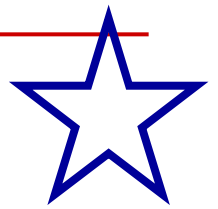
## £ Oral Reading Fluency

§ 1 minute timed reading

§ # of words correct per minute



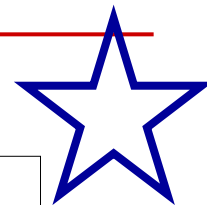
# Preliminary Findings: Progress Monitoring Data (DIBELS)



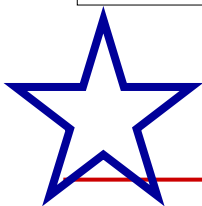
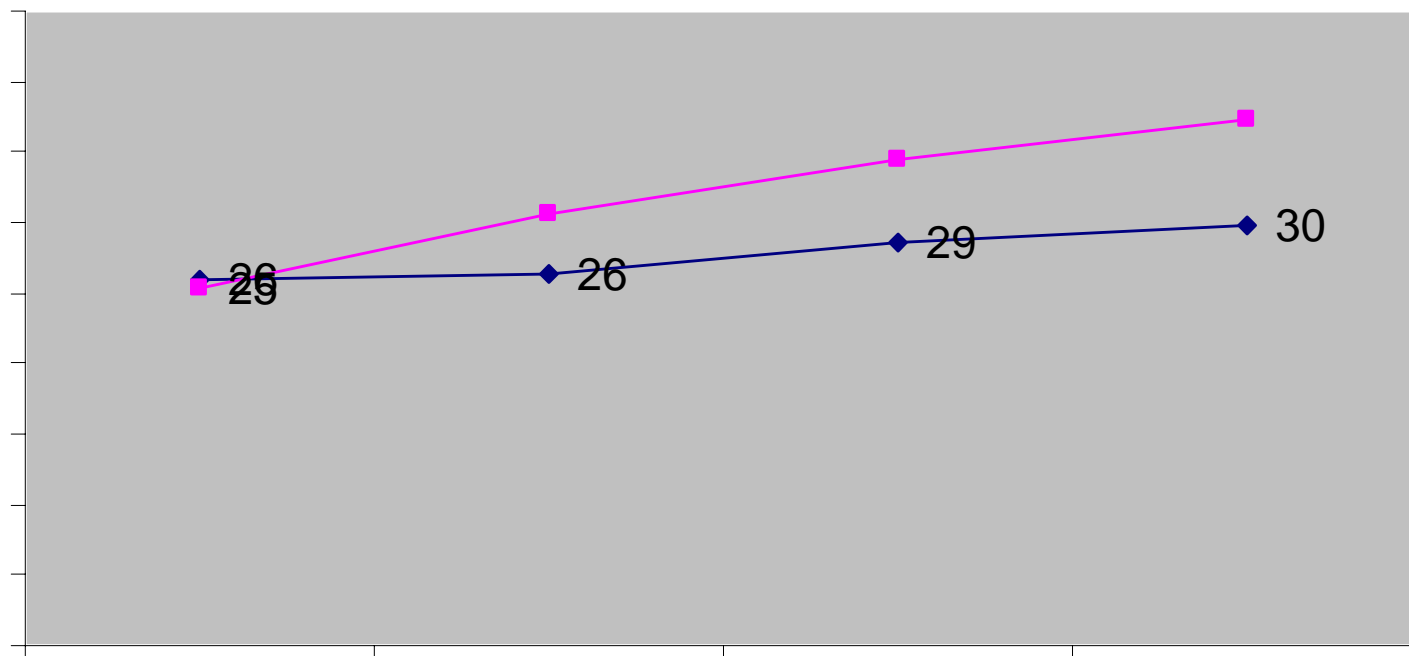
- £ Does not include 13 treatment students and 10 comparison students who began intervention late
- £ Only after first 12 weeks
- £ No significant findings; all trends in favor of experimental group
- £ Trends are highly favorable for PSF
- £ Trends are somewhat favorable for ORF
- £ VERY PRELIMINARY



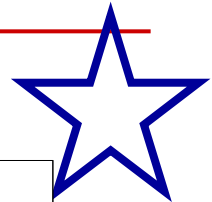




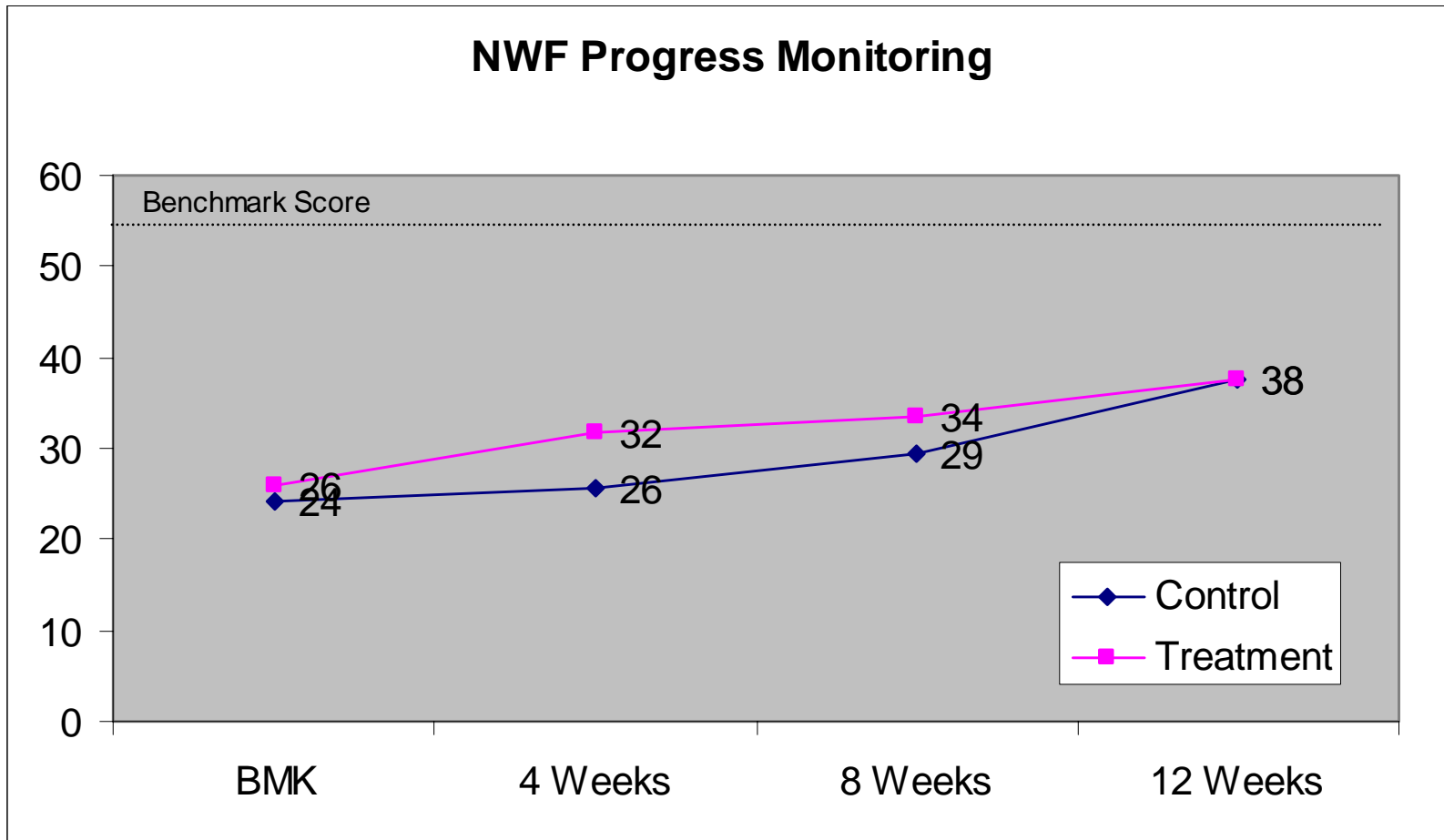
## PSF Progress Monitoring





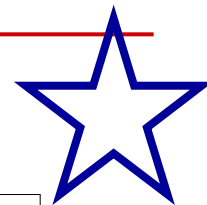


## NWF Progress Monitoring

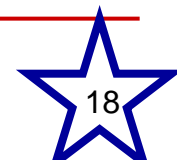
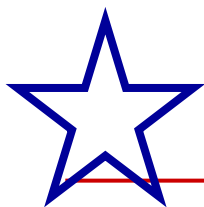
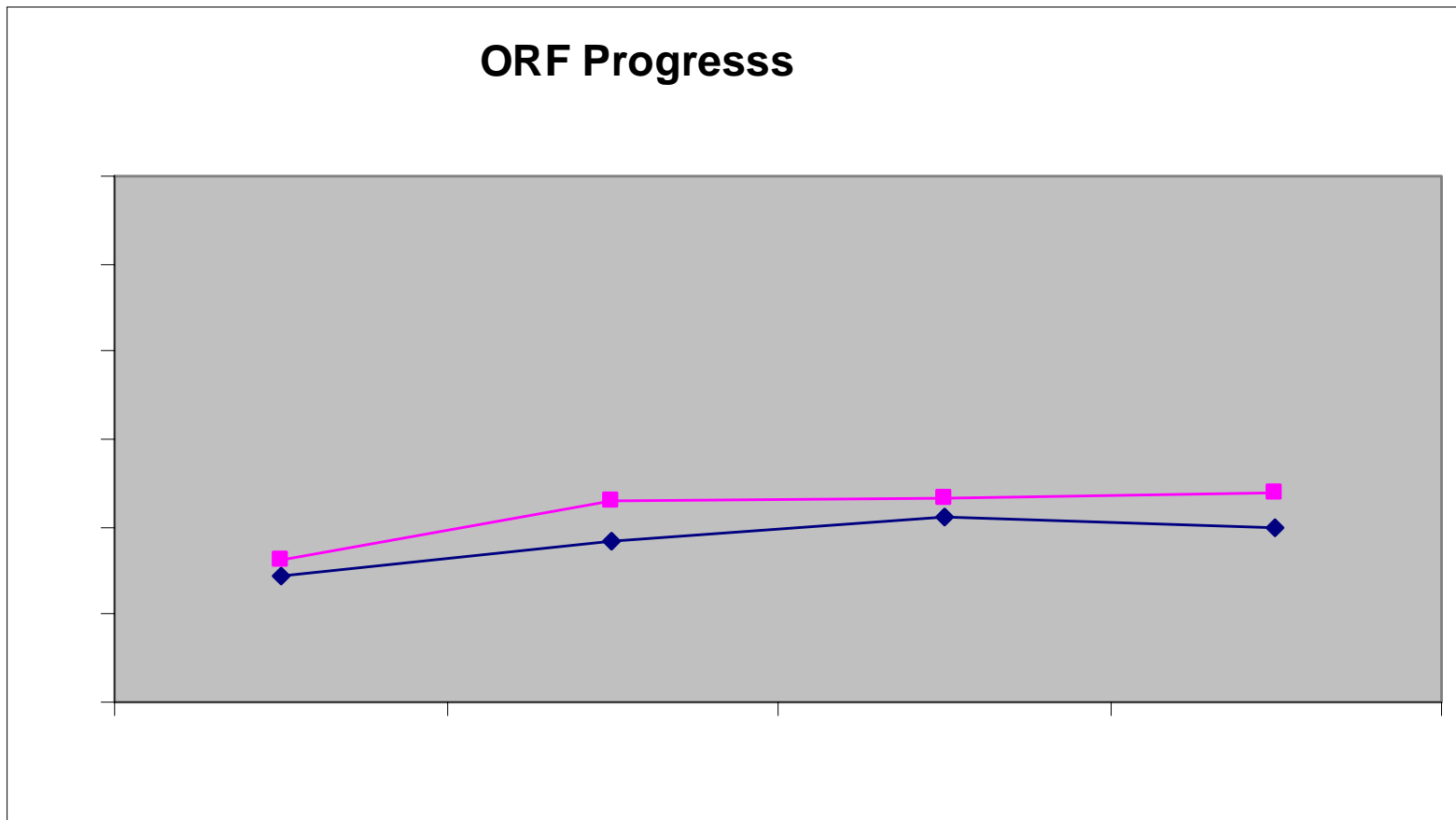


SD range from 22.9 to 37.1

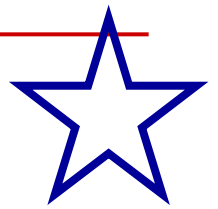




## ORF Progresss



# To be continued...



## Pre/Post Academic Measures

### £ Comprehensive Test of Phonological Processing (CTOPP)\*

§ Blending Words and NonWords\*

§ Segmenting Words\*

§ Sound Matching (first sound and last sound)\*

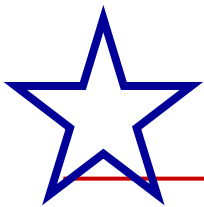
§ Rapid Letter Naming\*

### £ Test of Word Reading Efficiency (TOWRE)

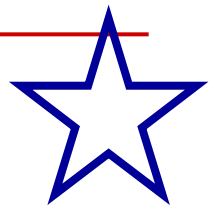
§ Phonemic decoding efficiency subtest

§ Sight word (real word) efficiency subtest

\*common measure



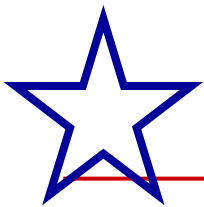
# To be continued...



Pre/Post Academic Measures

Woodcock Language Proficiency Battery- R  
(WLPB-R)\*

- § Language composite
- § Memory for sentences\*
- § Picture vocabulary
- § Oral vocabulary
- § Listening comprehension\*
- § Verbal analogies
- § Reading composite
- § Letter-word identification\*
- § Passage comprehension\*
- § Word Attack\*

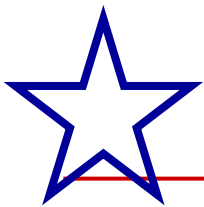




# Goals for Next Year

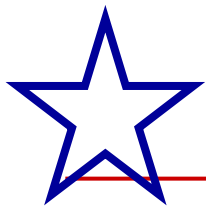


- £ Keep going!
- £ Careful intervention modification for students making little or no progress
- £ Developing additional oral language component
  - Š Listening comprehension
  - Š Oral expression
  - Š Vocabulary



# Curriculum: Proactive Reading

(Published as *Early Interventions in Reading* by



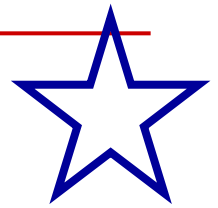
March, 2006

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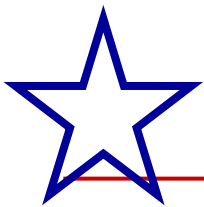


23

# Curriculum: Critical Features



£ Explicit and Systematic 7770R#Q%







# Curriculum: Immediate Feedback and Modeling

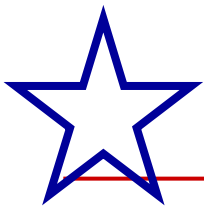


Model: “My turn” or “I”

Lead: “Our turn” or “We”

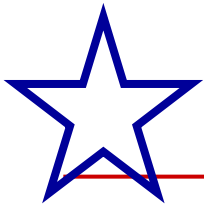
Test: “Your turn” or “You”

Retest: “Backing up”





# Curriculum: Providing Scaffolding



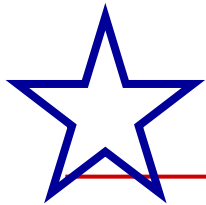
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26

# Phonological awareness and



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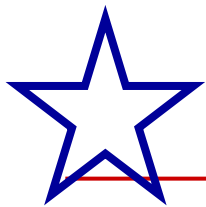
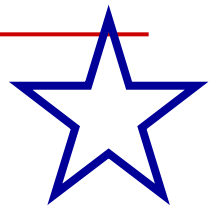


27





# PA Instruction: "First Sound



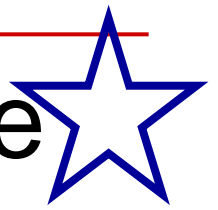
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30

# PA Instruction: First Sound Game

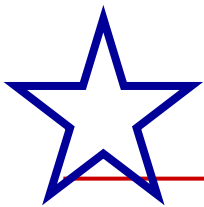


£ Scaffolded at Foundation Level

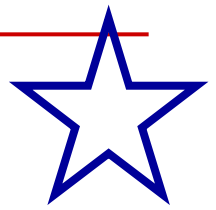
£ Similar Procedures

Š This is shhheep. This is fffish. (magnet pictures)

Š Which one begins with /fff/?



# More



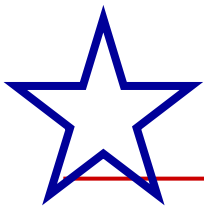
## Phonemic Awareness Goals

So far...

- £ Isolate first sound
- £ Blending onset and rime

Next...

- £ Blending individual phonemes into a word
  - Š Teacher: /mmm/ /aaa/ /nnn/
  - Š Student: man
- £ Segmenting words into individual phonemes
  - Š Teacher: Say “man” slowly.
  - Š Student: /mmm/ /aaa/ /nnn/







# PA Instruction: Blending Words



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33





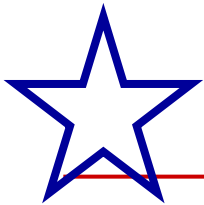
# Goal: Letter-Sound Correspondence



£ Letter-Sound Introduction



£ Letter-Sound Review



# Goal: Combining Letter-Sound Knowledge and PA

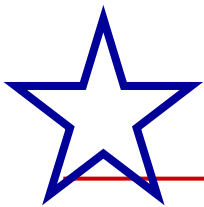


## £ Stop and Go Game

Š Part of Foundation Level

Š Provides additional practice for phonemic blending and segmenting

Š





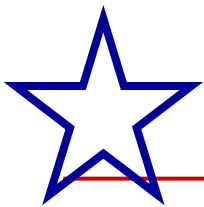


# Sounding Out -- in the Beginning



## Format:

1. Write short list of vc and cvc words on board.
2. Teacher asks the students to sound out the first word.
3. Teacher points under each sound while the students say each sound in the word.
4. Teacher points under continuous sounds for 2 seconds, but moves quickly off of stop sounds.



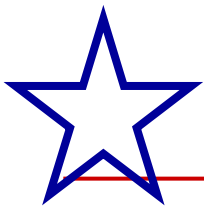


# Sounding-Out, Then Reading Fast



Format:

1.

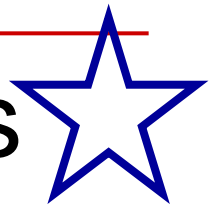








# Language Comprehension Goals



£ Increase general knowledge

£ Increase vocabulary

£ With narrative text,

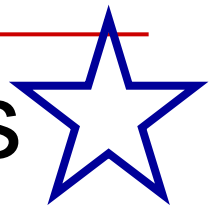
Š Identify the beginning, middle, and ending events in a story

Š Make reasonable predictions about what the story will be about

Š Make reasonable predictions about what will happen next



# Language Comprehension Goals

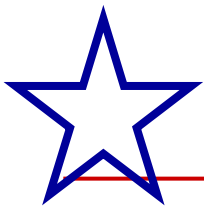


£ With expository (informative) text,

Š Discuss related knowledge

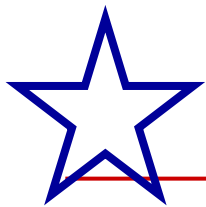
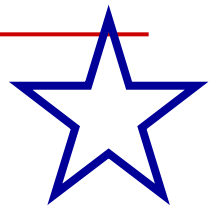
<sup>a</sup> What do you know about thunderstorms?

Š





# A few case studies...



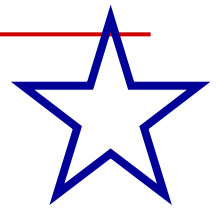
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46

# “Jason”



£ Grade: 1

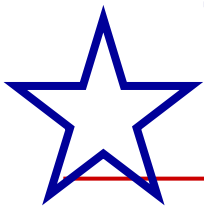
£ IQ: 60

£ Diagnosis: Autism and MR

£ Placement: Teaching to Academic Potential (TAP)

£ Level: Foundation

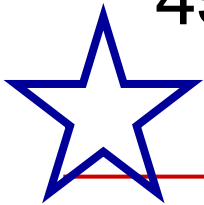
£ What people said before: The TAP director was surprised that he made it into the treatment group and “wished us luck”



# Intervention Teacher Comments



- £ Has improved his language, behavior, and attention
- £ Segmenting words such as “sat,” “Sam,” and “mat”
- £ Attempting to Blend
- £ In the beginning, he remained in his seat 5-7 minutes before throwing himself on the floor, etc.
- £ Currently, he remains in his seat the entire 35-45 minutes of the reading intervention





# Methods for Increasing Attention



£ Worked with special education teacher

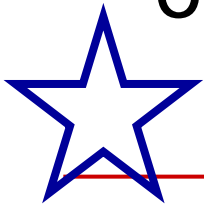
£ Very frequent periodic reinforcement during activities

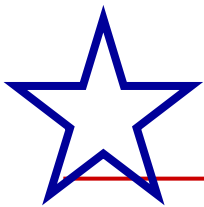
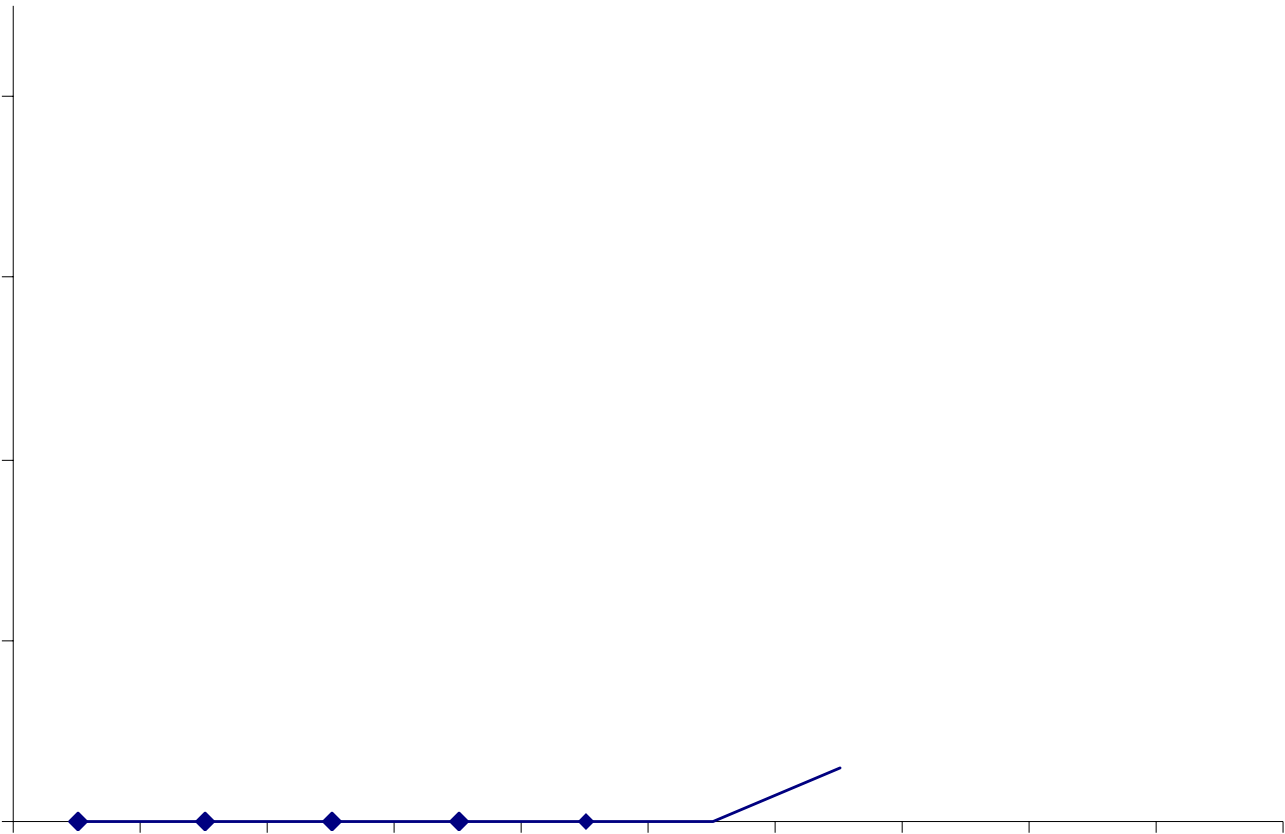
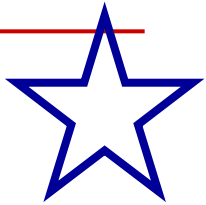
£ Varying reinforcers

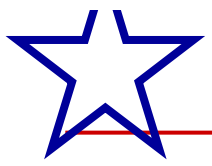
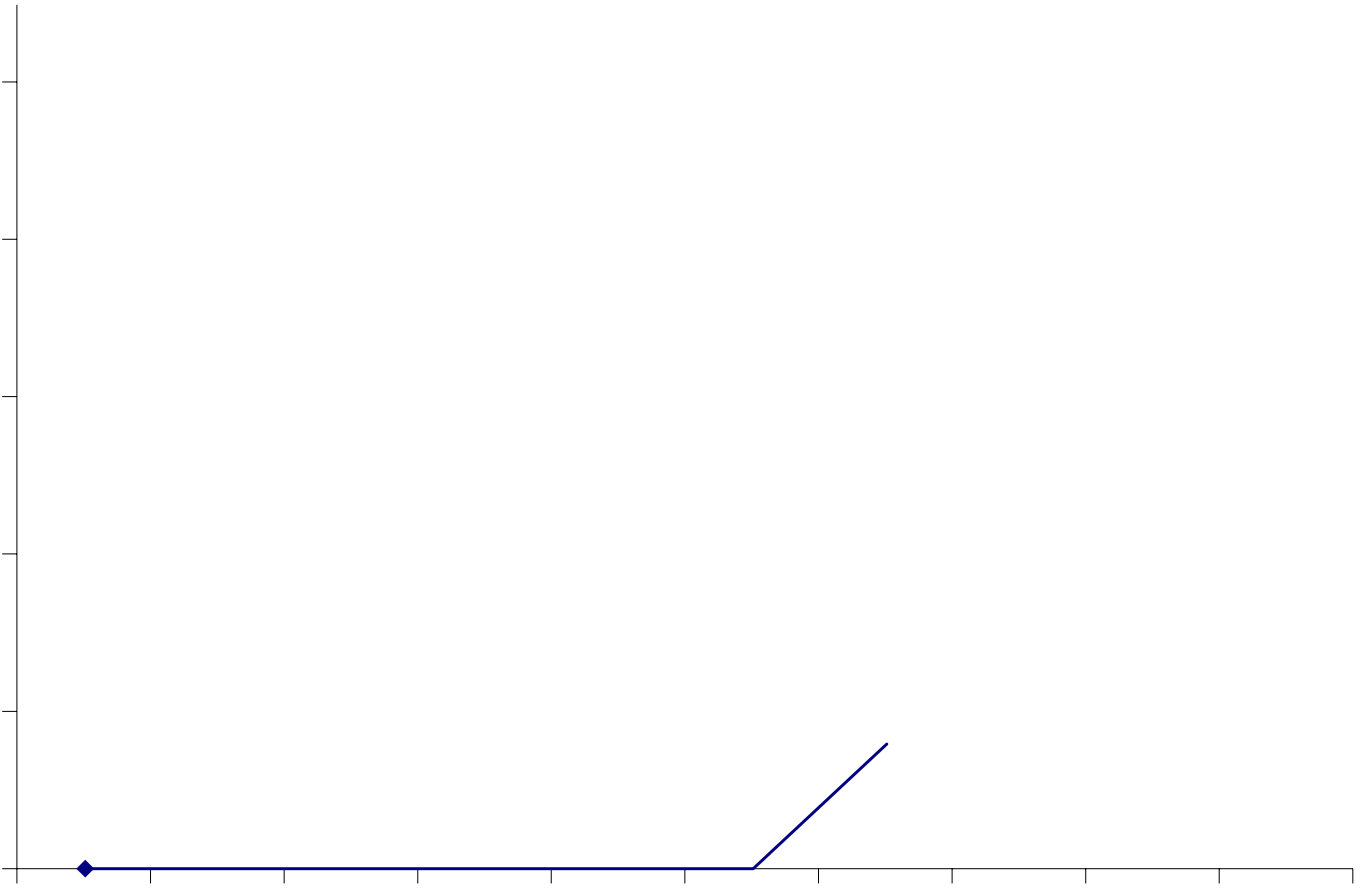
Š Marbles

Š Allowed to have toy

£ Taking breaks and then gradually fading out the breaks





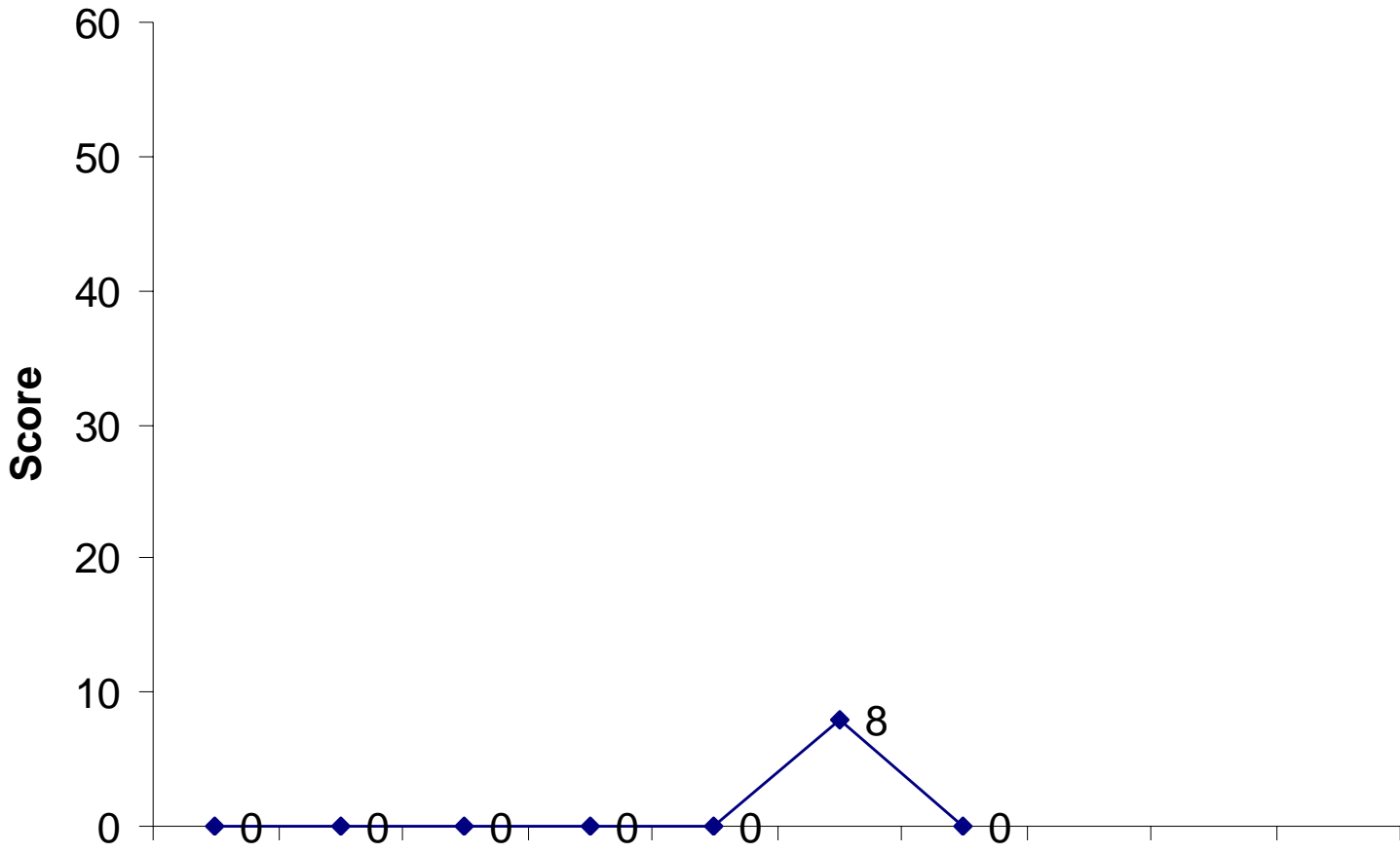
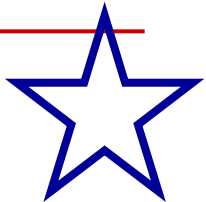


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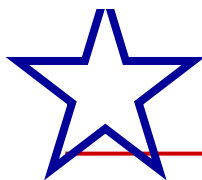
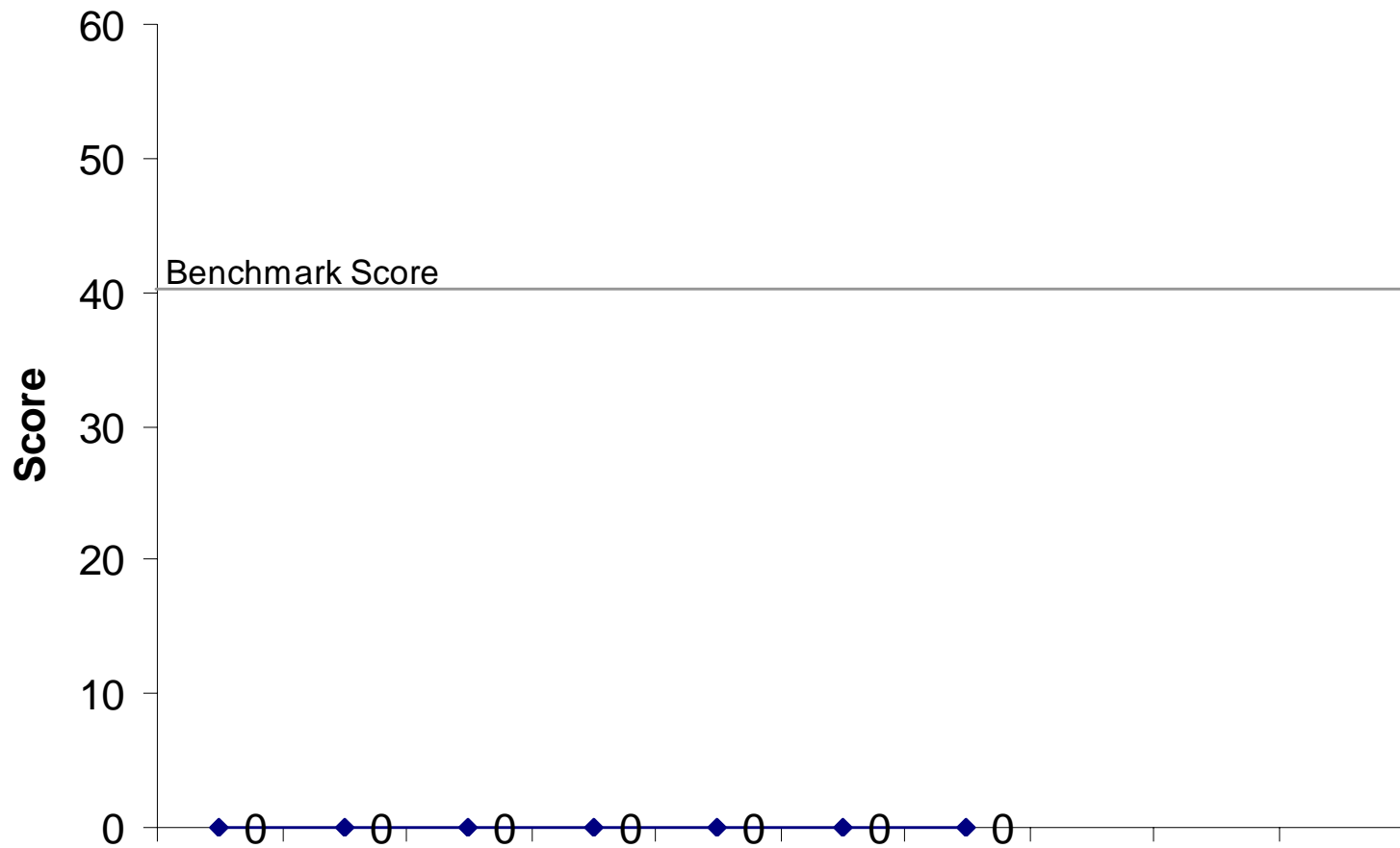


51





◆ Growth in Oral Reading Fluency for "Jason"



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53



# Teacher Comments



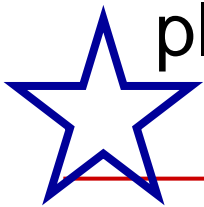
## £ Intervention Teacher

- § Able to tell beginning, middle and end of a poem/story
- § Can blend words and read some words in the storytime readers
- § Reading some sight words

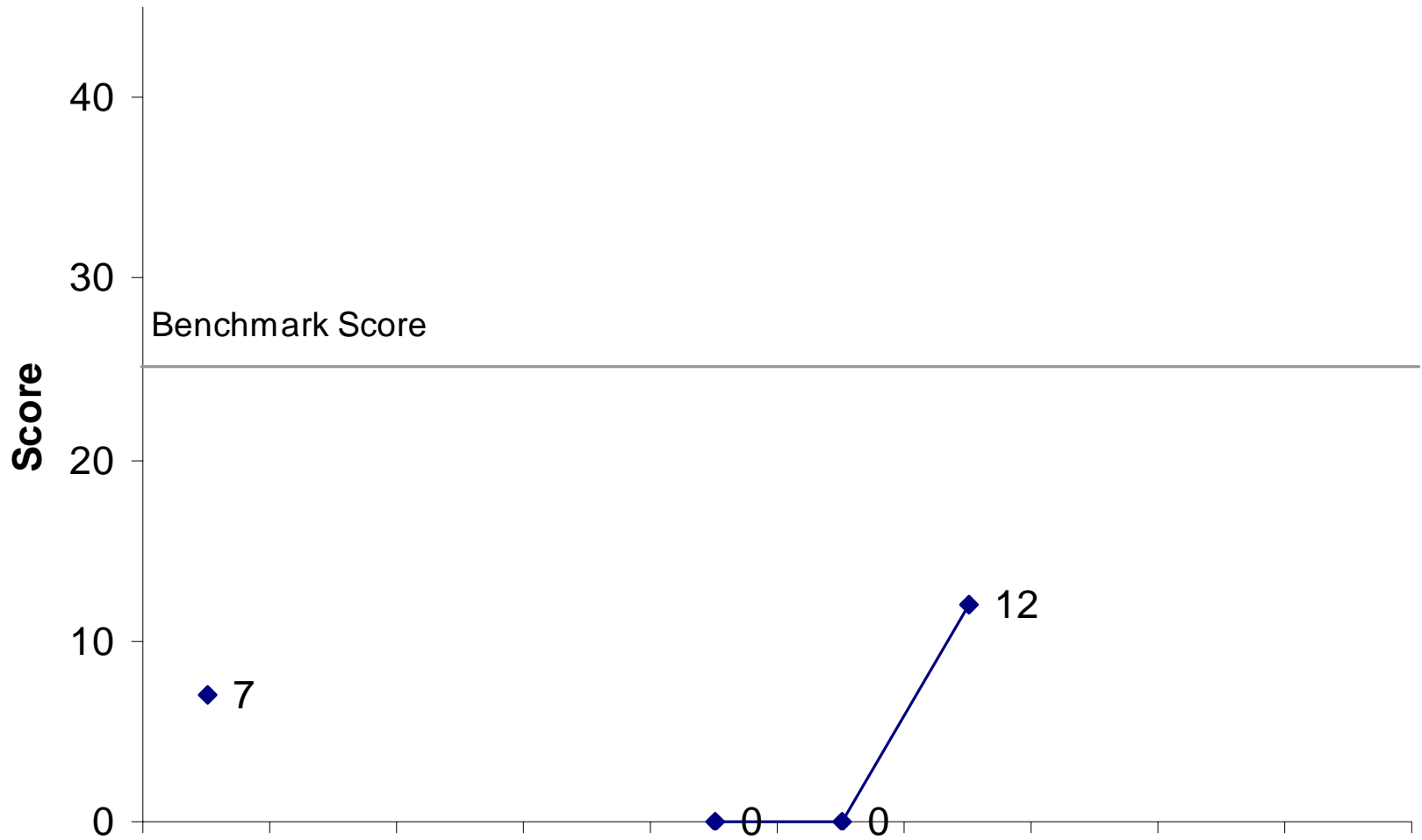
## £ LINC Teacher

- § "I have seen a lot of progress."
- § He now knows all of his letters and sounds.
- § He can create words using letter flashcards and blend familiar and unfamiliar words.

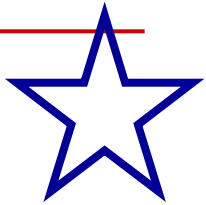
£ Both are going to advocate for a less restrictive placement at Tyrone's IEP meeting next month



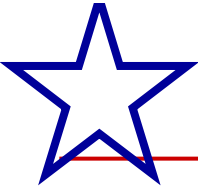
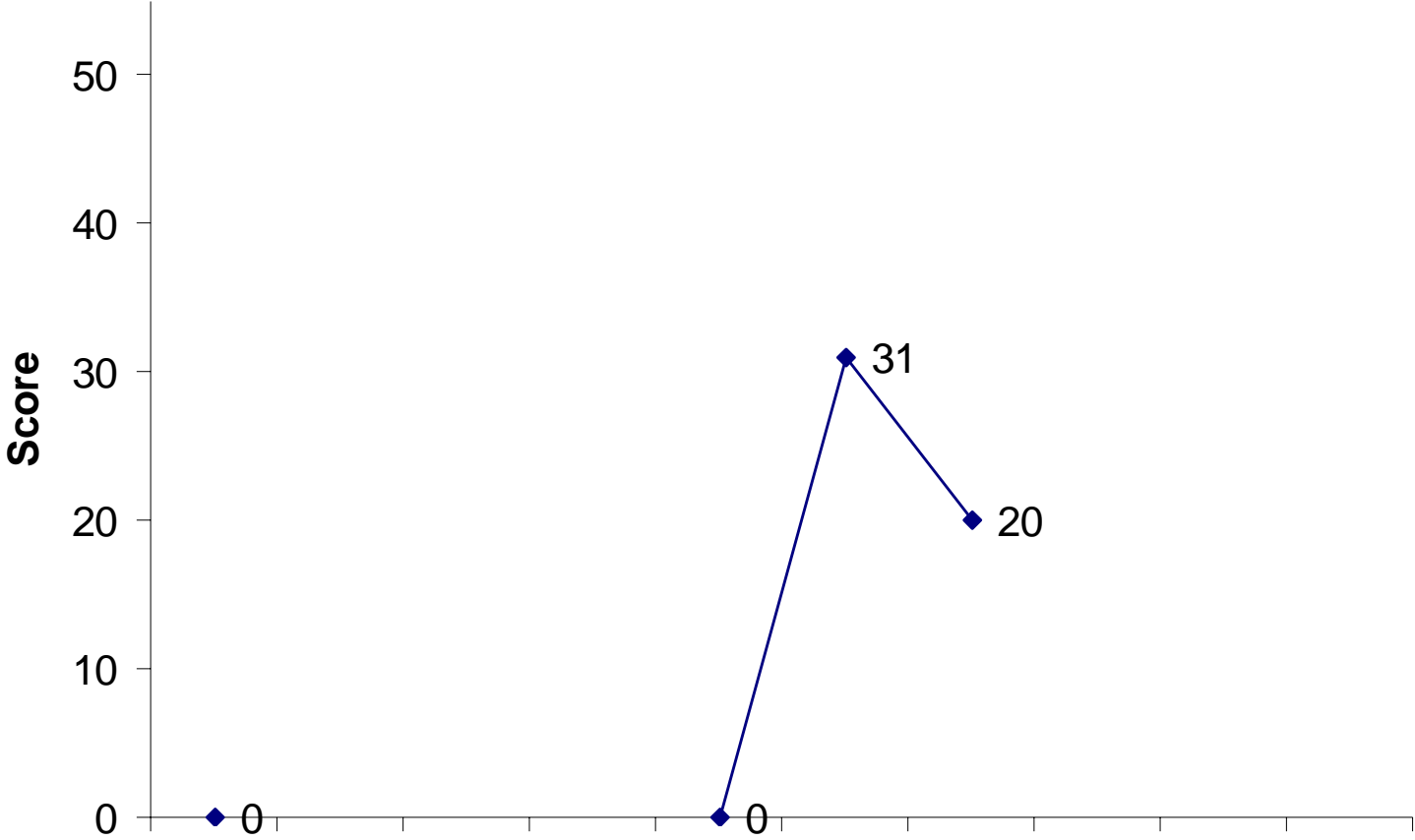
—◆— Growth in Initial Sound Fluency for "Tyrone"

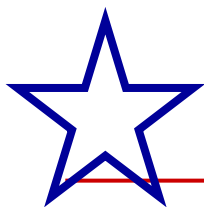
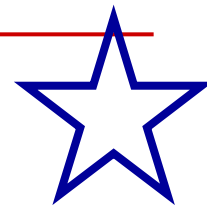






—◆— Growth in Phonemic Segmentation Fluency for "Tyrone"





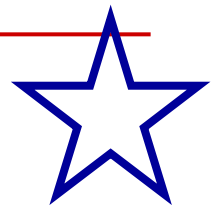
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# “Maria”



£ Grade: 1

£ IQ: 59

£ Diagnosis: Down Syndrome

£ Placement: General Education with resource support

£ Level: Foundation (almost finished)

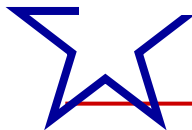
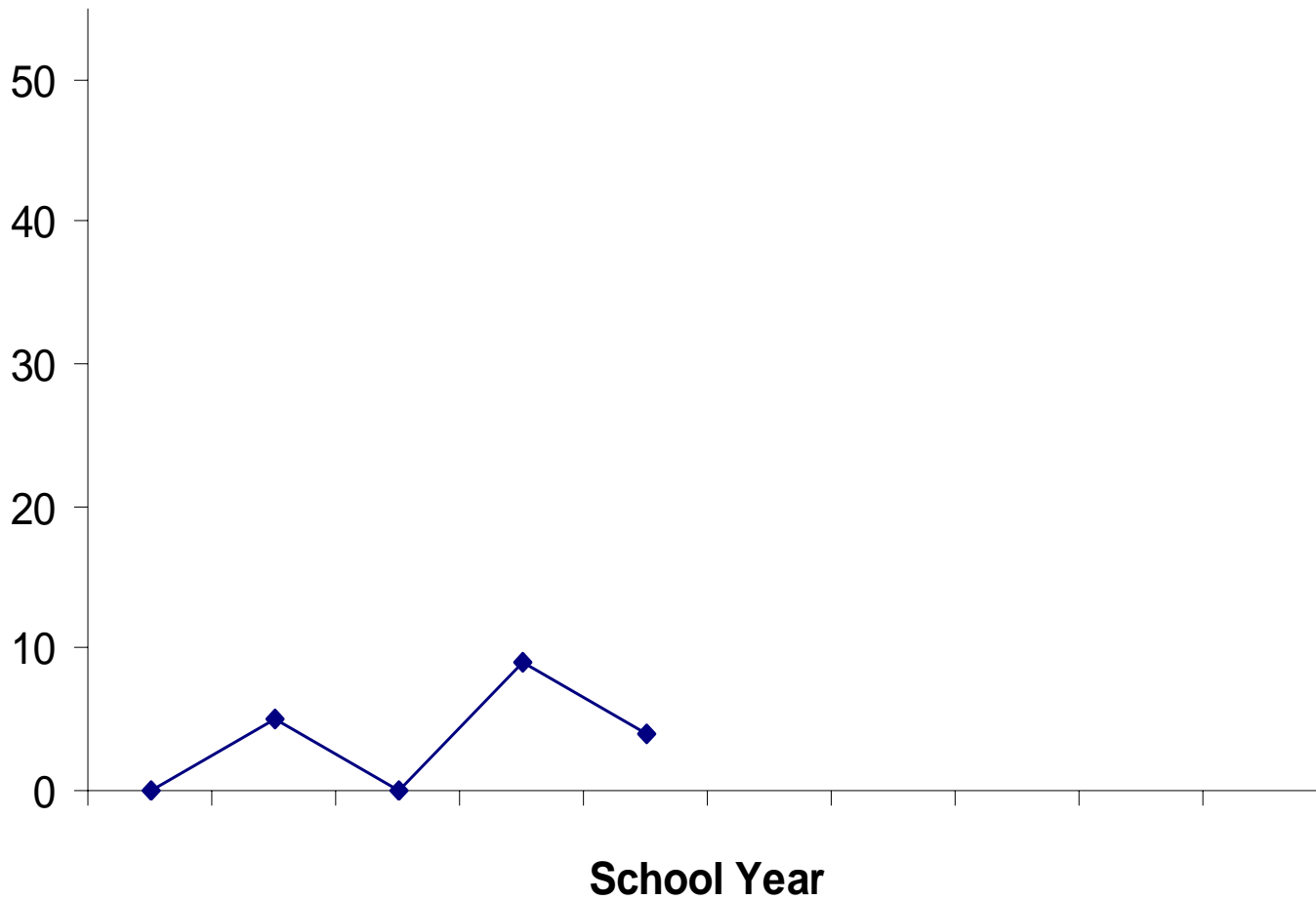
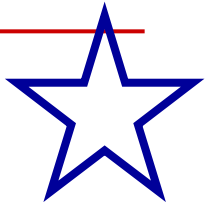
£ When the pre-test was to be administered, this student's teacher told her that, “this was not a child we wanted for the study.”

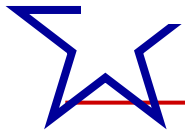
£ Teachers did not view reading as a reasonable goal





March, 2006





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64





# “George”



£ Grade: 1

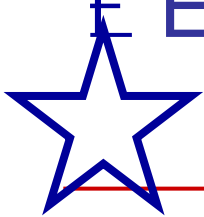
£ Placement: General Education with  
resource support

£ Diagnosis: MR

£ IQ: 63

£ Level: has finished Foundation level

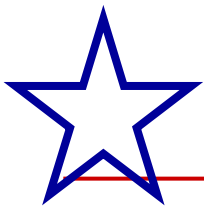
£ ESL

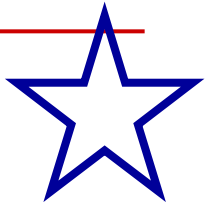


# Intervention Teacher Comments

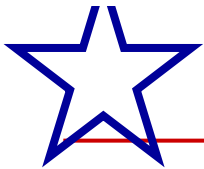
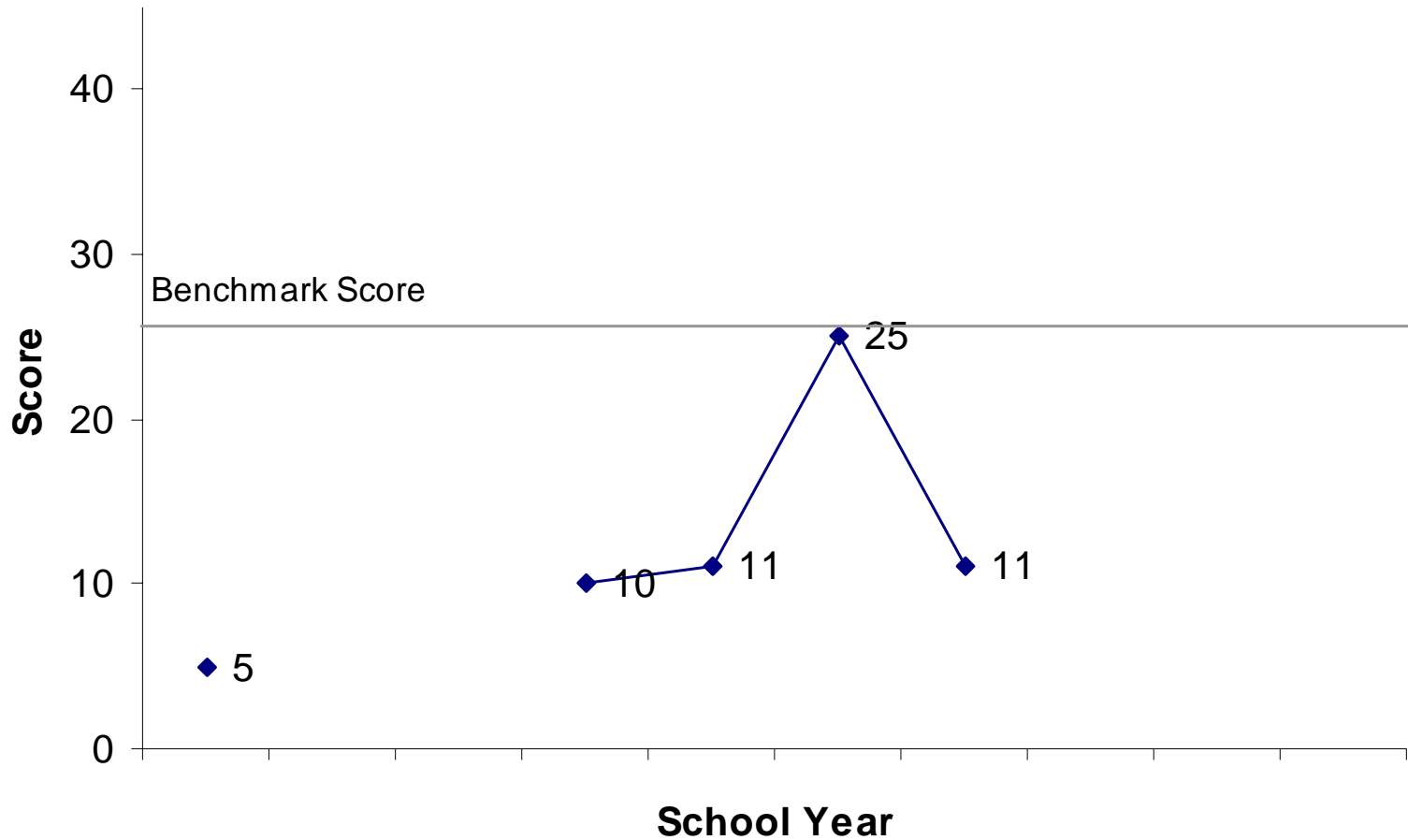


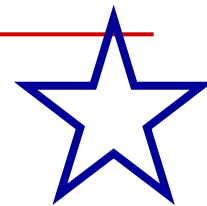
- £ Language and reading skills have progressed
- £ Stretches, blends, and attempts to read
- £ Initial sounds have improved, along with listening comprehension
- £ Attention skills have improved

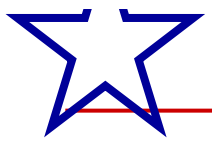




—◆— Growth in Initial Sound Fluency for "George"





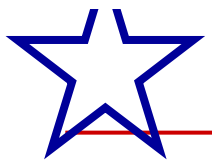
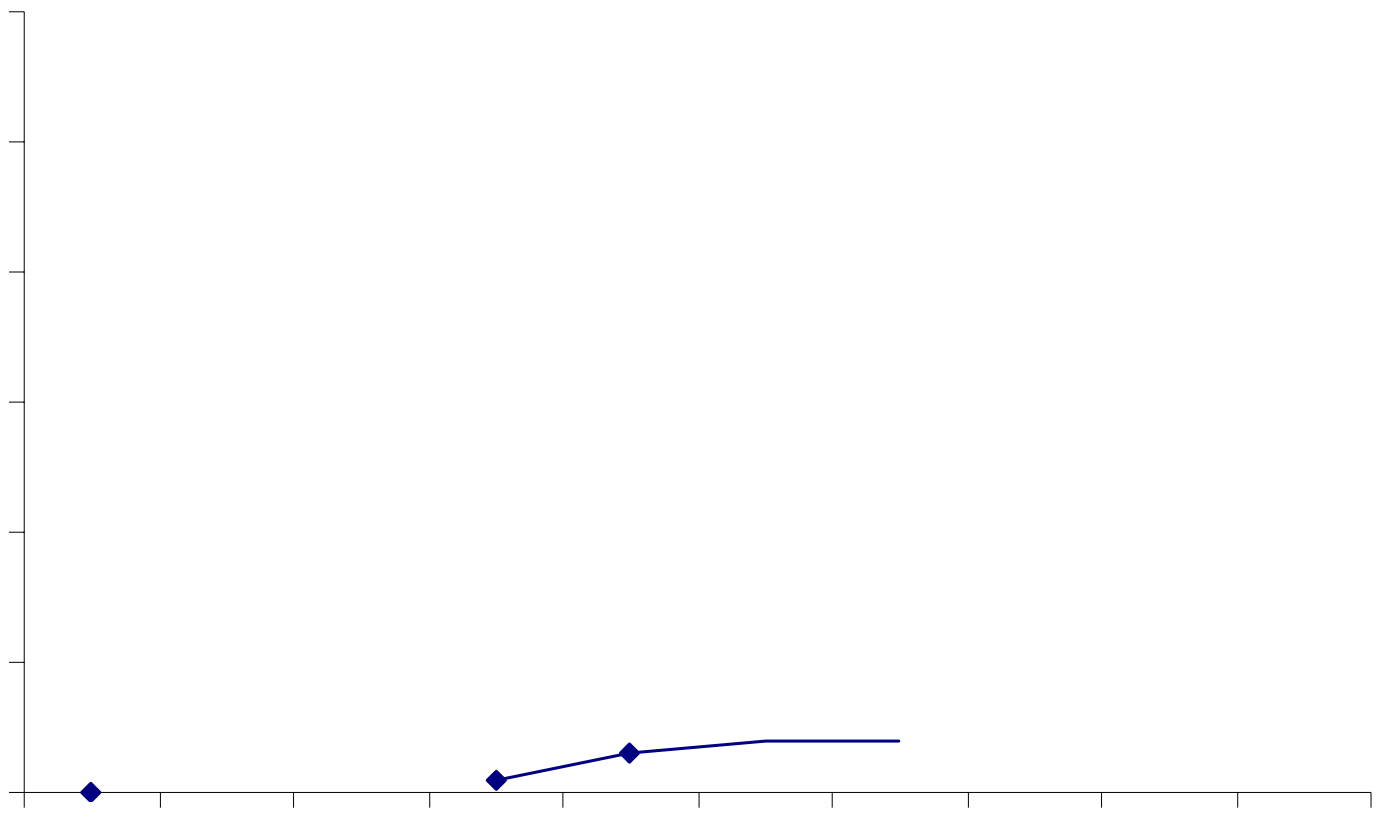


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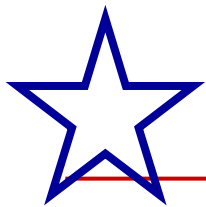
70







# Teacher Comments



March, 2006

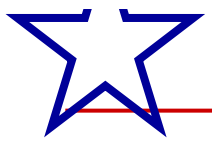
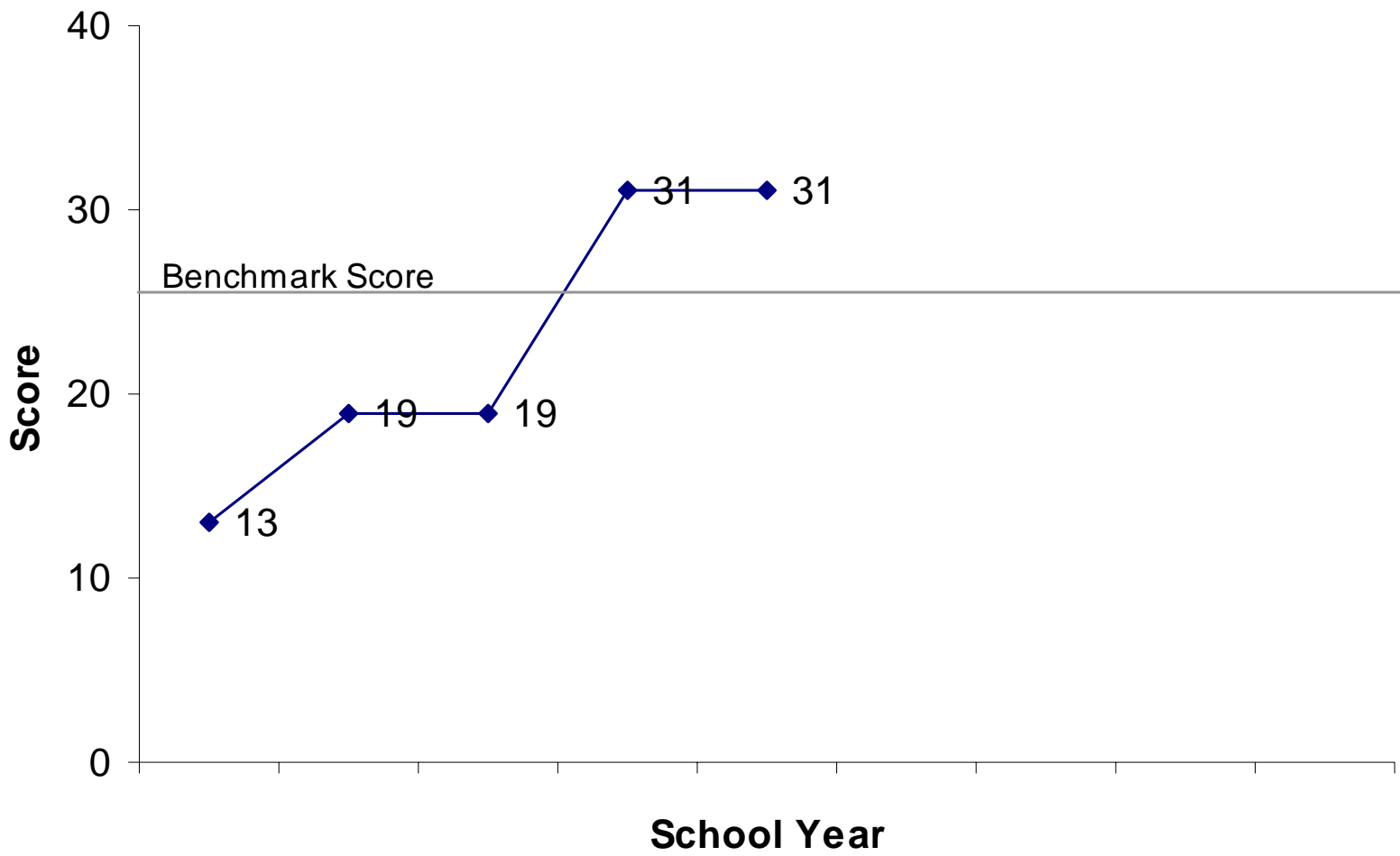
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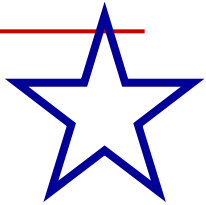


73



—◆— Growth in Initial Sound Fluency for "Kory"





—◆— Growth in Phonemic Segmentation Fluency for "Kory"

