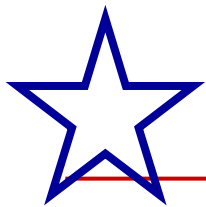
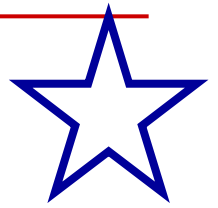


---

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



March, 2006

©



SMU

THE INSTITUTE FOR  
READING RESEARCH



# Project Staff



*Principal Investigator*

Patricia Mathes, Ph.D.

*Co-Prin. Investigator*

Jill Allor, Ed.D.

*Project Coordinator*

Francesca Jones, Ph.D.

*Research Teachers*

Karen Britton

Bea Jolly

Deirdre North

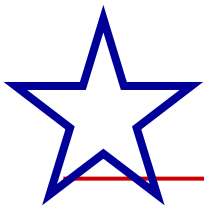
Janet Montana

Chuck Toney

*Research Assistants*

Timothea Davis

Dawn Levy



# Multi-Site Research

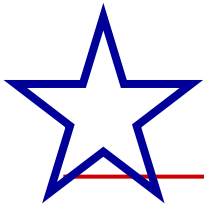


Research is funded by Institute of  
Education Sciences (IES)

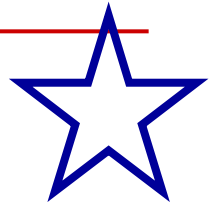
Coordinated with other research projects

University of North Carolina – Charlotte

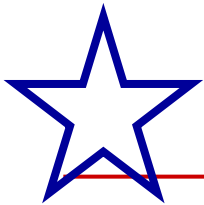
Georgia State University



# 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



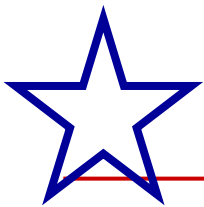
Some research supporting sight word instruction

Some research supporting phonics instruction

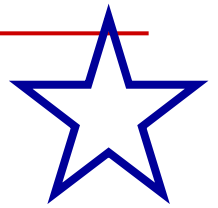
But...

No studies were large scale

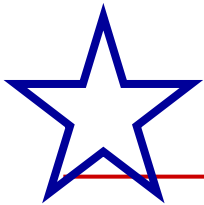
No studies employed a comprehensive reading program that included explicit, systematic phonics instruction



# Research Questions



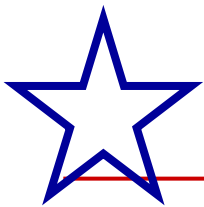
1. Are *reading interventions* that have been proven to be effective in teaching children who are very low readers also effective for teaching children with *cognitive disabilities or borderline IQ scores*?
2. What *level of reading competence* can be achieved by these students with the use of these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



# Research Questions



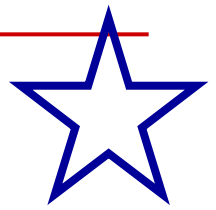
3. When provided with this type of instruction, are these students afforded greater *access to participation in the general education curriculum?*







# Participants



Total: 158

102 “Borderline”

according to *WASI: Wechsler Abbreviated Scales of Intelligence*  
OR school-testing

IQ 70-79

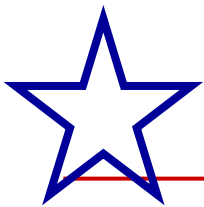
36 Mild range

IQ 55-69

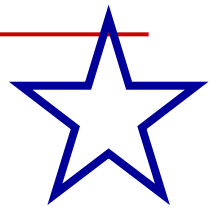
20 Moderate range

IQ 40-54

Students randomly assigned to experimental or  
contrast group



# Intervention

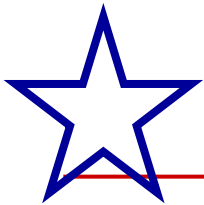


Comprehensive, explicit, systematic  
phonics-based reading program

Implemented daily by research teachers

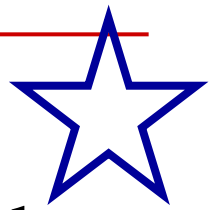
35- to 45-minute sessions

The intervention will be the **FOCUS** of  
**TODAY'S SESSION**



# Curriculum: Proactive Reading

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



## “Foundation” Level

Skills typically taught in kindergarten  
Unpublished

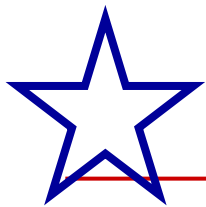
## Level One

Skills typically taught in first grade  
Published

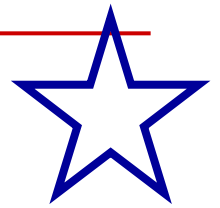
## Level Two

Skills typically taught in second grade  
Recently published

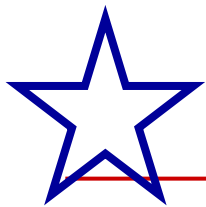
*Students began in either “Foundation” or Level One*



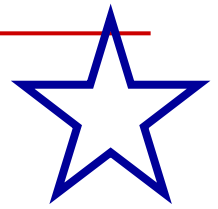
# Curriculum: Critical Features



Explicit and Systematic



# 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

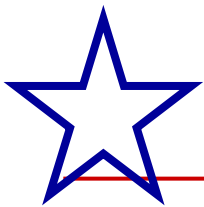
Measure of ability to segment words into individual phonemes  
Tell me the sounds in cat. /c/ /a/ /t/  
Partial credit is given

## Nonsense Word Fluency

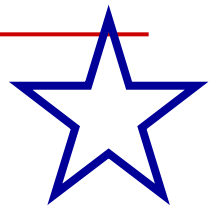
Measure of ability to say the sounds in a list of CVC non-words  
Students can go “sound by sound” or read whole words

## 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

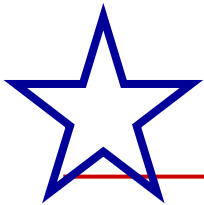
Only after first 12 weeks

No significant findings; all trends in favor of experimental group

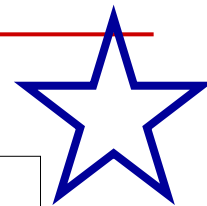
Trends are highly favorable for PSF

Trends are somewhat favorable for ORF

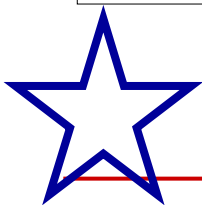
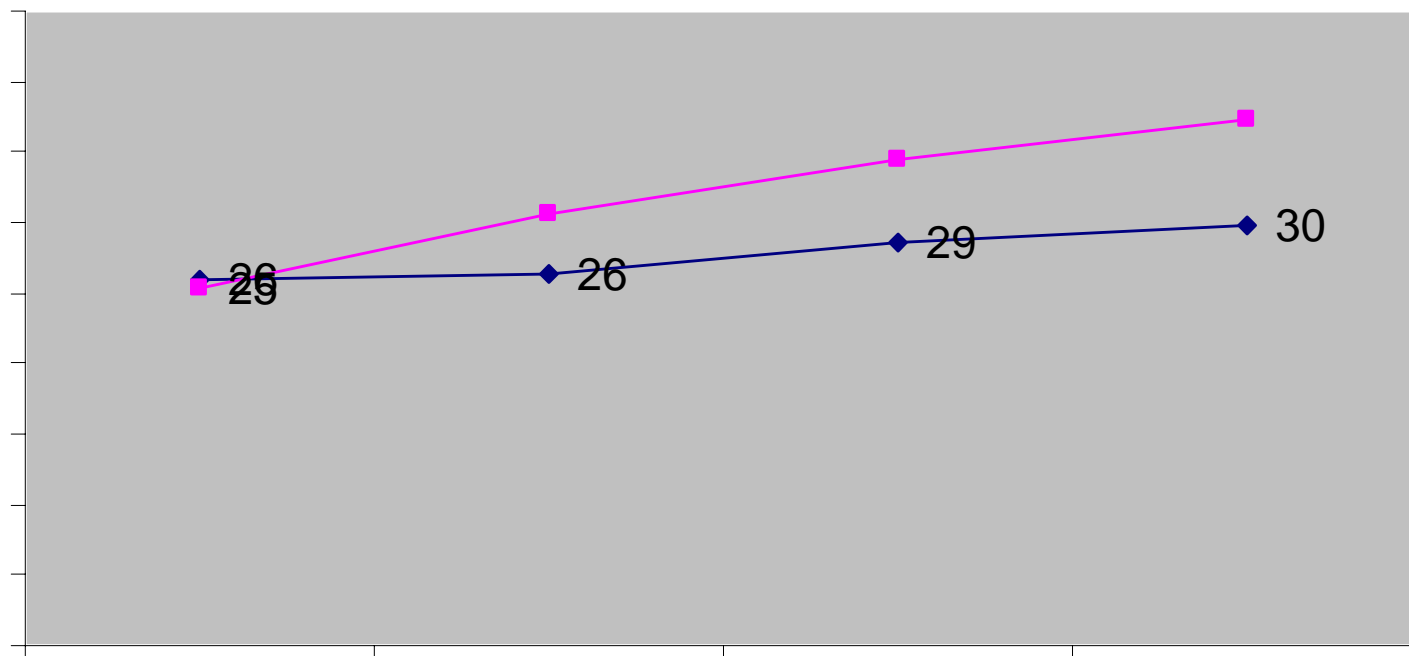
**VERY PRELIMINARY**



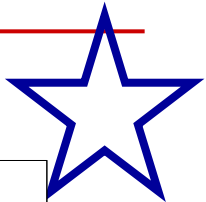




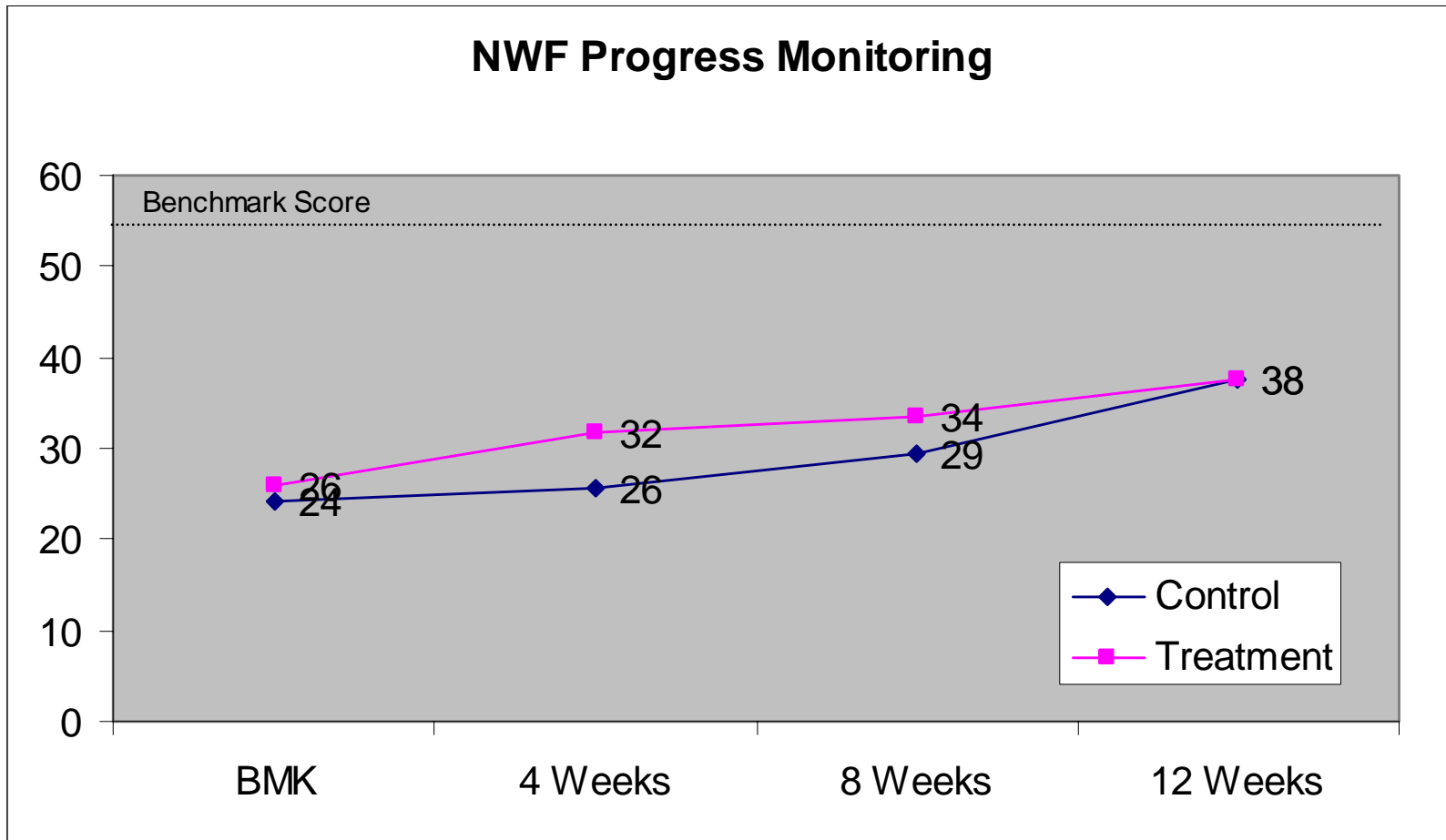
## PSF Progress Monitoring



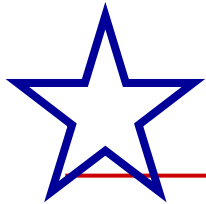


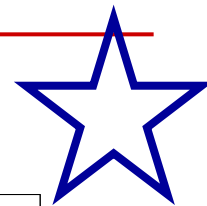


## NWF Progress Monitoring

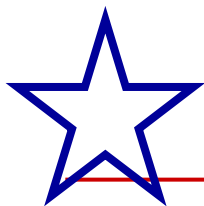
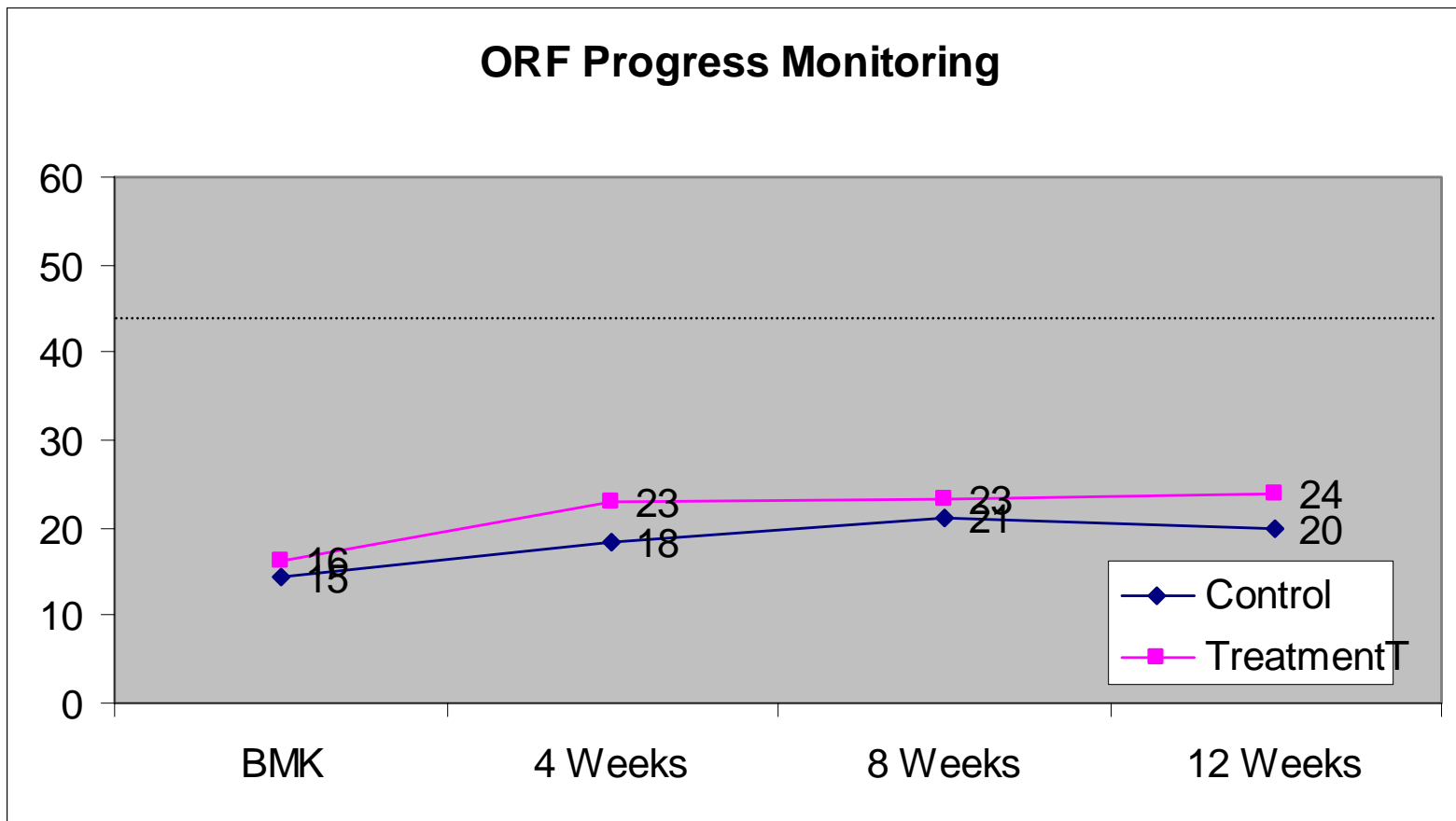


SD range from 22.9 to 37.1

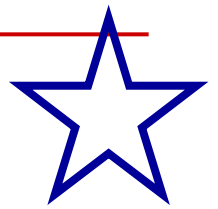




## ORF Progress Monitoring



# 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)\*

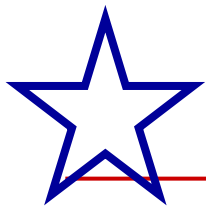
Rapid Letter Naming\*

### Test of Word Reading Efficiency (TOWRE)

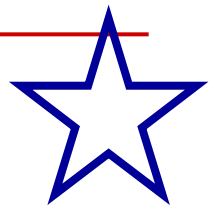
Phonemic decoding efficiency subtest

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\*

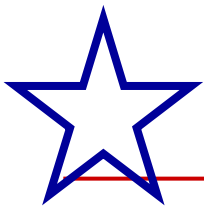
Verbal analogies

Reading composite

Letter-word identification\*

Passage comprehension\*

Word Attack\*





# Goals for Next Year



Keep going!

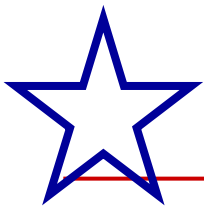
Careful intervention modification for students making little or no progress

Developing additional oral language component

Listening comprehension

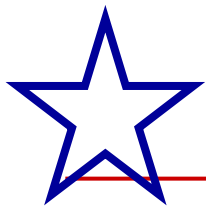
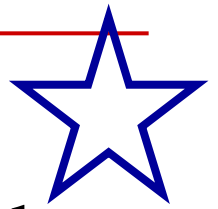
Oral expression

Vocabulary



# Curriculum: Proactive Reading

(Published as *Early Interventions in Reading* by



March, 2006

©



SMU

THE INSTITUTE FOR  
READING RESEARCH

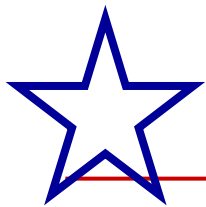


23

# Curriculum: Critical Features



Explicit and Systematic







# Curriculum: Immediate Feedback and Modeling

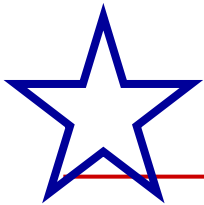


Model: “My turn” or “I”

Lead: “Our turn” or “We”

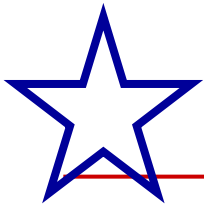
Test: “Your turn” or “You”

Retest: “Backing up”





# Curriculum: Providing Scaffolding



March, 2006

©



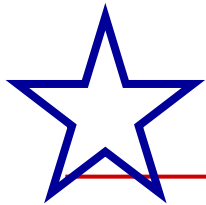
SMU

THE INSTITUTE FOR  
READING RESEARCH



26

# Phonological awareness and



March, 2006

©



SMU

THE INSTITUTE FOR  
READING RESEARCH

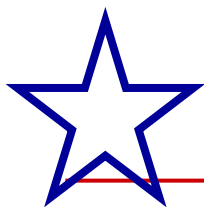
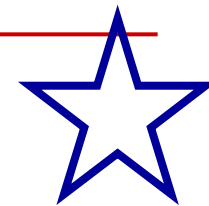


27





# PA Instruction: "First Sound



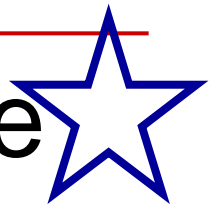
March, 2006

©



30

# PA Instruction: First Sound Game

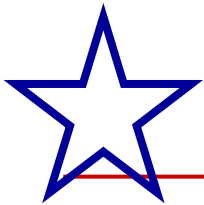


Scaffolded at Foundation Level

Similar Procedures

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

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

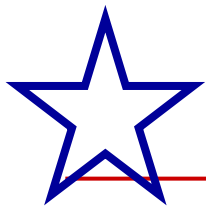
Teacher: /mmm/ /aaa/ /nnn/

Student: man

Segmenting words into individual phonemes

Teacher: Say “man” slowly.

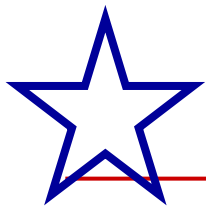
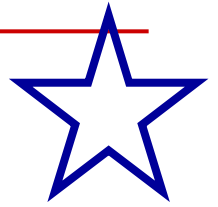
Student: /mmm/ /aaa/ /nnn/







# PA Instruction: Blending Words







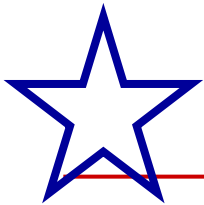
# Goal: Letter-Sound Correspondence



Letter-Sound Introduction



Letter-Sound Review



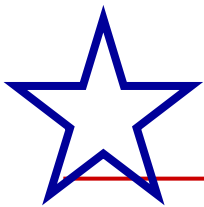
# Goal: Combining Letter-Sound Knowledge and PA



## Stop and Go Game

Part of Foundation Level

Provides additional practice for phonemic blending and segmenting





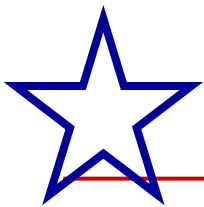


# Sounding Out -- in the Beginning



## 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.



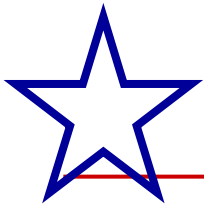


# Sounding-Out, Then Reading Fast



Format:

1.

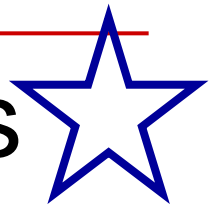








# Language Comprehension Goals



Increase general knowledge

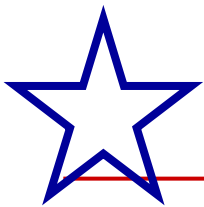
Increase vocabulary

With narrative text,

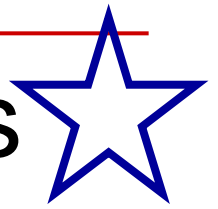
Identify the beginning, middle, and ending events in a story

Make reasonable predictions about what the story will be about

Make reasonable predictions about what will happen next



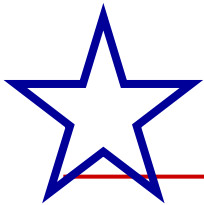
# Language Comprehension Goals



With expository (informative) text,

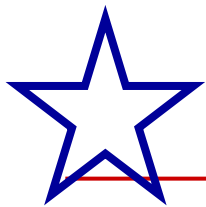
Discuss related knowledge

What do you know about thunderstorms?





# A few case studies...



March, 2006

©



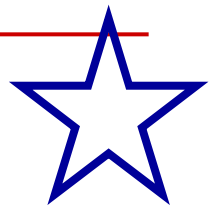
SMU

THE INSTITUTE FOR  
READING RESEARCH



46

# “Jason”



Grade: 1

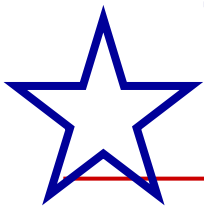
IQ: 60

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



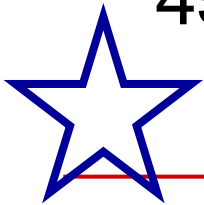
Has improved his language, behavior, and attention

Segmenting words such as “sat,” “Sam,” and “mat”

Attempting to Blend

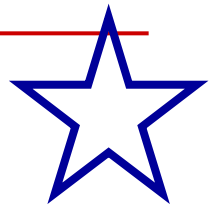
In the beginning, he remained in his seat 5-7 minutes before throwing himself on the floor, etc.

Currently, he remains in his seat the entire 35-45 minutes of the reading intervention





# Methods for Increasing Attention



Worked with special education teacher

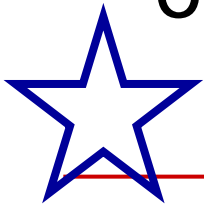
Very frequent periodic reinforcement during activities

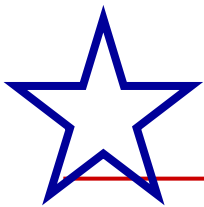
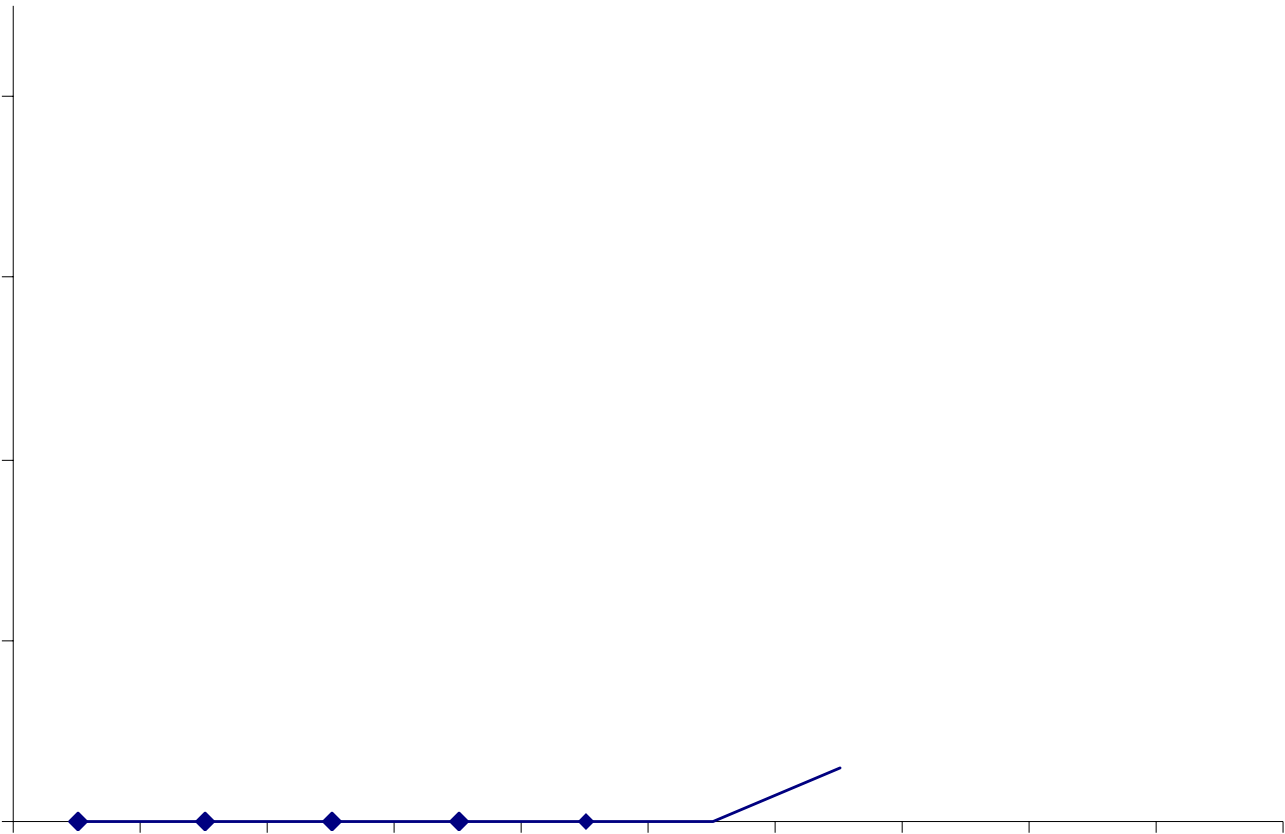
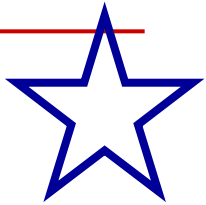
Varying reinforcers

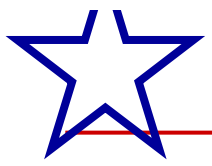
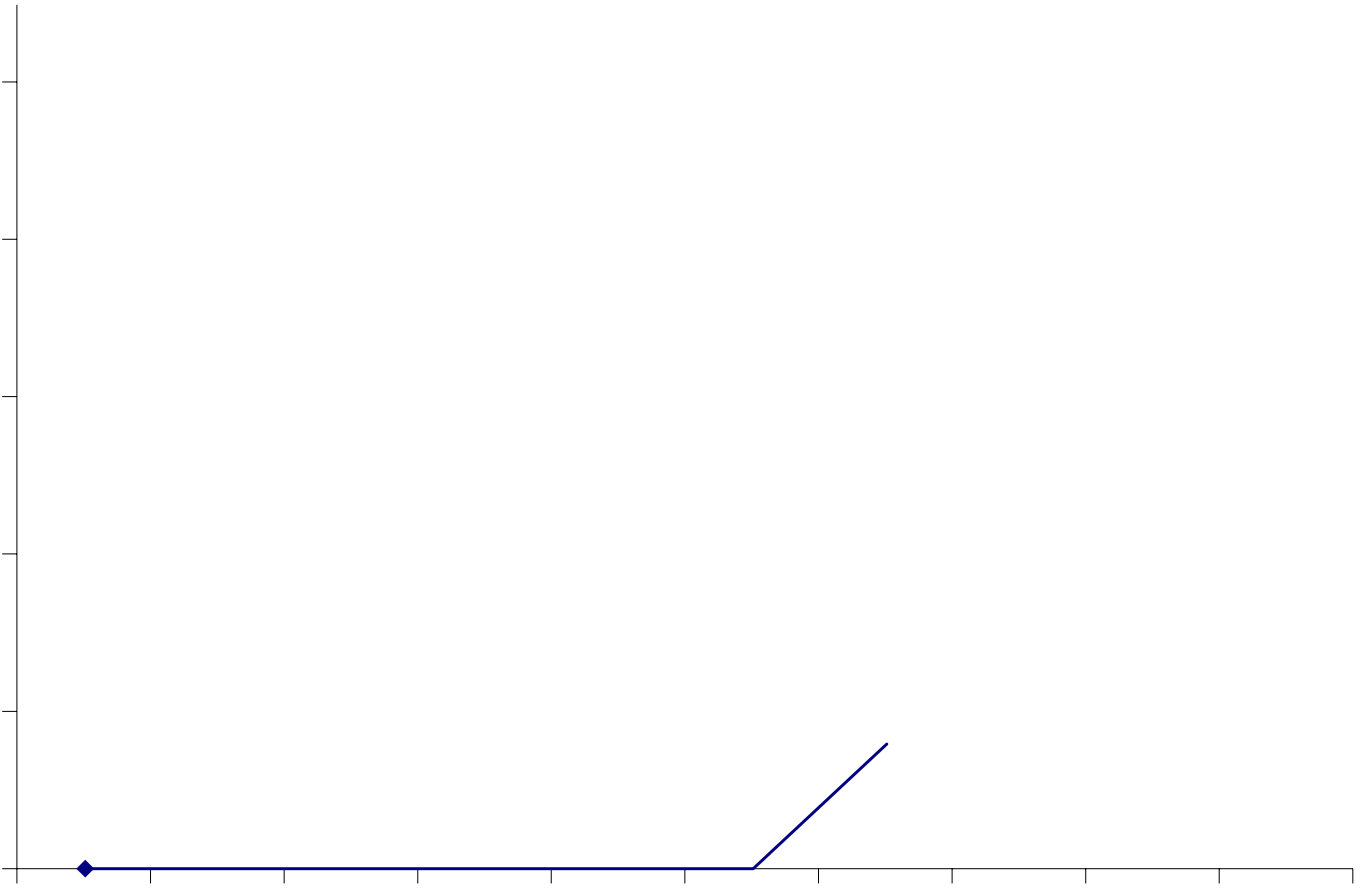
- Marbles

- Allowed to have toy

Taking breaks and then gradually fading out the breaks





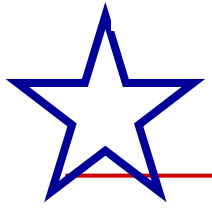
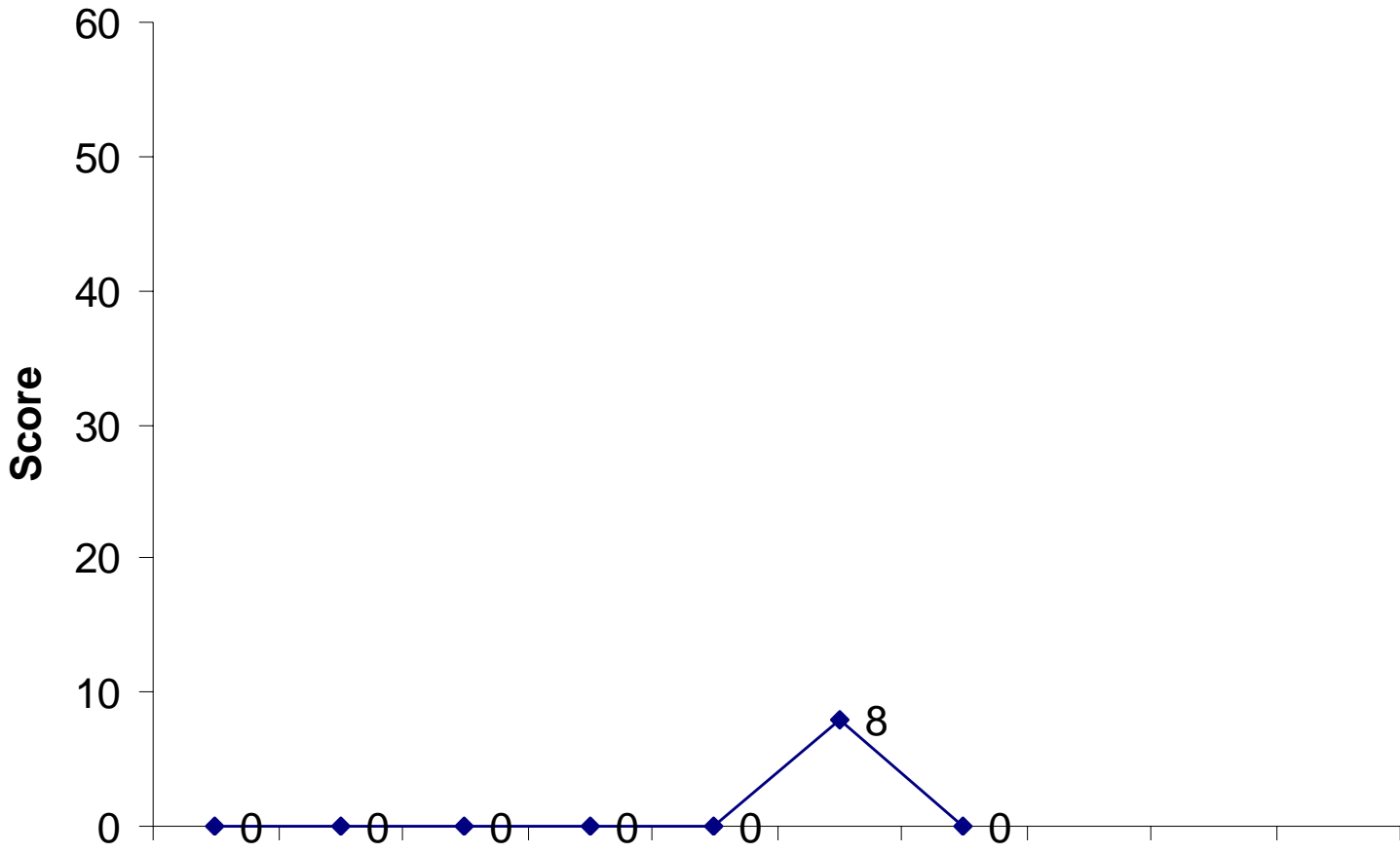
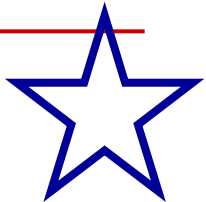


March, 2006

©



51



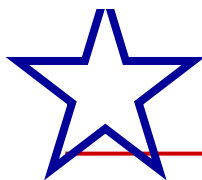
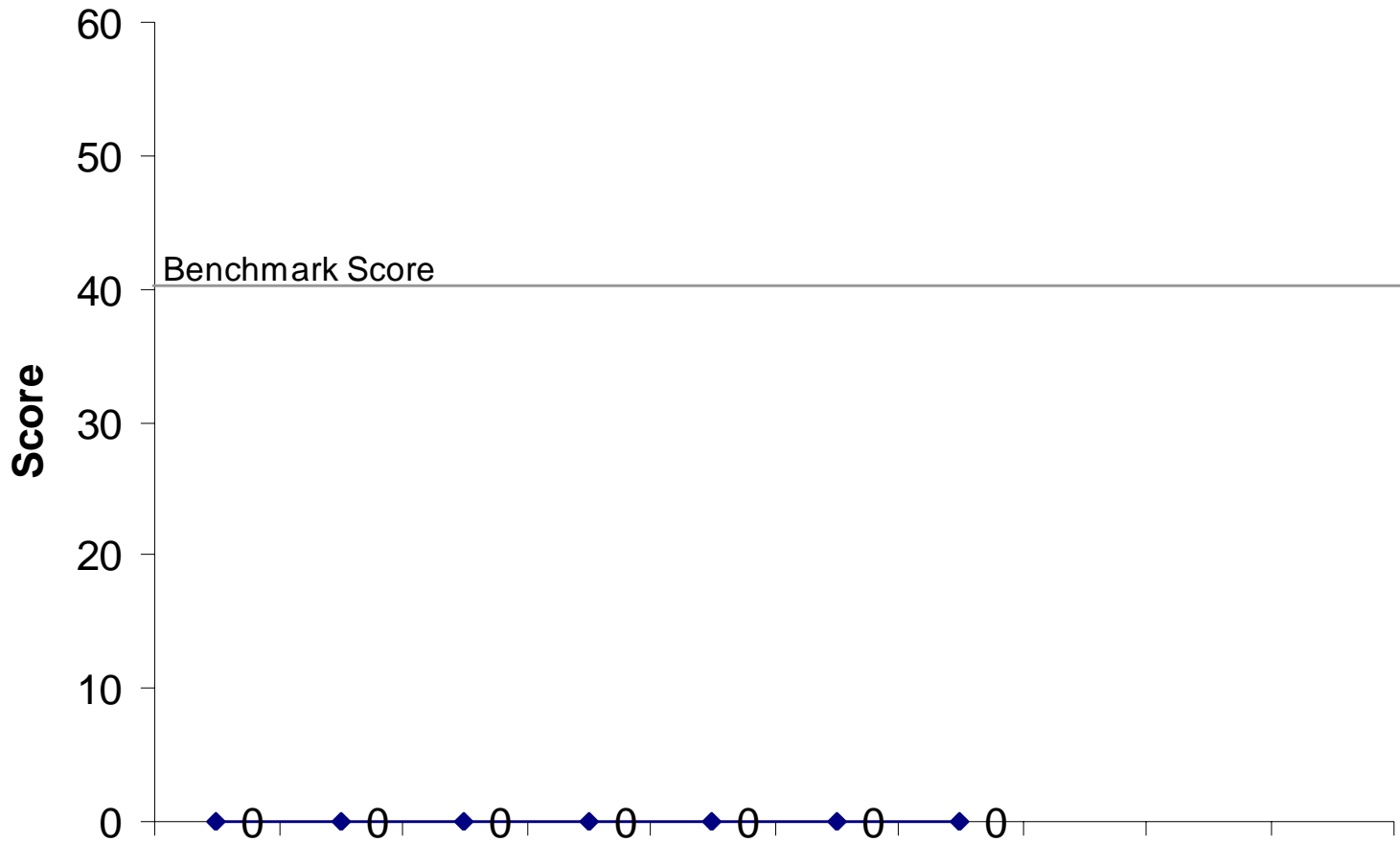
March, 2006

©





◆ Growth in Oral Reading Fluency for "Jason"



March, 2006

©



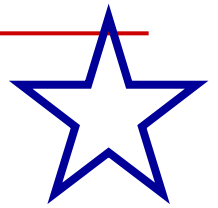
SMU

THE INSTITUTE FOR  
READING RESEARCH





# 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

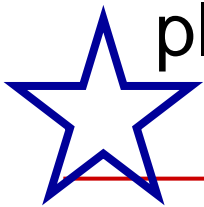
## LINC Teacher

“I have seen a lot of progress.”

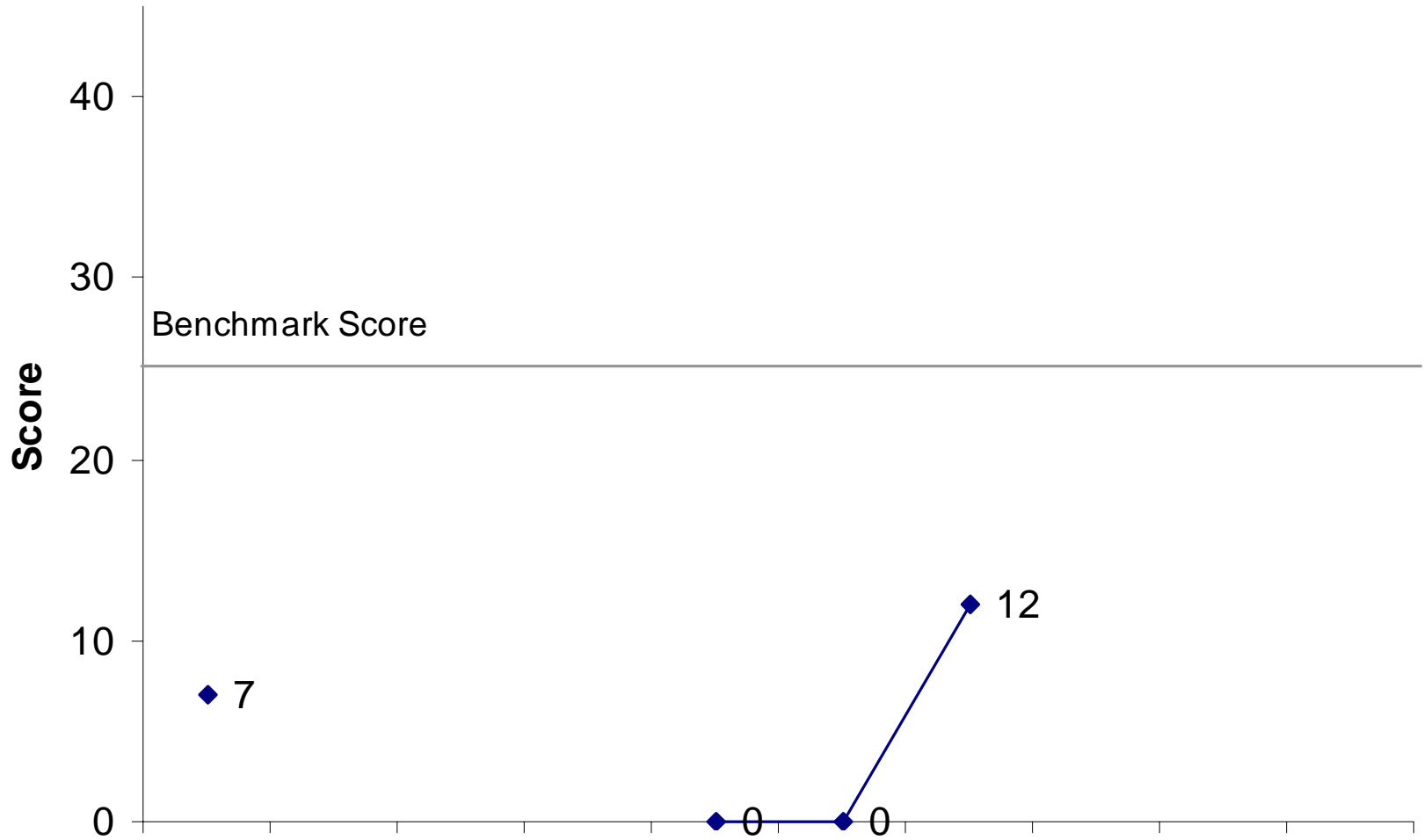
He now knows all of his letters and sounds.

He can create words using letter flashcards and blend familiar and unfamiliar words.

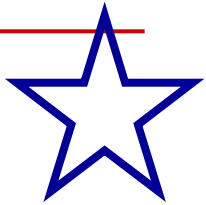
Both are going to advocate for a less restrictive placement at Tyrone’s IEP meeting next month



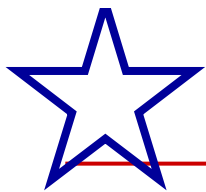
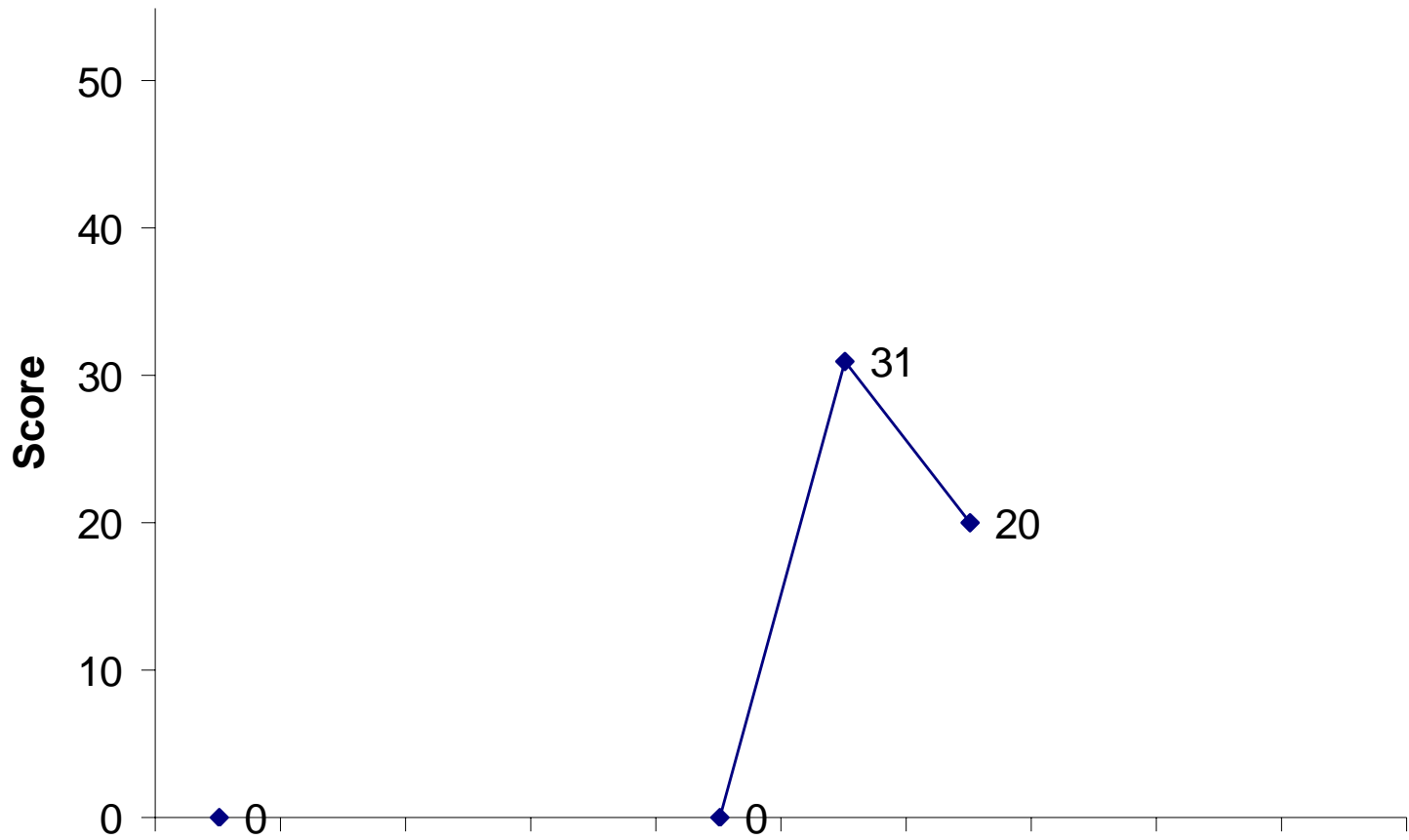
—◆— Growth in Initial Sound Fluency for "Tyrone"

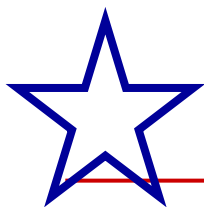
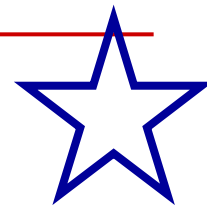






—◆— Growth in Phonemic Segmentation Fluency for "Tyrone"





March, 2006

©



SMU

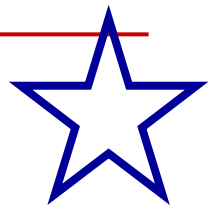
THE INSTITUTE FOR  
READING RESEARCH



58



# “Maria”



Grade: 1

IQ: 59

Diagnosis: Down Syndrome

Placement: General Education with resource support

Level: Foundation (almost finished)

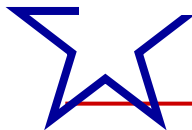
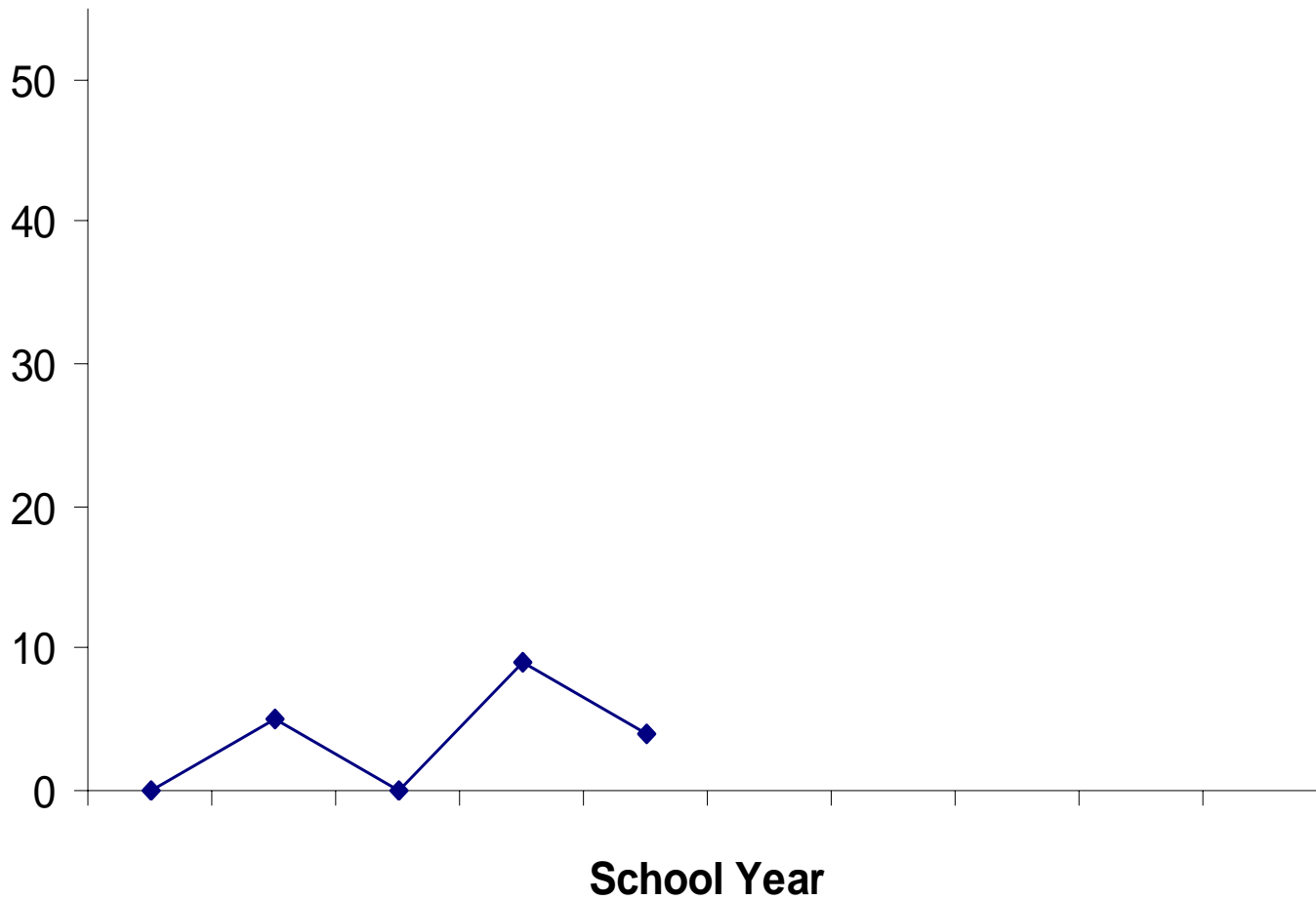
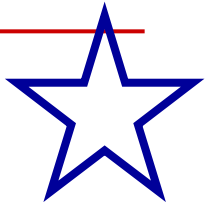
When the pre-test was to be administered, this student's teacher told her that, “this was not a child we wanted for the study.”

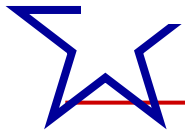
Teachers did not view reading as a reasonable goal





March, 2006

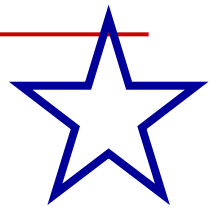








# “George”



Grade: 1

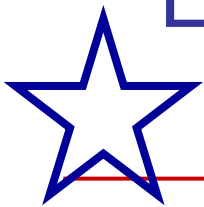
Placement: General Education with  
resource support

Diagnosis: MR

IQ: 63

Level: has finished Foundation level

ESL



# Intervention Teacher Comments

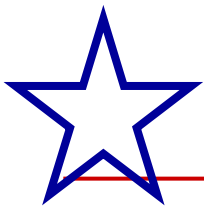


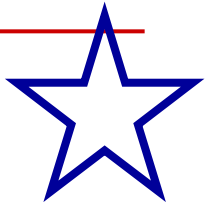
Language and reading skills have progressed

Stretches, blends, and attempts to read

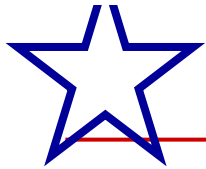
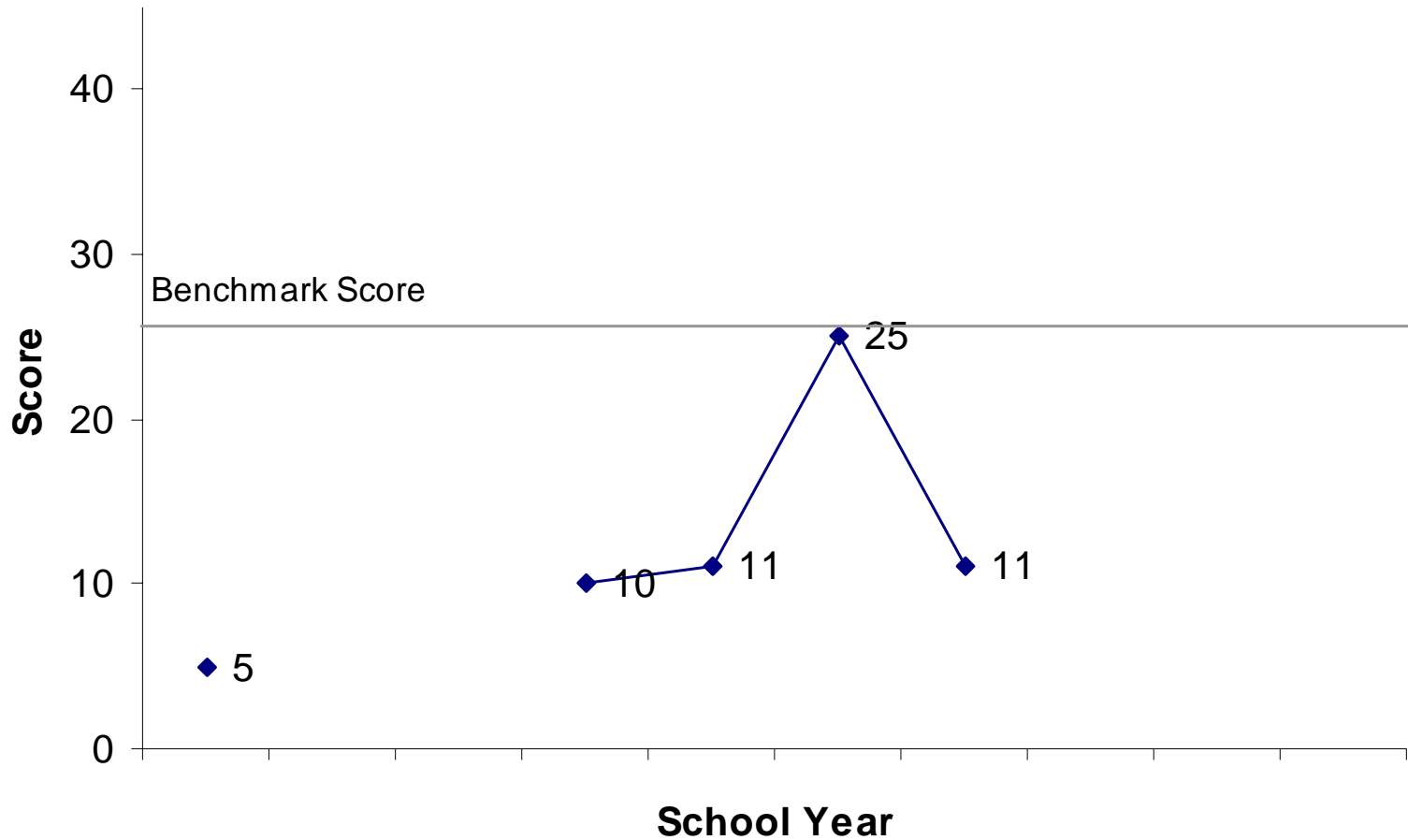
Initial sounds have improved, along with listening comprehension

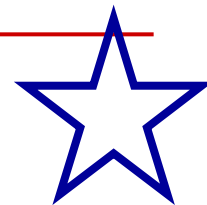
Attention skills have improved

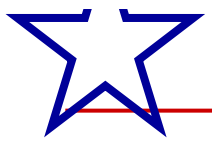




◆ Growth in Initial Sound Fluency for "George"





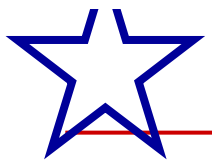
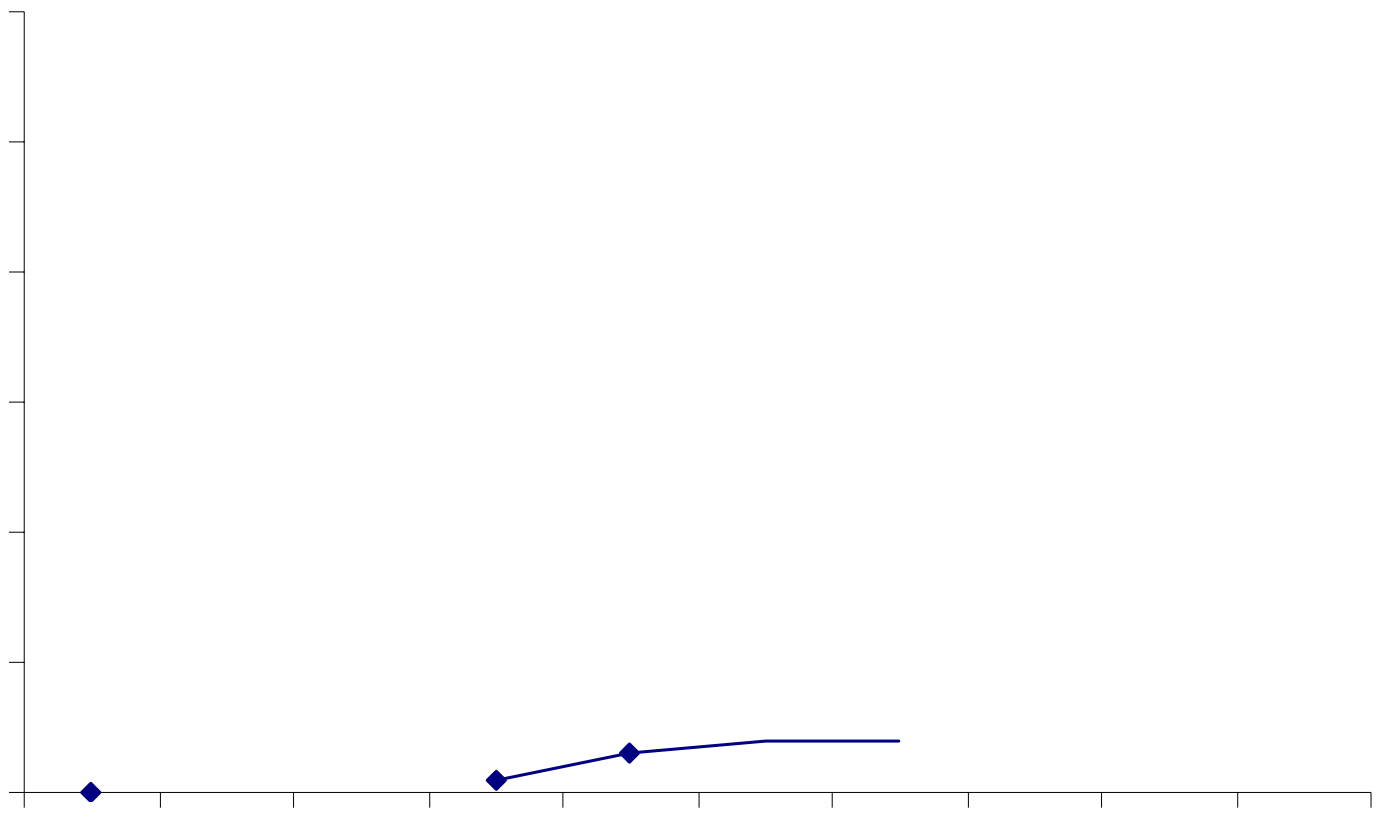


March, 2006

©



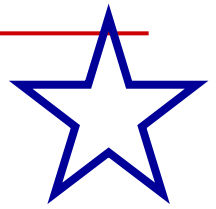
70







# Teacher Comments



## Intervention Teacher

In a Level One test, he read the passage at 38 correct words per minute, which was slower than his normal pace

Continues to struggle to keep his place when he reads and is often distracted, which slows down his scores

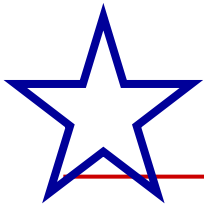
Has not consistently mastered the long “e” vs. short “e” sound

Sometimes switches “er” and “ar” sounds

## Classroom Teacher

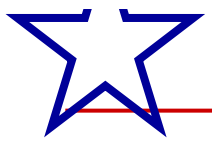
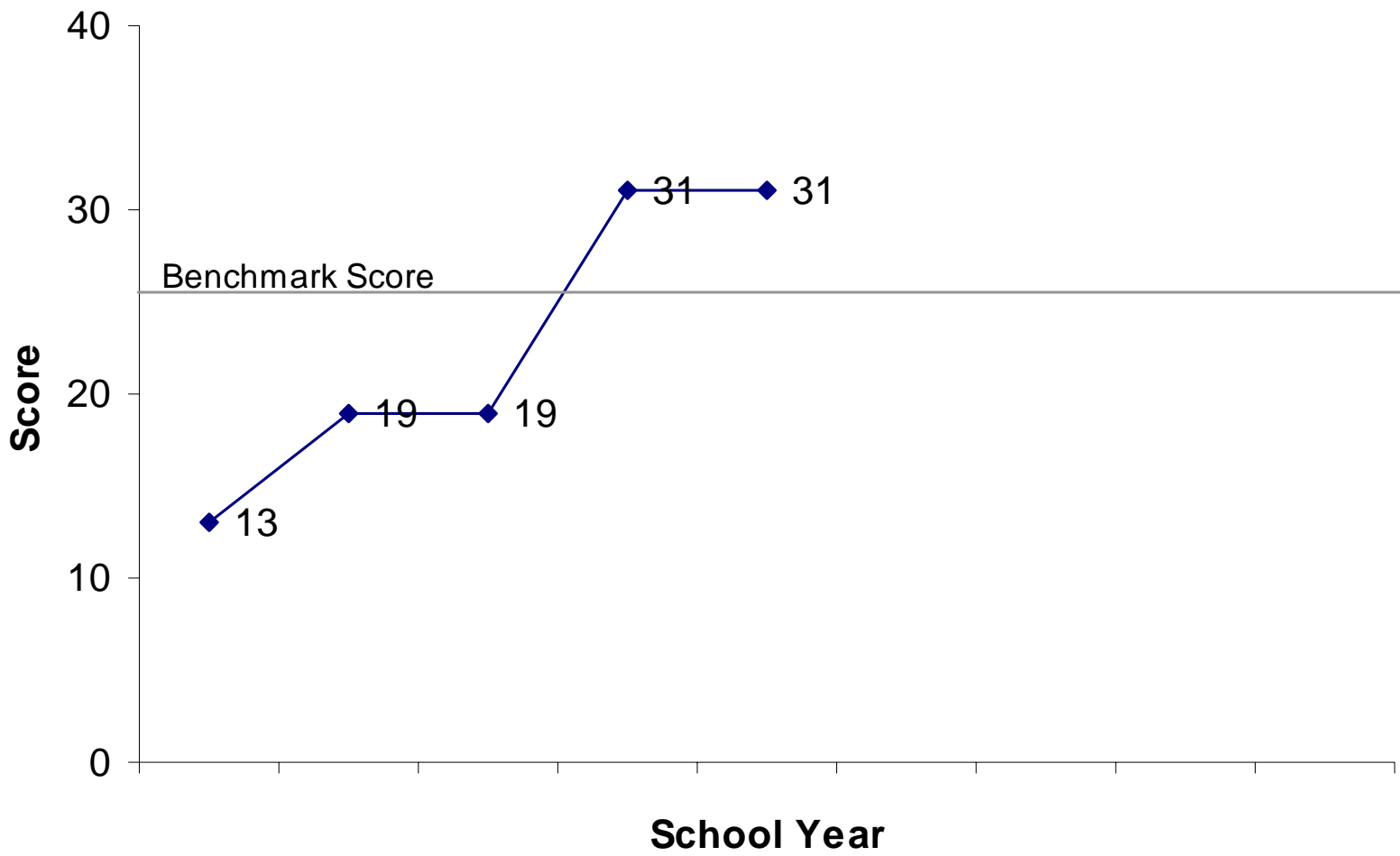
She could hardly get him to do a thing at the beginning of the school year

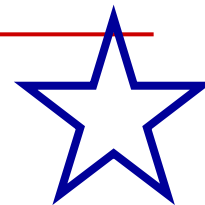
Now he is volunteering to answer questions, completing assignments, and acting like a “totally different student”





◆ Growth in Initial Sound Fluency for "Kory"





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

