



Picking Up the Pace: Strategies for Quickly Building Reading Fluency and Comprehension for Students with Autism and Developmental Disabilities

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Intellectual Disability & Developmental Disabilities*
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Agenda

- The Why
- The Study
- The Intervention
- The Case Stories
- Questions



Project Intensity Team



Friends on the Block Research and Development



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The Why



The Pervasive Narrative of the 95%

- Where does this narrative come from?
 - Mathes et al., 2005; Moats, 2020; Torgesen, 2004; Al Otaiba & Fuchs, 2006
- Is it true?
- Who can learn to read?
- We are working to rewrite the narrative of 95%!
 - Allor et al., 2014; Browder, Ahlgrim-Delzell, Courtade, Gibbs, & Flowers, 2008; Connor, Alberto, Compton, & O'Connor, 2014; Lemons et al., 2015



Reading:

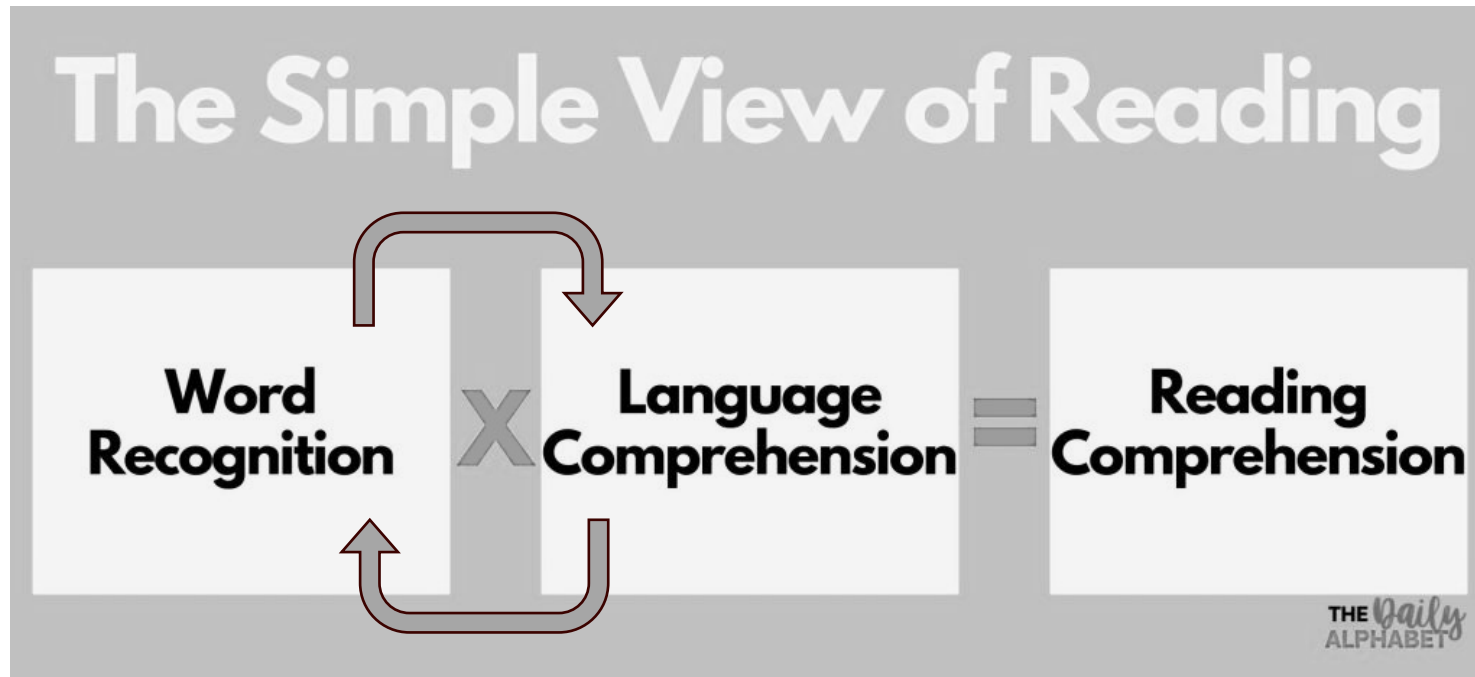
WHAT you need to learn doesn't change

- "Cultural, economic, and educational circumstances obviously affect children's progress," ... "But what they need to learn does not change."
 - (Dr. Mark Seidenberg in his book *Language at the Speed of Sight: How We Read, Why So Many Can't, and What Can Be Done About It*)
- Differences in necessity for intensive repetition and scaffolding certainly exist when working with students who have complex needs



The Simple View of Reading

- Word Recognition (code focused)
- Language Comprehension (meaning focused)
- Reading Comprehension (the goal of reading)



The Study



Primary Research Question

Do **students with disabilities** who experience **intensive literacy needs**, including students with intellectual and developmental disabilities, who participate in FOTB demonstrate greater **reading** and **language outcomes** compared to students who participate in BAU reading instruction?



Participants and Dosage

Total Participants: 132 (67 treatment; 65 control)

- Mean Age: 7.69 years
- Mean IQ (KBIT): 70.84 (range: 40–106)

Disability Percentages (Combined):

- Intellectual/Developmental Disability: 42.4%
- Autism: 7.6%
- Specific Learning Disability: 14.4%
- Speech/Language or Other: 20.5%
- Not Available: 15.2%

Intervention Dosage (Averaged):

- Hours of instruction: ~51 hours
- Weeks of instruction: ~34 weeks
- Days per week: ~3.6
- Minutes per session: ~25

Program Completion:

- Cohort 1: 51.6%
completed program in ≤ 42 weeks
- Cohort 2: 36.1%
completed program in ≤ 42 weeks



Results Summary

Measures Reported Today (C1)	<i>p</i>	<i>g</i>
FOTB (proximal measure of target words)	.0006	1.2
CTOPP Blending	.0702	0.5
WIAT Pseudoword Decoding	.0326	0.6
WIAT Word Reading	.0326	0.4
WIAT Oral Reading Fluency	.0006	1.0
WIAT Receptive Vocabulary	.9388	0.0
WIAT Oral Discourse	.7561	-0.1
WIAT Expressive Vocabulary	.7606	-0.1
WIAT Oral Word Fluency	.4026	0.2
WIAT Reading Comprehension	.0176	0.7

Measures Reported Today (C2)	<i>p</i>	<i>g</i>
FOTB (proximal measure of target words)	.0110	0.8
CTOPP Blending	.8617	-0.0
WIAT Pseudoword Decoding	.9981	0.0
WIAT Word Reading	.5688	0.1
WIAT Oral Reading Fluency	.1455	0.6
WIAT Receptive Vocabulary	.4558	0.3
WIAT Oral Discourse	.4558	-0.2
WIAT Expressive Vocabulary	.3875	-0.3
WIAT Oral Word Fluency	.3958	-0.3
WIAT Reading Comprehension	.3875	0.5

Note. *p* values adjusted with Benjamini–Hochberg correction for 22 total tests



The Intervention



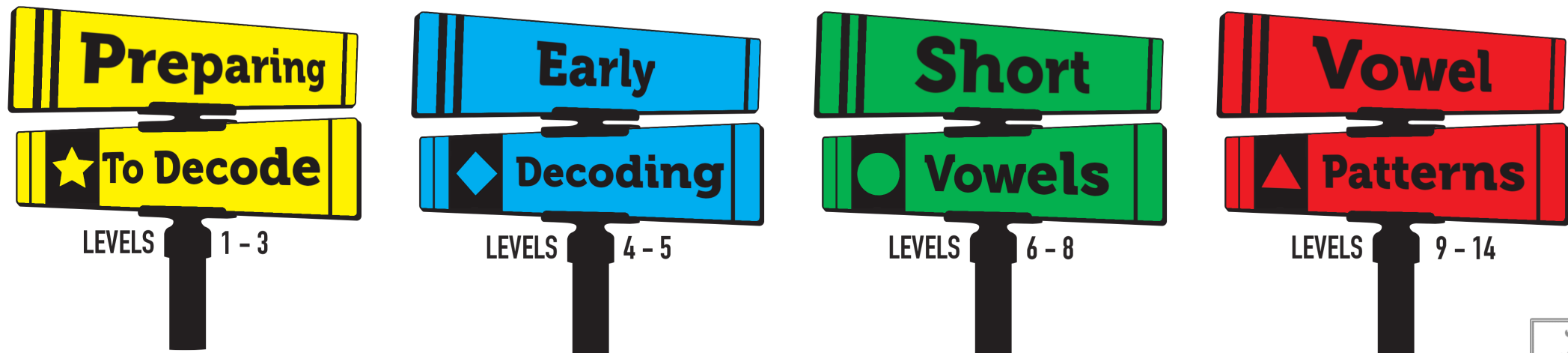
What is Friends on the Block?

A comprehensive and intensive **early literacy program** (initial instruction or intervention) designed to be **customizable** and provide needed supports and practice so **all students** can attain early literacy skills, particularly those with **intensive needs** such as students with disabilities (e.g., dyslexia, learning disabilities, intellectual and developmental disabilities).



What are the components of FOTB?

- 60 student books with carefully controlled, decodable text
- Each book has a detailed Teacher's Guide and materials
- Over 100 learning games that provide specific cumulative practice of skills
- Organized into 14 levels that span four stages of skill development



Scope and Sequence

- Focuses on key skills within all strands of word recognition and language
- Facilitates integration of skills across strands and apply as they read books



Scope and Sequence

Strand	Objective/Skill	Activity Learning Game	★ 1-3	◆ 4-5	● 6-8	▲ 9-14
Language: Comprehension & Vocabulary	Make oral predictions about a text	Predict				
	Develop language and comprehension	Discuss				
	Discuss and summarize a text using a graphic organizer	Review/ Get the Gist (Level 12+)				
	Develop oral language by sorting words based on meaning	Think and Sort				
Phonemic Awareness	Orally blend the first sound and rime into a spoken word	Say the Word				
		Sounds Bingo				
	Say the first sound of spoken words	Say the First Sound				
		Sounds Bingo				
	Orally blend sounds (phonemes) into a word	Say the Word				
		Sounds Bingo				
Word Recognition	Fluently pronounce taught irregular (or temporarily irregular) words	Say the Sounds				
		Sounds Bingo				
		Read It				
		Amazing Words				
	Fluently say the most common sound for taught letters	Word Bingo				
		Word Play				
		Say the Letter-Sound				
		Climb and Slide				
	Sound out and read short vowel words with taught letters/patterns	Sound It Out				
		I Got It				
		Sound It Out				
		Speed Reader				
	Sound out and fluently read words with taught letters/patterns	I Got It				
		Read through the Seasons				
		Word Bingo				
		Word Play				
Fluency	Fluently read target words, including taught irregular words and words with taught letters/patterns	Read the Groups				
	Pronounce words with taught patterns with s, ed, and ing	Read the Parts				
Writing	Pronounce words with taught spelling patterns and syllable types	Super Sentences				
	Read target words and sentences fluently	Read				
	Read text with increasing fluency	I Got It				
Apply	Say the sounds in spoken words; spell words with taught letters/patterns	Say and Write				
		Writing Super Sentences				
Apply	Write sentences fluently	Scavenger Hunt				

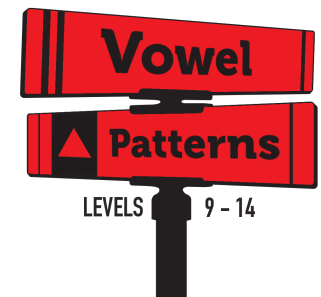
FOTB Target Word List and Phonics Patterns

Friends on the Block Target Word List and Phonics Patterns

Letter Sounds	★ Preparing to Decode			◆ Early Decoding		● Short Vowels			▲ Vowel Patterns					
	Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11	Level 12	Level 13	Level 14
	c, f, p, m, s, t	d, j, n	b, g, h, l, r	ck, k, a, z	u	ch, th, w, x, y	i, o, sh, qu, v	e	a-e, i-e, o-e	ai, ay, ol	al, ea, ee	ar, igh, er	oa, or, ow	ir, oo, u
Sound It Out Words (Decodable)	In Levels 1-3 students are learning phonemic awareness blending and segmenting, letter-sounds, and a small number of irregular words. Students begin in the level in which they miss two or more target words (Levels 1-5) or four or more target words (Levels 6-14). As soon as the students learn most of the words in the starting level, move to the next level. (Note: Sound it Out words in Levels 4-5 are repeated in Level 6.)			am and at can dad mad sad	am and at can dad mad sad	am and at can dad fun had hat mad ran run sad sun up us	big did got him if in it next mom not on sit stop then this will with	bed best end get help let like made make nine same side tail told wait when yes	came fine five gave home hope like made rain roll say stay tail told wait way white	cold day hold may old plain play rain neat need read see seem small tall wall together	all call clean each eat feel green light might never night number part right start together	after better chapter different hard high goal know more morning own road short show slow yellow	before below door follow forget goal hook hurt shirt stood third took turn wood	bird book burn cook disturb girl good hook hurt shirt stood third took turn wood
				Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	Level 9	Level 10	Level 11
Read It Words (Irregular)	a do I like not want	dad here is look mom see the where	are at happy in no she yes you	good help play there to was	big have little my please very what	be friend give go he her it me on so thank we who with your	because care come could feel first of how next said should take too why would	again away came clothes cold eat food for from need oh out put ready some	about animal been day does down every many one or other push saw their warm were	any ball both boy done family girl more most once room saw their warm young	another answer kind know our people question really second soon sure thought word work	almost book bought break buy easy four learn money new probably review these two watch	above alone by eight find house idea often special talk through usually walk water worry	able along carry color full great heard instead live love move only over try world
	Note: Words in blue are made up of patterns taught in later levels so they are temporarily irregular. They are introduced prior to the pattern to facilitate meaning and may facilitate learning of the phonics pattern.													



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A Typical FOTB Lesson (Flexible: About 20-35 minutes)

Level 4 Example

Part 1: Warm-Ups 5-8 minutes

Part 2: Book Reading 10-15 minutes

Part 3: Learning Games 5-10 minutes

Lesson A Warm-Up

Say the Word: sam, dog, mad, jazz

1. Teacher: I will say the sounds in a word. Then you will say the word. I'll do the first one. Listen. /s/ /a/ /m/ /m/ /m/ (Stretch the word by connecting the sounds as you say it slowly. Hold continuous sounds 2-3 seconds. Say the word quickly. Allow think time.) That word is Sam. Say the word.

2. Teacher: Listen. /d/ /oo/ /g/ Say the word.

Students: (Say the word)

Repeat Step 2 with /m/ /m/ /m/ /a/ /a/ /d/ and /j/ /a/ /a/ /z/ /z/.

Corrective Feedback & Scaffolding:

If students do not respond correctly, go through the steps below, starting with Step 1 and stopping when students are able to respond correctly.

Step 1 and Stopping when students are able to respond correctly.

1. Say the word slowly. Stretch continuous sounds 2-3 seconds and connect the sounds.

2. Gradually shorten the length of continuous sounds.

3. Provide the word and have students repeat it.

Say the Sounds: mad, dog, sam, jazz

1. Teacher: I will say a word. Then you will say each sound in the word. The first word is mad. Listen to me say the sounds. /m/ /a/ /d/ (Stretch the word by connecting the sounds as you say it slowly. Hold continuous sounds 2-3 seconds. Say the word quickly.)

2. Teacher: Listen. Dog. Say the sounds.

Students: (Say the sounds.)

Repeat Step 2 with sam and jazz.

Corrective Feedback & Scaffolding:

If students make an error, follow the 1. We. You feedback procedure.

1. Listen. Sound it out.

2. Teacher: Sound it out.

Students: (Say the sounds.)

Repeat Step 2 with all of the words.

Read It

1. Teacher: Read the word.

Students: (Read the word.)

Repeat Step 1 with all of the words.

Warm-Up

Say the Letter-Sound

r a z k l

Sound It Out

mad Jazz can at am

Read It

was to good there are

Lesson 8 Book: Read and Discuss

Use this guide to direct discussion and enhance student engagement. Use 1-2 questions per page based on student ability. Questions listed as the question "help" and numbers increase with the highest is the most difficult.

1. Teacher: Read with the student for the student text.

2. Teacher: Read with the student for the student text.

3. Teacher: Read with the student for the student text.

1. Read the title.

2. Read the word list to the student. Know what the pictures are.

Optional: Have the students point to the word.

Read the Story Starter.

3. Why do you think Sam thought the girl was sad?

1. What color is the sky? (blue)

2. What color is the grass? (green)

3. Why was the girl sorry she had yellow hair?

1. Why does Sam ask the girl if she is mad? What are some things that make you mad/sad?

2. Sam says he is ... (bored). Why do you think Sam is bored?

3. Why did Sam want to help the girl? How can you help people when they are sad or mad?

1. The girl looks ... (mad/sad/angry). What do you think Sam should do next?

2. What color is the grass? (green)

3. What is Sam wearing? (green shirt and blue shorts)

Sam and Jazz Take a Walk Scavenger Hunt

Materials: Sam and Jazz Take a Walk student book, provided.

Teacher: Make sure your book is closed and is not open to the scavenger hunt page.

1. Read each clue, one at a time.

2. How can you help people when they are sad or mad?

3. If you have 1 student, encourage the student to read the clue.

4. If you have more than 1 student, encourage everyone to read the clue.

Super Sentences

Materials: student chart (sentences), Super Sentence chart.

Set out the necessary word and picture cards for the chart.

1. Teacher: We will use the word cards to make the sentence.

2. Teacher: Let's make this point to the first sentence.

3. Now let's read out sentence together.

Amazing Words

finish	good		here	in	you
there		no	where	like	yes
was	help			play	to
the		is	help	there	
good	here	do		want	look
see		play			where
are	to	was	she	not	happy
					start

I was not
n a d
at you.

Sam and Jazz Take a Walk

Written by Jill Allor, Francesca Jones, and Ashley Sandoval
Illustrated by Jennifer Cheatham

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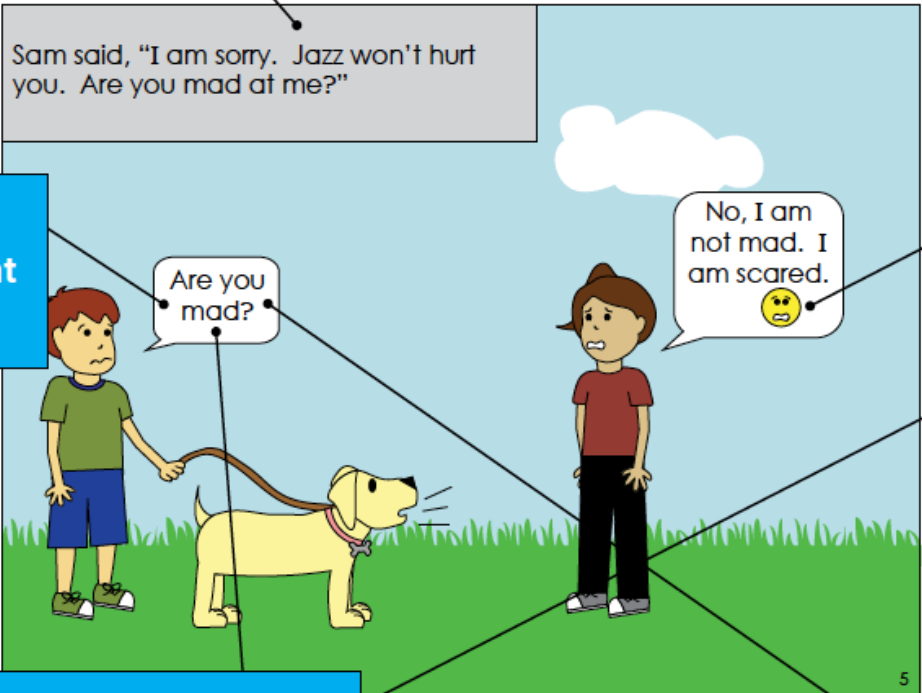


LEVEL 4 BOOK SAMPLE PAGES

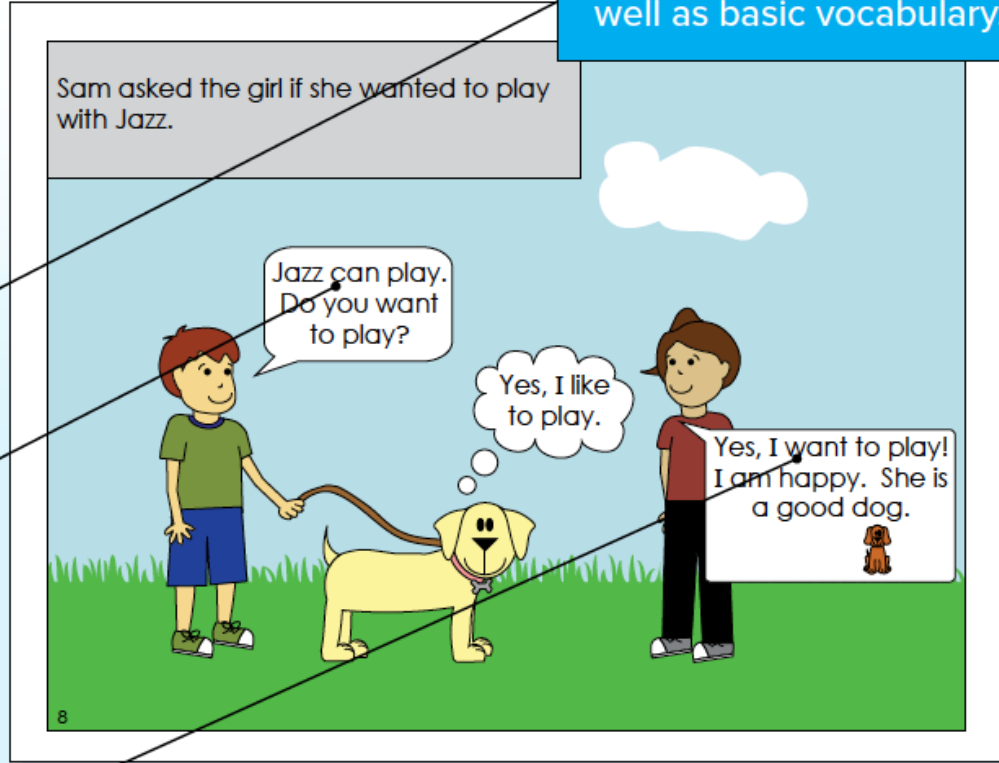
A friend (teacher, tutor, family member, peer) reads **Helper Text** in gray boxes. Helper Text improves the story and supports comprehension and vocabulary.

The student reads **Student Text** in white.

Sound It Out Target Words are decodable words that are also high-frequency words.



A few **Picture Words** improve the story and support meaning, as well as basic vocabulary.



Read It Target Words are irregular or temporarily irregular high-frequency words.

The Intervention: Supporting Fluency



FOTB Fluency Building Routine

- Students are not expected to be fluent before they move to a new level; important to move to next level so students will learn new words and letter patterns
- Use the Fluency Building Routine to focus on fluency
- Consider additional practice with previous level books and games
- Add fluency passages to lessons when students reach Level 5.
 - Begin with Level 4 passages.



Fluency Building Routine Directions

Fluency Building Routine



Materials:

- Choose the passage that is at least ONE level below your student's current level of instruction. For example, if the student is on Level 5 of Friends on the Block, choose the Level 4 passage. If needed, you may use the same passage in more than one lesson.
 - student copy (page for student to read)
 - examiner copy (page for tutor to mark on; page with numbers)
- timer
- red pencil or marker
- blue or black pencil or marker
- graph paper (or graph on computer or device)

General Directions:

Cold Read: Follow the procedures below, marking errors with a BLACK or BLUE pencil or marker and graphing the number of correct words per minute in REGULAR or BLUE colored pencil.

Hot Read: Follow the same procedures a second time, marking errors with a RED pencil and graphing the number of correct words per minute in RED.

Encourage the student by praising effort, prosody (reading with expression), and improvement from first to second reading and across days.

Fluency Building Routine



Detailed Procedures for Reading:

(place the student copy of the text in front of the student)

The title is _____. (read the title to the student, pointing to each word as you read it).

Please read this (point to the first word of the passage) **out loud. If you get stuck, I will tell you the word so you can keep reading. Do your best reading. Start here** (point to the first word of the passage). **Begin.** Start the timer when the student says the first word of the passage.

Mark errors by placing a slash mark on the missed word. At the end of **1 minute**, place a bracket () after the last word provided by the student, and say, **"Stop."**

If the student finishes the passage before 1 minute is over, write the number of seconds beneath the passage.

Graph the number of correct words with a REGULAR or BLUE pencil for the cold read and a RED pencil for the hot read.



Sample Passage: Level 4

Sam and Jazz Take a Walk



I am happy here. Jazz is happy here. Jazz and I are happy.



Help! There is a dog! I do not like dogs!



Are you mad?



No, I am not mad. I am scared.



Look at Jazz. She is happy to see you. She is a good dog.



I like you.



I was scared. I was not mad at you.



Jazz can play. Do you want to play?



Yes, I like to play.



Yes, I want to play! I am happy. She is a good dog.



Sam and Jazz Take a Walk



I am happy here. Jazz is happy here. Jazz and I are happy. 13



Help! There is a dog! I do not like dogs! 23



Are you mad? 26



No, I am not mad. I am scared. 34



Look at Jazz. She is happy to see you. She is a good dog. 48



I like you. 51



I was scared. I was not mad at you. 60



Jazz can play. Do you want to play? 68



Yes, I like to play. 73



Yes, I want to play! I am happy. She is a good dog. 86



Sample Passage: Level 10

Animals Up Close, Chapter 4



Frogs can hop. Some frogs can hop a long way. Some frogs are little. Once, I saw some frogs that were very, very little!

Snakes are very long. Their skin has scales. When they get big, they shed their old skin. They cannot bite food. They just gulp it down.

We had to go home at the end of the day. But I was not done looking at the animals. There are many animals. They can be plain, have scales, have a tail, like to be cold, like to roll a ball, or many more things. I want to see more animals up close!

Animals Up Close, Chapter 4



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Snakes are very long. Their skin has scales. When they get big, they shed their old skin. They cannot bite food. They just gulp it down.

We had to go home at the end of the day. But I was not done looking at the animals. There are many animals. They can be plain, have scales, have a tail, like to be cold, like to roll a ball, or many more things. I want to see more animals up close!



The Intervention: Supporting Comprehension



How to Support Comprehension in an FOTB Lesson

- Sometimes, students need a faster pace of instruction to prevent boredom/distractions
- Consider incorporating more challenging isolated decoding practice to grow student confidence
- Support comprehension at the student's decoding level with graphic organizers and think alouds
- Begin by selecting more obtainable comprehension questions and scale up as appropriate



Graphic Organizers Used in FOTB Lessons

Get the Gist	
	Who or what is the chapter mostly about? What is the most important thing about the who or what? Write the gist in a sentence with 10 words or less.
Chapter 1	
Chapter 2	
Chapter 3	
Chapter 4	
Chapter 5	

STORY GRAMMAR	
 <u>Listen</u> to me read the title of each box. Each of these is a part of the story.	
 <u>Think</u> about the book.	
 <u>Tell me</u> about that part of the book. Look at the pictures to help you remember.	
 CHARACTERS Who the Story is About	 PLOT What Happens in the Story
 SETTING When and Where the Story Takes Place	

Main Idea	Detail
 Write who or what the story is mostly about.	 Write one detail.
	 Write one detail.
	 Write one detail.

Scaling Up the Difficulty of Comprehension Questions

Level 3

What do you think is special about elephants?
What do you use to hold things? (hands/arms, bags, etc.)
Do you like hippos? What do you like about hippos?
Can you think of anything that reminds you of a hippo, or have you ever seen a hippo? (various; pigs, cartoon characters, etc.)
If you could have an elephant, a hippo, or a giraffe as a pet, which one would you want? Why?

Level 2

What is a word that describes elephants? (various; big, strong, opinion words)
Do boys or girls have tusks? (both)
Elephants swish their _____. (tails)
What is a word that describes hippos? (various)
Can hippos run fast? (yes)
Are giraffes tall or short? (tall) Are giraffes spotted or plain? (spotted)

Level 1

What is this? (an elephant)
Point to the tusk.
Point to the baby elephant.
Are elephants big or small?
Page 8 :Point to the hippo.
Page 9: What is this? (giraffe)

Here are African elephants.

They are very, very big. They need lots of room to run and play.

They have tusks. Both boys and girls can have tusks. You can see how old they are by seeing how long their tusks are. Young ones do not have any tusks. Old ones have very long tusks.



They have tails. They swish their tails to get insects to go away.

They have strong trunks that can pick up and hold things.



What is the young one holding?

7

plants. They spend most of their time looking for food or eating.



You can get very close to animals when you give them food. Stay in one spot. Hold out the food and wait for the animals to get it from you. It may take a little while, but just wait and hold the food still. Most of the time, they will come get the food when you give it to them this way.



9

The Case Stories



“Edwin”

Age 5



The Importance of Early Intervention

Diagnosis: Developmental Disability

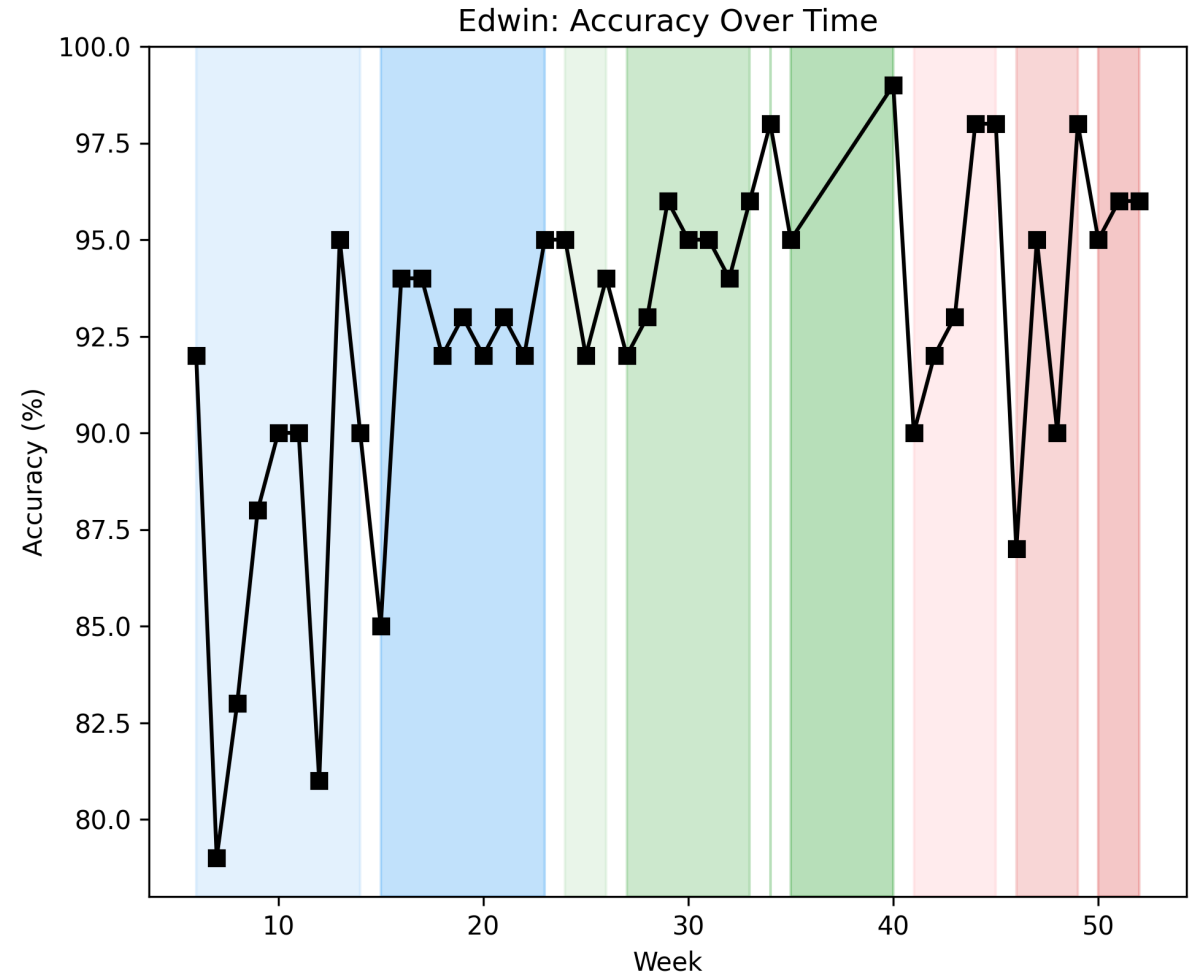
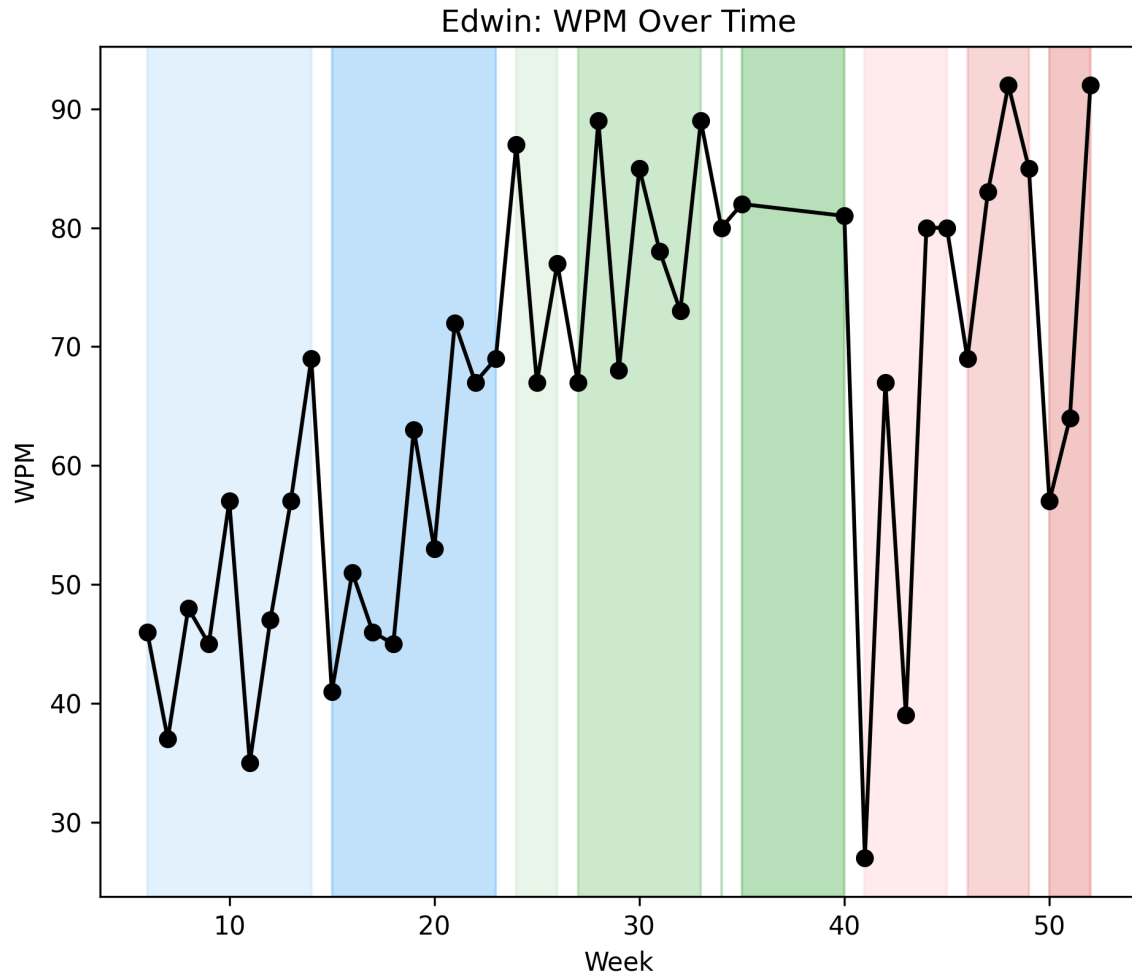
IQ (KBIT): 53

Began FOTB at level 1 and completed all 14 levels in 39 instructional weeks.

Received a total of 63.95 hours of one-on-one*, pull-out instruction with an average of 1.63 hours per week.



Edwin: Oral Reading Fluency



Do you have any students like Edwin?



- Think about your students, do you have any who struggle with the same things Edwin did?
- When they struggle with reading, what is preventing their success?
- What strategies would be helpful for those students?

“Finn” Age 8



Gamification and the Communal Aspects of Learning

Diagnosis: Other Health Impairment *

IQ (KBIT): 61

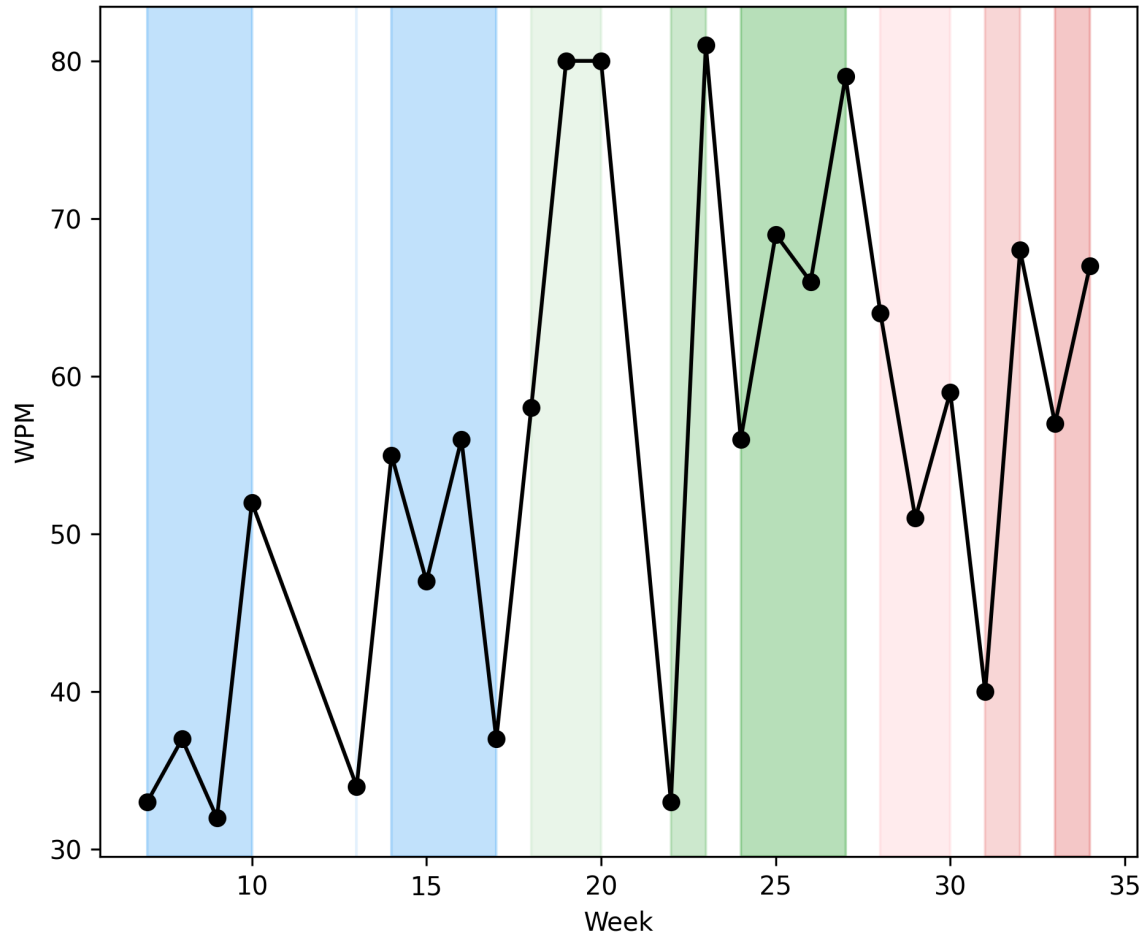
Began FOTB at level 1 and completed all 14 levels in 34 instructional weeks.

Received a total of 45.67 hours of one-on-one, pull-out instruction with an average of 1.35 hours per week.

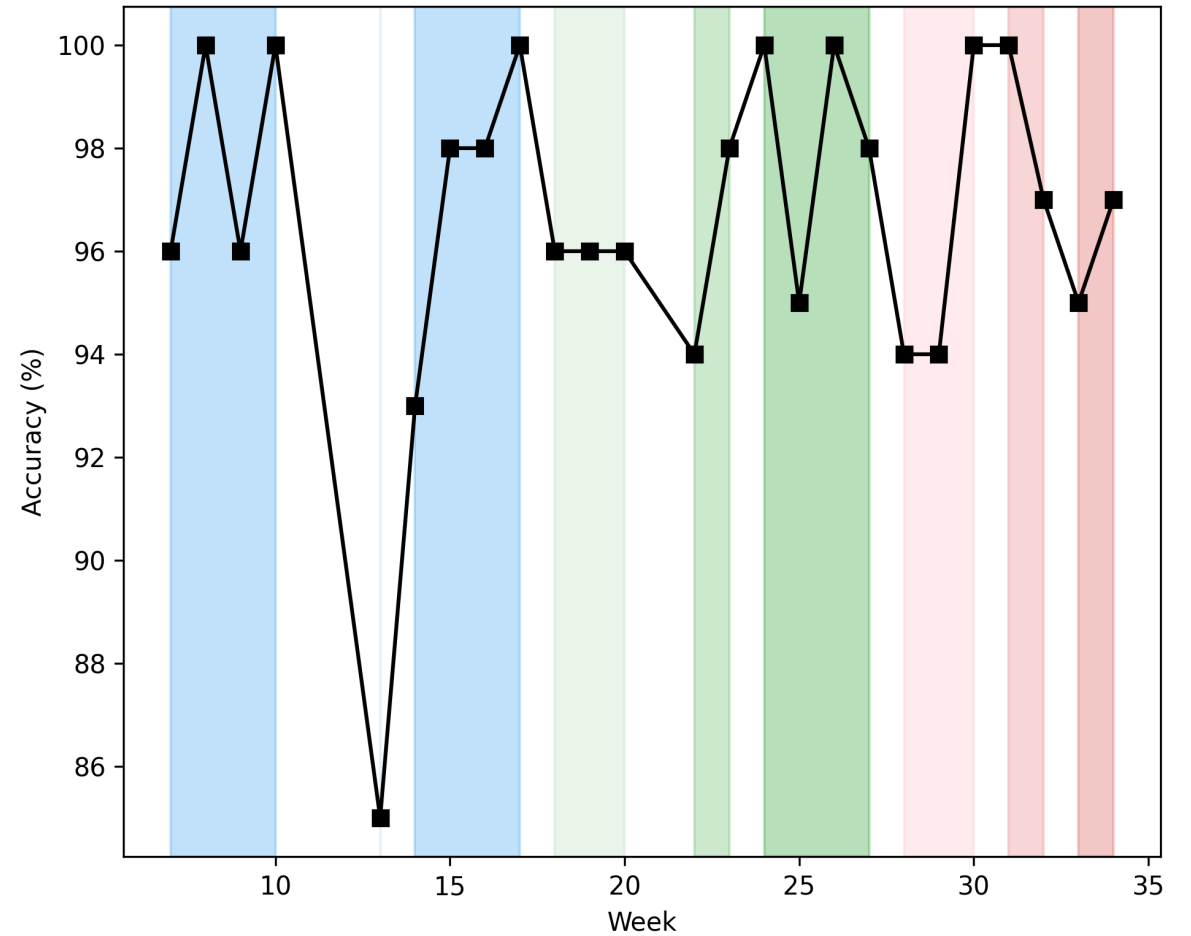


Finn: Oral Reading Fluency

Finn: WPM Over Time



Finn: Accuracy Over Time



Do you have any students like Finn?



- Think about your students, do you have any who struggle with the same things Finn did?
- When they struggle with reading, what is preventing their success?
- What strategies would be helpful for those students?

“Griffin”

Age 9



The Importance of Appropriate Placement and Retention Considerations

Diagnosis: Intellectual Disability
IQ (KBIT): 64

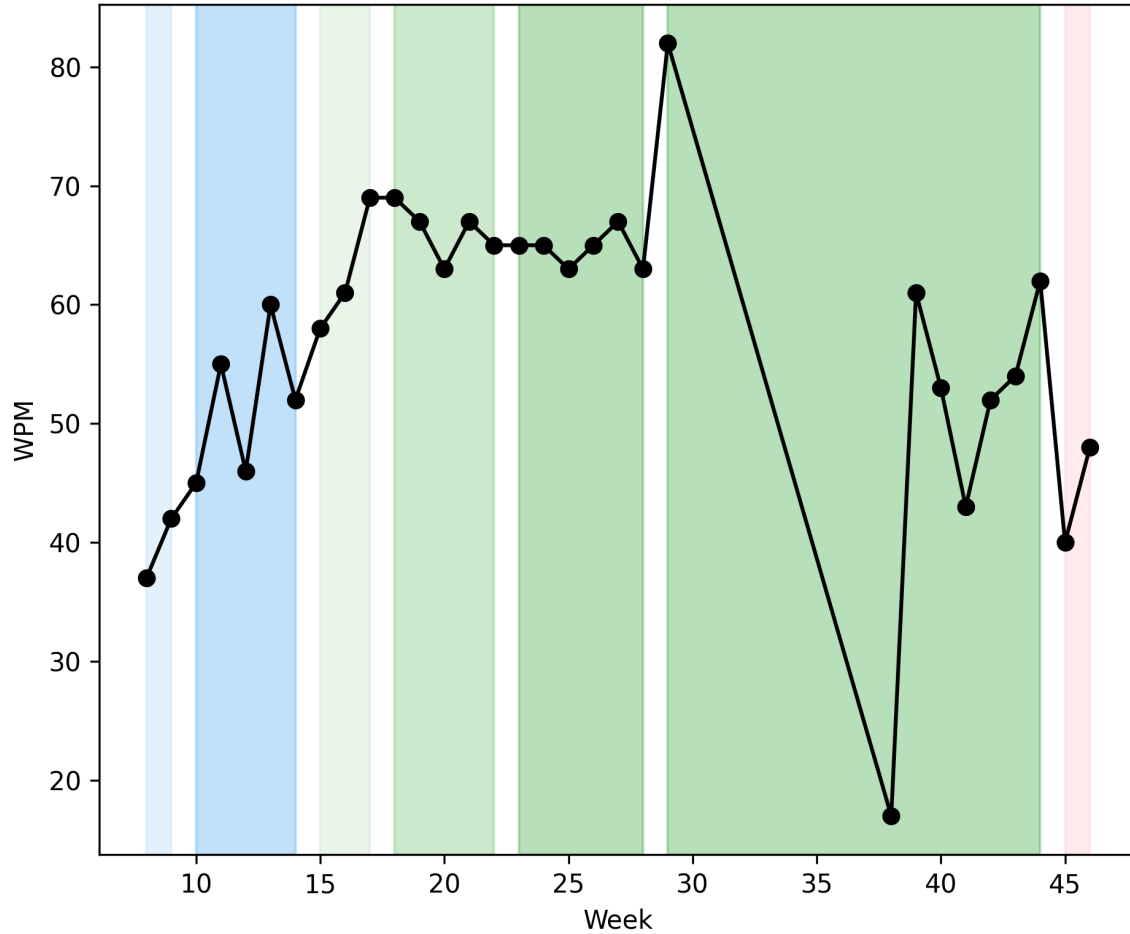
Began FOTB at level 2 and completed all 14 levels in 42 instructional weeks.

Received a total of 61.43 hours of pull-out instruction* with an average of 1.47 hours per week.

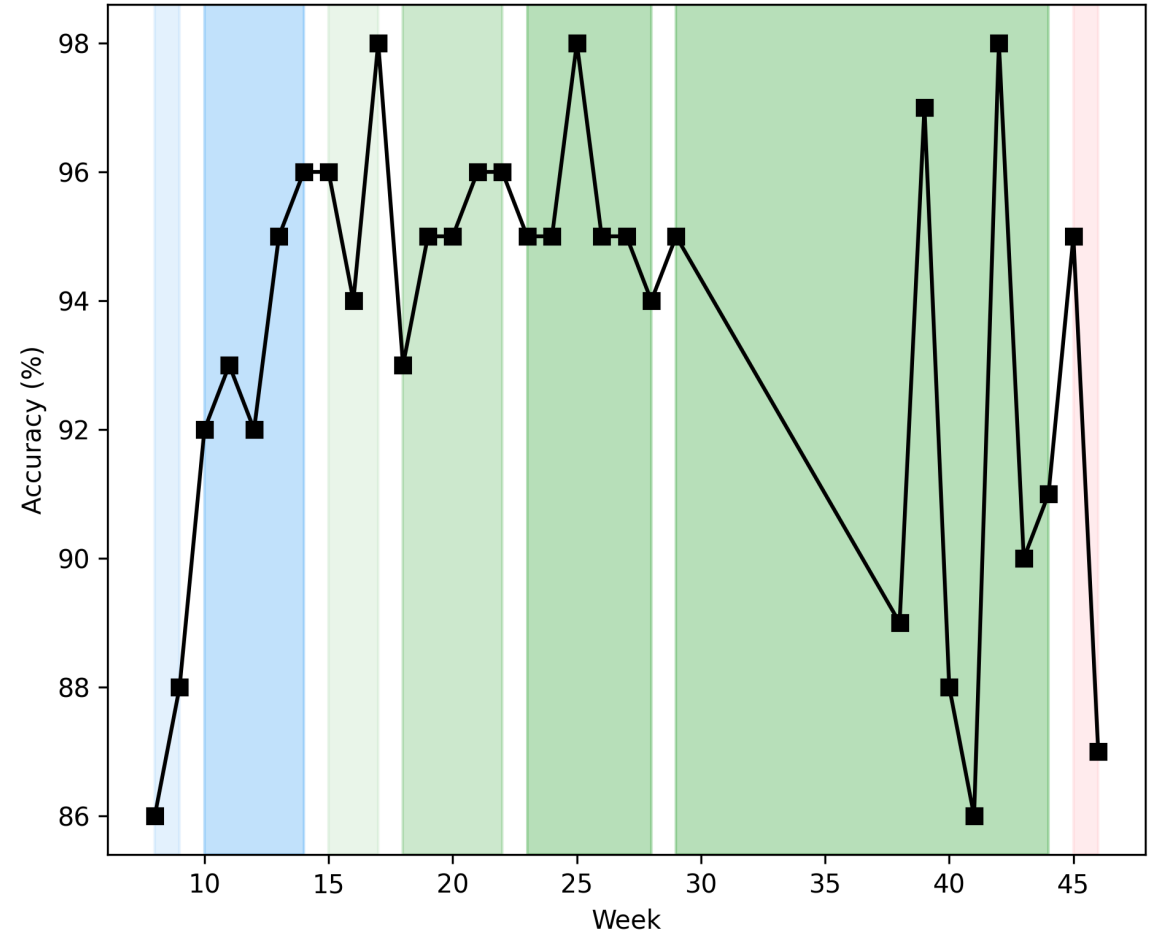


Griffin: Oral Reading Fluency

Griffin: WPM Over Time



Griffin: Accuracy Over Time



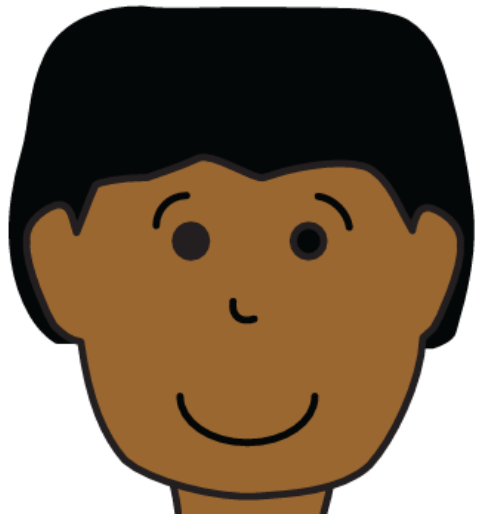
Do you have any students like Griffin?



- Think about your students, do you have any who struggle with the same things Griffin did?
- When they struggle with reading, what is preventing their success?
- What strategies would be helpful for those students?

“Lamar”

Age 7



The School to Prison Pipeline

Diagnosis: Other Health Impairment (ADHD)
IQ (KBIT): 70

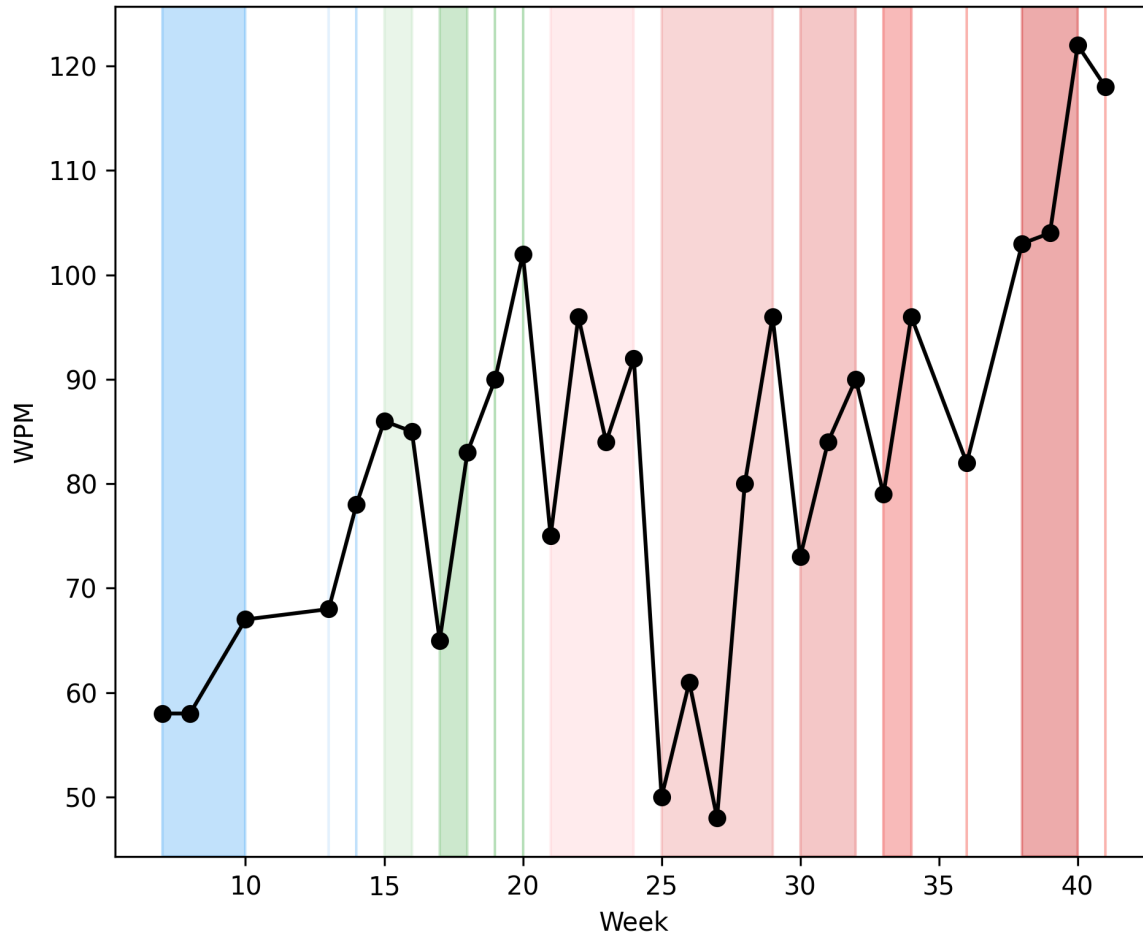
Began FOTB at level 1 and completed all 14 levels
in 36 instructional weeks.

Received a total of 49.33 hours of one-on-one*,
pull-out instruction with an average of 1.37 hours
per week.

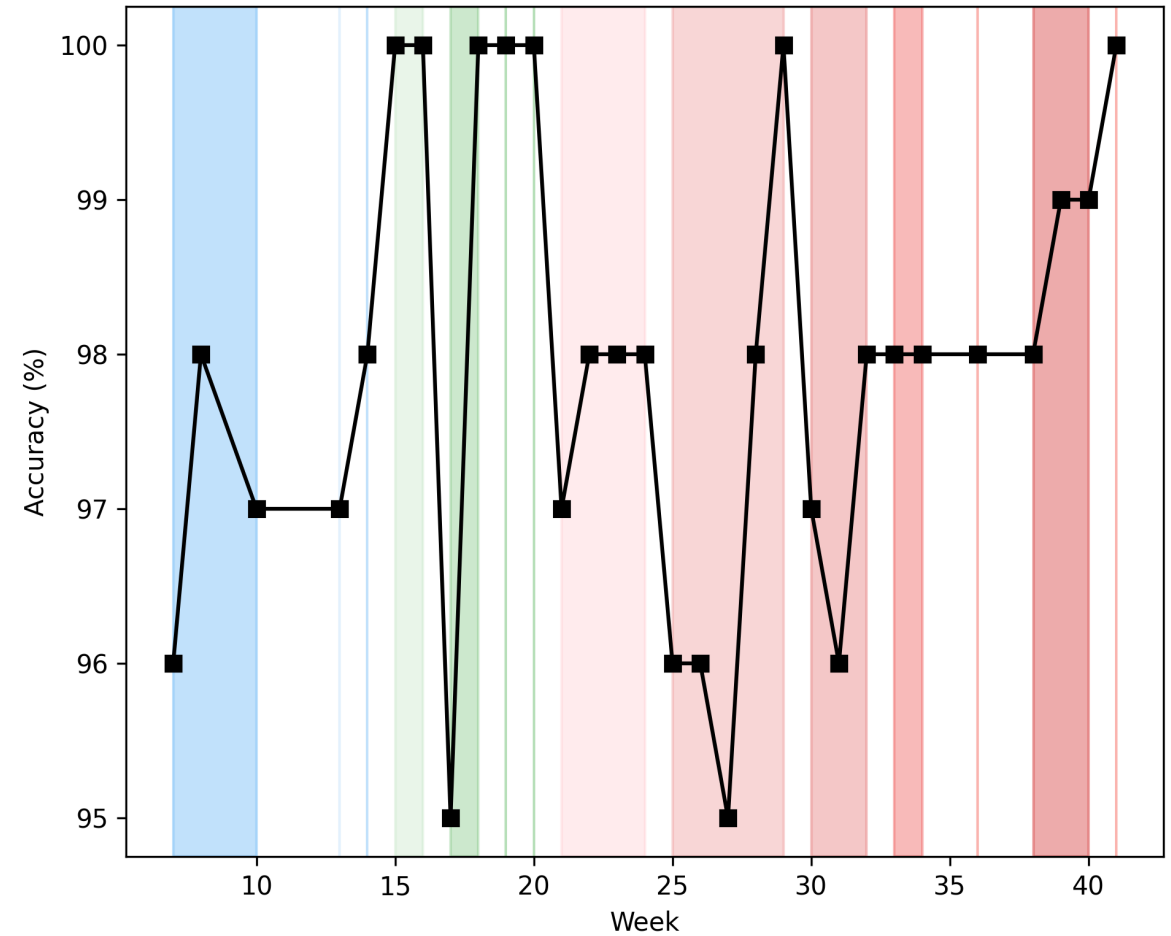


Lamar: Oral Reading Fluency

Lamar: WPM Over Time



Lamar: Accuracy Over Time



Do you have any students like Lamar?

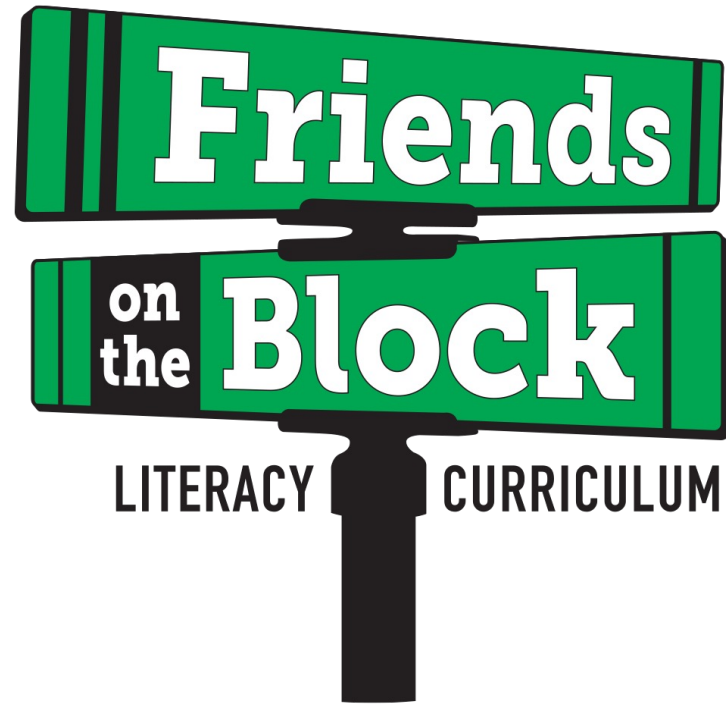


- Think about your students, do you have any who struggle with the same things Lamar did?
- When they struggle with reading, what is preventing their success?
- What strategies would be helpful for those students?

Questions



For More Information on Friends on the Block



Overview & Demonstration Videos

FREE Materials



OSF Registries

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Thank you!

Takeaway: Students with a variety of different needs **can** learn to read with appropriate fluency and comprehension when provided with effective instruction.

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