

# Reading Fluency Intervention Strategies to Build Automaticity at Multiple Levels

Roxanne Hudson, Ph.D.  
University of Washington  
rhudson@u.washington.edu



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## Reading Fluency

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**Accuracy**  
**Automaticity**  
**Prosody**

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## Reading Fluency

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### **AUTOMATICITY**

- Letter level—quick and effortless identification of letter sounds
- Word level—quick and effortless word recognition or decoding
- Text level—fluid pace in reading connected text

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## Automaticity

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### **Letter level**

- Slow access to letter sounds impairs decoding accuracy and fluency (Hudson et al. 2006).
- Not sufficient for students to be accurate in letter sound knowledge.

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# Automaticity

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## Word level

- Slow decoding impairs understanding
- Cognitive load is reduced as automaticity is increased
- Cognitive resources can be devoted to comprehension

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# Automaticity

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## Text level

- Refers to the fluidity of text reading, including the rate of reading
- Typically measured in correct words per minute (CWPM)
- Allows attention to focus on the connectedness of text

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# Improving Reading Fluency

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## The Bottom Line

**As with any skill that requires an individual to coordinate a series of smaller actions to create a unified process, it is practice that allows the learner to develop expertise.**

(Kuhn & Stahl, 2002)

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# Improving Reading Fluency

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**We will focus on practice that improves automaticity at the letter, word, and text level in order to reduce the readers' cognitive load and increase his or her reading comprehension.**

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## What the research says...

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A meta-analysis of repeated readings research by Theirran (2004) found that these elements are **critical for success**:

- Much more powerful if students read passages to an adult (ES = 1.37) rather than a peer (ES = .36)
- Instructors should provide direct corrective feedback after every session
- Much more powerful if students read until they reach a rate and accuracy criterion (ES = 1.78) rather than a set number of times (ES = .38)

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## Timed Repeated Readings

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- Can be used to increase automaticity with
  - Letter sounds
  - Sight Words
  - Decodable Words
  - Connected Text
- Should only be used with students who are essentially accurate, but slow.
- Should not be used with students who are not accurate or who are already fluent.
- Are not appropriate for use with all students

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## Timed Repeated Readings

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- Assess struggling students to see what the areas of difficulty are
  - Letter sounds appropriate for grade level, including digraphs
  - Word families
  - Sight words
  - Connected text
- If a student is accurate but slow, then timed repeated reading is a good choice for him or her

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## Timed Repeated Readings

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- If using timed repeated reading with levels lower than connected text, ensure there is a connection between the levels of practice.
  - Practice in letter sounds
  - Words with those letter sounds
  - Sight words at a similar reading level (if desired)
  - Connected text with those decodable and sight words

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## Timed Repeated Readings: Schedule

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- Best if done individually
- Can be done with groups up to 3
- At least 3 times a week
- 5 to 10 minutes per student

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## Timed Repeated Readings: Goals

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- Isolated Letter Sounds 60 cspm
- Isolated Words or Connected Text
  - Grade 1 40-55 cwpm
  - Grade 2 90-100 cwpm
  - Grade 3 110-115 cwpm
  - Grade 4 120-125 cwpm
  - Grade 5 130-140 cwpm
  - Grade 6+ 150 cwpm

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## Timed Repeated Readings: Materials

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- Materials can be purchased or teachers can make their own
- It is important that the materials
  - follow a sensible progression that systematically addresses the areas that need to be worked on,
  - increase in difficulty in small steps,
  - are organized so that teachers and students can easily use them,
  - and are at the appropriate level to meet the student's needs.

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## Timed Repeated Readings: Materials

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- Letter sounds timing sheets go from simple to more difficult in sequence that matches reading intervention materials.
- Words timing sheets consist of increasingly difficult sight words or decodable words that use letter sounds.

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## Timed Repeated Readings: Materials

- Connected text can come from anywhere: decodable books, leveled books, core reading program stories, etc.
  - As long as it is at the student's instructional (90-95% accuracy) or independent (95% + accuracy) reading level, any text can be used.

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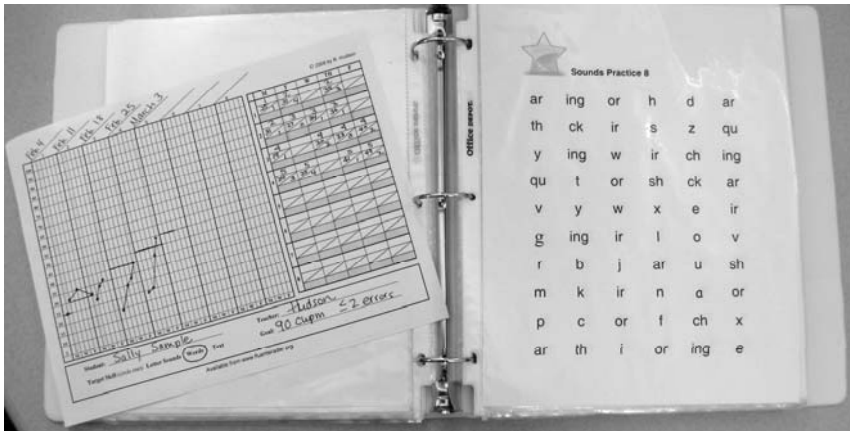
## Timed Repeated Readings: Materials

### Materials Organization



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## Binder of Student Materials



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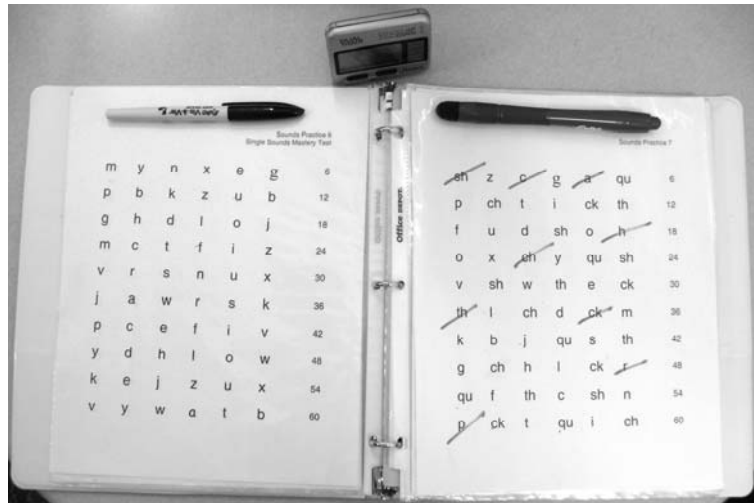
## Binder of Student Materials

- Can keep graphs in front cover
- Separate sections for...
  - sounds,
  - words, &
  - text.
- Mark individual student materials with post-its or colored tabs.



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# Binder of Teacher Materials





**Sounds Practice 1**

s	r	m	f	a
r	s	m	a	f
f	r	a	m	s
a	f	s	r	m
s	a	m	r	a
f	r	a	f	s
m	a	f	s	m

**Sounds Practice 1**

s	r	m	f	a	5
r	s	m	a	f	10
f	r	a	m	s	15
a	f	s	r	m	20
s	a	m	r	a	25
f	r	a	f	s	30
m	a	f	s	m	35

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**Sounds Practice 2**

p	c	t	l	i
m	r	s	f	a
i	l	m	c	p
r	p	c	l	f
t	c	i	a	p
m	t	s	f	l
p	l	t	c	i
t	r	s	i	a

**Sounds Practice 2**

p	c	t	l	i	5
m	r	s	f	a	10
i	l	m	c	p	15
r	p	c	l	f	20
t	c	i	a	p	25
m	t	s	f	l	30
p	l	t	c	i	35
t	r	s	i	a	40

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**Word Practice 1**

ram	at	am	as	cat
am	vas	mat	ram	fat
ham	rat	as	sat	ram
ham	fat	ram	at	am
as	sat	cat	vas	rat

**Word Practice 1**

ram	at	am	as	cat	5
am	vas	mat	ram	fat	10
ham	rat	as	sat	ram	15
ham	fat	man	at	am	20
as	sat	cat	vas	rat	25

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### Word Practice 2

map rim as Tim sit  
 fit ham rim tap Pam  
 hit cap sit him him  
 vas rap nap cat am  
 Tim as fit nap pit  
 rim map pit fat rap

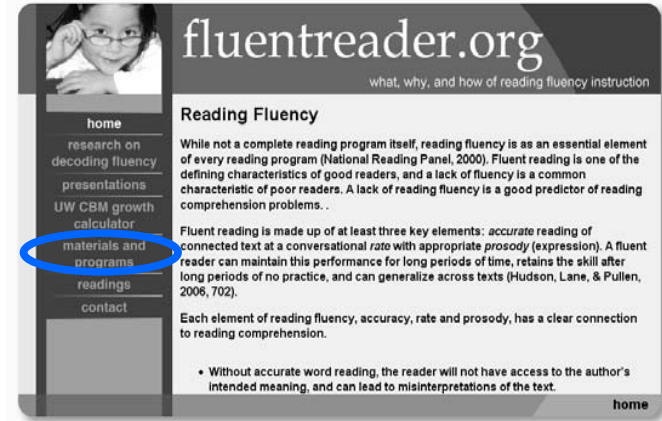
### Word Practice 2

map rim as Tim sit 5  
 fit ham rim tap Pam 10  
 hit cap sit him rap 15  
 vas rim nap cat am 20  
 Tim as fit nap pit 25  
 him map pit fat rap 30

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# Letter Sounds Available to Download

- Go to [www.fluentreader.org](http://www.fluentreader.org)
- Click on the materials and programs link



# Letter Sounds Available to Download



ORANGE COUNTY PUBLIC SCHOOLS  
 PRECISION TEACHING PROJECT  
 ORLANDO, FLORIDA

see-say

PA-3

Consonants & Vowels

n	s	z	p	m	r	v	b	k	e	20
t	c	d	i	f	o	h	a	y	g	20
w	l	u	n	s	p	z	r	u	d	30
e	f	b	a	o	m	c	y	v	k	40
l	l	h	t	g	j	w	u	t	w	50
e	s	n	k	j	f	r	c	h	l	60
d	p	o	i	a	v	m	b	g	y	70
z	o	m	z	n	k	y	r	v	w	80
h	b	g	p	a	e	t	l	c	j	90
l	d	u	s	f	y	f	l	a	r	100



can run	they are	will think	went away	he was	was made	went down	14
is coming	could eat	must be	my father	her mother	I was	I am	28
from home	has made	some bread	was found	will walk	you were	at school	42
we were	to stop	it is	will go	would like	to go	some bread	56
I was	is coming	will walk	went away	at school	you were	will go	70
must be	could eat	to stop	was found	from home	was made	they are	84
with us	my father	will think	I am	we were	would eat	can run	98
went down	to go	it is	her mother	has made	he was	will walk	112
will go	he was	to stop	I am	it is	went away	was found	126
would like	her mother	they are	we were	from home	can run	has made	140
went down	to go	at school	with us	some bread	I was	could eat	154
you were	my father	will think	must be	was made	is coming	went down	168
will go	her mother	with us	at school	could eat	I am	will think	182

## These materials are available from the state of Florida...

### Online:

- Go to [http://www.fl DOE.org/workforce/pdf/products\\_catalog.pdf](http://www.fl DOE.org/workforce/pdf/products_catalog.pdf)

### By Phone:

- Call 1-800-342-9271

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## Great site to get your own reading pages of connected text made:

- The website ([www.interventioncentral.com](http://www.interventioncentral.com)) is very helpful in the areas of CBM, RTI, positive behavioral support, reading, writing, and math
- The name of the tool is *OKAPI! The Internet Application for Creating Curriculum-Based Assessment Reading Probes*
- <http://www.interventioncentral.org/htmldocs/tools/okapi/okapi.php>

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## Okapi Tool:

Feedback? [jim@jimwrightonline.com](mailto:jim@jimwrightonline.com)

**OKAPI! On-Line Manual**

**Be Patient!**  
Once submitted, CBA probes may take 15 to 90 seconds to appear...

**OKAPI!**  
*The Internet Application for Creating Curriculum-Based Assessment Reading Probes*

**Directions:** Type or paste text into the form and submit. In a short time, OKAPI! will return formatted CBA probes or a readability analysis.

1 Title:

2 Author:

3 Font: SanSerif Text Size: Medium

4 Readability Formula : Spache (Grades 1-3)

From <http://www.interventioncentral.org/htmldocs/tools/okapi/okapi.php>

# Okapi Tool:

**Text to Be Analyzed:** *(Submit text samples of up to 200 words)*

**Additional Options:**

Highlight Difficult Words    
  Show Readability Formula    
  Show Sentence Boundaries    
  Count Semi-Colons(,), Colons (:) As Sentence Punctuation

**'Magic Characters' Guide:** *(Optional)*

- Place an *asterisk* (\*) in front of any additional word (i.e., *first names* for Spache, *names of persons or places* for Dale-Chall) that you would like *OKAPI!* to accept as an 'easy' word.

From <http://www.interventioncentral.org/htmdocs/tools/okapi/okapi.php>

# Okapi Tool:

**'Magic Characters' Guide:** *(Optional)*


- Place an *asterisk* (\*) in front of any additional word (i.e., *first names* for Spache, *names of persons or places* for Dale-Chall) that you would like *OKAPI!* to accept as an 'easy' word.
- Place a *right-bracket* (>) at any point in the text where you would like *OKAPI!* to force a new paragraph.
- Place a *backslash* (\) at the dividing point of any compound sentence that you would like *OKAPI!* to count as two sentences.
- Place an *underscore* ( \_ ) in front of any word containing one or more punctuation marks (e.g., *Y.W.C.A.*) that you would like to prevent *OKAPI!* from treating as end-of-sentence markers.

**Readability Resources:**

- Spache Revised Word List Spache Readability Formula Instructions [web page; pdf]
- Dale Familiar Word List Dale Readability Formula Instructions [web page; pdf]
- Public Domain Text Web Sites: Project Gutenberg, Bartleby.com, Blackmask.com

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

From <http://www.interventioncentral.org/htmdocs/tools/okapi/okapi.php>

 Created by OKAPI  
www.interventioncentral.org

**Curriculum-Based Assessment Reading Probe:  
Student Copy**


Title: *Mister Noisy Level 4*

Author: *Rozanne Lanczak Williams*

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Mr. Noisy made noise when he walked.  
 Mr. Noisy made noise when he talked. Mr.  
 Noisy made noise when he danced. Mr.  
 Noisy made noise when he sang. Mr. Noisy  
 made noise when he drove his car. Mr.  
 Noisy made noise when he rode his bike.  
 "It's too noisy!" everybody yelled. Mr.  
 Noisy walked quietly. Mr. Noisy talked  
 quietly. Mr. Noisy danced quietly. Mr.  
 Noisy sang quietly. Mr. Noisy drove his  
 car quietly. Mr. Noisy rode his bike  
 quietly. "It's too quiet!" everybody  
 yelled. "Where's Mr. Noisy?" Here I am!"

Child version  
of the timing

 Created by OKAPI  
www.interventioncentral.org

**Curriculum-Based Assessment Reading Probe:  
Examiner Copy**

Title: *Mister Noisy Level 4*

Author: *Rozanne Lanczak Williams*

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Total Rd Wds: \_\_\_\_ | #Errors: \_\_\_\_ | Correct. Rd Wds: \_\_\_\_ | %Correct. Rd Wds: \_\_\_\_

Total Words in Sample: **90** Total Sentences in Sample: **18**  
 Average Number of Words Per Sentence: **5.0**  
 Number of Words Not Matched to Revised Spache Word List: **17**  
 Percentage of Words Not Matched to Revised Spache Word List: **18.88**  
 Spache Readability Index: **3.16**

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Mr. Noisy made noise when he walked.	7
Mr. Noisy made noise when he talked. Mr.	15
Noisy made noise when he danced. Mr.	22
Noisy made noise when he sang. Mr. Noisy	30
made noise when he drove his car. Mr.	38
Noisy made noise when he rode his bike.	46
"It's too noisy!" everybody yelled. Mr.	52
Noisy walked quietly. Mr. Noisy talked	58
quietly. Mr. Noisy danced quietly. Mr.	64
Noisy sang quietly. Mr. Noisy drove his	71
car quietly. Mr. Noisy rode his bike	78
quietly. "It's too quiet!" everybody	83

Teacher  
version of the  
timing

## For example...a first grader

- Accurate but slow in all of the single letter sounds
- Inaccurate on digraphs
- Accurate but slow on decoding CvC words with letter sounds
- Accurate but slow in text with CvC and simple Dolch words

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## For example...a first grader

Recommendations:

- Letter pages that systematically practice single letter sounds.
- Word pages that systematically practice CvC words with those sounds
- Connected text with those words and simple Dolch Words


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## Letter Sounds Example

One page of each:

1. m, s, r, f, short a
2. p, c, t, l, short l
3. g, d, k, n, short o
4. k, b, j, z, short u
5. v, y, w, x, short e
6. Mastery Test: Single letters
7. qu, th, ch, sh, ck
8. or, ing, ar, ir
9. wh, ur, er, ow (long o)
10. oa, ee, ea, ai
11. ay, igh, oo, oi
12. kn, wr, ew
13. ph, ui, ou
14. Review
15. Mastery Test: All Sounds

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Sounds Practice 1

s	r	m	f	a
r	s	m	a	f
f	r	a	m	s
a	f	s	r	m
s	a	m	r	a
f	r	a	f	s
m	a	f	s	m

Sounds Practice 1

s	r	m	f	a	5
r	s	m	a	f	10
f	r	a	m	s	15
a	f	s	r	m	20
s	a	m	r	a	25
f	r	a	f	s	30
m	a	f	s	m	35

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### Sounds Practice 6

m	y	n	x	e	g
p	b	k	z	u	b
g	h	d	l	o	j
m	c	t	f	i	z
v	r	s	n	u	x
j	a	w	r	s	k
p	c	e	f	i	v
y	d	h	l	o	w
k	e	j	z	u	x
v	y	w	a	t	b

### Sounds Practice 6 Single Sounds Mastery Test

m	y	n	x	e	g	6
p	b	k	z	u	b	12
g	h	d	l	o	j	18
m	c	t	f	i	z	24
v	r	s	n	u	x	30
j	a	w	r	s	k	36
p	c	e	f	i	v	42
y	d	h	l	o	w	48
k	e	j	z	u	x	54
v	y	w	a	t	b	60

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### Sounds Practice 8

ar	ing	or	h	d	ar
th	ck	ir	s	z	qu
y	ing	w	ir	ch	ing
qu	t	or	sh	ck	ar
v	y	w	x	e	ir
g	ing	ir	l	o	v
r	b	j	ar	u	sh
m	k	ir	n	a	or
p	c	or	f	ch	x
ar	th	i	or	ing	e

### Sounds Practice 8

ar	ing	or	h	d	ar	6
th	ck	ir	s	z	qu	12
y	ing	w	ir	ch	ing	18
qu	t	or	sh	ck	ar	24
v	y	w	x	e	ir	30
g	ing	ir	l	o	v	36
r	b	j	ar	u	sh	42
m	k	ir	n	a	or	48
p	c	or	f	ch	x	54
ar	th	i	or	ing	e	60

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## Blendable Sounds

### A reminder...

Whenever teaching or practicing individual letter sounds, be sure to model, teach, and have the students produce blendable sounds.



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## For example...a second grader

- Fluent in single letter sounds
- Accurate but slow on digraphs
- Fluent on reading CvC words
- Accurate but slow on decoding words with blends and digraphs.
- Fluent in simple text primarily made up of CvC words.
- Accurate but slow in text with digraphs and blends.

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## **For example...a second grader**

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Recommendations:

- Systematic practice in digraph sounds.
- Systematic practice in words with those sounds and with blends
- Connected text with those words and common Dolch Words

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## **For example...a third grader**

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- Fluent in single and digraph letter sounds
- Fluent on reading CvC words
- Accurate but slow on decoding words with blends and digraphs.
- Fluent in first grade text
- Accurate but slow in second grade text.

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## **For example...a third grader**

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Recommendations:

- Systematic practice of words with blends and digraphs, moving to multisyllabic words
- Connected text at the second grade level with the same patterns as the words that gets increasingly difficult.

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## **Timed Repeated Readings: Letter, Word, and Text Level**

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1. Preview material to be read
2. Review Graph and Set Goal for Session
3. Student Reads for 1 minute
4. Instructor Listens and Records
5. Instructor Provides Constructive Feedback
6. Calculate Score
7. Graph Data
8. Determine if Goal is met
9. Celebrate or Support

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## Timed Repeated Readings: 1. Preview Material

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- The student practices the timing probe.
- The instructor models the correct responses (i.e., correct pronunciation of isolated sounds or of difficult words) for any unknown items before beginning the timing.

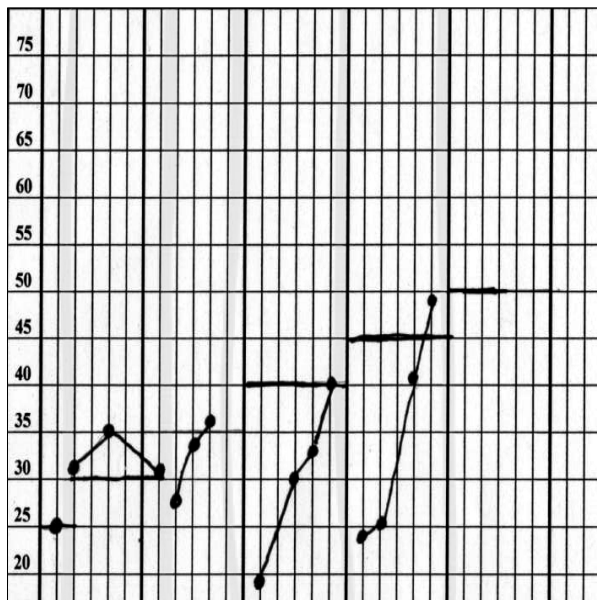
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## Timed Repeated Readings: 2. Review Graph and Set Goal for Session

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- Make sure to use the graph during every session with the student to provide critical information about progress and motivation.
- The student and instructor look at the graph of the previous session to review progress made to date and set a progress goal for today's session.
- Ask the student to state what he or she will work to accomplish (e.g., I will read 5 more words. I will make fewer mistakes).

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### Review Graph and Set Goal for Session

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## Timed Repeated Readings: 3. Student Reads and 4. Instructor Records

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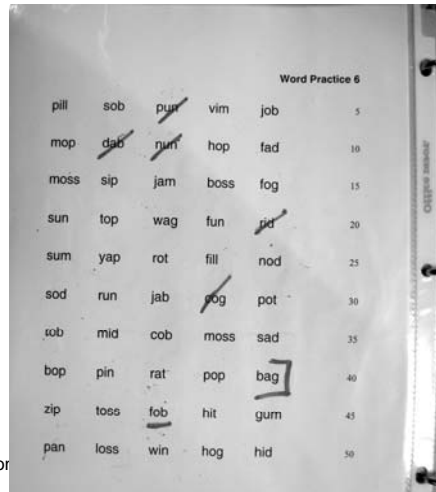
- After instructor modeling, the student is asked to read as many sounds or words as possible in one minute from his or her copy of the reading materials.
- The instructor times the student for 1 minute.

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## Timed Repeated Readings: 3. Student Reads and 4. Instructor Records

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- While listening, the instructor circles all errors on the instructor's copy of the page with a dry erase marker or wipe-off pen.
- In addition, the instructor offers the correct pronunciations during the timed reading.



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## Timed Repeated Readings: 5. Constructive Feedback

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- The instructor and student review the student's performance on the task
- First, the instructor provide positive feedback.
- Next, the instructor provides correct pronunciations for errors and student practices the correct pronunciation of sounds and words.

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## Timed Repeated Readings: 6. Calculate Score

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- To determine the number of words the student read, look at the number of words at the end of the last complete line he read and then count on to the last word read.
- Then count the number of errors.
- Subtract the errors from the total words read. This yields the fluency score that will be graphed, the number of correct words read per minute.

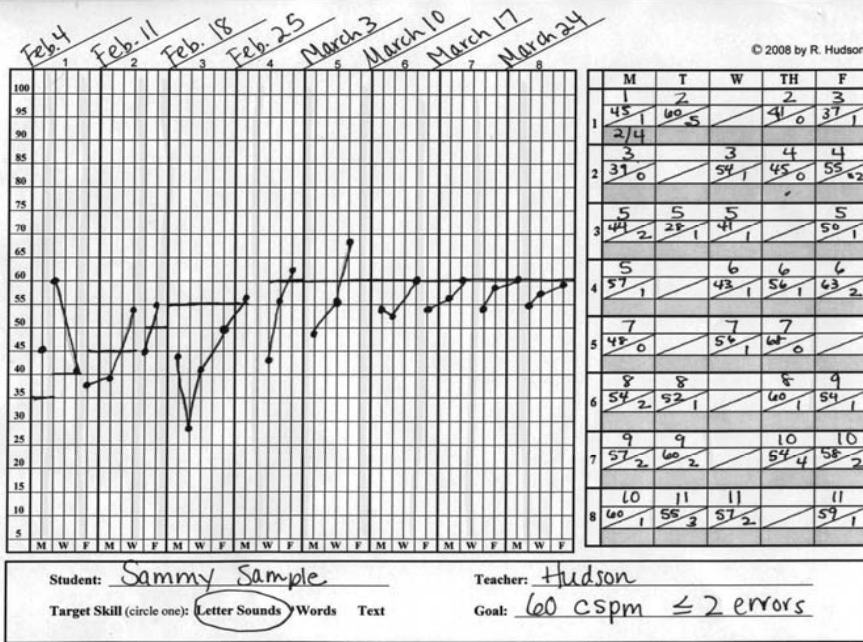
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## Timed Repeated Readings: 7. Graph Data

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- Explain to the student that he or she will read as many times as it takes to reach that goal without too many mistakes.
- When the goal is reached, you will celebrate with the student and give him or her a new timing page.

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Available from www.fluenterader.org

## Timed Repeated Readings: 7. Graph Data

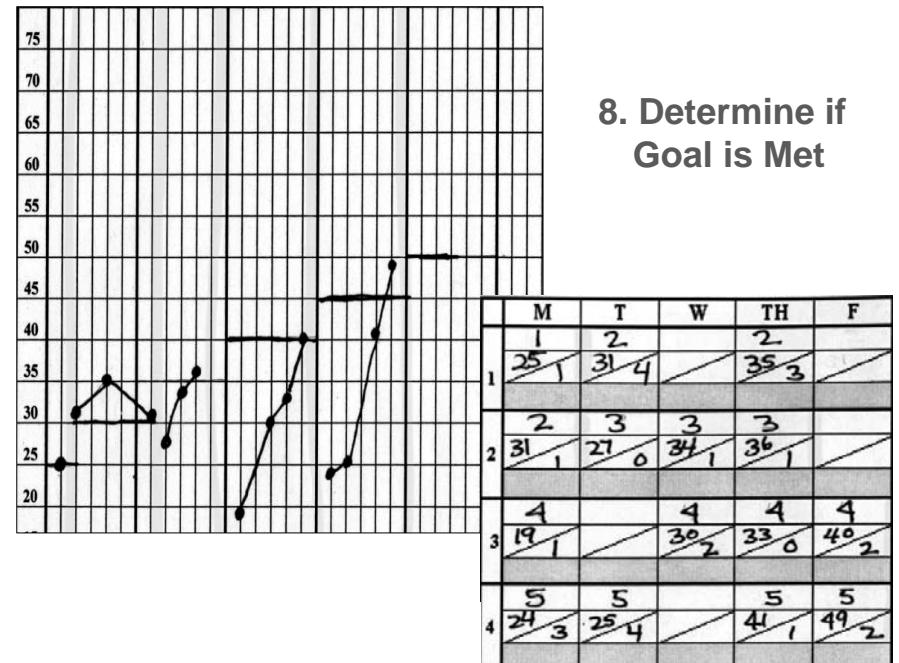
- You will use the graphs with the student to provide critical information about progress and motivation.
- Record the student's score in the correct week and day, with the number of correct words per minute/errors.
- On the graph, find the correct week and day and put a dot on the right horizontal line for the data point.

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## Timed Repeated Readings: 8. Determine if Goal is Met

- If a student reads at or above the number of correct words (sounds) per minute marked as his goal with fewer than the number of errors, then she has "made his goal".
- This determination is made based solely on the data. A student may make his goal in one session or seven. Either way, the student moves on to a new passage.

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## 8. Determine if Goal is Met

## Timed Repeated Readings: 9. Celebrate

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If the student met the goal, Celebrate!!

- In addition to using the graph, put into place a motivation plan
  - Lunch with teacher
  - Banana Split



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## Timed Repeated Readings: 9. Celebrate

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If the student met the goal, Celebrate!!

- In addition to using the graph, put into place a motivation plan
  - Lunch with teacher
  - Banana Split
  - Pizza



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## Timed Repeated Readings: 9. Celebrate

---

If the student met the goal, Celebrate!!

- In addition to using the graph, put into place a motivation plan
  - Lunch with teacher
  - Banana Split
  - Pizza
  - Reach for the Stars



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## Timed Repeated Readings: 9. Celebrate

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If the student met the goal, Celebrate!!

- In addition to using the graph, put into place a motivation plan
  - Lunch with teacher
  - Banana Split
  - Pizza
  - Reach for the Stars
  - Add shapes to a bulletin board for each goal reached

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## Timed Repeated Readings: 8. Determine if Goal is Met

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- If a student read below the number of correct words (sounds) per minute marked as his goal or had more than the number of allowed errors, then he has not “made his goal”.
- The student will read that page again during the next instructional session and continue with that page until she reaches the goal.

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## Timed Repeated Readings: 9. Support

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- If the student has not met the goal, provide support.
- Many students who struggle in school attribute failure to lack of ability or the task being too hard. As you provide support to the student, be sure to attribute reaching his goal to hard work and his failure to reach the goal as a result of not working hard enough.
- You may want to discuss strategies to use, additional practice, or other ways to help himself reach the goal.

“The goal of helping children learn to recognize words quickly and easily is to ensure that word recognition will feed rather than compete with comprehension.

The goal of explicitly and systematically teaching children to understand and use phonics is to bring them to that point faster.”

(Adams, 2001, p. 78)

## Questions?

[rhudson@u.washington.edu](mailto:rhudson@u.washington.edu)

A list of resources and materials are found on handout 6 of your packet