



Tests of Achievement





Objectives

- To increase participants' understanding of procedures and best practices for administration of the WJ-4
- To increase participants' knowledge of interpretation of the WJ-4 and make instructional modifications and identify effective strategies





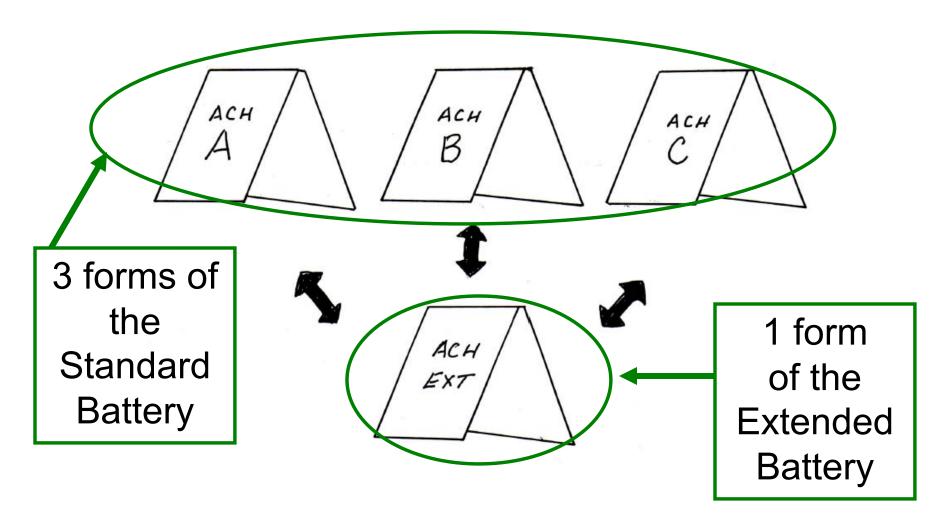
Interpretation



The primary purpose for testing should be to find out more about the problem, not to just get a score.



Organization







Achievement

- 3 forms of the Standard Battery (Forms A, B, C)
 - Tests 1-11
- 1 Extended Battery (use with all 3 forms)
 - Tests 12–20
- Core set of tests (1–6)
 - Measures reading, writing, and mathematics achievement areas
 - Creates the intra-achievement variation procedure
 - Provides Brief Achievement cluster (Tests 1–3)



Achievement

- 20 tests
 - 11 in Standard Battery (3 forms)
 - 9 in Extended Battery (1 form)
- 22 clusters
 - 15 in Standard Battery
 - 7 additional when using Extended Battery



Achievement: What's New?

- 7 new or extended tests
 - Oral Reading, Reading Recall, Word Reading Fluency
 - Number Matrices
 - Science, Social Studies, Humanities
- 8 new clusters
 - Reading, Reading Comprehension—Extended, Reading Fluency, Reading Rate
 - Written Language
 - Mathematics
 - Brief Achievement, Broad Achievement



Achievement: What's New?

- Co-normed with WJ IV Tests of Cognitive Abilities and WJ IV Tests of Oral Language
- Qualitative Observation checklists for Tests 1–11
 - Located in Test Record
 - Help document important information about how examinee performed on the task
 - Include data on percentage of age mates at each rating



Achievement Standard Battery (Tests 1–11) (Forms A, B, C)

Test 1: Letter-Word Identification

Test 2: Applied Problems

Test 3: Spelling

Test 4: Passage Comprehension

Test 5: Calculation

Test 6: Writing Samples

Test 7: Word Attack

Test 8: Oral Reading (NEW!

Test 9: Sentence Reading Fluency

Test 10: Math Facts Fluency

Test 11: Sentence Writing Fluency

Core Tests (1-6)

Required for intra-ACH variation

Creates:

Brief ACH Reading **Mathematics** Written Language





Tests in ACH Standard Battery

WJ IV ACH

1: Letter-Word Identification

2: Applied Problems

3: Spelling

4: Passage Comprehension

5: Calculation

6: Writing Samples

7: Word Attack

8: Oral Reading

9: Sentence Reading Fluency

10: Math Facts Fluency

11: Sentence Writing Fluency

WJ III ACH

1: Letter-Word Identification

2: Reading Fluency Renamed

3: Story Recall

In COG

4: Understanding Directions

In OL

5: Calculation

6: Math Fluency Renamed

7: Spelling

8: Writing Fluency

Renamed

9: Passage Comprehension

10: Applied Problems

11: Writing Samples

12: Story Recall—Delayed







Achievement Extended Battery (Tests 12–20) (1 form)

Test 12: Reading Recall (NEW!

Test 13: Number Matrices <

Moved from COG DS

Test 14: Editing

Test 15: Word Reading Fluency NEW!

Test 16: Spelling of Sounds

Test 17: Reading Vocabulary

Test 18: Science

Test 19: Social Studies

Test 20: Humanities

Extended to full-length texts





Tests in ACH Extended Battery

WJ IV ACH

12: Reading Recall

13: Number Matrices

14: Editing

15: Word Reading Fluency

16: Spelling of Sounds

17: Reading Vocabulary

18: Science

19: Social Studies

20: Humanities

WJ III ACH

13: Word Attack In STD

14: Picture Vocabulary In OL

15: Oral Comprehension In OL

16: Editing

17: Reading Vocabulary

18: Quantitative Concepts Dropped

19: Academic Knowledge Expanded

20: Spelling of Sounds

21: Sound Awareness In OL

22: Punctuation & Capitalization

Dropped





Selective Testing Table

					9	Reading				Mathematics				Writing				Cross-Domain Clusters					
			Read:	Broad	Basic Bading	Reading Com	Reading Compact	Read: Fluence Insign	Mark Rate	Broad alics	Math Cathemaris	Math Calculation of	Write Problem Collins	Broad Language	Basic Written Isa	Write Writing Chill age	Acada Epitessia	Acado Skille	Acade Fluence	Academic Application	Phose Knowing	Brist of State of Street	o for Broad) Achie knowledge
	ACH 1	Letter-Word Identification	•																				
	ACH 2	Applied Problems																					
	ACH 3	Spelling											•		•								
ery	ACH 4	Passage Comprehension																				•	
3att	ACH 5	Calculation																				•	
E	ACH 6	Writing Samples																				•	
Standard Battery	ACH 7	Word Attack																					
Sta	ACH 8	Oral Reading															П						
	ACH 9	Sentence Reading Fluency											Г				Г	•				•	
	ACH 10	Math Facts Fluency																				•	
	ACH 11	Sentence Writing Fluency																				•	
	ACH 12	Reading Recall							П				П										
	ACH 13	Number Matrices																					
ery	ACH 14	Editing													•								
3att	ACH 15	Word Reading Fluency															Г						
Extended Battery	ACH 16	Spelling of Sounds																					
	ACH 17	Reading Vocabulary																					
X	ACH 18	Science																					
	ACH 19	Social Studies																					
	ACH 20	Humanities																					

- Tests required to create the cluster listed.
- Additional test required to create an extended version of the cluster listed.
- Additional tests required to create the Broad Achievement cluster.





Reading

- Includes 8 tests measuring various aspects of reading
 - Test 1: Letter-Word Identification
 - Test 4: Passage Comprehension
 - Test 7: Word Attack
 - Test 8: Oral Reading



- Test 9: Sentence Reading Fluency
- Test 12: Reading Recall NEW!
- Test 15: Word Reading Fluency NEW!
- Test 17: Reading Vocabulary



Reading

- Provides 7 clusters for a comprehensive evaluation of reading performance
 - Reading
 - Broad Reading
 - Basic Reading Skills
 - Reading Comprehension (and Extended)



Reading Fluency (NEW!)



Reading Rate NEW!

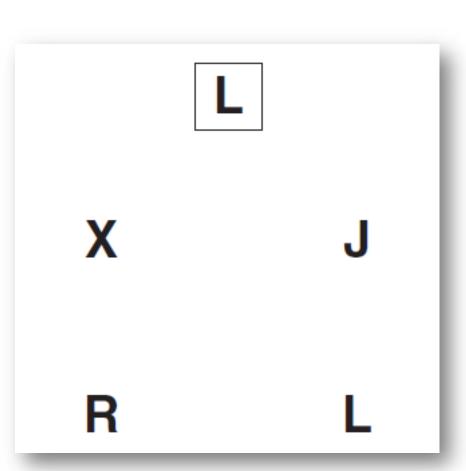




- A measure of basic reading skills that contributes to 6 clusters: Reading, Basic Reading Skills, Broad Reading, Academic Skills, Brief Achievement, Broad Achievement
- Select starting point based on examinee's estimated achievement level.
- Basal/Ceiling rules: (test by complete pages)
 - Basal: 6 lowest correct or Item 1
 - Ceiling: 6 highest incorrect or last item
- Words must be read fluently to receive credit (pronounced as a whole word on last attempt).



Early items are letter recognition and require a pointing response.







Naming letters requires an oral response.

R

F

p

J





Word recognition requires a pointing response.

me	car	see	it
red	hat	sun	can
cat	dog	bear	bird





the

at

and

no

Final task is reading words aloud.

Words increase in difficulty.

tertiary

echelon

septuagenarian

coiffure

macaque





Qualitative Observations

On Letter-Word Identification, which of the following best describes the ease with which the individual identified



Qualitative Observation

words?	(Mark only one response.)
1.	Identified words rapidly and accurately with little effort (automatic word identification skills)
2.	Identified initial items rapidly and accurately and identified more difficult items through increased application of phoneme-grapheme relationships (typical)
3.	Identified the initial items rapidly and accurately but had difficulty applying phoneme-grapheme relationships to latter items
4.	Required increased time and greater attention to phoneme-grapheme relationships to determine the correct response (nonautomatic word identification skills)
5.	Was not able to apply phoneme-grapheme relationships
6.	None of the above, not observed, or does not apply



NEW!

Qualitative Observations

 Data collected in standardization to determine percentage of age mates assigned each rating

Example at age 9:

4% identified words rapidly and accurately (rating 1) 7% had nonautomatic word reading skills (rating 4) 1% did not apply phoneme-grapheme skills (rating 5) 75% were rated as typical (rating 2)

 Use to determine how typical or atypical examinee's performance is on task





- A measure of reading comprehension that contributes to 5 clusters: Reading, Broad Reading, Reading Comprehension, Academic Applications, Broad Achievement
- Select starting point based on examinee's estimated achievement level.
- Basal/Ceiling rules: (test by complete pages)
 - Basal: 6 lowest correct or Item 1
 - Ceiling: 6 highest incorrect or last item



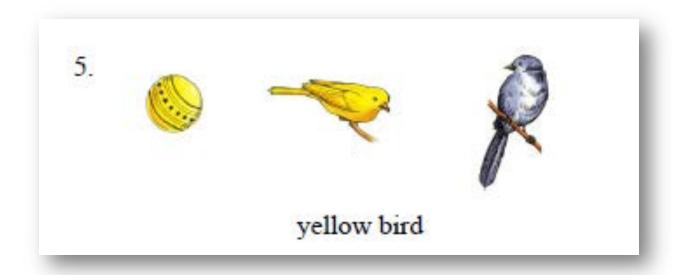


Early items require a pointing response to match a rebus with a drawing.









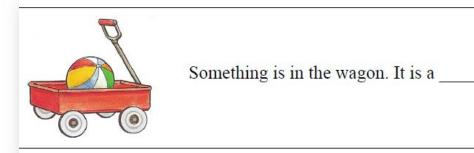
Task requires pointing to the picture the words tell about.





Task requires reading the passage silently and providing the missing word.

Easier items have pictures and shorter passages.



Most scratches on airplane windows are caused by dirt and other particles in the air. When an airplane is traveling at 600 miles an hour, these particles become very

Difficulty increases as pictures are eliminated and passages are longer.





Test 7: Word Attack

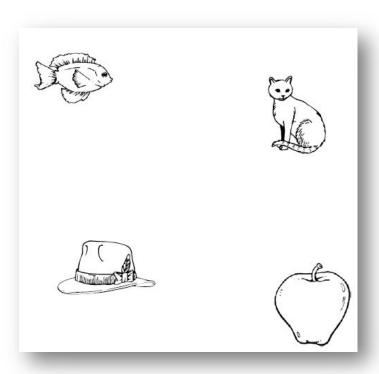
- A measure of basic reading skill that contributes to 2 clusters: Basic Reading Skills and Phoneme-Grapheme Knowledge
- Select starting point based on examinee's estimated achievement level.
- Basal/Ceiling rules: (test by complete pages)
 - Basal: 6 lowest correct or Item 1
 - Ceiling: 6 highest incorrect or last item
- Words must be read fluently to receive credit (pronounced as a whole word on last attempt).





Test 7: Word Attack

Early items require pointing to the picture that starts with a specific sound.



z p k r

Point to the letter that makes a specific sound.





Test 7: Word Attack

Read each of these to me. Don't go too fast.

7–12: No Response

Point to each item, if necessary.

Encourage response. If subject still does not respond, score item 0 and continue test by pointing to next item.

Do not pronounce any words or sounds for subject.

tiff

zoop

ven

wugs





- A measure of oral reading skill that contributes to the Reading Fluency cluster
- Select starting point based on examinee's estimated achievement level.
- Ceiling: Determined by cutoffs
- Scoring 2, 1, or 0
 - 2 if sentence is read with no errors
 - 1 if sentence is read with one error
 - 0 if sentence is read with two or more errors



Types of reading errors that may occur:

Mispronunciation—Pronounces the word incorrectly

Omission—Leaves out a word

Insertion—Adds a word or words

Substitution—Says a word that is incorrect but that maintains the sentence meaning (e.g., "house" for *home*)

Hesitation—Does not pronounce the word within 3 seconds. If this happens, say: Go on to the next word.

Repetition—Repeats a word or words

Transposition—Reads words in the wrong order (e.g., "bright and sunny" instead of sunny and bright)

Ignores Punctuation—Does not observe punctuation (e.g., fails to pause for a comma or fails to raise voice for a question mark)

Self-corrections within 3 seconds do not count as errors.





Starting With Item 1

Say: I want to listen to you read aloud. Read as carefully as you can, not as fast as you can. If you come to a word you cannot read, just do your best and then go on to the next word. Point to Item 1 on subject's page and say: Start here and read a story about bees.

Mark each error on the Test Record with a slash (/) at the point in the sentence the error occurs.

A Story About Bees

Bees are little.

They are bugs.

Bees can make wax.

Bees have lots of jobs.





Test 8 Oral Reading			Qualitative Observation Tally										
Note: Basal and ceiling rules do not apply to this test. Scoring is based on the administration of specific groups of items. Score 2, 1, 0	Mispronunciation	Omission	Insertion	Substitution	Hesitation	Repetition	Transposition	Ignores Punctuation					
1 1 A Story About Bees a boat	1												
2 Bees are little.													
3 1 They are bugs. There	1												
4 O Bees can make wax. Noney		1		1									
5 Bees have lots of jobs.					1								
Items 1–5 8A: Number of Points (0–10) Number of Errors Items 1–5	2	1		1	1								

5 or fewer points: Discontinue testing 6 or more points: Administer Items 6–10 unless already administered



Follow Continuation Instructions to determine when to give additional items or when to discontinue testing.

Items 1-5 Continuation Instructions

* 5 or Fewer Points

If subject has 5 or fewer points on Items 1 through 5, discontinue testing.

* 6 or More Points

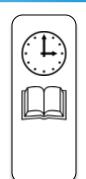
If subject has 6 or more points on Items 1 through 5, administer Items 6 through 10. If Items 6 through 10 have already been administered, discontinue testing.





Test 9: Sentence Reading Fluency

 A measure of reading skill that contributes to 5 clusters: Broad Reading, Reading Fluency, Reading Rate, Academic Fluency, Broad Achievement



- Administer sample items and practice exercise to all examinees.
- Timed test: 3 minutes
- Scoring 1 or 0 (use scoring guide overlay)
 - Total number correct and number incorrect
- Was Reading Fluency in WJ III





Test 9: Sentence Reading Fluency

Administer sample items to all examinees.

Sample Items



Open Response Booklet to Sentence Reading Fluency sample items and place directly in front of subject. Say: I want you to read some sentences and decide if the answer is yes or no.

Point to Sample Item A and say: Look at this sentence. It says, "A cow is an animal." (Pause.) Is that true? (Pause for response.) Because the answer is yes, you would circle the letter Y (point to circled Y). Now look at the second sentence. It says, "A fish can read." (Pause.) Is that true? (Pause for response.) Because the answer is no, you would circle the letter N (point to circled N).

Sample Items	
A. A cow is an animalY	N
B. A fish can read Y	N





Test 9: Sentence Reading Fluency

Administer practice exercise to all examinees.

Practice Exercise

Give subject a pencil with eraser and say: Now look at the next four sentences. Draw a circle around the correct answer for each sentence. Work as quickly as you can without making mistakes. Go ahead.

Practice Exercise		
c. An apple is blue.	Y	N
D. A wheel is round	Y	N
E. A man has two legs.	Y	N
F. Ice is hot.	Y	N





Test 9: Sentence Reading Fluency

Follow Error and No Response directions carefully to ensure examinee understands task.

♦ C-F: Error

Say: Read the sentence aloud and tell me if the answer if "yes" or "no." If subject still gives incorrect answer, explain sentence and correct answer.

♦ C-F: No Response

Say: Read the sentence aloud and tell me if the answer if "yes" or "no." If subject cannot read sentence, point to next sentence and say: Try the next one.

If examinee has 2 or fewer correct on Practice Exercise after error correction procedure, record score of 0 for the test.





Test 9: Sentence Reading Fluency

- Record <u>exact</u> finishing time in minutes and seconds.
 - Early finishers who do well receive a higher score than others who work for the full 3 minutes.
- Count number correct and number incorrect.
- Do not count skipped items.
- Remind examinee to read silently, to cross out instead of erasing, and to do all 3 pages.





- A measure of reading skill that contributes to the Reading Comprehension cluster
- Select starting point based on examinee's estimated achievement level.
- Ceiling: Determined by cutoffs
- Scoring 1 or 0 for each element
 - 1 if element is recalled correctly
 - 0 if element is not recalled or is recalled incorrectly





Say: I want you to read some short stories. Please read each story silently one time. When you finish, I want you to tell it back to me. You don't have to tell it back exactly, but try to remember all of the things you can.

Ann lost her cat. She looked under the car. Then she saw it in a tree.

Test Items

Go ahead and read this to yourself. When you have finished, look up at me.





Turn the page after examinee has read the story one time.

Tell me everything about the story you remember.

Ann lost her cat. She looked under the car.
 Then she saw it in a tree.





Place a check mark over each element the examinee recalls correctly. Order does not matter.

/ Ann / lost her cat. / She looked under the car. / Then she saw it / in a tree. /

This story has 5 elements.

The bold words are the keys to receiving credit for the elements.





Example response:

Her cat was lost and she found it in a tree.



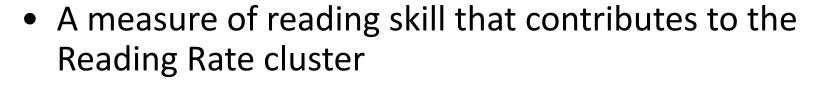


/ Ann / lost her cat. / She looked under the car. / Then she saw it / in a tree. /

Examinee earns 2 points for this response.









- Administer sample items and practice exercise to all examinees.
- Timed test: 3 minutes
- Scoring 1 or 0 (use scoring guide overlay)
- Do not tell the examinee any words on the test.



Sample Items

Sample Items



Open Response Booklet to Word Reading Fluency sample items and place directly in front of subject. Say: I want you to read some words and then decide which two words go together. If the words were apple, tree, moon, and banana, you would draw a line through apple and banana because they are both fruit. If the words were pear, drum, couch, and chair, you would draw a line through couch and chair because they are both furniture.



Sample Items

A. Point to Sample Item A and say: Look at these words. They say pen, red, fox, and pencil. Because you can use a pen and pencil to write, you would draw a line through both pen and pencil (point to lines through pen and pencil).



A. pen red fox pencil

B. Point to Sample Item B and say: Now look at these words. They are ham, blue, green, and toe.

Because blue and green are both colors, you would draw a line through them. Give subject a pencil with eraser and say: Go ahead.

▲ Correct:

B. ham blue green toe



Practice Exercise

Practice Exercise

Say: Now look at the next four rows of words. Draw a line through the two words that go together in each row. Work as quickly as you can without making mistakes. Go ahead.

▲ Correct:			
C. dog	shoe	car	PUPPY
D. tree	nyan	boy	blue
E. shoe	girl	can	sock
E green	JUN	cat	two





Practice Exercise

Follow Error and No Response directions carefully to ensure examinee understands task.

♦ C-F: Error

Say: Read the words aloud and tell me the two words that go together. If subject still gives incorrect answer, explain the two words and correct answer.

♦ C-F: No Response

Say: Read the words aloud and tell me the two words that go together. If subject cannot read words, point to next item and say: Try the next one.

If examinee has 1 or 0 correct on Practice Exercise, discontinue testing and record a score of 0 for the test.





Test 15: Word Reading Fluency Scoring

- Record exact finishing time in minutes and seconds.
 - Early finishers who do well will receive a higher score than individuals who work for the full 3 minutes.
- Count number correct.
- Do not count skipped items.
- Remind examinee to read silently, cross out instead of erasing, and to do all 3 pages.





Test 17: Reading Vocabulary

- A measure of reading that contributes to the Reading Comprehension–Extended cluster
- Administer both subtests: 17A Synonyms and 17B Antonyms.
- Administer sample items to all examinees and then choose appropriate starting point.
- Basal/Ceiling rules: (test by complete pages; apply to each subtest)
 - 5 lowest correct or Item 1
 - 5 highest incorrect or last item
- Modified from WJ III: no analogies





Test 17: Reading Vocabulary

- Do not read any words to examinee during test.
- Only one-word responses are acceptable; if a twoword response is given, ask for one word.
- Accept correct responses that differ in number or tense.
- Do not accept responses that are a different part of speech.



Test 17A: Reading Vocabulary– Synonyms

Sample Items

Point to street on subject's page and say: Another word that means street is road.

- A. Point to large on subject's page and say: Tell me another word for large.
 - △ Correct: big, gigantic, enormous, huge

♦ A: Error or No Response Score item 0. Say: Another word for large is big. Repeat Sample Item A.





Test 17B: Reading Vocabulary– Antonyms

Sample Items

Now we are going to do something different. Point to night on subject's page and say: The opposite of night is day.

A. Point to no on subject's page and say: Tell me the opposite of no.

▲ Correct: yes

A: Error or No Response Score item 0 and say: The opposite of no is yes. Repeat Sample Item A.





Reading (Grw)

2-test cluster of reading achievement, including decoding, comprehension, and reading-writing (*Grw*) abilities

Test 1: Letter-Word Identification

Test 4: Passage Comprehension

Median reliability: .94 (5–19) .96 (adult)





Broad Reading (Grw)

3-test cluster of reading achievement, including decoding, fluency, comprehension, and reading-writing (*Grw*) abilities

Test 1: Letter-Word Identification

Test 4: Passage Comprehension

Test 9: Sentence Reading Fluency

Median reliability: .96 (5-19) .97 (adult)





Basic Reading Skills (Grw)

2-test cluster of basic reading skills, including decoding, sight vocabulary, phonics, structural analysis, and reading-writing (*Grw*) abilities

Test 1: Letter-Word Identification

Test 7: Word Attack

Median reliability: .95 (5–19) .96 (adult)





Reading Comprehension

(Reading Comprehension-Extended)

2-test cluster of reading comprehension, reasoning, (*Grw* abilities), and to a lesser extent, long-term retrieval (*Glr*) ability

Test 4: Passage Comprehension

Test 12: Reading Recall

Median reliability: .93 (5–19) .93 (adult)

Reading Comprehension—Extended adds a third test, Test 17: Reading Vocabulary.

Median reliability: .96 (5–19) .94 (adult)





Reading Fluency (Grw, Gs)

2-test cluster measuring aspects of fluency, including prosody, automaticity, accuracy, reading-writing (*Grw*), and cognitive processing speed (*Gs*) abilities

Test 8: Oral Reading

Test 9: Sentence Reading Fluency

Median reliability: .96 (5–19) .96 (adult)





Reading Rate (Grw, Gs)

2-test cluster measuring automaticity with reading at the single word and sentence levels, reading-writing (*Grw*), and cognitive processing speed (*Gs*) abilities

Test 9: Sentence Reading Fluency

Test 15: Word Reading Fluency

Median reliability: .96 (5–19) .96 (adult)





Summary: Reading

- Includes 8 tests for evaluating different aspects of reading
 - Letter-Word Identification, Passage
 Comprehension, Word Attack, Sentence
 Reading Fluency, Reading Vocabulary



- Oral Reading, Reading Recall, Word Reading Fluency
- Provides 7 clusters for a comprehensive evaluation of reading performance
 - Reading, Broad Reading, Basic Reading Skills, Reading Comprehension
 - Reading Fluency, Reading Rate,
 - Reading Comprehension—Extended







So What Do I Do? Intra-Cluster Considerations for Basic Reading Skills

INSTRUCTIONAL MODIFICATIONS

- Match materials to reading level
- Provide reading materials that match interests
- Use other media (tapes, computer, films)
- Decrease oral reading demands
- Shorten assignments

INSTRUCTIONAL STRATEGIES

- Match approach to student
- Focus on reading for meaning
- Whole-word recognition methods if this is the student's strength
- Phonics methods if this is the student's strength





So What Do I Do? Intra-Cluster Considerations for Reading Comp

INSTRUCTIONAL MODIFICATIONS

- Adjust instructional level
- Identify interests
- Alter assignments
- Identify important information
- Use other media

INSTRUCTIONAL STRATEGIES

- Semantic feature analysis, semantic maps
- Cloze procedure
- Story maps, frames, story grammar
- Direct strategy instruction
 - Directed reading
 - Self-questioning
 - Reciprocal teaching





So What Do I Do? Intra-Cluster Considerations for Reading Fluency

INSTRUCTIONAL MODIFICATIONS

- Books on tape or CD
- Extra time
- Option to work in a quiet place

INSTRUCTIONAL STRATEGIES

- Repeated readings
- Speed drills
- Choral reading
- Increased time spent reading





Mathematics

- Includes 4 tests measuring various aspects of math achievement
 - Test 2: Applied Problems
 - Test 5: Calculation
 - Test 10: Math Facts Fluency
 - Test 13: Number Matrices

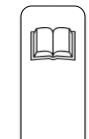


Mathematics

- Provides 4 clusters to evaluate performance in mathematics
 - Mathematics
 - Broad Mathematics
 - Math Calculation Skills
 - Math Problem Solving



 A measure of math reasoning that contributes to 6 clusters: Mathematics, Broad Mathematics, Math Problem Solving, Academic Applications, Brief Achievement, Broad Achievement



- Select starting point based on examinee's estimated achievement level.
- Basal/Ceiling rules: (test by complete pages)
 - 5 lowest correct or Item 1
 - 5 highest incorrect or last item



- Read all items to all examinees.
- Repeat any items upon request.
- Provide the worksheet in the Response Booklet and a pencil at Item 25 or earlier if the examinee requests or appears to need paper and pencil.
- Complete all queries.



Unit labels are not required unless specified in key.

27. Point to item and say: While working on an art project, Deena takes one piece of paper and cuts it in half. She then cuts each piece in half again. How many pieces of paper does she have now?

△ Correct: 4

No Label Required

28. Point to item and say: At the snack bar, George can buy a sandwich and drink for three dollars and fifty cents. If George gave the cashier four dollars, how much change would be get?

▲ Correct: 50 cents

Query: 50—Fifty . . . what?

Label Required

If a unit label is specified, both the label and numeric answer must be correct to receive credit.





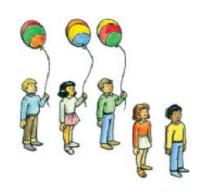
Any time an incorrect unit label is given, whether required or not, score the answer as incorrect, even if the numeric portion was correct.

20. Listen. If you had ten dollars and you spent five of them, how many dollars would you have left? Correct: 5

- Example responses:
 5 cents (score as 0)
 5 (score as 1)
 5 dollars (score as 1)







Point to picture and say: There are five children here. There are three balloons. How many children do not have balloons?

▲ Correct: 2

Score these example responses:

2

2 balloons C

2 children 1





Qualitative Observation

On Applied Problems, which of the following best characterizes the individual's performance? (Mark only one response.)

- Solved problems with no observed difficulties (good comprehension and analytical abilities)
- Solved initial problems with no observed difficulty but demonstrated increasing difficulties solving the latter items (typical)
- 3. Appeared to have limited understanding of gradeor age-appropriate math application tasks
- 4. None of the above, not observed, or does not apply

Qualitative Observation

Use data to compare examinee's performance to age mates.



Test 5: Calculation

A measure of basic math skill that contributes to
 5 clusters: Mathematics, Broad Mathematics, Math
 Calculation Skills, Academic Skills, Broad Achievement



- Select starting point based on examinee's estimated achievement level.
- Basal/Ceiling rules:
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Accept poorly formed or reversed numerals as correct but transposed numbers as incorrect (e.g., 21 for 12).





Test 5: Calculation

Do not read items or assist examinee in any way.

Complete all queries.

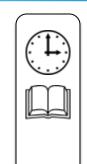
33.
$$\frac{1}{4} + \frac{1}{4}$$

- \triangle Correct: $\frac{1}{2}$
- Query: $\frac{2}{4}$ —Simplify your answer. Do not explain further.



Test 10: Math Facts Fluency

 A measure of basic math skill that contributes to 4 clusters: Broad Mathematics, Math Calculation Skills, Academic Fluency, Broad Achievement



- Starting point: Item 1 for all examinees
- Timed test: 3 minutes
- Do not point out signs during test.
- Remind examinee to cross out instead of erasing, skip problems he or she cannot solve, and do both pages.



Test 10: Math Facts Fluency

Test 10 Math Facts Fluency

Use scoring guide overlay to score the test.



 A measure of math reasoning that contributes to the Math Problem Solving cluster



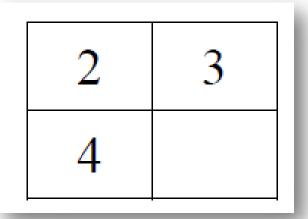
- Select appropriate starting point.
- Basal/Ceiling rules: (test by complete pages)
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Provide worksheet in Response Booklet and pencil when directed.
- Number Matrices was in WJ III DS.





To be correct, number must solve the puzzle vertically and horizontally.

Sample A: Start here for K to Grade 6



Sample B: Start here for Grade 7 to Adult

5	3	1
6	4	





Monitor response time

- Items 1–11 have a 30 second guideline.
- Items 12 and higher have a 1-minute guideline.

If subject does not appear actively engaged in solving problem, encourage response. If subject still does not respond, score item 0, point to next item, and say: Try this one.

Do not give answer or explain further.





6	4	
8	6	4
	8	



◆ 12: Responds to Shaded Boxes
If subject provides numbers for
shaded boxes (2, 10), say: Just tell me
the number that belongs in the
empty box (point).



- If examinee provides a response that is not a whole number, ask him or her to solve the problems using whole numbers only.
- If examinee is confused by more than one matrix per page, you may uncover one at a time (use hand or paper to block).
- A few matrices have more than one possible answer listed in the correct key. Only one correct answer is required to receive credit.



Mathematics (Gq)

2-test cluster of math achievement (quantitative knowledge [Gq] ability), including problem solving and computational skills

Test 2: Applied Problems

Test 5: Calculation

Median reliability: .96 (5–19) .96 (adult)





Broad Mathematics (Gq, Gs)

3-test cluster of math achievement, including problem solving, computational skills, number facility, automaticity, and cognitive processing speed (*Gs*) ability

Test 2: Applied Problems

Test 5: Calculation

Test 10: Math Facts Fluency

Median reliability: .97 (5–19) .97 (adult)





Math Calculation Skills (Gq, Gs)

2-test cluster of math achievement, including computational skills, automaticity with basic math facts, and cognitive processing speed (*Gs*) ability

Test 5: Calculation

Test 10: Math Facts Fluency

Median reliability: .96 (5–19) .97 (adult)





Math Problem Solving (Gq,Gf)

2-test cluster of math achievement and reasoning, including problem solving, analysis, and fluid reasoning (*Gf*) ability

Test 2: Applied Problems

Test 13: Number Matrices

Median reliability: .95 (5–19) .96 (adult)





Mathematics: Summary

- Includes 4 tests measuring various aspects of math achievement:
 - Applied Problems, Calculation, Math Facts
 Fluency, and Number Matrices
- Provides 4 clusters for a comprehensive evaluation of math performance:
 - Mathematics, Broad Mathematics, Math
 Calculation Skills, Math Problem Solving



So What Do I Do? Intra-Cluster Considerations for Math Skills

INSTRUCTIONAL MODIFICATIONS

- Adapt worksheets (number of problems, size)
- Use color coding, directional arrows, graph paper
- Eliminate copying
- Use fact charts, calculators, manipulatives

•

INSTRUCTIONAL STRATEGIES

- Match instruction to individual's level
- Teach prerequisite skills
- Use multi-sensory approaches
- Provide practice, timed drills, computer drills





So What Do I Do? Intra-Cluster Considerations for Math Reasoning

INSTRUCTIONAL MODIFICATIONS

- Modify level of difficulty
- Reduce number of problems
- Rewrite word problems
- Alter instructional sequence
- Use color-coding and calculators

INSTRUCTIONAL STRATEGIES

- Require conceptual understanding first
- Go from concrete to abstract
- Provide story problem activities
- Focus on life-skill mathematics when necessary





Written Language

- Includes 5 tests measuring various aspects of written language
 - Test 3: Spelling
 - Test 6: Writing Samples
 - Test 11: Sentence Writing Fluency
 - Test 14: Editing
 - Test 16: Spelling of Sounds

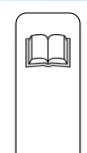


Written Language

- Provides 4 clusters to evaluate performance in written language
 - Written Language
 - Broad Written Language
 - Basic Writing Skills
 - Written Expression



 A measure of spelling skill that contributes to 6 clusters: Written Language, Broad Written Language, Basic Writing Skills, Academic Skills, Brief Achievement, Broad Achievement



- Select appropriate starting point.
- Basal/Ceiling rules:
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Know correct pronunciation for all items.



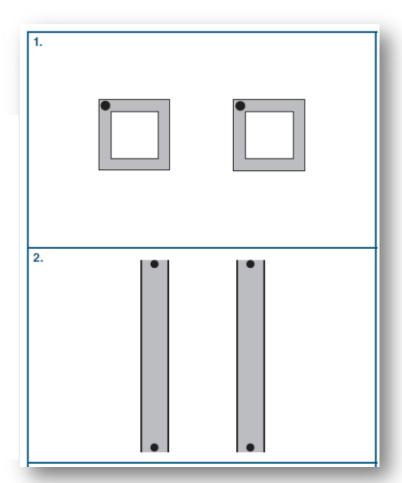
- Accept upper- or lowercase unless case is specified.
- Accept reversed letters as correct unless they form different letters.
 - Reversed b becomes a d so this is incorrect.
 - Reversed c does not become a different letter so it is acceptable.
- Printing is requested but cursive is acceptable.



Other items administered as a dictated spelling test.

4

- 5. _____
- 6. _____
- 7. _____
- 8. G A _____
- 9. a h _____



Prespelling items





Qualitative Observation

Use data to compare examinee's performance to age mates.

Qualitative Observation

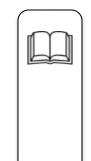
On Spelling, which of the following best describes the automaticity of the individual's performance? (Mark only one response.)

- Spelled words easily and accurately
- Spelled initial items easily and accurately; spelling of latter items reflected a need for further skill development (typical)
- 3. Spelled words in a laborious manner (nonautomatic)
- 4. None of the above, not observed, or does not apply





 A measure of written expression skills that contributes to 5 clusters: Written Language, Broad Written Language, Written Expression, Academic Applications, Broad Achievement



- Select an appropriate block of items to administer based on examinee's estimated achievement level.
- Consult Adjusted Item Block chart in Test Record if score falls in a shaded area to determine which additional items should be administered.



- Items 1–6 are scored 1 or 0.
- Items 7 and higher are scored 2, 1, or 0.
 - Items may also be scored .5 or 1.5.
- Use the scoring guide in the Examiner's Manual to score this test (Appendix B).
- Do not spell any words for the examinee.
- You may read any printed word in an item to the examinee upon request.



Starting With Item 1



Open Response Booklet to Writing Samples Item 1 and place directly in front of subject. Give subject a pencil with eraser and say: I am going to ask you to do some writing. Please write or print your answers neatly so that I can read them. You may tell subject any printed words during test. Repeat instructions, if needed. If subject asks about spelling, say: Just do the best you can.

- Number one. Point to Item 1 in Response Booklet and say: This says, "My name is . . ." Point to blank and say: Write your name here.
- 2.



Number two. Point to words and say: This is a . . . Point to blank and say: Write the word here that finishes the sentence.

Items 1–6

Score standard responses 1 (meets task requirements).

Score inadequate or illegible responses 0.



1 point: Must have at least one initial letter (first or last name) and one more correct letter. Reversals OK, upper- or lowercase OK.

1.

My name is _____

2



kr

1 point: Must begin with the /k/ sound (e.g., c or k) and include the letter r. Reversals OK.





Starting With Item 7



Open Response Booklet to Writing Samples Item 7 and place directly in front of subject. Give subject a pencil with eraser and say: I am going to ask you to do some writing. Please write or print your answers neatly so that I can read them. You may tell subject any printed words during test. Repeat instructions, if needed. If subject asks about spelling, say: Just do the best you can.

7.



Number seven. Point to blank lines and say: Write a good sentence that tells what is happening in the picture.

Items 7 and higher

Score superior responses 2 (exceeds task requirements).

Score standard responses 1 (meets task requirements).

Score inadequate or illegible responses 0.





Practice Scoring

7. Write a good sentence that describes what is happening in the picture.

7



The mother bird is feeding her babies a worm.

2

The bird has a worm.

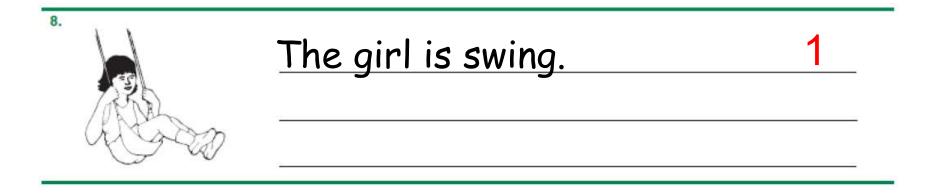
This is a bird.





Practice Scoring

8. Write a good sentence that tells what the girl is doing.

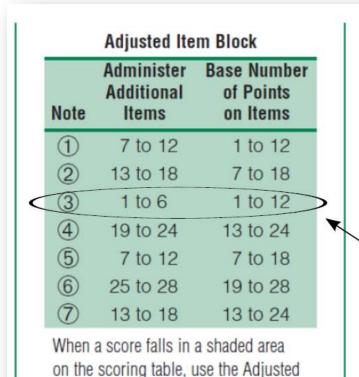


The girl is playing on a swing at 2 the park.

The girl is nice.







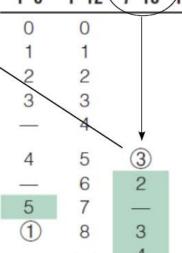
Item Block table above to determine

what additional items to administer.

Test 6 Writing Samples Scoring Table

Encircle row for the Number of Points.

Number of Points Items Items Items Items 1-6 1-12 7-18 13-24 10 20 AF (F



If, after giving Items 7–18, the examinee earns 4 points, see Note 3.

Give Items 1–6 and base final score on Items 1–12.





- Scoring occurs after the initial block of items is administered.
- If the examinee's score falls in a shaded area, additional items need to be administered
 - A score falling in the shaded area at the top of a range means the block was too hard.
 - A score falling in the shaded area at the bottom of a range means the block was too easy.
- Final score may not include all items administered. Follow the directions in the Adjusted Item Block.



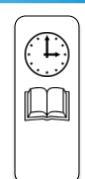
Writing Samples

Practice Exercises, page 1
Score items





 A measure of written expression skills that contributes to 4 clusters: Broad Written Language, Written Expression, Academic Fluency, Broad Achievement



- Administer sample items to all examinees.
- Timed test: 5 minutes
- Score reasonable sentences that use 3 stimulus words (unchanged) as correct (1).
- Test name was Writing Fluency in WJ III.



Administer Sample Items A–D to all examinees.

A.	good cake is		The cake is good.
B.	pig fat is	The state of the s	



C. this ball big



Point to Sample Item C and say: Look at this picture and the words this, ball, big. Use these three words and any other words you need to write a sentence about the picture. You may put the words in any order.

Provide corrective feedback and practice as directed in Error or No Response boxes.





If 0 correct on Sample Items B–D after error correction, discontinue testing and record a score of 0 for Test 11.

If 1 or more correct, continue testing.

On test items, if 3 or fewer correct after 2 minutes, discontinue testing and record score and 2 minutes for time.





Test 14: Editing

- A measure of writing skill that contributes to the Basic Writing Skills cluster
- Administer Sample Items A–D to all examinees, then select appropriate starting point.
- Basal/Ceiling rules: (test by complete pages)
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Do not read any words for the examinee after sample items have been administered.



Test 14: Editing

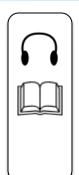
i want to ride with them.

- To receive credit, examinee must identify <u>and</u> correct the error.
- If examinee locates error but does not correct it, say: How would you correct that mistake?





 A measure of spelling skill that contributes to the Phoneme-Grapheme Knowledge cluster



- Select appropriate starting point.
- Basal/Ceiling rules:
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Use audio recording for Item 6 and higher.
- Items may be repeated upon request.



Starting point for Preschool to Grade 3

A. Say: I am going to ask you to write some letters. I will tell you the sound that the letter makes, then you say the sound and write the letter here (point to blank for Sample Item A in Response Booklet).

Let's try one. Write the letter that makes the /s/sound as in sand (point to blank for Sample Item A in Response Booklet).

▲ Correct: 5

Say the sound, not the letter name, when a letter appears between slash marks /s/.





 Number one. Say the sound, then write the letter that makes the /t/ sound as in top.

▲ Correct: t

♦ 1-5: Does Not Repeat Sound Say: Say the sound before you write the letter.

Examinees are asked to first say the sound or nonword and then write it; score is based only on written response.





Starting point for Grade 3 to Adult

Starting With Sample Item C



Open Response Booklet to Spelling of Sounds and place directly in front of subject. Give subject a pencil with eraser.

Say: I am going to ask you to spell some words that are not real words—they are nonwords. Nonwords may sound like bip (bip), ost (ôst), or mib (mib). Try to spell the nonword the way you think it would be spelled if it were a real word. Listen carefully. I will say the nonword twice, then you say the nonword and you write it on the line.

Only acceptable correct responses are listed in the Test Book.



- All items are scored 1 or 0.
- Do not penalize examinee for saying the nonword first or mispronouncing it.
 - Saying word first is designed to help with spelling
 - Use for qualitative information only
- Do not penalize for poor handwriting.
- Accept reversed letters unless they become a new letter (e.g., a reversed b becomes a d).





Written Language (Grw)

2-test cluster of written language achievement, including spelling of single words, quality of expression, and reading-writing (*Grw*) abilities

Test 3: Spelling

Test 6: Writing Samples

Median reliability: .94 (5–19) .95 (adult)





Broad Written Language (Grw, Gs)

3-test cluster of written language achievement, including spelling of single words; fluency of production; and quality of expression, readingwriting (*Grw*), and cognitive processing speed (*Gs*) abilities

Test 3: Spelling

Test 6: Writing Samples

Test 11: Sentence Writing Fluency

Median reliability: .95 (5–19) .96 (adult)





Basic Writing Skills (Grw)

2-test cluster of basic writing skills in isolated and contextually based formats, including spelling of single words; identifying and correcting errors in punctuation, capitalization, spelling, and word usage; and reading-writing (*Grw*) abilities

Test 3: Spelling

Test 14: Editing

Median reliability: .95 (5–19) .96 (adult)





Written Expression (Grw, Gs)

2-test cluster measuring meaningful written expression and fluency (reading-writing [*Grw*] abilities) and cognitive processing speed (*Gs*) ability

Test 6: Writing Samples

Test 11: Sentence Writing Fluency

Median reliability: .91 (5–19) .92 (adult)





Written Language: Summary

- Includes 5 tests measuring various aspects of written language:
 - Spelling, Writing Samples, Sentence Writing Fluency,
 Editing, and Spelling of Sounds
- Provides 4 clusters for a comprehensive evaluation of writing performance:
 - Written Language, Broad Written Language, Basic Writing Skills, Written Expression
- Contributes to Phoneme-Grapheme Knowledge cluster (Spelling of Sounds + Word Attack)





So What Do I Do? Intra-Cluster Considerations for Editing

INSTRUCTIONAL STRATEGIES

- Teach within the context of the individual's writing
- Avoid the "red pencil" treatment
- Provide targeted guidelines for proofreading
- Oral proofreading
- Guided proofreading
- Teach revision skills
- Use standard proofreading symbols





So What Do I Do? Intra-Cluster Considerations for Written Expression

Analyze Writing Fluency to determine:

- Sustained concentration
- Response style
- Level of automaticity
- Types of errors
- Reading and spelling skills

Analyze Writing Samples to determine:

- Attitude toward writing
- Basic writing skills
- Oral language performance
- Vocabulary
- Organizational ability





So What Do I Do? Intra-Cluster Considerations for Written Expression

INSTRUCTIONAL MODIFICATIONS

- Identify interests
- Ensure the student has plenty to write about (activate background knowledge
- Do not penalize for spelling or punctuation errors; focus on content
- Use media to dictate (Dragon Speak or similar)

INSTRUCTIONAL STRATEGIES

- Emphasize the writing process
- Teach how to organize stories, reports, themes
- Use graphic organizers, story grammar, story maps, frames
- Have the student dictate and then work with a more-knowledgeable other to revise and edit
- Focus on improving one or two things at a time (e.g. Houghton Mifflin Harcourt.



So What Do I Do? Intra-Cluster Considerations for Writing Fluency

INSTRUCTIONAL MODIFICATIONS

- Increase time to complete written assignments
- Decrease amount of written work
- Allow oral reports
- Simplify type of writing assignment
- Determine if copying is a problem

INSTRUCTIONAL STRATEGIES

- Provide opportunities to write
- Teach skills in simple to complex sequence
- Conduct daily timed writing activity
- Use sentence combining exercises
- Use sentence guides





Cross-Domain Clusters

- Cluster includes tests from different academic domains (reading, writing, math).
- 7 cross-domain clusters are available.
 - Brief Achievement and Broad Achievement
 - Academic Knowledge
 - Academic Skills
 - Academic Fluency
 - Academic Applications
 - Phoneme-Grapheme Knowledge



Brief Achievement

- Includes 3 tests, each measuring a different achievement area
 - Test 1: Letter-Word Identification (reading)
 - Test 2: Applied Problems (math)
 - Test 3: Spelling (written language)
- Provides a brief screening of achievement
- Median reliability: .96 (5–19) .97 (adult)



Broad Achievement

Includes 9 tests (Tests 1–6, 9–11)

Test 1: Letter-Word Identification

Test 4: Passage Comprehension

Test 9: Sentence Reading Fluency

Broad Reading

Test 2: Applied Problems

Test 5: Calculation

Test 10: Math Facts Fluency

Broad Mathematics

Test 3: Spelling

Test 6: Writing Samples

Test 11: Sentence Writing Fluency

Broad
Written
Language

Median reliability: .99 (5–19) .99 (adult)



Academic Knowledge

- Includes 3 tests measuring various aspects of academic knowledge (comprehension-knowledge [Gc])
 - Test 18: Science
 - Test 19: Social Studies
 - Test 20: Humanities
- Provides 1 cluster: Academic Knowledge
 - Serves as the ability score in an ability/achievement comparison procedure
- Examinee is not required to read: All items are presented orally by examiner.
- Median reliability: .92 (5–19) .96 (adult)





Test 18: Science

- A measure of domain-specific knowledge that contributes to the Academic Knowledge cluster
- Select appropriate starting point.
- Basal/Ceiling rules: (test by complete pages)
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Know correct pronunciation of words in test.
- Present all items orally.



Test 18: Science

Measures aspects of anatomy, biology, chemistry, geology, medicine, and physics

1.



Some items have pictures.

Point to picture on subject's page and say: What are these?

Some items are only presented orally.

Listen.

isten. What organ in the body pumps blood?

Some items are shown in text.

What is the name of the center of the retina, where a person has the best, or sharpest, vision?





Test 19: Social Studies

- A measure of domain-specific knowledge that contributes to the Academic Knowledge cluster
- Select appropriate starting point.
- Basal/Ceiling rules: (test by complete pages)
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Know correct pronunciation of words in test.
- Present all items orally.



Test 19: Social Studies

Measures aspects of history, economics, geography, government, and psychology



Point to picture on subject's page and say: What does this person do?

- ▲ Correct: any response that indicates fighting fires or helping people who are hurt
- Query: fireman—What does a fireman do?

Complete all queries as indicated in Test Book.

In what city was the first modern Olympics held?

- ▲ Correct: Athens, (Greece)
- Query: Greece—Tell me the city.



Test 20: Humanities

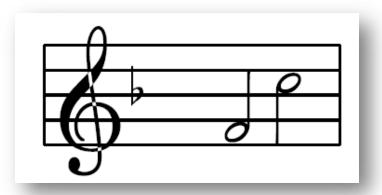
- A measure of domain-specific knowledge that contributes to the Academic Knowledge cluster
- Select appropriate starting point.
- Basal/Ceiling rules: (test by complete pages)
 - 6 lowest correct or Item 1
 - 6 highest incorrect or last item
- Know correct pronunciation of words in test.
- Present all items orally.



Test 20: Humanities

Measures aspects of art, music, literature





Listen carefully and finish what I say: Mary had a little lamb, Its fleece was white as ... (pause expectantly).





Academic Skills

- Includes 3 tests, each measuring a basic skill in a different achievement area (decoding, encoding, and computation)
 - Test 1: Letter-Word Identification (reading)
 - Test 3: Spelling (written language)
 - Test 5: Calculation (math)
- Provides an overall index of basic achievement skills
- Median reliability: .97 (5–19) .97 (adult)



Academic Fluency

- Includes 3 tests, each measuring fluency in a different achievement area
 - Test 9: Sentence Reading Fluency (reading)
 - Test 10: Math Facts Fluency (math)
 - Test 11: Sentence Writing Fluency (written language)
- Provides an overall index of academic fluency (automaticity)
- Median reliability: .97 (5–19) .97 (adult)





Academic Applications

- Includes 3 tests, each measuring applied skill in a different achievement area
 - Test 2: Applied Problems (math)
 - Test 4: Passage Comprehension (reading)
 - Test 6: Writing Samples (written language)
- Provides a broad measure of applied academic skill
- Median reliability: .95 (5–19) .96 (adult)





Phoneme-Grapheme Knowledge

- Includes 2 tests
 - Test 7: Word Attack
 - Test 16: Spelling of Sounds
- Yields 1 cluster: Phoneme-Grapheme Knowledge
- Requires both phonology and orthography
- Provides insight into examinee's knowledge of sounds and symbols
- Median reliability: .93 (5–19) .94 (adult)



Summary of WJ IV ACH

 Provides 3 forms of the Standard Battery (eliminates overexposure of items and supports team approaches)



- Offers new reading tests and clusters for a more comprehensive evaluation of reading
- Collects important qualitative information with checklists on the Test Record
- Provides academic knowledge/achievement comparison procedure
- Offers one Extended Battery for use with all 3 forms of the Standard Battery
- Co-normed with WJ IV COG and WJ IV OL





Interpretation: Predictions - RPI

Houghton Mifflin Harcourt

The RPI reflects the individual's proficiency on tasks on which the AVERAGE age- or grade- mate has 90% proficiency. It predicts the level of success on similar tasks.

Yoshi has an RPI of 3/90 on Broad Written Language. This means he is predicted to perform with 3% success on those writing tasks that average grade mates would perform with 90% success.

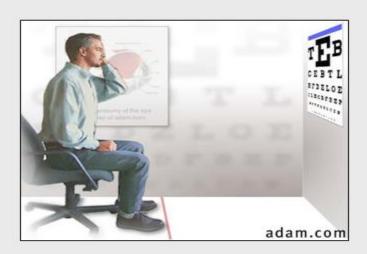
Bennett has an RPI of 98/90 on Math Reasoning. This indicates his performance is advanced with him predicted to perform with 98% success when average grade mates attain 90% success with math reasoning tasks.



Interpretation: Predictions - RPI

The Relative Proficiency Index (RPI) represents a persons quality of performance on reference tasks

RPIs are analogous to the Snellen Index which describes quality of visual acuity





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Interpretation: Predictions - RPI

Snellen Index:

20/200 means the individual has to be at 20 feet to see what a person with normal vision can see at 200 feet.

Provides a criterion-referenced index of a person's visual acuity.

Relative Proficiency Index:

20/90 Prexidethe individual of a se20% dring the roficiency on the resk's violation average age or grade-peers have 90% mastery.



Woodcock Johnson IV

RPI	Proficiency	Functional Level	Development/ Delay
100/90	Very Advanced	Very Advanced	Very Advanced
98/90 to 100/90	Advanced	Advanced	Advanced
95/90 to 98/90	Average to Advanced	Within Normal Limits to Advanced	Age-appropriate to Advanced
82/90 to 95/90	Average	Within Normal Limits	Age-appropriate
67/90 to 82/90	Limited to Average	Mildly Impaired to Within Normal Limits	Mildly Delayed to Age-appropriate
24/90 to 67/90	Limited	Mildly Impaired	Mildly Delayed
3/90 to 24/90	Very Limited	Moderately Impaired	Moderately Delayed
0/90 to 3/90	Negligible	Severely Impaired	Severely Delayed





Interpretation: Predictions - Developmental/ Instructional Zones

Developmental/Instructional Zones go hand-in-hand with RPI

They reflect the range from easy or independent level to the difficult or frustration level.

Easy Instructional

Difficult

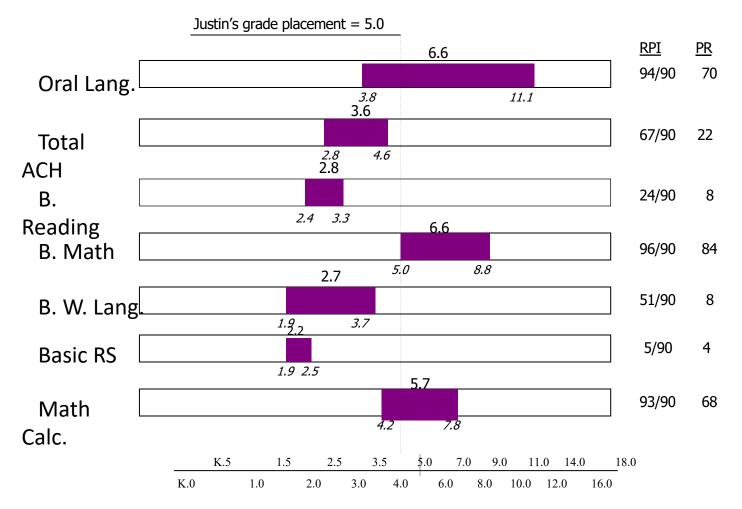
96/90 90/90

75/90

To glean this information, we look at the Age/Grade Profiles











Interpretation: Consider the Variables

Step 6: Consider the variables that may facilitate or inhibit the individual's

cognitive or academic performance.

- Facilitators/inhibitors
- Observations/reports
- Informal work samples
- Error analysis





THANK YOU!!!!

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