

Woodcock-Johnson IV Tests of Cognitive Ability

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NILD webinar

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WJ-IV COGNITIVE (2014)

- A **comprehensive assessment system** on the **cutting edge of clinical practice**.
- The **Woodcock-Johnson IV (WJIV)** is structured to offer the ease of use and flexibility that examiners need to accurately evaluate learning problems for children and adults with a wide range of other assessment solutions can.
- Facilitate **exploration of strengths and weaknesses** across cognitive, oral language, and academic abilities.
- Batteries can be used in **conjunction with one another or as standalone assessments**.
- Clusters engineered to provide the **most diagnostically useful interpretations**.
- **Simplified and reframed procedures** for evaluating ability/achievement comparisons and intelligibility.
- **Expanded focus** beyond the original broad-band CHC theory that was the foundation for the WJ III®

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Examiner Qualifications

- Level C
- Must have specific training in administering psychological and cognitive measures and their interpretation
- Must have at least a Master's Degree, Ed.D., PSY.D., or PHD in psychology and related fields
- Must have these credentials in order to order the materials from Riverside Insights

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Examiner Qualifications

- **Doctorate or Masters (e.g., PhD, PsyD, EdD, etc.)** in a field closely related to the intended use of the assessment, which includes supervised training in administration, scoring, and interpretation of standardized clinical assessments.
- OR
- **Licensure or certification** to practice in your state in a field related to purchase (School Psychologist, Clinical Psychologist, etc.) **AND** supervised training in administration, scoring, and interpretation of standardized assessments.
- OR
- **Licensure or certification** in field closely related to the intended use of the assessment **OR** full active membership in a professional organization (such as APA, NASP, NANN, INS) that requires training and experience in the relevant area of assessment.

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How does WJ-IV COG compare to WISC-V

WISC-V Index Scores	WJ-IV COG Cluster Scores
■ Verbal Comprehension ■ Visual-Spatial ■ Fluid Reasoning ■ Working Memory ■ Processing Speed	■ Comprehension-Knowledge ■ Vocabulary ■ Long-Term Retrieval ■ Visual Processing ■ Fluid Reasoning ■ Short-Term Working Memory ■ Auditory Memory Span ■ Perceptual Speed ■ Cognitive Processing Speed ■ Cognitive Efficiency

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SUBTESTS

- | | |
|--|---|
| WISC-V <ul style="list-style-type: none"> ■ Digit Span (with distractors) ■ Digits Backward ■ Picture Span ■ Letter-Number Sequencing ■ Cancellation | WJ-IV COG <ul style="list-style-type: none"> ■ Verbal Attention ■ Memory for Words ■ Numbers Reversed ■ Picture Recognition ■ Object-Number Sequencing ■ Pair Cancellation |
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STANDARD BATTERY

- Subtest 1: Oral Vocabulary -Synonyms & Antonyms
 - Examiner reads items
 - In ACH battery student READS items
 - Helpful difference between reading vocab & listening vocab
 - Measures acquired knowledge

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Subtest 2 Number Series

- Understanding the mathematical system - Patterns – what's missing
- Quantitative Reasoning, inductive reasoning
 - 1, 3, __, 7
 - 6, __, 12, 18
 - 18, 15, 12, __, 6
 - 1, 4, __, 13
- Compare with ACH subtest Number Matrices

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Subtest 3 Verbal Attention

- Short-term auditory working memory
- Verbal Working Memory
- categorize information to assist in organizing and recalling it in a different order, measuring short-term working memory or verbal working memory as a critical ability necessary for efficient working memory, attentional control or executive function
- listen to a list of intermingled animals and numbers presented orally and answer a specific question regarding the sequence, which is stated after the series is given. For example, "Say the animal that came before 5."

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Subtest 4 Letter-Pattern Matching

- is more demanding of fine-motor skills, short-term memory, and measures the speed at which one can make visual symbol discriminations and identify common orthographic (spelling) patterns by locating and circling two identical letter patterns in a row of varied spelling patterns within 3 minute time limit
- C s C O
- K W W p
- nrf ter ffr frf ter nrk
- hct tch cht htc tch

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Subtest 5 Phonological Processing

- Compare with Sound Awareness and Phonetic Coding tasks – Segmenting & Blending (most basic foundation)
- Cognitively complex auditory processing task that includes speed of lexical access or long-term retrieval, comprised of three parts:
 - Word Access (provide a word with a particular sound in a specific location within the word).
 - Word Fluency (name as many words as you can think of in one minute that begin with a certain sound).
 - Substitution (substitute part of a word to create a new word).

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Subtest 6 Story Recall

- Used to be in WJ-IV ACH III
- Measures meaningful memory as part of long-term retrieval as well as some aspects of oral language development, which requires the student to recall increasingly complex stories.
- After listening to a passage, the student is asked to recall as many details from the story as he or she can remember.
- This has significance for recalling information shared in class lectures and small group discussions.

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Subtest 7 Visualization

- Includes two subtests measuring different aspects of visual processing.
- Spatial Relations requires the student to identify two or three pieces that form a complete target shape, with increasing difficulty as the pieces are flipped, rotated or become more similar in shape



- Block Rotation task requires the student to identify two block patterns that match one another, requiring the student to look at a series of pictures turned and twisted in various directions using visual discrimination and visual transfer to determine which ones match



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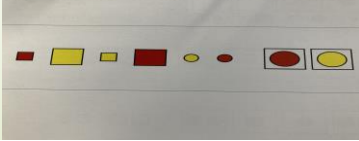
Subtest 8 General Information

- Measures the depth of one's background knowledge, asking, "Where would you find ... ?" or "What would you do with ... ?" The task initially begins with objects that might commonly appear in a person's environment, increasing in difficulty to items that may be more unusual
- Background Knowledge – attention to environment and information picked up from exposure to situations and items – vocabulary dependent
- May have been taught or attained by "osmosis"
- May be culturally biased depending where you live, or experience through books, media, etc.

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Subtest 9 Concept Formation

- Use thinking and reasoning abilities on novel tasks with unfamiliar patterns that require persistence and motivation without the use of language
- Fluid reasoning uses involves categorical reasoning based on principals of inductive logic, measuring as aspect of executive processing that requiring mental flexibility and shifting mental set



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Subtest 10 Numbers Reversed

- Auditory short-term memory
- Hold a span of numbers in immediate awareness (memory) while performing a mental operation on it (reversing the sequence of numbers)
- Like Digit Span Backward
- More than rote memory
- Manipulate information to give back in different sequence
- Requires use of strategy
- What is this like in the classroom?
- What techniques would we use to remediate this?

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EXTENDED BATTERY

- Subtest 11 Number Pattern Matching
 - Using visual discrimination, visual scanning, and fine motor skills on a timed pencil-paper task (3 minutes)
 - Compare to Letter-Number Matching
- Letter Pattern Matching – spelling & reading difficulties???
- Number Pattern Matching – math anxiety???
- Both – dyslexia or visual processing or fine-motor skills
- Compare to other similar subtests to isolate primary dysfunction

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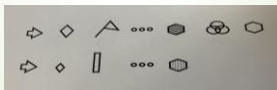
Subtest 12 Nonword Repetition

- Using aspects of auditory processing and short-term memory (phonological short-term memory, or the phonological loop)
- Listen to a nonsense word and has to repeat it exactly, with increasing difficulty level and syllable length, like learning a new language
- Use to help determine Foreign Language Exemption
- marg
- fligitte
- inexculpatory

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Subtest 13 Visual-Auditory Learning

- Long-term storage and retrieval
- Learn, store and retrieve a series of visual-auditory associations
- Using associative memory of rebus pictographic representations of words



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Subtest 14 Picture Recognition

- Visual memory for objects or pictures
- Recognize a subset of previously presented pictures within a field of distracting pictures
- To eliminate verbal mediation as a memory strategy, varieties of the same type of object are used for both stimuli and distractors (several different leaves or several different windows), with increasing difficulty and increased number of stimuli and distractors
- Impacts reading and spelling tasks for instant recognition & automaticity

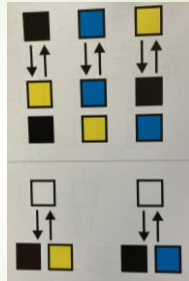


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Subtest 15 Analysis & Synthesis

Measures general sequential, deductive reasoning, along with the ability to reason and draw conclusions from given conditions

Comparable to Concept Formation – indicator of higher level thinking & reasoning ability and general intellectual ability



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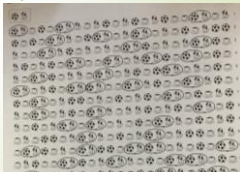
Subtest 16 Object-Number Sequencing

- Auditory attention, concentration, and mental control
- Can be influenced by the ability to correctly sequence information
- Listen to a series of digits and words, such as "dog, 1, shoe, 8, 2, apple,"
- Then reorder the information, repeating the objects first in sequential order, and then the digits in sequential order.
- Requires the ability to hold auditory information in immediate awareness, divide the information into two groups, and shift attentional resources to the two new sequences.
- Compare to Letter-Number Sequencing (WISC-V)

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Subtest 17 Pair Cancellation

- Processing speed
- Visual selective attention
- Vigilance when working with familiar images
- Compare to Cancellation (WISC-V)



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Subtest 18 Memory for Words

- Short-term auditory working memory span
- Repeat lists of unrelated words in the same sequence given
- Pure rote memory – no strategy use
- had ... know ... be ... other
- at ... people ... dark ... his ... some ... always

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WJ-IV Charts

- See additional handouts provided

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Review RPI scores

Use to compare

Best way to measure
true progress

Reported RPIs	Proficiency	Implications
100/90	very advanced	extremely easy
98/90 to 100/90	advanced	very easy
95/90 to 98/90	average to advanced	easy
82/90 to 95/90	average	manageable
67/90 to 82/90	limited to average	difficult
24/90 to 67/90	limited	very difficult
3/90 to 24/90	very limited	extremely difficult
0/90 to 3/90	extremely limited	nearly impossible

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Q & A

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References

- Riverside Insights website information on WJ-IV Tests of Cognitive Abilities
- Mather, Nancy, Wendling, Barbara J. - Woodcock-Johnson Tests of Cognitive Abilities Examiner's Manual: Standard and Extended Batteries, Houghton Mifflin Harcourt, Riverside 2014
- Schrank, Fredrick, McGrew, Kevin, Mather, Nancy - Woodcock-Johnson Tests of Cognitive Abilities Examiner's Manual: Standard Test Book & Extended Test Book, Houghton Mifflin Harcourt, Riverside, 2014
- Purchased web downloads - WJ-IV Reports, Recommendations and Strategies, Mather & Jaffe, 2014

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