

Introducing the WAIS-IV



WAIS[®]-IV

WECHSLER ADULT INTELLIGENCE SCALE[®] – FOURTH EDITION



Overview

- Introduction
- Revision Goals
- Test Structure
- Normative / Validity / Clinical Information



Wechsler's View of Intelligence

"The global capacity of a person to act purposefully, to think rationally, and to deal effectively with his/her environment."

Wechsler, David (1939). *The measurement of adult intelligence*.
Baltimore: Williams & Wilkins, p. 229.



WAIS: A Historical Perspective

Wechsler-Bellevue	1939
Wechsler-Bellevue II	1946
WAIS	1955
WAIS-R	1981
WAIS-III	1997
WAIS-IV	2008



Revision Goals



Update Theoretical Foundations

- Eliminate Dual IQ/Index Score Structure
 - Consistent with WISC-IV
- Enhance Measure of Fluid Intelligence
 - Develop additional measure of fluid reasoning: Figure Weights
- Enhance Measure of Working Memory
 - Revise Arithmetic and Digit Span to emphasize WM
- Enhance Measure of Processing Speed
 - Develop additional PS subtest: Cancellation



Enhance Clinical Utility

- Co-normed with the Wechsler Memory Scale-IV
- Additional Special Group Studies (e.g., Mild Cognitive Impairment, Borderline Intellectual Functioning)
- Develop an Upgrade Kit in 2009 for Specialists (e.g., Geropsychologists & Neuropsychologists)



Improve Psychometric Properties

- Update Norms
- Expand FSIQ Range
- Improve Floors and Ceilings
- Maintain or improve subtest and composite reliability
- Provide initial evidence of validity



Enhance User-Friendliness

- Reduce Testing Time
- Revise Instructions
- Redesign Record Form
- Increase Portability
- Separate WAIS-IV and WMS-IV Technical Manuals



Increase Developmental Appropriateness

- Add demonstration and sample items
- Reduce vocabulary level of instructions
- Drop Object Assembly
- Reduce emphasis on motor demands
- Reduce emphasis on time-bonus
- Enlarge visual stimuli
- Eliminate auditory concerns on DS and LN



Test Structure



Test Structure

Verbal Comprehension Scale

Core Subtests

Similarities
Vocabulary
Information

Supplemental Subtests

Comprehension

Perceptual Reasoning Scale

Core Subtests

Block Design
Matrix Reasoning
Visual Puzzles **New!**

Supplemental Subtests

Picture Completion
Figure Weights (16-69) only **New!**

FSIQ

Working Memory Scale

Core Subtests

Digit Span
Arithmetic

Supplemental Subtests

Letter-Number Sequencing (16-69 only)

Processing Speed Scale

Core Subtests

Symbol Search
Coding

Supplemental Subtests

Cancellation (16-69 only) **New!**



Subtest Modifications

- 4 Subtests Dropped
 - Object Assembly, Picture Arrangement, Coding Recall (Digit Symbol-Incidental Learning), and Coding Copy (Digit Symbol-Copy)
- 12 Subtests Retained with Modifications
 - Similarities, Vocabulary, Information, Comprehension
 - Block Design, Matrix Reasoning, Picture Completion
 - Digit Span, Arithmetic, Letter-Number Sequencing
 - Symbol Search, Coding
- 3 New Subtests
 - Visual Puzzles, Figure Weights, Cancellation



Changes to Verbal Subtests

- Similarities
 - Replaced items, Revised scoring rules, Added sample responses
- Vocabulary
 - Replaced items, Revised scoring rules, Added sample responses, Added picture items
- Information
 - Replaced items, Revised scoring rules, Added sample responses
- Comprehension
 - Replaced items, Revised scoring rules, Added sample responses



Changes to Performance Subtests

- Block Design
 - Used Model and Stimulus Book for all teaching items, Added 4-block diamond items before 9-block items, Reduced # of items with time bonus, Added BDN process score
- Matrix Reasoning
 - Retained 2 of 4 item-types, Added sample item for each type, Clarified 30-second guideline
- Picture Completion
 - Enlarged visual stimuli and Added ceiling items



Changes to Working Memory Subtests

- Digit Span
 - Added new sequencing task, Eliminated rhyming numbers
- Arithmetic
 - Omitted reference to English measurement system and currency, Decreased emphasis on mathematical skills to increase emphasis on working memory
- Letter-Number Sequencing
 - Eliminated rhyming numbers and letters, Omitted use of L, I, O, and zero, Implemented graduated teaching strategy



Changes to Processing Speed Subtests

- Symbol Search
 - Enlarged symbols, Revised format and instructions
- Coding
 - Enlarged symbols and writing space, Redesigned for more equivalent item difficulty across task, Revised instructions for consistency with WISC-IV



Reduced Discontinue Rules

Subtest	WAIS-III	WAIS-IV
BD	3	2
SI, MR, AR, CO	4	3
VC, IN	6	3
PCm	5	4



New Subtests: Visual Puzzles

“Which 3 of these pieces go together to make this puzzle?”

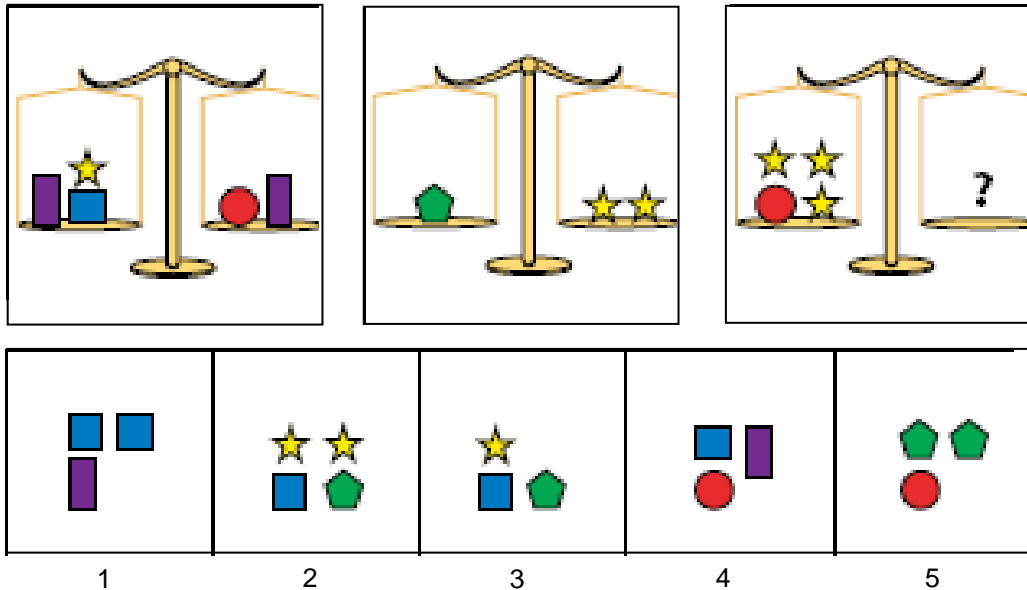


 1	 2	 3
 4	 5	 6



New Subtests: Figure Weights


“Which one of these goes here to balance the scale?”






New Subtests: Cancellation






















“When I say go, draw a line through each *red* square and *yellow* triangle.”



Demonstration Item A.



Sample Item A.



Composite Scores

- FSIQ
 - Based on 10 core subtests
- Index Scores: Primary interpretation level
 - VCI & PRI: 3 core subtests each
 - WMI & PSI: 2 core subtests each
- $GAI = VCI + PRI$
 - Optional Index score



Process Scores

- Block Design
 - Block Design No Time Bonus (BDN)
- Digit Span
 - Digit Span Forward (DSF), Digit Span Backward (DSB), Digit Span Sequencing (DSS)
 - Longest Digit Span Forward (LDSF), Longest Digit Span Backward (LDSB), Longest Digit Span Sequence (LDSS)
- Letter-Number Sequencing
 - Longest Letter-Number Sequence (LLNS)



Normative Sample Information

Validity Study Information

Clinical Study Information



WAIS-IV Normative Sample

- Ages 16-90
- Normative sample: N = 2200
 - 200 examinees per age band for ages 16-69
 - 100 examinees per age band for ages 70-90
- National sample stratified by:
 - Sex
 - Education Level
 - Ethnicity
 - Region



WAIS-IV Validity Studies

- WMS-IV Co-norming Study (2009 pub)
- WMS-III Correlational Study (16:0-89:11)
- WAIS-III Equating Study (16:0-89:11)
- WISC-IV Equating Study (16:0-16:11)
- WIAT-II Linking Study (16:0-19:11)
- CMS Correlational Study (16:0-16:11)



WAIS-IV Clinical Studies

- Intellectual Disability: Mild Severity
- Intellectual Disability: Moderate Severity
- Borderline Intellectual Functioning
- Gifted Intellectual Functioning
- Autistic Disorder
- Asperger's Disorder
- Learning Disability: Reading
- Learning Disability: Math
- ADHD
- TBI
- Mild Cognitive Impairment
- Dementia of the Alzheimer's Type
- Depression