"The WPPSI-IV is no one’s kid brother or sister. This newest version stands tall alongside the WISC-IV and WAIS-IV in every way imaginable – technical excellence, clinical utility, innovativeness, theoretical basis, and societal relevance."

"Bottom line: The WPPSI-IV is an amazing work of measurement for young children."

-- Alan S. Kaufman and Nadeen L Kaufman
Yale Child Study, School of Medicine
Standard Revision Goals
- Update theoretical foundations
- Increase developmental appropriateness
- Enhance clinical utility
- Improve psychometric properties
- Increase user friendliness

Update Theoretical Foundations
- Increase breadth of construct coverage
  - Develop new working memory subtests
  - Evaluate inhibitory control measures
- Revise composite terminology
  - Replace VIQ, PIQ, & PSQ with index scores
  - Add Working Memory Index (WMI)
  - Evaluate Fluid Reasoning Index (FRI)
  - Evaluate General Ability Index (GAI)

Increase Developmental Appropriateness
- Out-of-level testing (Tech Report)
- Revise processing speed subtests
- Simplify instructions
- Update Art
- Adapt test manipulatives
Enhance Clinical Utility

- Extend age range upward to 7:7
- Update validity studies
  - Update clinical validity/special group studies
  - Add Home Environment Questionnaire (HEQ)
  - Add NEPSY-2 validity study
  - Appropriate concurrent validity measures
- Score difference comparisons more specific
- Decreased expressive language requirements

Special Group Studies

- Iterative psychometric analyses
- Qualitative reviews by experts
- Improved test structure changes
- More options for significance levels
- Enhances S/W analysis

Improve Psychometric Properties

- Update normative information
- Extend subtest floors & ceilings
- Improve item difficulty gradients
- Minimize or eliminate overlap with WISC-IV
- Evaluate item bias
  - Iterative psychometric analyses
  - Qualitative reviews by experts
- Test structure changes
- More options for significance levels
  - Enhances S/W analysis
WPPSI-IV Normative Sample

- Total N=1700
  - n=600 for ages 2:6-3:11
  - n=1100 ages 4:0-7:7
- Nationally stratified sample
  - Age
  - Sex/Gender
  - Race/Ethnicity
  - Parent education level (5 levels)
  - Geographic Region (NE, S, MW, W)

Increase User Friendliness

- Maintain or reduce testing time
  - Maintain goal of ≤45 minutes for 2:6-3:11 and ≤60 minutes for 4:0-7:7
  - Re-evaluate start points & discontinue rules; reduce number of final items
  - FSIQ may not include all subtests

Increase User Friendliness

- Simplify instructions to child
  - Reduce verbosity & vocabulary level
  - Demonstrate, practice, and teach the task
- Replace plastic puzzle box
  - Similar to block box
  - Separate box holds animal cards and dauber
- Provide post publication training
Subtest Changes from WPPSI-III

- Dropped Word Reasoning & Picture Completion
- Revised retained subtests
  - New items include picture items on Similarities and Comprehension, and a new puzzle for Object Assembly
- Replaced Processing Speed subtests
  - Bug Search & Animal Coding
  - Added Cancellation
- New Working Memory subtests
  - Picture Memory
  - Zoo Locations

Subtest Modifications

<table>
<thead>
<tr>
<th>Subtest</th>
<th>New Administration</th>
<th>Recording &amp; Scoring</th>
<th>New Items</th>
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<tbody>
<tr>
<td>Vocabulary</td>
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<tr>
<td>Information</td>
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<tr>
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<td>✓</td>
</tr>
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<td>Receptive Vocabulary</td>
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<td></td>
</tr>
<tr>
<td>Picture Naming</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Block Design</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Object Assembly</td>
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</table>

Subtest Modifications (continued)

<table>
<thead>
<tr>
<th>Subtest</th>
<th>New Administration</th>
<th>Recording &amp; Scoring</th>
<th>New Items</th>
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<tbody>
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<tr>
<td>Bug Search</td>
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<td></td>
</tr>
<tr>
<td>Animal Coding</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cancellation</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Example: New Picture Items for Verbal Subtests

Similarities  Comprehension

"Which one here is X like these?"  "Show me the X who need X."

New Processing Speed Subtests

Bug Search
• Child friendly adaptation of Symbol Search
• Child stamps the matching bug in each row for 120 seconds
  "When I find this bug over here, I stamp it, like this."

New Processing Speed Subtests

Animal Coding
• Child friendly adaptation of the Coding paired-associates task
• Child stamps the shape that is associated with each animal for 120 seconds
  "Stamp the shape that each animal likes best."
New Processing Speed Subtests

Cancellation
- Child friendly version of WISC-IV task
- Child stamps articles of clothing for 45 seconds
- Random & Structured items
“Only stamp the things that people wear. Do not stamp anything else.”

Working Memory: NEW in WPPSI-IV!

- Why add Working Memory?
  - Most highly rated customer request
  - Need for preschool working memory measures with strong floors
  - Predicts academic achievement (e.g., reading comprehension, math)
  - Related to other abilities (e.g., language comprehension, attention, fluid reasoning)
  - Sensitive to clinical conditions (e.g., ADHD, TBI)
  - Provides information about developmental trajectories of working memory components

Working Memory in WPPSI-IV

- Research suggests that children rarely engage in rehearsal, & when they do, inefficiently (Cowan & Kail, 1996; Gathercole, Adams, & Hitch, 1994).
- Correlations between STM tasks & cognitive ability are higher in younger children than older children and are similar to correlations between complex span tasks & cognitive ability in older children (Cowan et al., 2005)
- Use of complex tasks with preschoolers may be inconsistent with developmental trajectory of working memory abilities
Working Memory: NEW in WPPSI-IV

- New Working Memory subtests
  - Picture Memory
  - Zoo Locations

- Appear to be more like traditional STM or recognition memory measures
  - But look a little more closely...

Working Memory in WPPSI-IV

- Appear to be like traditional STM or recognition memory measures
  - Picture Memory is similar to recognition tasks where target picture is identified among others
  - Zoo Locations is similar to visual-spatial recall tasks

- But.....
  - Picture Memory and Zoo Locations incorporate proactive interference through reuse of visual stimuli across trials
  - Recent research indicates proactive interference increases processing demands of working memory tasks (Blalock & McCabe, 2011; Carroll, et al., 2010)

New Working Memory Subtests

**Picture Memory**

- Child views stimulus pictures for 3 or 5 seconds
- Child selects stimulus pictures from a larger group
- Visual recognition task
- Order of selection does not affect score
**Working Memory Subtest**

**Zoo Locations**
- Child views locations of animal cards for 3-5 seconds
- Child places animal cards in correct locations on layout
- Visual-spatial recall task
- Number of possible layout locations increases w/difficulty
When should I use substitution?

**YES**

- **Primary Reason = Core subtest invalidated**
- **Temporary impairment in an area such as broken finger, etc.**

**NO**

- **I like this subtest better**
- **The child got a better score with this subtest**

Substitution Guidance

**Table 2.1 Allowable Substitutions for Core Subtests, by Age Band and Composite Score**

<table>
<thead>
<tr>
<th>Age Band</th>
<th>Composite Score</th>
<th>Core Subtests</th>
<th>Allowable Subtest*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2E-3F</td>
<td>TFQ</td>
<td>Receptive Vocabulary</td>
<td>Picture Naming</td>
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<tr>
<td></td>
<td></td>
<td>Interchangeable</td>
<td>Black Dice</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other Assembly</td>
<td>Pictorial Naming</td>
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<td></td>
<td></td>
<td></td>
<td>Zoe Letters</td>
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<tr>
<td>3F-4F</td>
<td>NW</td>
<td>Black Dice</td>
<td>Other Assembly</td>
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<td>Zoe Letters</td>
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<tr>
<td>4F-5F</td>
<td>NW</td>
<td>Receptive Vocabulary</td>
<td>Picture Naming</td>
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*Because the substitution of a supplemental subtest for a core subtest may introduce additional measurement error, only one substitution is allowed for each listed composite score.
### Substitution Guidance

<table>
<thead>
<tr>
<th>4-6-7</th>
<th>PSIQ</th>
<th>Information</th>
<th>Vocabulary or Comprehension</th>
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<tr>
<td></td>
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<td>Vocabulary or Comprehension</td>
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Because the substitution of a supplemental subtest for a core subtest may introduce additional measurement error, only one substitution is allowed for each listed composite score.

### Summary of Substitution Rules

- No substitution of subtests on 2-subtest composites
- Only substitute permitted subtests when calculating composite scores composed of 4+ subtests
- Only substitute if subtest is spoiled or there is a necessary clinical reason
  - Determined a priori
- For composites where substitution permitted only 1 is allowed
To Summarize-

- Primary index scores can be conceptualized as representing various abilities that are clinically useful to assess because of their proven utility in various types of psychological evaluations, and their relations with clinical conditions and to neurodevelopment.
To Summarize-
Performance can be used as a starting point in hypotheses generation about neuropsychological processing deficits, and can also be conceptualized and interpreted using a neuropsychological perspective (Hale & Fiorello, 2004; Miller & Maricle, 2012).

Best Practices in Assessment of Young Children

FAQs
- Can I administer the WPPSI-IV to a bilingual child?
- Are all of the WPPSI-IV materials safe for use by young children?
Basic Training Included with Kit!

- 24/7 online training
- Welcome email with access information

Post-Publication Activities

- Out of level testing for older children taking the younger battery
- Out of level testing for younger children taking the older battery
- Extended norms for intellectually gifted children taking age-appropriate battery
- Using the WPPSI-IV with children who are deaf or hard of hearing
- WPPSI-IV Essentials book

WPPSI-IV Informational Series

Other sessions available to view now!

1) Overview of the WPPSI-IV Revision Goals
2) Developmentally Appropriate Features of the WPPSI-IV
3) Working Memory

www.PsychCorp.com/WPPSI-IV

Coming soon: WPPSI-IV Factor Structure
For Customers in the USA

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WPPSI-IV Materials and Pricing Information

<table>
<thead>
<tr>
<th>Kit Code</th>
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<th>Pre-pub Price</th>
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To receive updates about the content, features and availability of the WPPSI-IV, visit PsychCorp.com/WPPSI-IV and register today!

*Pre-publication pricing good through 9/28/2012. You will not be billed until materials ship.

For Customers in Canada

For more information regarding WPPSI-IV availability and pricing please call...
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or email...
Customer Care Canada:
cs.canada@pearson.com

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