WISC-V
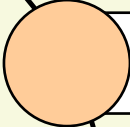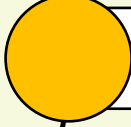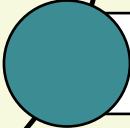WECHSLER INTELLIGENCE SCALE FOR CHILDREN® FIFTH EDITION

Advanced Interpretation of the WISC-V

Gloria Maccow, Ph.D.
Assessment Training Consultant

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Learning Outcomes

Describe the cognitive abilities measured by the WISC-V index scores.

Describe the theoretical link between cognitive processes and specific academic skills.

Describe how to use performance on the WISC-V to generate hypotheses about processing deficits.

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WISC-V
WECHSLER INTELLIGENCE SCALE FOR CHILDREN – FIFTH EDITION

Conceptual Structure
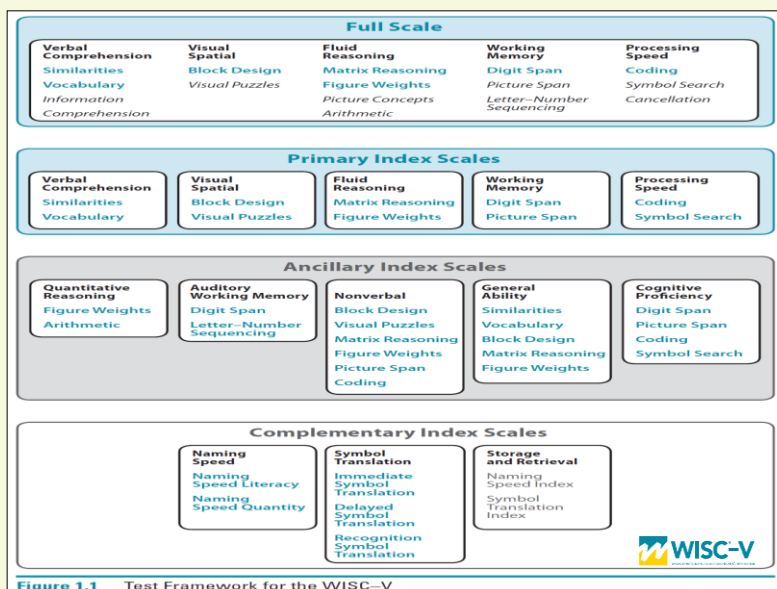
Figure 1.1   Test Framework for the WISC–V

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WISC-V

WECHSLER INTELLIGENCE SCALE FOR CHILDREN®– FIFTH EDITION

WISC-V Index Scores and Contributing Cognitive Processes

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Full Scale IQ

Full Scale

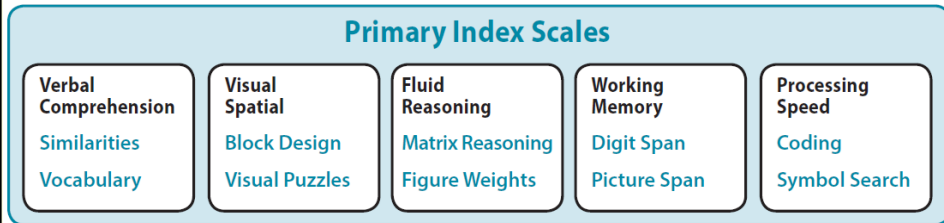| Verbal Comprehension	Visual Spatial	Fluid Reasoning	Working Memory	Processing Speed
Similarities	Block Design	Matrix Reasoning	Digit Span	Coding
Vocabulary	Visual Puzzles	Figure Weights	Picture Span	Symbol Search
Information		Picture Concepts	Letter–Number Sequencing	Cancellation
Comprehension		Arithmetic		

- Most reliable score – good predictor of important life outcomes.
- Derived from a sum of 7 subtest scaled scores.
- Considered the score that is most representative of global intellectual functioning (g).
- Traditionally, FSIQ has been the first score to be considered in profile interpretation.

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Primary Index Scales

Primary Index Scales

Verbal Comprehension	Visual Spatial	Fluid Reasoning	Working Memory	Processing Speed
Similarities	Block Design	Matrix Reasoning	Digit Span	Coding
Vocabulary	Visual Puzzles	Figure Weights	Picture Span	Symbol Search

The primary index scores, along with the FSIQ, are recommended for a comprehensive description and evaluation of intellectual ability.

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Abilities Measured by Primary Index Scales

Index	Abilities Measured
Verbal Comprehension	• Word Knowledge Acquisition • Information Retrieval • Ability to reason and solve verbal problems • Communication of knowledge
Visual Spatial	• Visual spatial reasoning • Synthesis of part-whole relationships • Attentiveness to visual detail • Visual-motor integration
Fluid Reasoning	• Inductive and Quantitative Reasoning • Broad Visual Intelligence • Simultaneous Processing • Abstract Thinking

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Abilities Measured by Primary Index Scales

Index	Abilities Measured
Working Memory	Ability to register, maintain, and manipulate visual and auditory information in conscious awareness. • Attention • Concentration • Mental Control
Processing Speed	• Short-term visual memory • Visual-Motor Coordination • Visual Discrimination • Visual Scanning • Concentration • Cognitive Flexibility • Rate of Test-Taking

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Ancillary Index Scales

Ancillary Index Scales

Quantitative Reasoning
Figure Weights
Arithmetic

Auditory Working Memory
Digit Span
Letter–Number Sequencing

Nonverbal
Block Design
Visual Puzzles
Matrix Reasoning
Figure Weights
Picture Span
Coding

General Ability
Similarities
Vocabulary
Block Design
Matrix Reasoning
Figure Weights

Cognitive Proficiency
Digit Span
Picture Span
Coding
Symbol Search

• Derived from combinations of primary subtests or primary and secondary subtests.
• Provide additional information regarding a child's cognitive abilities and WISC–V performance.

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Complementary Index Scales

Complementary Index Scales

Naming Speed	Symbol Translation	Storage and Retrieval
Naming Speed Literacy	Immediate Symbol Translation	Naming Speed Index
Naming Speed Quantity	Delayed Symbol Translation	Symbol Translation Index
	Recognition Symbol Translation	
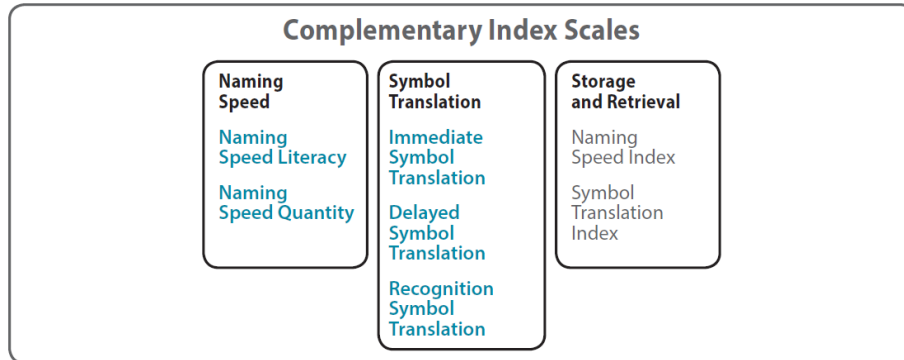
Complementary scales were designed to enhance the assessment of children with learning difficulties.

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Generate Hypotheses
Twelve Male – Grade 6

(See WISC-V Score Report)

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Reasons for Referral

His teachers report that Twelve has difficulty

- listening and following directions,
- reading grade-level text with comprehension,
- meeting expectations in the preparation of compositions or written responses to demonstrate what he has learned, and
- completing long-term assignments (i.e., book reports).

Often, he is talking when he should be working.

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Reasons for Referral

His parents report similar concerns at home.

- Twelve often does not remember his chores, or he starts his chores and does not complete them.
- He complains about assigned reading and refuses at times to complete written assignments.

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Demographic Information

WISC®-V
Wechsler Intelligence Scale for Children®-Fifth Edition
Score Report

Examinee Name	Twelve Male	Date of Report	02/04/2015
Examinee ID		Grade	6
Date of Birth	07/18/2002	Primary Language	English
Gender	Male	Handedness	Right
Race/Ethnicity	White	Examiner Name	Gloria Maccow
Date of Testing	01/26/2015	Age at Testing	12 years 6 months

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Full Scale IQ and
Primary Index Scores

Composite Score Summary

Composite		Sum of Scaled Scores	Composite Score	Percentile Rank	95% Confidence Interval	Qualitative Description
Verbal Comprehension	VCI	23	108	70	100-115	Average
Visual Spatial	VSI	22	105	63	97-112	Average
Fluid Reasoning	FRI	23	109	73	101-116	Average
Working Memory	WMI	16	88	21	81-97	Low Average
Processing Speed	PSI	23	108	70	98-116	Average
Full Scale IQ	FSIQ	73	103	58	97-109	Average

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Subtest Scores

Subtest Score Summary

Scale	Subtest Name		Total Raw Score	Scaled Score	Percentile Rank
Verbal Comprehension	**Similarities**	SI	33	12	75
	Vocabulary	VC	32	11	63
	(Information)	IN	20	10	50
	(Comprehension)	CO	27	12	75
Visual Spatial	**Block Design**	BD	35	11	63
	Visual Puzzles	VP	19	11	63
Fluid Reasoning	**Matrix Reasoning**	MR	23	13	84
	Figure Weights	FW	23	10	50
	(Picture Concepts)	PC	18	12	75
	(Arithmetic)	AR	15	6	9
Working Memory	**Digit Span**	DS	19	6	9
	Picture Span	PS	31	10	50
	(Letter-Number Seq.)	LN	14	7	16
Processing Speed	**Coding**	CD	53	10	50
	Symbol Search	SS	35	13	84
	(Cancellation)	CA	70	10	50

Subtests used to derive the FSIQ are bolded. Secondary subtests are in parentheses.

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Primary Analysis

Index Level Strengths and Weaknesses

Index	Score	Comparison Score	Difference	Critical Value	Strength or Weakness	Base Rate
VCI	108	103.6	4.4	8.82		>25%
VSI	105	103.6	1.4	9.32		>25%
FRI	109	103.6	5.4	8.30		>25%
WMI	88	103.6	-15.6	9.32	W	<=5%
PSI	108	103.6	4.4	12.92		>25%

Comparison score mean derived from the five index scores (MIS).
Statistical significance (critical values) at the .05 level.
Base rates are reported by overall sample.

Working Memory is a weakness relative to the MIS.

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Primary Analysis

Subtest Level Strengths and Weaknesses

Subtest	Score	Comparison Score	Difference	Critical Value	Strength or Weakness	Base Rate
SI	12	10.7	1.3	2.87		<=25%
VC	11	10.7	0.3	2.45		>25%
BD	11	10.7	0.3	3.06		>25%
VP	11	10.7	0.3	2.57		>25%
MR	13	10.7	2.3	2.57		<=15%
FW	10	10.7	-0.7	1.94		>25%
DS	6	10.7	-4.7	2.20	W	<=2%
PS	10	10.7	-0.7	2.97		>25%
CD	10	10.7	-0.7	3.33		>25%
SS	13	10.7	2.3	4.42		<=25%

Comparison score mean derived from the ten primary subtest scores (MSS-P).
Statistical significance (critical values) at the .05 level.

Primary Analysis

Index Level Pairwise Difference Comparisons

Index Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
VCI - VSI	108	105	3	10.60	N	42.9%
VCI - FRI	108	109	-1	9.74	N	48.2%
VCI - WMI	108	88	20	10.60	Y	9.0%
VCI - PSI	108	108	0	13.79	N	
VSI - FRI	105	109	-4	10.18	N	40.1%
VSI - WMI	105	88	17	11.00	Y	14.2%
VSI - PSI	105	108	-3	14.10	N	44.6%
FRI - WMI	109	88	21	10.18	Y	8.5%
FRI - PSI	109	108	1	13.47	N	48.9%
WMI - PSI	88	108	-20	14.10	Y	12.2%

Statistical significance (critical values) at the .05 level.
Base rates are reported by overall sample.

Significant and unusual discrepancy between
VCI-WMI   VSI-WMI   FRI-WMI   WMI-PSI

Primary Analysis

Subtest Level Pairwise Difference Comparisons

Subtest Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
SI - VC	12	11	1	3.02	N	40.7%
BD - VP	11	11	0	3.04	N	
MR - FW	13	10	3	2.60	Y	20.7%
DS - PS	6	10	-4	2.89	Y	11.1%
CD - SS	10	13	-3	3.63	N	16.8%

Statistical significance (critical values) at the .05 level.

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Ancillary Indexes

Index Score Summary

Composite		Sum of Scaled/ Standard Scores	Index Score	Percentile Rank	95% Confidence Interval	Qualitative Description	SEM
Ancillary							
Quantitative Reasoning	QRI	16	88	21	82-95	Low Average	3.00
Auditory Working Memory	AWMI	13	81	10	75-90	Low Average	3.67
Nonverbal	NVI	65	106	66	99-112	Average	3.00
General Ability	GAI	57	109	73	103-114	Average	2.60
Cognitive Proficiency	CPI	39	98	45	91-105	Average	4.24

Ancillary index scores are reported using scaled scores and complementary index scores are reported using standard scores.

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Quantitative Reasoning Index (88)

Subtest	Scaled Score				
Block Design					
Similarities					
Matrix Reasoning					
Digit Span					
Coding					
Vocabulary					
Figure Weights	10				
Visual Puzzles					
Picture Span					
Symbol Search					
Letter–Number Seq.					
Arithmetic	6				
Sum of Scaled Scores	16				
	Quan. Reason.	Auditory Work. Mem.	Nonverb		

AR
- Requires computational ability and quantitative knowledge.
- Loads on FRI, WMI, and VCI.

FW
- Requires math in a more limited, abstract manner.
- Examinee uses quantitative concept of equality to understand relationship among objects.
- Then, examinee applies concepts of matching, addition, and/or multiplication to identify correct response.

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Auditory Working Memory Index (81)

Subtest	Scaled Score				
Block Design					
Similarities					
Matrix Reasoning					
Digit Span	6				
Coding					
Vocabulary					
Figure Weights					
Visual Puzzles					
Picture Span					
Symbol Search					
Letter–Number Seq.	7				
Arithmetic					
Sum of Scaled Scores	13				
	Quan. Reason.	Auditory Work. Mem.	Nonverbal	General Ability	Cognitive Proficiency

- WMI is based on the multi-component model.
- Two domain-specific storage systems:
  - phonological loop, and
  - visual-spatial sketchpad.

The AWMI is a purer measure of auditory working memory.

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Nonverbal Index (106)

Subtest	Scaled Score				
Block Design			11		
Similarities					
Matrix Reasoning			13		
Digit Span					
Coding			10		
Vocabulary					
Figure Weights		10			
Visual Puzzles			11		
Picture Span			10		
Symbol Search					
Letter–Number Seq.					
Arithmetic					
Sum of Scaled Scores			65		
	Quan. Reason.	Auditory Work. Mem.	Nonverbal	General Ability	Cognitive Proficiency

- Useful when examinee has obvious verbal difficulties
  - ELL
  - RELD, ELD
  - ASD with Language Impairment
- The processing speed component can affect results just like FSIQ.
- More emphasis on reasoning using visual-spatial processes than FSIQ.

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General Ability Index (109)

Subtest	Scaled Score				
Block Design				11	
Similarities				12	
Matrix Reasoning				13	
Digit Span					
Coding					
Vocabulary				11	
Figure Weights				10	
Visual Puzzles					
Picture Span					
Symbol Search					
Letter–Number Seq.					
Arithmetic					
Sum of Scaled Scores				57	
	Quan. Reason.	Auditory Work. Mem.	Nonverbal	General Ability	Cognitive Proficiency

The GAI provides an estimate of general intellectual ability that is less reliant on working memory and processing speed than the FSIQ.

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Cognitive Proficiency Index (98)

Subtest	Scaled Score				
Block Design					
Similarities					
Matrix Reasoning					
Digit Span				6	
Coding				10	
Vocabulary					
Figure Weights					
Visual Puzzles					
Picture Span				10	
Symbol Search				13	
Letter–Number Seq.					
Arithmetic					
Sum of Scaled Scores				39	
	Quan. Reason.	Auditory Work. Mem.	Nonverbal	General Ability	Cognitive Proficiency

The CPI provides an estimate of the efficiency with which information is processed in the service of learning, problem solving, and higher-order reasoning.

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Ancillary Analysis

Index Level Pairwise Difference Comparisons

Index Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
Ancillary						
GAI - FSIQ	109	103	6	3.04	Y	9.6%
GAI - CPI	109	98	11	9.75	Y	22.5%
WMI - AWMI	88	81	7	6.91	Y	21.3%

Statistical significance (critical values) at the .05 level.
Base rates are reported by overall sample.

Subtest Level Pairwise Difference Comparisons

Subtest Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
Ancillary						
FW - AR	10	6	4	2.33	Y	11.0%
DS - LN	6	7	-1	2.81	N	42.9%

Statistical significance (critical values) at the .05 level.
Base rates are reported by overall sample.

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Complementary Indexes

Index Score Summary

Composite		Sum of Scaled/ Standard Scores	Index Score	Percentile Rank	95% Confidence Interval	Qualitative Description	SEM
Complementary							
Naming Speed	NSI	160	78	7	72-89	Very Low	4.50
Symbol Translation	STI	319	106	66	99-112	Average	3.67
Storage & Retrieval	SRI	184	89	23	83-96	Low Average	3.35

Ancillary index scores are reported using scaled scores and complementary index scores are reported using standard scores.

Subtest Score Summary

Scale	Subtest/Process Score		Total Raw Score	Standard Score	Percentile Rank	Age Equivalent	SEM
Naming Speed	Naming Speed Literacy	NSL	54	79	8	<9:2	5.61
	Naming Speed Quantity	NSQ	29	81	10	9:2	6.00
Symbol Translation	Immediate Symbol Translation	IST	81	105	63	14:6	5.41
	Delayed Symbol Translation	DST	64	107	68	>16:10	4.97
	Recognition Symbol Translation	RST	31	107	68	>16:10	7.04

Naming Speed Index

- The NSI provides a broad estimate of automaticity of basic naming ability drawn from a variety of tasks.

- These tasks were developed to enhance the assessment of children with suspected learning disabilities and are not designed as measures of intellectual ability.

Symbol Translation Index

- The STI provides a broad estimate of visual-verbal associative memory drawn from a variety of conditions.

- These measures were developed to enhance the assessment of children suspected of having learning problems or declarative memory impairment.

- These subtests were not developed as measures of intellectual ability.

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Storage and Retrieval Index

- The SRI provides a broad estimate of long-term storage and retrieval accuracy and fluency.

- It is derived from a variety of tasks designed to assess cognitive processes that are associated with reading, mathematics, and writing skills, and that have shown sensitivity to specific learning disorders and other clinical conditions.

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Complementary Analysis

Index Level Pairwise Difference Comparisons

Index Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
Complementary						
NSI - STI	78	106	-28	11.38	Y	5.7%

Statistical significance (critical values) at the .05 level.
Base rates are reported by overall sample.

Subtest Level Pairwise Difference Comparisons

Subtest Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
Complementary						
NSL - NSQ	79	81	-2	16.10	N	46.6%
IST - DST	105	107	-2	14.40	N	40.9%
IST - RST	105	107	-2	17.40	N	43.6%
DST - RST	107	107	0	16.89	N	

Statistical significance (critical values) at the .05 level.
Base rates are reported by overall sample.

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Process Analysis

Process Level Pairwise Difference Comparisons (Scaled Scores)

Process Score Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
BD - BDn	11	10	1	3.40	N	17.1%
BD - BDp	11	14	-3	3.11	N	3.6%
DSf - DSb	7	6	1	3.69	N	41.3%
DSf - DSs	7	7	0	3.63	N	
DSb - DSs	6	7	-1	3.66	N	42.9%
LN - DSs	7	7	0	3.38	N	
CAr - CAs	10	10	0	3.59	N	

Statistical significance (critical values) at the .05 level.

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Deriving Contrast Scores

DSb Scaled Score	DSf Scaled Score								DSb Scaled Score
	1–3	4–5	6–7	8–9	10–11	12–13	14–15	16–19	
1	4	2	1	1	1	1	1	1	1
2	6	4	2	2	2	1	1	1	2
3	7	5	3	3	3	2	2	1	3
4	8	6	5	4	4	3	3	2	4
5	9	8	6	5	5	4	4	3	5
6	10	9	7	6	5	5	5	4	6
7	11	9	8	7	6	6	6	5	7
8	12	10	9	8	7	7	7	6	8
9	13	11	11	9	8	8	8	6	9
10	14	12	12	11	10	9	9	7	10
11	15	14	13	12	11	10	9	8	11
12	16	15	14	13	12	11	10	9	12
13	17	16	15	14	13	12	11	10	13
14	18	17	16	15	14	13	12	11	14
15	19	18	17	16	15	14	13	12	15
16	19	19	18	18	16	16	14	13	16
17	19	19	19	19	18	17	16	14	17
18	19	19	19	19	19	19	17	16	18
19	19	19	19	19	19	19	19	18	19

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Interpreting Contrast Scores

DSf vs. DSb Interpretive Summary

DSfvDSb	DSf	Interpretation Hypotheses
Low	Low	global attention difficulties, difficulties with mental manipulation
	Average	average attention, difficulties with mental manipulation, difficulty with effortful processing
	High	good span, difficulties with mental manipulation
Average	All	mental manipulation ability is as expected, given attention and basic span ability
High	Low	global attention difficulties, good mental manipulation of limited information
	Average	average attention, good mental manipulation, improved attention or strategy on the Backward task
	High	good span, good mental manipulation

See Appendix C in the WISC-V Technical and Interpretive Manual.

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Process Analysis

Total Raw Score to Base Rate Conversion

Process Score		Raw Score	Base Rate
Longest Digit Span Forward	LDSf	5	88.1%
Longest Digit Span Backward	LDSb	3	91.5%
Longest Digit Span Sequence	LDSs	4	84.5%
Longest Picture Span Stimulus	LPSs	-	-
Longest Picture Span Response	LPSr	-	-
Longest Letter-Number Sequence	LLNs	3	95.1%
Block Design Dimension Errors	BDde	0	>25%
Block Design Rotation Errors	BDre	0	<=15%
Coding Rotation Errors	CDre	-	-
Symbol Search Set Errors	SSse	-	-
Symbol Search Rotation Errors	SSre	-	-
Naming Speed Literacy Errors	NSLe	0	>25%
Naming Speed Quantity Errors	NSQe	2	<=2%

Base rates are reported by overall sample for the span and sequence scores and by age group for the error scores.

Academic Achievement

Based on his WISC-V profile, what are your hypotheses about Twelve's academic achievement?

WISC-V
WECHSLER INTELLIGENCE SCALE FOR CHILDREN® FIFTH EDITION

Cognitive Processes Contributing to Academic Skills

Reading-Related Processes

Contributing Processes

- Phonological Processing
- Rapid Naming
- Auditory Working Memory
- Language Comprehension
- Executive Functions
- Visuospatial Abilities

Cognitive Processes and Reading

- Verbal comprehension and working memory were the best WISC–III/WISC–IV predictors of reading ability.

- Children diagnosed with SLD-R show reduced verbal working memory (Kibby & Cohen, 2008) and processing speed deficits (Shanahan et al., 2006).

Cognitive Processes and Reading

- Rapid automatic naming measures, similar to Naming Speed Literacy, significantly predict reading ability in both younger and older children with reading disorder (Park & Lombardino, 2013).

- Children with reading disorders perform poorly on verbal learning measures (Kibby & Cohen, 2008) and on paired associate learning tasks that involve pairing a visual input (i.e., a symbol) with a verbal response, that is, a word or nonword (Litt & Nation, 2014; Messbauer & de Jong, 2003).

Special Group Study Results: Specific Learning Disorder-Reading N=30

Score	Clinical Mean	Control Mean	Mean Diff	P value	Std. Diff
VCI	89.1	100.7	11.63	<.01	.98
VSI	93.3	101.6	8.27	<.01	.62
FRI	92.5	101.9	9.40	<.01	.77
WMI	87.8	104.1	16.23	<.01	1.52
PSI	93.0	100.3	7.37	.02	.50
FSIQ	88.9	102.0	13.07	<.01	1.06
QRI	92.2	102.7	10.57	<.01	.80
AWMI	90.1	101.2	11.07	<.01	1.14
NVI	89.6	102.6	13.03	<.01	1.04
GAI	90.0	101.6	11.63	<.01	.96
CPI	88.6	102.7	14.17	<.01	1.09
NSI	88.4	101.6	13.14	<.01	.95
STI	91.8	101.5	9.63	<.01	.80
SRI	87.4	101.9	14.55	<.01	1.23

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Math-Related Processes

Contributing Processes

- Attention
- Visual-Spatial Processing
- Working Memory
- Language Comprehension
- Executive Functions

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Cognitive Processes and Math

- Difficulties in verbal comprehension, working memory, and processing speed (Willicutt et al., 2013).

- General cognitive functioning, processing speed, and components of working memory are longitudinal predictors of math achievement (Geary, 2011).

- Difficulties with working memory (Geary, 2010), attention (Raghubar et al., 2009), and semantic-retrieval and visuospatial skills (Cirino, Morris, & Morris, 2007) are related to mathematics difficulties.

Cognitive Processes and Math

- Early number skills and conceptual reasoning skills predict math achievement (Fuchs, Geary, Compton, Fuchs, Hamlett, & Bryant, 2010).

- Language, nonverbal reasoning, and attention are significantly related to performance on math word problems (Fuchs, Geary, Compton, Fuchs, Hamlett, Seethaler, et al., 2010; Tolar et al., 2012).

Special Group Study Results: Specific Learning Disorder-Math N=28

Score	Clinical Mean	Control Mean	Mean Diff	P value	Std. Diff
VCI	90.3	99.5	9.19	<.01	.61
VSI	85.4	100.0	14.61	<.01	1.04
FRI	82.2	96.7	14.46	<.01	.91
WMI	88.7	97.7	9.00	.07	.52
PSI	90.2	97.7	7.46	.03	.50
FSIQ	83.6	98.4	14.85	<.01	1.04
QRI	79.9	96.2	16.29	<.01	1.09
AWMI	88.3	99.1	10.78	.02	.69
NVI	81.5	97.6	16.11	<.01	1.09
GAI	84.2	98.6	14.44	<.01	1.00
CPI	87.3	97.0	9.71	.02	.63
NSI	92.6	96.4	3.79	.36	.23
STI	90.1	100.2	10.07	.02	.63
SRI	89.7	98.0	8.25	.03	.55

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WIAT-III Scores

Composite/Subtest	Standard Score	Percentile Rank
Basic Reading	*87*	*19*
• Word Reading	90	25
• Pseudoword Decoding	84	14
Reading Comprehension and Fluency	*87*	*19*
	93	32
• Reading Comprehension	88	21
• Oral Reading Fluency		
Mathematics	*110*	*75*
• Math Problem Solving	110	75
• Numerical Operations	108	70
Written Expression	*82*	*12*
• Spelling	78	7
• Sentence Composition	88	21
• Essay Composition	90	25

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Integration of Data

Relative Strengths

- Verbal Reasoning
- Visual-Spatial Reasoning
- Abstract Thinking
- Speed of Processing
- Math

Relative Weaknesses

- Auditory Working Memory
- Phonological Processing
- Reading Decoding
- Spelling
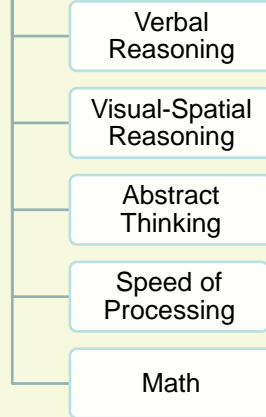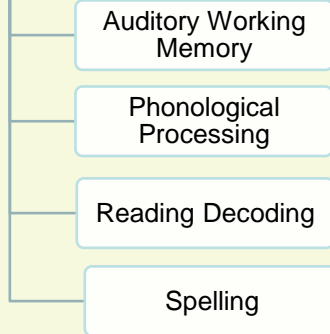
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Eligibility

Is Twelve eligible for direct specialized instruction?

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Ability–Achievement

ABILITY-ACHIEVEMENT DISCREPANCY ANALYSIS

Ability Score Type: WISC-V GAI   Ability Score: 109

Simple Difference Method

	GAI Score	WIAT-III Score	Difference	Critical Value .05	Significant Difference Y/N	Base Rate	Standard Deviation Discrepancy ≥ 1.5 SD
WIAT-III Composite							
Total Reading	109	84	25	8.00	Y	<=5%	Y
Basic Reading	109	86	23	7.00	Y	<=10%	Y
Reading Comprehension and Fluency	109	86	23	10.00	Y	<=5%	Y
Written Expression	109	83	26	9.00	Y	<=5%	Y
Mathematics	109	110	-1	9.00	N	N/A	N/A

Cognitive Hypothesis Testing

PATTERN OF STRENGTHS AND WEAKNESSES ANALYSIS

Area of Achievement Weakness	WIAT-III	Spelling: 78
Area of Processing Weakness	WISC-V	NSI: 78
Area of Processing Strength	WISC-V	VSI: 105

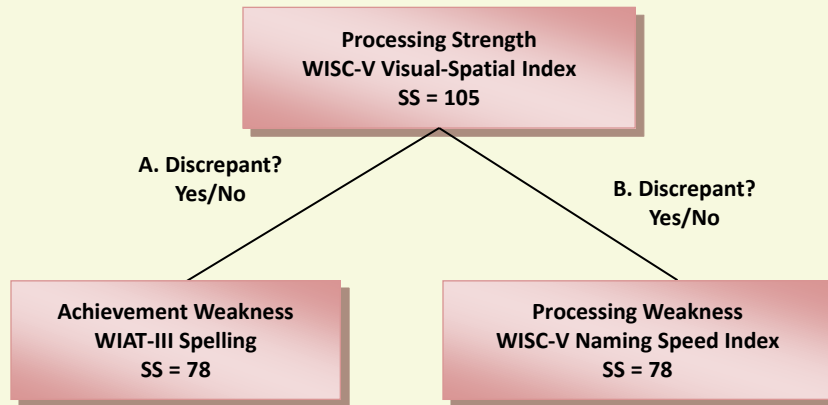| Comparison	Relative Strength Score	Relative Weakness Score	Difference	Critical Value .05	Significant Difference Y/N	Supports SLD hypothesis? Yes/No
A Processing Strength/ Achievement Weakness	105	78	27	11.00	Y	Yes
B Processing Strength/ Processing Weakness	105	78	27	12.00	Y	Yes

The PSW model is intended to help practitioners generate hypotheses regarding clinical diagnoses. The analysis should always be used within a comprehensive evaluation that incorporates multiple sources of information.

Cognitive Hypothesis Testing

Processing Strength
WISC-V Visual-Spatial Index
SS = 105

A. Discrepant?
Yes/No

B. Discrepant?
Yes/No

Achievement Weakness
WIAT-III Spelling
SS = 78

Processing Weakness
WISC-V Naming Speed Index
SS = 78

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Another Set of Data

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Look at the Data

- What questions do you have?

- Should you compute the ancillary indexes? Why or Why Not?

- Look at the pattern of scores. Consider abilities shared by several subtests and abilities unique to a subtest.

- What follow-up testing would you recommend?

Male, Grade 5, Age 10:5

WISC-V Index/Subtest	Composite Score/ Scaled Score	WISC-V Index/Subtest	Composite Score/ Scaled Score
Verbal Comprehension	*76*	*Working Memory*	*88*
Similarities	6	Digit Span	6
Vocabulary	5	Picture Span	10
(Information)	(7)	(Letter-Number Sequencing)	(5)
(Comprehension)	(6)	*Processing Speed*	*86*
Visual Spatial	*86*	Coding	5
Block Design	5	Symbol Search	10
Visual Puzzles	10	(Cancellation)	(9)
Fluid Reasoning	*103*		
Matrix Reasoning	11		
Figure Weights	10		
(Picture Concepts)	9		
(Arithmetic)	(13)		
Full Scale IQ 77			

What Are Your Hypotheses Now?

Verbal Domain Subtest	Scaled Score
Similarities	6
Similarities Multiple Choice	12
Comprehension	6
Comprehension Multiple Choice	15
Vocabulary	5
Vocabulary Multiple Choice	10
Picture Vocabulary Multiple Choice	10
Information	7
Information Multiple Choice	7

(WISC-V Integrated, 2015)

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Summary

- Generate hypotheses based on referral concern.

- Identify patterns in the WISC-V data.

- Confirm or refute hypotheses.

- Generate follow-up questions.

- Determine what needs to be done to answer questions.

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