## WISC-V Interpretive Considerations for Sample Report (10/20/2020)

Interpretive considerations provide additional information to assist you, the examiner, in interpreting Sample's performance. *This section should not be provided to the parent or recipient of the report.* 

Please review these interpretive considerations before reading the report, as they may suggest that you make changes to the report settings in Q-global. If you make changes to the report settings, you can re-run the report without being charged.

This file contains two full reports: first, the interpretive report, and second, the parent report. Be sure to separate these reports before providing them to the appropriate recipients.

### **Recommendation Considerations**

Items listed in the 'Recommendations' section at the end of the report are meant to be an aid to you as a clinician, not a substitute for individualized recommendations that should be provided by a professional who is familiar with the examinee. Please read through the automatically generated recommendations carefully and edit them according to the examinee's individual strengths and needs.

The recommendation section entitled 'Recommendations for Verbal Comprehension Skills' was included in the report because the examinee's VCI was a clear area of strength relative to others her age.

The recommendation section entitled 'Recommendations for Fluid Reasoning Skills' was included in the report because the examinee's FRI was a clear area of strength relative to others her age.

The recommendation section entitled 'Recommendations for Processing Speed' was included in the report because the examinee's PSI was a clear area of strength relative to others her age and a personal strength relative to her overall cognitive ability.

### **End of Interpretive Considerations**

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[ 1.3 / RE1 / QG1 ]



## WISC<sup>®</sup>-V Wechsler Intelligence Scale for Children<sup>®</sup>-Fifth Edition Interpretive Report

Examinee Name	Sample Report	Date of Report	10/20/2020	
Examinee ID		Grade	1	
Date of Birth	01/10/2012	Primary Language	English	
Gender	Female	Handedness	Right	
Race/Ethnicity	Black/African-American	Examiner Name	Sample Examiner	
Date of Testing	10/20/2020	Age at Testing	8 years 9 months	Retest? No

Comments:



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[ 1.3 / RE1 / QG1 ]

ALWAYS LEARNING



## **ABOUT WISC-V SCORES**

Sample was administered 16 subtests from the Wechsler Intelligence Scale for Children-Fifth Edition (WISC-V). The WISC-V is an individually administered, comprehensive clinical instrument for assessing the intelligence of children ages 6:0-16:11. The primary and secondary subtests are on a scaled score metric with a mean of 10 and a standard deviation (*SD*) of 3. These subtest scores range from 1 to 19, with scores between 8 and 12 typically considered average. The primary subtest scores contribute to the primary index scores, which represent intellectual functioning in five cognitive areas: Verbal Comprehension Index (VCI), Visual Spatial Index (VSI), Fluid Reasoning Index (FRI), Working Memory Index (WMI), and the Processing Speed Index (PSI). This assessment also produces a Full Scale IQ (FSIQ) composite score that represents general intellectual ability. The primary index scores and the FSIQ are on a standard score metric with a mean of 100 and an *SD* of 15. The primary index scores and the FSIQ are on a standard score metric with a mean of 100 and an *SD* of 15. The primary index scores and the FSIQ, scores ranging from 90 to 109 are typically considered average.

Ancillary index scores are also provided. The ancillary index scores represent cognitive abilities using different primary and secondary subtest groupings than do the primary index scores. The ancillary index scores are also on a standard score metric with a mean of 100 and an *SD* of 15. The Verbal (Expanded Crystallized) Index (VECI), Expanded Fluid Index (EFI), Quantitative Reasoning Index (QRI), and Auditory Working Memory Index (AWMI) scores have a range of 45-155. The remaining three ancillary index scores have a range of 40-160: Nonverbal Index (NVI), General Ability Index (GAI), and the Cognitive Proficiency Index (CPI). Scores ranging from 90 to 109 are typically considered average. Further, the WISC-V provides complementary index scores that measure additional cognitive processes related to academic achievement and learning-related issues. The complementary index scores include the Naming Speed Index (NSI), Symbol Translation Index (STI), and the Storage and Retrieval Index (SRI). Both the complementary subtests and index scores are on a standard score metric with a mean of 100 and an *SD* of 15, with a range of 45-155. Scores ranging from 90 to 109 are typically considered average.

A percentile rank (PR) is provided for each reported composite and subtest score to show Sample's standing relative to other same-age children in the WISC-V normative sample. If the percentile rank for her Verbal Comprehension Index score is 92, for example, it means that she performed as well as or better than approximately 92% of children her age. This appears in the report as PR = 92.

The scores obtained on the WISC-V reflect Sample's true abilities combined with some degree of measurement error. Her true score is more accurately represented by a confidence interval (CI), which is a range of scores within which her true score is likely to fall. Composite scores are reported with 95% confidence intervals to ensure greater accuracy when interpreting test scores. For each composite score reported for Sample, there is a 95% certainty that her true score falls within the listed range.

It is common for children to exhibit score differences across areas of performance. Comparing the score differences in relation to three separate benchmarks may yield a richer portrait of a child's strengths and weaknesses. The three types of score difference comparisons presented in this report use interpretive statements that describe what can be generically understood as strengths or weaknesses. Because many score comparisons are possible within the WISC-V, attention to exactly what the scores are compared to is necessary to understand Sample's performance. The first type of comparison may be used to detect a

normative strength or weakness, which occurs if a composite or subtest score differs from what is typical in the normative sample. For the purposes of this report, scores that fall above or below the Average qualitative descriptor range suggest either a normative strength or a normative weakness. The report will include phrases such as 'very high for her age' or 'lower than most children her age' when this occurs. The second type of comparison may be used to examine score differences from an intrapersonal perspective. For this comparison, a score is described as a strength or weakness if a primary index or subtest score differs from an indicator of overall performance (i.e., the mean of the primary index scores, the mean of the FSIQ subtest scores). Statistically significant differences are described with phrases such as 'personal strength' or 'personal weakness' or as one of the child's 'strongest or weakest areas of performance'. The third type of comparison may be used to examine score of the same type (e.g., scaled, standard). When a scaled or standard score is compared with another scaled or standard score, the phrases 'relative strength' and 'relative weakness' are used to describe statistically significant differences when comparing performance on one score in relation to another.

If the difference between two scores is statistically significant, it is listed in the report with a base rate to aid in interpretation. The statistical significance and base rate results provide different information. A statistically significant difference suggests that the result is reliable and would likely be observed again if the assessment were repeated (i.e., the difference is not due to measurement error). The base rate (BR) provides a basis for estimating how common or rare a particular score difference was among other children of similar ability in the WISC-V normative sample. For example, a base rate of <=10% is reported if the score for the the Visual Spatial Index is 11.80 points lower than the mean primary index score (MIS). This appears on the report as VSI < MIS, BR = <=10%. This means that <=10% of children of similar ability level in the WISC-V normative sample obtained a difference of this magnitude or greater between those two scores. In many cases, a statistically significant difference may be accompanied by a base rate of greater than 15\%, which indicates that the difference, while reliable and not due to measurement error, is relatively common among children. This result does not necessarily reduce the importance of the difference, but does indicate a difference that large or larger is relatively common.

It is possible for intellectual abilities to change over the course of childhood. Additionally, a child's scores on the WISC-V can be influenced by motivation, attention, interests, and opportunities for learning. All scores may be slightly higher or lower if Sample were tested again on a different day. It is therefore important to view these test scores as a snapshot of Sample's current level of intellectual functioning. When these scores are used as part of a comprehensive evaluation, they contribute to an understanding of her current strengths and any needs that can be addressed.

## **INTERPRETATION OF WISC-V RESULTS**

### FSIQ

The FSIQ is derived from seven subtests and summarizes ability across a diverse set of cognitive functions. This score is typically considered the most representative indicator of general intellectual functioning. Subtests are drawn from five areas of cognitive ability: verbal comprehension, visual spatial, fluid reasoning, working memory, and processing speed. Sample's FSIQ score is in the

Extremely High range when compared to other children her age (FSIQ = 132, PR = 98, CI = 125-136). Although the WISC-V measures various aspects of ability, a child's scores on this test can also be influenced by many factors that are not captured in this report. When interpreting this report, consider additional sources of information that may not be reflected in the scores on this assessment. While the FSIQ provides a broad representation of cognitive ability, describing Sample's domain-specific performance allows for a more thorough understanding of her functioning in distinct areas. Some children perform at approximately the same level in all of these areas, but many others display areas of cognitive strengths and weaknesses.

#### **Verbal Comprehension**

The Verbal Comprehension Index (VCI) measured Sample's ability to access and apply acquired word knowledge. Specifically, this score reflects her ability to verbalize meaningful concepts, think about verbal information, and express herself using words. Sample's performance on the VCI was diverse, but overall was strong for her age (VCI = 121, PR = 92, Very High range, CI = 112-127). High scores in this area indicate a well-developed verbal reasoning system with strong word knowledge acquisition, effective information retrieval, good ability to reason and solve verbal problems, and effective communication of knowledge. Sample's Verbal Comprehension performance, while very high for her age, was weaker than scores obtained on tasks requiring her to work quickly and efficiently (VCI < PSI, BR = 4.0%).

With regard to individual subtests within the VCI, Similarities (SI) required Sample to describe a similarity between two words that represent a common object or concept and Vocabulary (VC) required her to name depicted objects and/or define words that were read aloud. She exhibited uneven performance across these two subtests. The discrepancy between Sample's scores on the Similarities and Vocabulary subtests is clinically meaningful. These subtests differ in the specific abilities involved, and consideration of the difference between the two scores informs interpretation of the VCI. She excelled when defining words aloud (VC = 16); however, she showed greater difficulty identifying how two words relate to a common concept (SI = 12; SI < VC, BR = 6.1%). This pattern of performance suggests that she has a very strong ability to learn new words and define them aloud, but appears to have greater difficulty with verbal tasks that require her to use abstract reasoning. She may benefit from practice categorizing objects and/or concepts, solving analogies, and applying critical thinking skills. This pattern of performance also suggests more developed lexical knowledge, relative to abstract reasoning and cognitive flexibility. In addition to the two subtests that contribute to the VCI, two other verbal comprehension subtests were administered to gain a more detailed understanding of Sample's verbal comprehension abilities. For Information (IN), she answered questions about a broad range of general-knowledge topics. Her performance was average for her age, suggesting age-appropriate ability to acquire, remember, and retrieve knowledge about the world around her (IN = 10). On Comprehension (CO), a subtest requiring her to answer questions based on her understanding of general principles and social situations, Sample's performance was average for her age. This suggests age-appropriate understanding of practical knowledge and ability to verbalize meaningful concepts (CO = 10).

#### **Visual Spatial**

The Visual Spatial Index (VSI) measured Sample's ability to evaluate visual details and understand visual spatial relationships in order to construct geometric designs from a model. This skill requires visual spatial reasoning, integration and synthesis of part-whole relationships, attentiveness to visual

detail, and visual-motor integration. During this evaluation, visual spatial processing was one of Sample's weaknesses, with performance that was somewhat advanced for her age (VSI = 111, PR = 77, High Average range, CI = 102-118; VSI < MIS, BR = <=10%). High scores in this area indicate a well-developed capacity to apply spatial reasoning and analyze visual details. During this evaluation, Sample quickly and accurately assembled block designs and puzzles in her mind, but her performance in this area was weak in relation to her performance on logical reasoning tasks (VSI < FRI, BR = 9.0%). Her visual spatial scores were also a relative weakness when compared to her performance on tests of processing speed (VSI < PSI, BR = 2.0%).

The VSI is derived from two subtests. During Block Design (BD), Sample viewed a model and/or picture and used two-colored blocks to re-create the design. Visual Puzzles (VP) required her to view a completed puzzle and select three response options that together would reconstruct the puzzle. Sample showed inconsistent performance on these tasks. The discrepancy between Sample's scores on the Block Design and Visual Puzzles subtests is clinically meaningful. These subtests differ in the specific abilities involved, and consideration of the difference between the two scores informs interpretation of the VSI. While she showed very high performance when assembling puzzle pieces in her mind (VP = 15), she showed greater difficulty using her hands to put together multicolored blocks to match pictures (BD = 9; BD < MSS-P,  $BR = \langle =2\%$ ; BD < VP, BR = 2.0%). This pattern of scores may indicate that her visuomotor skills may be a weakness relative to her overall visual-perceptual and spatial reasoning ability. In addition to the BD score, the Block Design No Time Bonus score (BDn) was calculated. BDn is based on the child's performance on Block Design (BD) without including bonus points for rapid completion of items. The score's reduced emphasis on speed may be useful when a child's limitations, problem-solving strategies, or personality characteristics are believed to affect performance on timed tasks, as this score does not award extra points for working quickly. Sample's BD score is significantly higher than her BDn score (BDn = 5), suggesting that speed did not attenuate Block Design performance (BR = 0.0%). The Block Design Partial score (BDp) was also calculated, which awards points for the number of blocks correctly placed when the time runs out, even if the child has not finished the entire design. This score reduces the emphasis on speed and attention to detail, providing an estimate of performance in children who are impulsive or who misperceive the design. Sample's BDp score (BDp = 14) is significantly higher than her BD score, suggesting that her performance on visual spatial tasks may improve when the emphasis on speed, fine motor dexterity, or attention to detail is reduced (BR = 0.3%). Mental rotation ability is of considerable interest because of its association with intelligence and working memory. Relative to her same-age peers, the number of rotation errors Sample made on Block Design is more than expected. Further, she also committed an unusual number of rotation errors on the two Processing Speed subtests: Coding and Symbol Search. A consistent pattern of rotation errors across all three of these subtests may indicate a broader issue regarding her mental rotation processes. It might help to review her item-level performance on the Visual Puzzles subtest. Problems with mental rotation are likely if she had more difficulty with VP items that involve rotated response options. On Block Design, Sample made more dimension errors than expected when compared to her same-age peers. Dimension errors occur when the maximum dimension for a square- or diamond-shaped design is exceeded at any time during construction of the block design. Dimension errors that occur with this frequency suggest either slowed decision speed regarding block placement or spatial deficits when looking for correct angles within designs.

#### **Fluid Reasoning**

The Fluid Reasoning Index (FRI) measured Sample's ability to detect the underlying conceptual relationship among visual objects and use reasoning to identify and apply rules. Identification and application of conceptual relationships in the FRI requires inductive and quantitative reasoning, broad visual intelligence, simultaneous processing, and abstract thinking. Sample's performance on the FRI was diverse, but overall was extremely strong for her age (FRI = 131, PR = 98, Extremely High range, CI = 122-136). High FRI scores indicate a well-developed ability to abstract conceptual information from visual details and to effectively apply that knowledge. Her performance on fluid reasoning tasks was particularly strong when compared to her performance on tasks that involved visual spatial skills (FRI > VSI, BR = 9.0%). While subtests in both the FRI and VSI include visual stimuli, fluid reasoning subtests can be solved using logic, whereas visual spatial subtests require primarily visual spatial processing. Sample's relatively stronger fluid reasoning performance suggests that she makes sense of visual information more easily when it follows a logical pattern. She is better able to understand the relationship of visual information to abstract concepts than she is to use visual and spatial information for design construction. Moreover, her overall performance on the FRI was stronger than performance on tasks that measured working memory (FRI > WMI, BR = 13.5%). It appears that she is well able to solve complex problems despite having difficulty on other tasks.

The FRI is derived from two subtests: Matrix Reasoning (MR) and Figure Weights (FW). Matrix Reasoning required Sample to view an incomplete matrix or series and select the response option that completed the matrix or series. On Figure Weights, she viewed a scale with a missing weight(s) and identified the response option that would keep the scale balanced. Sample demonstrated diverse performance on these two tasks. The discrepancy between Sample's scores on the Matrix Reasoning and Figure Weights subtests is clinically meaningful. These subtests differ in the specific abilities involved, and consideration of the difference between the two scores informs interpretation of the FRI. Identifying the missing piece in patterns on Matrix Reasoning was a strength for Sample (MR = 19; MR > MSS-P,  $BR = \langle =2\% \rangle$ ; however, she showed greater difficulty balancing scales under a time constraint during Figure Weights (FW = 12; MR > FW, BR = 2.0%). This pattern of scores implies a relative strength in inductive reasoning compared to quantitative reasoning. It is possible that her understanding of part-whole relationships may currently be better developed than her mathematical reasoning skills. When Sample solves novel problems, she may have difficulty applying quantitative concepts. In addition to the two subtests that contribute to the FRI, two additional fluid reasoning subtests were administered to gain a more detailed understanding of Sample's fluid reasoning skills. For Picture Concepts (PC), she was asked to view two or three rows of pictures and select one picture from each row to form a group with a common characteristic. Her performance was extremely high for her age, suggesting exceptional categorical reasoning skills (PC = 17). On Arithmetic (AR), a timed subtest requiring her to mentally solve math problems, Sample's performance was somewhat advanced for her age. This suggests above average numerical reasoning and applied computational ability (AR = 12).

#### **Working Memory**

The Working Memory Index (WMI) measured Sample's ability to register, maintain, and manipulate visual and auditory information in conscious awareness, which requires attention and concentration, as well as visual and auditory discrimination. Working memory was one of Sample's weakest areas of performance, with scores that were somewhat advanced for her age (WMI = 110, PR = 75, High Average range, CI = 102-117; WMI < MIS, BR = <=15%). High WMI scores reflect a well-developed

ability to identify visual and auditory information, maintain it in temporary storage, and resequence it for use in problem solving. Sample easily recalled and sequenced series of pictures and lists of numbers. Her performance on these tasks was a relative weakness when compared to her performance on logical reasoning and processing speed tasks (WMI < FRI, BR = 13.5%; WMI < PSI, BR = 1.5%).

Within the WMI, Picture Span (PS) required Sample to memorize one or more pictures presented on a stimulus page and then identify the correct pictures (in sequential order, if possible) from options on a response page. On Digit Span (DS), she listened to sequences of numbers read aloud and recalled them in the same order, reverse order, and ascending order. Sample showed uneven performance on these tasks. The discrepancy between Sample's scores on the Digit Span and Picture Span subtests is clinically meaningful. These subtests differ in the specific abilities involved, and consideration of the difference between the two scores informs interpretation of the WMI. When asked to listen to strings of numbers and recall them in a specified sequence, her performance was strong for her age (DS = 15). However, she showed greater difficulty when asked to remember series of rapidly-presented pictures (PS = 8; PS <MSS-P, BR =  $\langle =2\%$ ; PS  $\langle DS, BR = 2.2\%$ ). This pattern of strengths and weaknesses suggests that Sample best employs working memory when information is presented in an auditory versus visual format. Further, she performs better when a free recall paradigm is used, rather than a recognition paradigm. She may attend to and process information more readily when it is presented in an auditory rather than a visual format. It is also possible that she experienced a lapse in attention or motivation during administration, because material may not be repeated or re-exposed for these tasks. The Digit Span Forward (DSf) scaled process score is derived from the total raw score for the Digit Span Forward task. On this task, Sample was required to repeat numbers verbatim, with the number of digits in each sequence increasing as the task progressed. This task required working memory when the number of digits exceeded her ability to repeat the digits without the aid of rehearsal. This task represents basic capacity in the phonological loop. Her performance on DSf was above average compared to other children her age (DSf = 13). On the Digit Span Forward task, Sample's Longest Digit Span Forward score was recorded (LDSf = 2). This raw score reflects the maximum span length recalled on DSf and offers unique information about performance on this task. Examine the consistency of recall across trials or items with the same number of digits, to determine if Sample exhibited variable performance. When performance is variable, this score may provide further insight regarding her performance. The Digit Span Backward (DSb) scaled process score is derived from the total raw score for the Digit Span Backward task. This task invoked working memory because Sample was required to repeat the digits in a reverse sequence than was originally presented, requiring her to mentally manipulate the information before responding. Her performance on DSb was above average compared to other children her age (DSb = 13). On the Digit Span Backward task, Sample's Longest Digit Span Backward score was recorded (LDSb = 2). The Digit Span Sequencing (DSs) scaled process score is derived from the total raw score for the Digit Span Sequencing task. This task required Sample to sequence digits according to value, invoking quantitative knowledge in addition to working memory. The increased demands for mental manipulation of information on the Digit Span Sequencing task places additional demands on working memory, as well as attention. Her performance on DSs was strong compared to other children her age (DSs = 15). On the Digit Span Sequencing task, Sample's Longest Digit Span Sequence score was recorded (LDSs = 2). The Longest Picture Span Stimulus (LPSs) and Longest Picture Span Response (LPSr) raw process scores may help to further evaluate performance on the Picture Span subtest. These scores reflect the number of stimulus and response pictures, respectively, that appear on the last item with a perfect score. Given the variation in the length of response choices across items (i.e., number of responses may decrease when the stimulus span increases), LPSr should be interpreted in

relation to LPSs. Sample's performance pattern on LPSs and LPSr are worth noting. Her Longest Picture Span Stimulus score was (LPSs = 8) and her Longest Picture Span Response score was (LPSr = 4). In addition to the two subtests that contribute to the WMI, Letter-Number Sequencing (LN) was administered to gain a more detailed understanding of Sample's working memory proficiency. On this subtest, she was read sequences of numbers and letters, and was then asked to recall the numbers in ascending order and then the letters in alphabetical order. Her performance was exceptional for her age, suggesting extremely high sequential processing, mental manipulation, and attention (LN = 19). Sample's Longest Letter-Number Sequence score was recorded (LLNs = 2).

#### **Processing Speed**

The Processing Speed Index (PSI) measured Sample's speed and accuracy of visual identification, decision making, and decision implementation. Performance on the PSI is related to visual scanning, visual discrimination, short-term visual memory, visuomotor coordination, and concentration. The PSI assessed her ability to rapidly identify, register, and implement decisions about visual stimuli. Her performance across subtests that contribute to the PSI was diverse, but overall was extremely strong for her age and emerged as a personal strength (PSI = 141, PR = 99.7, Extremely High range, CI = 127-145; PSI > MIS,  $BR = \langle =5\% \rangle$ . High PSI scores indicate a well-developed ability to rapidly identify visual information, to make quick and accurate decisions, and to rapidly implement those decisions. Additionally, her speed and accuracy when processing visual information were strengths compared to her performance on tasks that involved language-based and visual spatial reasoning (PSI > VCI, BR = 4.0%; PSI > VSI, BR = 2.0\%). This pattern of performance suggests that her ability to quickly evaluate visual information and make simple decisions is a strength relative to her complex problem solving ability. Processing speed is not limiting her performance on tasks involving reasoning. Moreover, her processing speed performance was stronger than performance on tasks requiring her to utilize working memory (PSI > WMI, BR = 1.5%). This pattern of performance suggests that Sample may be more proficient at rapid decision making with information registered in short-term memory than at manipulating that information. and have difficulty holding and manipulating information in her mind.

The PSI is derived from two timed subtests. Symbol Search required Sample to scan a group of symbols and indicate if the target symbol was present. On Coding, she used a key to copy symbols that corresponded with numbers. Sample demonstrated uneven performance across subtests within the PSI. The discrepancy between Sample's scores on the Coding and Symbol Search subtests is clinically meaningful. These subtests differ in the specific abilities involved, and consideration of the difference between the two scores informs interpretation of the PSI. Using a key to pair symbols with numbers was one of her strongest areas of performance (CD = 19; CD > MSS-P,  $BR = \langle =5\% \rangle$ ). However, she showed greater difficulty on Symbol Search (SS = 15; CD > SS, BR = 9.0%). Her performance suggests that paired associate learning and/or fine-motor speed are relative strengths when compared to visual scanning and discrimination. Relative to her same-age peers, the number of rotation errors Sample made on Coding and Symbol Search is more than expected. On Coding, when copying symbols using a key, she rotated some of her drawings at least 90 degrees. On Symbol Search, when looking for a match, she incorrectly marked the response choice that was a rotated variation of the target. A consistent pattern of rotation errors may indicate broader issues with mental rotation ability. Further observation and evaluation may provide more information regarding Sample's mental rotation processes. On Symbol Search, Sample made more set errors than expected when compared to her same-age peers. Specifically, she marked the incorrect response choice containing characteristics similar to that of the target. An unusual number of set errors may indicate impulsivity, lapses in attention, or visual perception issues. In addition to the subtests that contribute to the PSI, Sample was administered Cancellation (CA), another processing speed subtest, to gain a more detailed understanding of her processing speed ability. On this timed subtest, she scanned two arrangements of objects (one random, one structured) and marked target objects. Cancellation measures speed, scanning ability, and visual discrimination. Her performance was above average compared to other children her age (CA = 13). This pattern of performance suggests she currently processes visual information more easily when it is arranged in structured rows that are easy to navigate. She may become overwhelmed by a complex array of unstructured visual information.

## ANCILLARY INDEX SCORES

In addition to the index scores described above, Sample was administered subtests contributing to several ancillary index scores. Ancillary index scores do not replace the FSIQ and primary index scores, but are meant to provide additional information about Sample's cognitive profile.

### Verbal (Expanded Crystallized)

Sample was administered the four subtests comprising the Verbal (Expanded Crystallized) Index (VECI), an ancillary index score that provides a broad measure of the child's ability to access and apply acquired word knowledge and general knowledge. The application of this knowledge involves verbal concept formation and expression; abstract verbal reasoning; and long-term retrieval. The VECI is derived using the sum of scaled scores for all four subtests from the Verbal Comprehension domain (i.e., Similarities, Vocabulary, Information, and Comprehension). Overall, this index score was somewhat advanced for her age (VECI = 111, PR = 77, High Average range, CI = 104-117). High VECI scores indicate strong crystallized abilities, a well-developed verbal reasoning system and fund of acquired general factual and practical knowledge. High scores also imply strong word knowledge acquisition, effective information retrieval, good ability to reason and solve verbal problems, and effective communication of learned material.

### **Expanded Fluid**

Sample was administered the four subtests comprising the Expanded Fluid Index (EFI), an ancillary index score that provides a broad measure of the child's ability to detect underlying conceptual relationships, extract important information, and use reasoning to identify and apply rules. Identification and application of conceptual relationships in the EFI requires inductive and quantitative fluid reasoning, simultaneous and sequential processing, and abstract thinking. The EFI is derived using the sum of scaled scores for all four subtests from the Fluid Reasoning domain (i.e., Matrix Reasoning, Figure Weights, Picture Concepts, and Arithmetic). Overall, this index score was exceptional for her age (EFI = 133, PR = 99, Extremely High range, CI = 125-138). High EFI scores indicate strong fluid intelligence, and a well-developed ability to abstract conceptual information from visual and auditory details, extract relevant information, and effectively apply knowledge about semantic, visual, or quantitative relationships.

#### **Quantitative Reasoning**

Figure Weights and Arithmetic comprise the Quantitative Reasoning Index (QRI), which measures quantitative reasoning skills. Quantitative reasoning is closely related to general intelligence and can indicate a child's capacity to perform mental math operations and comprehend abstract relationships. Sample's overall index score was somewhat advanced for her age (QRI = 112, PR = 79, High Average range, CI = 105-118). High scores in this area suggest a well-developed capacity to perform mental math operations and to understand quantitative relationships, as well as above average general intelligence. Assessment of Sample's performance on the QRI may help to predict her reading and math achievement scores, creative potential, standardized test performance, and future academic success.

#### **Auditory Working Memory**

The Auditory Working Memory Index (AWMI) is derived from the sum of scaled scores for the Digit Span and Letter-Number Sequencing subtests. These subtests required Sample to listen to numbers and letters presented verbally, then recall or sequence them aloud. This index score measured her ability to register, maintain, and manipulate verbally-presented information. Her overall auditory working memory performance was extremely strong for her age (AWMI = 139, PR = 99.5, Extremely High range, CI = 129-144). High scores in this area indicate a well-developed ability to temporarily store, rehearse, and manipulate verbally-presented information using the phonological loop. Although the WMI is derived from subtests that employ both verbal and nonverbal domains, the AWMI is more verbally loaded. The WMI-AWMI comparison provides insight regarding the impact of visual versus auditory domain specificity on working memory functioning. Sample's performance suggests that presenting information verbally, rather than visually, may improve her working memory functioning (WMI < AWMI, BR = 0.5%). Sample exhibited inconsistent performance across the two subtests that contribute to the AWMI. On Letter-Number Sequencing items, Sample was read a string of numbers and letters. She was then asked to recall the numbers in ascending order and the letters in alphabetical order. She excelled on this task (LN = 19); however, she showed greater difficulty on Digit Span items, which required her to listen and recall a string of numbers in forward, backward, or ascending order (DS = 15). This pattern of performance suggests that on the Digit Span subtest, Sample may have experienced problems with concentration and/or motivation during administration or she might have had difficulty sequencing the longer strings of numbers. Alternately, her performance on Letter-Number Sequencing may have been higher due to previous exposure to a similar task, Digit Span Sequencing, which was presented during Digit Span. She was able to readily improve with practice when progressing across these two tasks. It is also possible that she may have been more engaged during the Letter-Number Sequencing subtest due to the dual-stimulus demands of the task. The Digit Span Sequencing (DSs) and Letter-Number Sequencing (LN) discrepancy comparison provides information regarding Sample's performance across a pair of working memory tasks with single-stimulus versus dual-stimulus demands. The DSs task required her to reorder a series of numbers in ascending order, whereas the LN subtest required her to simultaneously reorder a series of numbers and letters in alphabetical and ascending order, respectively (DSs = 15; LN = 19). Sample's performance across these two working memory tasks was inconsistent, indicating that she was confused by the requirement to repeat numbers on some trials of DSs or she had difficulty with reordering longer spans of numbers. Alternately, because DSs precedes LN in administration order, her results may also indicate that she easily learns to employ successful strategies while progressing across tasks or readily improves with experience and practice. Because repetition of trials is not permitted on the Digit Span and Letter-Number Sequencing subtests, a discrepancy in either direction might also suggest that she experienced a lapse in attention or motivation

during the task with the lower score.

#### Nonverbal

The Nonverbal Index (NVI) is derived from six subtests that do not require verbal responses. This index score can provide a measure of general intellectual functioning that minimizes expressive language demands for children with special circumstances or clinical needs. Subtests that contribute to the NVI are drawn from four of the five primary cognitive domains (i.e., Visual Spatial, Fluid Reasoning, Working Memory, and Processing Speed). Sample's performance on the NVI fell in the Very High range when compared to other children her age (NVI = 126, PR = 96, CI = 118-131). High scores in this area indicate well-developed general intellectual functioning for visually-presented information. Assessment of Sample's performance on the NVI may help to estimate her overall nonverbal cognitive ability.

### **General Ability**

Sample was administered the five subtests comprising the General Ability Index (GAI), an ancillary index score that provides an estimate of general intelligence that is less impacted by working memory and processing speed, relative to the FSIQ. The GAI consists of subtests from the verbal comprehension, visual spatial, and fluid reasoning domains. Overall, this index score was very advanced for her age (GAI = 124, PR = 95, Very High range, CI = 117-129). High GAI scores indicate well-developed abstract, conceptual, visual-perceptual and spatial reasoning, as well as verbal problem solving. The GAI does not replace the FSIQ as the best estimate of overall ability. It should be interpreted along with the FSIQ and all of the primary index scores. Sample's GAI score was significantly lower than her FSIQ score (GAI < FSIQ, BR = 1.4%). The significant difference between her GAI and FSIQ scores indicates that the effects of cognitive proficiency, as measured by working memory and processing speed, may have led to a higher overall FSIQ score. This estimate of her overall intellectual ability was improved by the inclusion of working memory and processing speed subtests. This result supports that her working memory and processing speed skills are areas of strength that bolster her overall intellectual ability.

#### **Cognitive Proficiency**

Sample was also administered subtests that contribute to the Cognitive Proficiency Index (CPI). These four subtests are drawn from the working memory and processing speed domains. Her index score suggests that she efficiently processes cognitive information in the service of learning, problem solving, and higher-order reasoning (CPI = 129, PR = 97, Very High range, CI = 120-134). High CPI scores indicate a high degree of cognitive efficiency for manipulating and rapidly processing information. The CPI is most informative when interpreted as part of a comprehensive evaluation, together with its counterpart, the GAI. The practitioner may consider evaluating the GAI-CPI pairwise comparison, as this may provide additional interpretive information regarding the possible impact of cognitive processing on her ability. Sample's GAI and CPI scores were relatively similar, suggesting that general ability is commensurate with cognitive proficiency.

## **COMPLEMENTARY INDEX SCORES**

#### **Storage and Retrieval**

The Storage and Retrieval Index (SRI) provides a broad estimate of Sample's long-term storage and retrieval accuracy and fluency. Her ability to store and accurately retrieve information from long-term memory impacts her reading, writing, and math performance. While her scores on the SRI were diverse, her overall performance was slightly below other children her age (SRI = 82, PR = 12, Low Average range, CI = 76-90). The SRI is based on the sum of scores for the Naming Speed Index (NSI) and the Symbol Translation Index (STI), each measuring unique aspects regarding the storage and retrieval of information from long-term memory. Low SRI scores can occur for many reasons, including difficulty encoding and/or retrieving information from long-term memory, difficulty acquiring new information, slow processing speed, visual and/or language processing deficits, and/or inattentiveness.

#### **Naming Speed**

The Naming Speed Index (NSI) is based on the Naming Speed Literacy (NSL) and Naming Speed Quantity (NSQ) subtest scores. The NSI provides a broad estimate of the automaticity of basic naming ability. Interpretation of the NSI enhances the assessment of children with suspected learning disabilities, but is not intended to assess intellectual ability. The NSI measured Sample's ability to quickly and accurately name familiar objects, colors, letters, and numbers. During the Naming Speed Literacy subtest, Sample named elements (e.g., objects of various size and color, letters and numbers) as quickly as possible. Compared to other children her age, Sample's score fell in the Extremely Low range (NSL = 45). On the Naming Speed Quantity subtest, Sample named the quantity of squares inside a series of boxes as quickly as possible. On this subtest, her score fell in the Extremely Low range (NSQ = 45). Her overall performance on the NSI was significantly lower than other children her age (NSI = 45,  $PR = \langle 0.1, Extremely Low range, CI = 42-59 \rangle$ . Low NSI scores may occur for many reasons, including visual-processing deficits, information retrieval difficulties, weak language skills, poor naming skills, or generally slow cognitive functioning. The Naming Speed process scores correspond to the NSL items. Sample's Naming Speed Size-Color-Object (NSsco) process score reflects her ability to identify elements by their size, color and object attributes, while her Naming Speed Letter-Number (NSIn) process score reflects her ability to name letters and numbers, as quickly as possible. During administration of the Naming Speed Index (NSI) subtests, Sample made more than the expected amount of errors on Naming Speed Literacy ( $BR = \langle = 2\%$ ) and Naming Speed Quantity ( $BR = \langle = 2\%$ ), relative to her same-age peers. These error process scores are critical to the interpretation of the NSI, as well as both of the Naming Speed subtests. In fact, her NSI score should be interpreted with caution because the number of errors that Sample made is rare compared to her same-aged peers. On Naming Speed Literacy (NSL), an error is counted for each mis-named attribute of an element. Sample made more than the expected number of errors on a task that required her to name the size, color and object of elements and on a task that required her to name letters and numbers. On Naming Speed Quantity (NSQ), an error is counted when the child mis-names the quantity of squares inside a box. Sample made more than the expected number of errors, relative to her same-age peers. Observation of Sample's test behaviors may further clarify interpretation. If she performed a sample item with few or no errors, but then had difficulty on the corresponding item trials, she may have difficulty working under time pressure. Or, it is possible that she had problems with visual tracking due to the additional complexity of the test item pages, which have more stimuli relative to the sample item pages. In contrast, if she committed several errors on a sample item and responded to feedback, but then committed the same type of errors on the

item, a different interpretation is likely warranted. In this case, she might have misunderstood the task or she may require ongoing feedback to perform even simple tasks. If she had no errors or only a few errors on the first trial of an item, but then had an increased number of errors on the second trial, her test behaviors might have impacted her performance. Specifically, impatience, impulsivity, or a desire to finish quickly, without a concern for accuracy resulted in additional errors. In this case, a true naming facility deficit is less likely. Further, if she was not prompted to start again after two consecutive errors, the possibility of an administration or recording issue must be considered.

#### **Symbol Translation**

The Symbol Translation Index (STI) provides a broad estimate of visual-verbal associative memory. The STI is based on the Immediate Symbol Translation (IST), Delayed Symbol Translation (DST), and Recognition Symbol Translation (RST) subtest scores. She was shown symbols and taught the word that each symbol represented (i.e., visual-verbal pairs). She was then asked to translate symbol strings into phrases or sentences immediately (IST), after a 20-30 minute delay (DST), and in a multiple-choice recognition format (RST). These measures enhance the assessment of children suspected of having learning problems or declarative memory impairment, rather than the measurement of overall intellectual ability. When interpreting her Symbol Translation subtest scores, it is important to remember that DST and RST performance are dependent upon that of IST. Although Sample's overall performance was Very High compared to same-age peers (STI = 128, PR = 97, CI = 120-133), she showed some variability across these three tasks. While her performance on the immediate recall task was Extremely High for her age (IST = 138), her performance was significantly weaker on the delayed recognition task, falling in the High Average range (RST = 112; IST > RST; BR = 3.5%). This pattern suggests that she very easily recalls information as soon as she learns it, but has greater difficulty recognizing that information after a delay or interruption. Sample's performance on the immediate recall and delayed recall tasks was consistent. This suggests that her immediate and delayed recall within visual-verbal associative memory are commensurate. She very easily recalls information as soon as she learns it and easily recalls information after a delay or interruption. Sample's performance on the delayed recall and delayed recognition tasks was consistent. This suggests that her delayed recall and delayed recognition within visual-verbal associative memory are commensurate. She is able to access the information encoded into delayed memory. She easily recalls information after a delay and somewhat easily recognizes information after a delay or interruption. High STI scores indicate well-developed encoding and retrieval of newly learned visual-verbal associations after short and long delays. An NSI vs. STI discrepancy comparison offers insight regarding her relative strengths and weaknesses within the storage and retrieval domain. Her STI score was significantly stronger than her performance on the NSI (STI > NSI; BR = 4.0%). This suggests that learning and memory for recently acquired visual-verbal associations is a strength relative to rapid access of previously acquired visual-verbal associations. Sample's ability to store and accurately retrieve information is stronger than her naming fluency and automaticity.

### SUMMARY

Sample is an 8-year-old girl. The WISC-V was used to assess Sample's performance across five areas of cognitive ability. When interpreting her scores, it is important to view the results as a snapshot of her current intellectual functioning. As measured by the WISC-V, her overall FSIQ score fell in the Extremely High range when compared to other children her age (FSIQ = 132). Performance on the PSI was variable, but overall she worked extremely quickly on the processing speed tasks, which was one of her strongest performance areas during this assessment (PSI = 141). Processing speed was particularly strong when compared to her verbal reasoning (VCI = 121) skills. She exhibited diverse visual spatial skills, but overall this was an area of weakness relative to her overall ability (VSI = 111). When compared to her fluid reasoning (FRI = 131) performance, visual spatial skills emerged as an area of personal weakness. Although her working memory performance was variable, overall she showed above average performance on working memory tasks, which measure concentration and mental control. However, this was also an area of weakness relative to her overall level of ability (WMI = 110). When compared to her fluid reasoning (FRI = 131) performance, working memory skills emerged as an area for further development. Ancillary index scores revealed additional information about Sample's cognitive abilities using unique subtest groupings to better interpret clinical needs. She scored in the High Average range on the Verbal (Expanded Crystallized) Index (VECI), which provides a measure of ability to access and apply acquired word knowledge and general knowledge (VECI = 111). She scored in the Extremely High range on the Expanded Fluid Index (EFI), which provides a measure of ability to detect underlying conceptual relationships, extract important information, and use reasoning to identify and apply rules (EFI = 133). Her capacity to perform mental math operations and understand quantitative relationships, as measured by the Quantitative Reasoning Index (QRI), fell in the High Average range (QRI = 112). The Auditory Working Memory Index (AWMI) measured her ability to register, maintain, and manipulate information that was presented orally. Her index score was Extremely High for her age (AWMI = 139). On the Nonverbal Index (NVI), a measure of general intellectual ability that minimizes expressive language demands, her performance was Very High for her age (NVI = 126). She scored in the Very High range on the General Ability Index (GAI), which provides an estimate of general intellectual ability that is less reliant on working memory and processing speed relative to the FSIQ (GAI = 124). Sample's strong performance on the Cognitive Proficiency Index (CPI) suggests that she very efficiently processes cognitive information in the service of learning, problem solving, and higher order reasoning (CPI = 129). Complementary index scores measured Sample's abilities as they relate to academic achievement and learning-related issues. The Storage and Retrieval Index (SRI) provides a broad estimate of long-term storage and retrieval accuracy and fluency. This score is derived from tasks on the Naming Speed Index (NSI) and Symbol Translation Index (STI). The NSI measures basic naming automaticity. Sample's NSI score was in the Extremely Low range (NSI = 45). The STI measures visual-verbal associative memory. Her score on the STI fell in the Very High range (STI = 128). It is important to compare her performance across the three Symbol Translation subtests, when interpreting her associative memory ability. Her performance on the SRI was diverse, but overall was Low Average for her age (SRI = 82; STI > NSI, BR = 4.0%). Potential areas for intervention are described in the following section.

## RECOMMENDATIONS

#### **Recommendations for Verbal Comprehension Skills**

Sample's overall performance on the VCI was Very High compared to other children her age. Verbal skills are an important component of academic success because classroom instruction involves listening comprehension, verbal reasoning, and oral communication. It is therefore important to continue to build Sample's verbal reasoning, knowledge, and comprehension skills by providing ongoing enrichment opportunities. Strategies to build verbal skills include approaches such as dialogic reading. This strategy involves adults asking the child specific questions about reading material to encourage interest, comprehension, and critical thinking. Verbal skills can also be enriched by exposing Sample to novel situations or materials and providing discussion about them. Adults can keep a list of terms, information, and concepts that Sample learns and periodically discuss it with her to expand Sample's understanding. Discovering and investigating new concepts can help her to expand her verbal reasoning, knowledge, and comprehension skills. Adults can encourage Sample to elaborate on her thoughts, and can also expand on her contributions to the conversation.

#### **Recommendations for Fluid Reasoning Skills**

Sample's overall performance on the FRI was Extremely High compared to other children her age. Fluid reasoning includes using logic to solve problems and identifying connections between abstract concepts. Because these skills can be an important component in future academic success, it is recommended that Sample engage in activities that nurture her already strong fluid reasoning skills. For example, she can look at increasingly challenging patterns or series to identify what comes next. Encourage her to think of multiple ways to group objects and then explain her rationale to adults. Performing age-appropriate science experiments may also be helpful in strengthening logical thinking skills. For example, adults can help her form a hypothesis and then perform a simple experiment, using measurement techniques to determine whether or not her hypothesis was correct. When creating opportunities for Sample to further build her fluid reasoning skills, it is important to provide activities that are challenging, but within her skill level.

#### **Recommendations for Processing Speed**

Sample's overall performance on the PSI was Extremely High compared to other children her age. The ability to quickly scan and discriminate visual information is an important component of academic success. It is important to reinforce Sample's strengths in this area by continuing to build her speed and accuracy through practice. Speeded flash card drills, such as those that ask the student to quickly solve simple math problems, may help develop automaticity that can free up cognitive resources in the service of more complex academic tasks. Digital interventions may also be helpful in building her speed on simple tasks. It is important to note, however, that some children who work relatively quickly can be reluctant to slow down when tasks require deeper thought. This may result in careless errors. In addition to building speed, it is important to provide other activities in which Sample is rewarded for accuracy rather than quick completion of tasks.

## RECOMMENDATIONS

#### **Recommendations for Building Verbal Skills**

Sample's family is encouraged to set aside time each evening to discuss the day's events. It is important that distractions are minimized during this time, allowing each family member to be given the full attention of those around them. Such activities may help to develop Sample's verbal expression skills.

Organizing new information into visual categories that are meaningful may help Sample remember the information more easily and accurately.

#### **Recommendations for Executive Functioning**

Sample's parents or guardians are encouraged to provide immediate reinforcement for demonstrations of increased self-control or longer periods of maintaining attention.

Sample's parents and teachers can facilitate her development of executive functioning by praising her for working hard, rather than telling her that she is "smart." When children are praised for working hard, they may learn to persevere when faced with difficult concepts.

#### **Recommendations to Build Writing Skills**

Sample's family may help her learn to spell words by playing games in which Sample is asked to make words (or made-up words) from a group of letters.

Thank you for the opportunity to assess Sample. Please contact me with any questions you have about these results.

This report is only valid if signed by a qualified professional:

Sample Examiner

Date

## PRIMARY SUMMARY

#### Subtest Score Summary

Domain	Subtest Name		Total Raw Score	Scaled Score	Percentile Rank	Age Equivalent	SEM
Verbal	Similarities	SI	26	12	75	10:6	1.16
Comprehension	Vocabulary	VC	34	16	98	14:2	1.24
	(Information)	IN	15	10	50	8:10	1.31
	(Comprehension)	CO	15	10	50	8:6	1.34
Visual Spatial	Block Design	BD	20	9	37	7:10	1.04
	Visual Puzzles	VP	20	15	95	16:6	1.08
Fluid Reasoning	Matrix Reasoning	MR	27	19	99.9	>16:10	0.99
U	Figure Weights	FW	20	12	75	9:10	0.73
	(Picture Concepts)	PC	20	17	99	>16:10	1.24
	(Arithmetic)	AR	19	12	75	10:2	1.04
Working Memory	Digit Span	DS	30	15	95	15:10	0.95
	Picture Span	PS	20	8	25	7:2	1.08
	(Letter-Number Seq.)	LN	28	19	99.9	>16:10	1.24
Processing Speed	Coding	CD	110	19	99.9	>16:10	1.37
	Symbol Search	SS	30	15	95	13:2	1.34
	(Cancellation)	CA	70	13	84	12:2	1.24

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



#### Subtest Scaled Score Profile

## PRIMARY SUMMARY (CONTINUED)

### **Composite Score Summary**

					95%		
Composite		Sum of Scaled Scores	Composite Score	Percentile Rank	Confidence Interval	Qualitative Description	SEM
Verbal Comprehension	VCI	28	121	92	112-127	Very High	4.74
Visual Spatial	VSI	24	111	77	102-118	High Average	4.24
Fluid Reasoning	FRI	31	131	98	122-136	Extremely High	3.67
Working Memory	WMI	23	110	75	102-117	High Average	4.24
Processing Speed	PSI	34	141	99.7	127-145	Extremely High	5.61
Full Scale IQ	FSIQ	102	132	98	125-136	Extremely High	3.00

Confidence intervals are calculated using the Standard Error of Estimation.





*Note.* Vertical bars represent the Confidence Intervals.

## PRIMARY ANALYSIS

Index	Score	Comparison Score	Difference	Critical Value	Strength or Weakness	Base Rate
VCI	121	122.8	-1.8	10.79		>25%
VSI	111	122.8	-11.8	9.93	W	<=10%
FRI	131	122.8	8.2	8.98		>25%
WMI	110	122.8	-12.8	9.93	W	<=15%
PSI	141	122.8	18.2	12.33	S	<=5%

#### **Index Level Strengths and Weaknesses**

Comparison score mean derived from the five index scores (MIS).

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

Base rates are reported by ability level.

#### **Index Level Pairwise Difference Comparisons**

	~ .	~ .			Significant	
Index Comparison	Score 1	Score 2	Difference	Critical Value	Difference	Base Rate
VCI - VSI	121	111	10	12.46	Ν	34.0%
VCI - FRI	121	131	-10	11.75	Ν	26.0%
VCI - WMI	121	110	11	12.46	Ν	36.5%
VCI - PSI	121	141	-20	14.39	Y	4.0%
VSI - FRI	111	131	-20	10.99	Y	9.0%
VSI - WMI	111	110	1	11.75	Ν	55.0%
VSI - PSI	111	141	-30	13.78	Y	2.0%
FRI - WMI	131	110	21	10.99	Y	13.5%
FRI - PSI	131	141	-10	13.14	N	13.5%
WMI - PSI	110	141	-31	13.78	Y	1.5%

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

Base rates are reported by ability level.

## PRIMARY ANALYSIS (CONTINUED)

Subtest	Score	Comparison Score	Difference	Critical Value	Strength or Weakness	Base Rate
SI	12	14.0	-2.0	3.07		<=25%
VC	16	14.0	2.0	3.26		<=25%
BD	9	14.0	-5.0	2.78	W	<=2%
VP	15	14.0	1.0	2.88		>25%
MR	19	14.0	5.0	2.67	S	<=2%
FW	12	14.0	-2.0	2.08		<=25%
DS	15	14.0	1.0	2.58		>25%
PS	8	14.0	-6.0	2.88	W	<=2%
CD	19	14.0	5.0	3.57	S	<=5%
SS	15	14.0	1.0	3.50		>25%

### Subtest Level Strengths and Weaknesses

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

#### Subtest Level Pairwise Difference Comparisons

					Significant	
Subtest Comparison	Score 1	Score 2	Difference	<b>Critical Value</b>	Difference	Base Rate
SI - VC	12	16	-4	3.02	Y	6.1%
BD - VP	9	15	-6	3.04	Y	2.0%
MR - FW	19	12	7	2.60	Y	2.0%
DS - PS	15	8	7	2.89	Y	2.2%
CD - SS	19	15	4	3.63	Y	9.0%

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

# ANCILLARY & COMPLEMENTARY SUMMARY

### **Index Score Summary**

					95%		
Composite		Sum of Scaled/ Standard Scores	Index Score	Percentile Rank	Confidence Interval	Qualitative Description	SEM
Ancillary							
Verbal (Expanded Crystallized)	VECI	48	111	77	104-117	High Average	3.67
Expanded Fluid	EFI	60	133	99	125-138	Extremely High	3.35
Quantitative Reasoning	QRI	24	112	79	105-118	High Average	3.67
Auditory Working Memory	AWMI	34	139	99.5	129-144	Extremely High	4.24
Nonverbal	NVI	82	126	96	118-131	Very High	3.35
General Ability	GAI	68	124	95	117-129	Very High	3.00
Cognitive Proficiency	CPI	57	129	97	120-134	Very High	4.24
Complementary							
Naming Speed	NSI	90	45	< 0.1	42-59	Extremely Low	5.61
Symbol Translation	STI	372	128	97	120-133	Very High	3.67
Storage & Retrieval	SRI	173	82	12	76-90	Low Average	4.24

Index scores are reported using standard scores.



Ancillary/Complementary Index Score Profile

Note. Vertical bars represent the Confidence Intervals.

## ANCILLARY & COMPLEMENTARY SUMMARY (CONTINUED)

#### **Subtest Score Summary**

Scale	Subtest/Process Score		Total Raw Score	Standard Score	Percentile Rank	Age Equivalent	SEM
Naming Speed	Naming Speed Literacy	NSL	500	45	< 0.1	<7:2	6.87
	Naming Speed Quantity	NSQ	300	45	< 0.1	<7:2	6.54
Symbol Translation	Immediate Symbol Translation	IST	100	138	99	>16:10	5.81
	Delayed Symbol Translation	DST	67	122	93	>16:10	5.81
	Recognition Symbol Translation	RST	30	112	79	14:6	6.71

## **ANCILLARY & COMPLEMENTARY ANALYSIS**

Index Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
Ancillary						
GAI - FSIQ	124	132	-8	3.58	Y	1.4%
GAI - CPI	124	129	-5	10.18	Ν	9.4%
WMI - AWMI	110	139	-29	6.85	Y	0.5%
Complementary						
NSI - STI	45	128	-83	13.14	Y	4.0%

#### **Index Level Pairwise Difference Comparisons**

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

For comparisons between GAI and other index scores, base rates are reported by GAI ability level. For remaining comparisons, base rates are reported by FSIQ ability level.

#### Subtest Level Pairwise Difference Comparisons

Subtest Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
Ancillary						
FW - AR	12	12	0	2.33	Ν	
DS - LN	15	19	-4	2.81	Y	6.7%
Complementary						
NSL - NSQ	45	45	0	18.59	Ν	
IST - DST	138	122	16	16.10	Ν	2.5%
IST - RST	138	112	26	17.40	Y	3.5%
DST - RST	122	112	10	17.40	N	26.5%

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

Base rates are reported by overall sample for ancillary subtests and by ability level for complementary subtests.

## **PROCESS ANALYSIS**

#### **Total Raw Score to Standard Score Conversion**

Process Score		Raw Score	Standard Score	
Naming Speed Size-Color-Object	NSsco	300	64	
Naming Speed Letter-Number	NSln	200	50	

### **Process Level Pairwise Difference Comparisons (Standard Scores)**

Process Score Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate	
NSsco - NSln	64	50	14	18.59	Ν	17.9%	
Statistical significance (article values) at the 05 level							

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

#### **Total Raw Score to Scaled Score Conversion**

Process Score		Raw Score	Scaled Score	
Block Design No Time Bonus	BDn	10	5	
Block Design Partial Score	BDp	50	14	
Digit Span Forward	DSf	10	13	
Digit Span Backward	DSb	10	13	
Digit Span Sequencing	DSs	10	15	
Cancellation Random	CAr	30	12	
Cancellation Structured	CAs	40	14	

#### **Process Level Pairwise Difference Comparisons (Scaled Scores)**

Process Score Comparison	Score 1	Score 2	Difference	Critical Value	Significant Difference	Base Rate
BD - BDn	9	5	4	3.40	Y	0.0%
BD - BDp	9	14	-5	3.11	Y	0.3%
DSf - DSb	13	13	0	3.69	N	
DSf - DSs	13	15	-2	3.63	N	31.3%
DSb - DSs	13	15	-2	3.66	N	30.5%
LN - DSs	19	15	4	3.38	Y	9.2%
CAr - CAs	12	14	-2	3.59	N	21.8%

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

## PROCESS ANALYSIS (CONTINUED)

#### **Total Raw Score to Base Rate Conversion**

Process Score		<b>Raw Score</b>	<b>Base Rate</b>	
Longest Digit Span Forward	LDSf	2	99.5%	
Longest Digit Span Backward	LDSb	2	99.5%	
Longest Digit Span Sequence	LDSs	2	99.0%	
Longest Picture Span Stimulus	LPSs	8	0.0%	
Longest Picture Span Response	LPSr	4	100.0%	
Longest Letter-Number Sequence	LLNs	2	99.5%	
Block Design Dimension Errors	BDde	10	<=2%	
Block Design Rotation Errors	BDre	10	<=2%	
Coding Rotation Errors	CDre	100	<=2%	
Symbol Search Set Errors	SSse	15	<=2%	
Symbol Search Rotation Errors	SSre	15	<=2%	
Naming Speed Literacy Errors	NSLe	140	<=2%	
Naming Speed Size-Color-Object Errors	NSscoe	100	<=2%	
Naming Speed Letter-Number Errors	NSlne	40	<=2%	
Naming Speed Quantity Errors	NSQe	20	<=2%	

Base rates are reported by age group.

### Process Level Pairwise Difference Comparisons (Raw Scores)

Process Score Comparison	Raw Score 1	Raw Score 2	Difference	Base Rate
LDSf - LDSb	2	2	0	100.0%
LDSf - LDSs	2	2	0	90.5%
LDSb - LDSs	2	2	0	30.5%

Base rates are reported by age group.

## **End of Report**



#### WISC®-V

## Wechsler Intelligence Scale for Children®-Fifth Edition Parent Summary Report

Examinee Name	Sample Report	Date of Report	10/20/2020	
Examinee ID		Grade	1	
Date of Birth	01/10/2012	Primary Language	English	
Gender	Female	Handedness	Right	
Race/Ethnicity	Black/African-American	Examiner Name	Sample Examiner	
Date of Testing	10/20/2020	Age at Testing	8 years 9 months	Retest? No

# PsychCorp

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[1.3/RE1/QG1]

ALWAYS LEARNING



## **ABOUT THE WISC-V**

The WISC-V is used to measure the general thinking and reasoning skills of children aged 6 to 16 years. This assessment provides a composite score that represents Sample's overall intellectual ability (FSIQ), as well as primary index scores that measure the following areas of cognitive functioning: verbal comprehension, visual spatial processing, fluid reasoning, working memory, and processing speed. Sample was also administered subtests contributing to ancillary index scores that provide additional information about her cognitive skills. In addition, she was administered subtests contributing to three complementary index scores. These subtests provide additional information about her learning styles.

WISC-V scores show how well Sample performed compared to a group of children her age from the United States. A primary index score can range from 45 to 155, while the FSIQ ranges from 40 to 160. For both the primary index scores and the FSIQ, scores ranging from 90 to 109 are typically considered average. It is common for examinees to exhibit strengths and weaknesses across index scores.

Scores on the WISC-V can be influenced by motivation, attention, interests, and opportunities for learning. For these reasons, some scores might be slightly higher or lower if Sample was tested again at another time. It is therefore important to view these test scores as a snapshot of Sample's current level of intellectual functioning. When these scores are used as part of a comprehensive evaluation, they contribute to an understanding of her current strengths and any needs that can be addressed.

## WISC-V SCORE INTERPRETATION

### **Primary Index Scores**

Sample's FSIQ score, a measure of overall intellectual ability, was in the Extremely High range compared to other children who are 8 years and 9 months old (FSIQ = 132). Overall, her performance on these tasks was better than approximately 98 out of 100 examinees in her age group.

The Verbal Comprehension Index (VCI) measured Sample's ability to use word knowledge, verbalize meaningful concepts, and reason with language-based information. Her overall score on the VCI fell in the Very High range (VCI = 121). This means that she performed better than approximately 92 out of 100 examinees in the same age group.

On the Visual Spatial Index (VSI), which measures the ability to evaluate visual details and understand part-whole relationships, Sample's overall score was in the High Average range (VSI = 111). Tasks in this index involve constructing designs and puzzles under a time constraint. Her performance was better than approximately 77 out of 100 examinees her age. Sample's performance in this area was relatively weak compared to her overall level of ability. This may be an area for continued development.

The Fluid Reasoning Index (FRI) measured Sample's logical thinking skills and her ability to use reasoning to apply rules. Her overall score on the FRI fell in the Extremely High range (FRI = 131). This means that she performed better than approximately 98 out of 100 examinees in the same age group.

The Working Memory Index (WMI) measured Sample's attention, concentration, and mental control. Her overall score on the WMI fell in the High Average range (WMI = 110). This means that she performed better than approximately 75 out of 100 examinees in the same age group. Working memory skills were one of her weakest areas of performance during this assessment and may be an area for continued development.

On the Processing Speed Index (PSI), which measures the ability to quickly and correctly scan visual information, Sample's overall score was in the Extremely High range (PSI = 141). Her performance was better than approximately 99.7 out of 100 examinees her age. During this assessment, Sample's processing speed performance was relatively strong compared to her overall level of ability. This may be an area that can be built upon in the future.

#### **Ancillary Index Scores**

The Verbal (Expanded Crystallized) Index (VECI) provides a measure of ability to access and apply acquired word knowledge and general knowledge. Her overall score on the VECI fell in the High Average range. She performed better than approximately 77 out of 100 examinees her age (VECI = 111).

The Expanded Fluid Index (EFI) provides a measure of ability to detect underlying conceptual relationships, extract important information, and use reasoning to identify and apply rules. Her overall score on the EFI fell in the Extremely High range. She performed better than approximately 99 out of 100 examinees her age (EFI = 133).

The Quantitative Reasoning Index (QRI) measured Sample's ability to perform mental math operations. Her overall performance on the QRI fell in the High Average range, and was higher than approximately 79 out of 100 examinees her age (QRI = 112).

On the Auditory Working Memory Index (AWMI), which measures the ability to remember information presented verbally, Sample's overall score was in the Extremely High range (AWMI = 139). Her performance was better than approximately 99.5 out of 100 examinees her age.

The Nonverbal Index (NVI) is a measure of general ability that minimizes verbal expression. Sample's overall performance on the NVI fell in the Very High range, and was higher than approximately 96 out of 100 examinees her age (NVI = 126).

The General Ability Index (GAI) provides an estimate of general intelligence that is less reliant on working memory and processing speed ability, relative to the FSIQ. Her overall score on the GAI fell in the Very High range. She performed better than approximately 95 out of 100 examinees her age (GAI = 124).

The Cognitive Proficiency Index (CPI) provides a summary of Sample's working memory and processing speed performance. Her overall performance on the CPI fell in the Very High range, and was higher than approximately 97 out of 100 examinees her age (CPI = 129).

#### **Complementary Index Scores**

The Naming Speed Index (NSI) measured Sample's basic naming ability. Sample's performance on the NSI fell in the Extremely Low range, and was higher than approximately <0.1 out of 100 examinees her age (NSI = 45).

On the Symbol Translation Index (STI), which measures visual-verbal associative memory, Sample's overall score was in the Very High range, and was better than approximately 97 out of 100 examinees her age (STI = 128).

The Storage and Retrieval Index (SRI) provides an estimate of Sample's ability to store and retrieve information. Her overall performance on the SRI fell in the Low Average range, and was higher than approximately 12 out of 100 examinees her age (SRI = 82).

Thank you for the opportunity to assess Sample. Please contact me with any questions you have about these results.

This report is only valid if signed by a qualified professional:

Sample Examiner

Date

# WISC-V TEST SCORES

### **Score Summary**

Composite		Score	Percentile Rank	Qualitative Description
Verbal Comprehension	VCI	121	92	Very High
Visual Spatial	VSI	111	77	High Average
Fluid Reasoning	FRI	131	98	Extremely High
Working Memory	WMI	110	75	High Average
Processing Speed	PSI	141	99.7	Extremely High
Full Scale IQ	FSIQ	132	98	Extremely High

# **Composite Score Profile**



## **Ancillary/Complementary Score Summary**

Composite		Score	Percentile Rank	Qualitative Description
Ancillary				
Verbal (Expanded Crystallized)	VECI	111	77	High Average
Expanded Fluid	EFI	133	99	Extremely High
Quantitative Reasoning	QRI	112	79	High Average
Auditory Working Memory	AWMI	139	99.5	Extremely High
Nonverbal	NVI	126	96	Very High
General Ability	GAI	124	95	Very High
Cognitive Proficiency	CPI	129	97	Very High
Complementary				
Naming Speed	NSI	45	<0.1	Extremely Low
Symbol Translation	STI	128	97	Very High
Storage & Retrieval	SRI	82	12	Low Average

### **Ancillary/Complementary Index Score Profile**

