|  |  |  |  |
| --- | --- | --- | --- |
|  | **Standard Score** | **Percentile Rank** | **Qualitative Descriptor** |
| **Comprehension-Knowledge (Gc)** | **76** | **6** | **Well Below Average** |
| Oral Vocabulary (VL) | 75 | 5 | Well Below Average |
| General Information (KO) | 80 | 9 | Below Average |
| **Long-Term Retrieval (Glr)** | **78** | **7** | **Well Below Average** |
| Story Recall (MM) | 74 | 4 | Well Below Average |
| Visual-Auditory Learning (MA) | 87 | 20 | Below Average |
| **Visual-Spatial Thinking (Gv)** | **111 (XBASS)** | **77** | **Above Average** |
| Visualization (Vz) | 107 | 67 | Average |
| Picture Recognition (MV) | 85 (Divergent) | 17 | Below Average |
| DAS-II Recognition of Pictures (MV) | 112 | 58 | Above Average |
| **Fluid Reasoning (Gf)** | **79 (XBASS)** | **8** | **Well Below Average** |
| Number Series (RQ) | 84 | 15 | Below Average |
| Concept Formation (I) | 104 (Divergent) | 60 | Average |
| Analysis-Synthesis (RG) | 80 | 9 | Below Average |
| **Short-Term Memory (Gsm)** | **87 (XBASS)** | **19** | **Below Average** |
| Verbal Attention (MW) | 90 | 26 | Average |
| Memory for Words (MS) | 88 | 22 | Below Average |
| **Phonological Awareness (Ga)** | **58 (XBASS)** | **<1** | **Extremely Below Average** |
| Elision (PC) | 70 | 2 | Well Below Average |
| Blending Words (PC) | 85 (Divergent) | 16 | Below Average |
| Phoneme Isolation (PC) | 60 | <1 | Extremely Below Average |
| **Processing Speed (Gs)** | **85** | **16** | **Below Average** |
| Letter-Pattern Matching (P) | 92 | 31 | Average |
| Pair Cancellation (P) | 82 | 12 | Below Average |

Intellectual evaluations do not measure innate capacity or potential, but rather facilitate the identification of cognitive strengths and weaknesses, and are associated with the student’s learning abilities. The results presented in this report were compiled from tests that do not share a common norm group; however, test results have been interpreted following the cross-battery approach and integrated with data from other sources including educational records, parent/teacher interviews, observations, work samples, and other test findings to ensure ecological validity. No single test or procedure was used as the sole criterion for classification, eligibility, or educational planning.

Intellectual functioning was assessed using the following formal instruments: The Woodcock-Johnson Tests of Cognitive Abilities, Fourth Edition (WJ IV COG), the Comprehensive Test of Phonological Processing, Second Edition (CTOPP-2), and the Differential Ability Scales, Second Edition (DAS-II).

WOODCOCK-JOHNSON TESTS OF COGNITIVE ABILITIES, FOURTH EDITION (WJ IV COG)

The WJ IV COG is an individually administered intelligence test that measures general intellectual functioning of individuals aged 2-90+. Scores are reported as standard scores with a Mean of 100 and Standard Deviation of 15. Scores between 85 and 115 are considered within the range of normal limits. The WJ IV COG was used as the primary test battery for the purposes of determining Israel’s cognitive abilities.

COMPREHENSIVE TEST OF PHONOLOGICAL PROCESSING, SECOND EDITION (CTOPP-2)  
The CTOPP-2 assesses phonological processing which refers to the use of phonological information, especially the sound structure of one's oral language, in processing written language and oral language. The CTOPP-2 was used to assess Israel’s abilities in the areas of Phonological Awareness (Ga), that is, awareness of and access to the phonological structure of oral language.

DIFFERENTIAL ABILITY SCALES, SECOND EDITION (DAS-II)

The DAS-II is an individually administered clinical instrument designed for assessing the cognitive abilities of children and adolescents from ages 2 years 6 months through 17 years 11 months. Subtest scores are reported as T-scores with a mean of 50 and standard deviation of 10. Scores between 40 and 60 are considered within the range of normal limits. The DAS-II was used as part of the assessment of the Visual Processing (Gv) ability area.

A summary of the scores obtained are discussed below. The scores can be found the following table:

*COMPREHENSION-KNOWLEDGE (Gc) cohesive cluster based on WJ IV (SS=76)*

Comprehension Knowledge, or crystallized intelligence, is the breadth and depth of a person’s acquired knowledge, the ability to communicate one’s knowledge (especially verbally), and the ability to reason using previously learned experiences or procedures. It includes both declarative and procedural knowledge. Declarative knowledge includes factual information, comprehension, concepts, rules, and knowledge of relationships, especially when information is verbal. Procedural knowledge refers to the operating skills (e.g., driving a car) a person performs automatically after the period of initial learning. This cluster is comprised of the Oral Vocabulary and General Information tests on the WJ IV: Cog. The Oral Vocabulary test consists of Synonyms and Antonyms, and measures an aspect of vocabulary knowledge of spoken English. On Synonyms, STUDENT listened to a word and then provided an appropriate word with the same meaning. On Antonyms, she listened to a word and then provided an appropriate answer with the opposite meaning. The Oral Vocabulary subtest is a measure of acquired verbal knowledge. STUDENT performed in the Well Below Average range on this test. The General Information test consists of two subtests: Where and What. In the first subtest, STUDENT was asked where she would find an object. On the second subtest, she was asked what she would do with an object. This test is a measure of general information and knowledge. STUDENT performed in the Below Average range on this test. Based on STUDENT’s performance on these two tests, her Gc falls within the Well Below Average range, and is considered a normative weakness.   
   
*LONG-TERM RETRIEVAL (Glr) cohesive cluster based on WJ IV (SS=78)*Long-Term Retrieval is the ability to store information and fluently retrieve it later in the process of thinking. It involves both the amount of information that can be stored and the rate and fluency with which the information can be retrieved and accessed. This cluster is comprised of the Story Recall and Visual-Auditory Learning tests. The Story Recall test is a measure of meaningful memory as well as some aspects of oral language development. On this task, STUDENT had to recall increasingly complex stories that were presented from an audio recording. After listening to the story, she had to recall as many details of the story as she could remember. STUDENT performed in the Well Below Average range on this test. The Visual-Auditory Learning test is a measure of associative memory. On this test, STUDENT was asked to learn and recall pictographic presentations of words. This is also a controlled learning task in that she received feedback on her responses throughout the administration of the test. STUDENT performed within the Below Average range on this test. When considering both tests administered, STUDENT’s tests were considered cohesive. Her Glr score falls within the Well Below Average range, and is considered a normative weakness.

*VISUAL SPATIAL THINKING (Gv) cohesive cluster based on XBASS (SS=111)*

Visual Spatial Thinking is the ability to perceive, analyze, synthesize, and think with visual patterns, including the ability to store and recall visual representations. Examples of this type of ability include putting puzzles together, completing a maze, and interpreting charts or graphs. This cluster is comprised of the Visualization and Picture Recognition tests. The Visualization test is a measure of visualization which a narrow ability of visual processing. The test is comprised of the Spatial Relations and Block Rotation subtests. On Spatial Relations, STUDENT identified two or three pieces that form a complete shape. On Block Rotation, STUDENT identified the two block patterns out of a series of choices that matched the target pattern. STUDENT performed within the Average range on this test. The Picture Recognition test is a measure of visual memory for objects or pictures. On this test, STUDENT recognized a subset of previously presented pictures within a field of distracting pictures. Varieties of the same type of objects were used as the stimuli and distracters for each item to eliminate verbal mediation as a memory strategy. STUDENT performed within the Below Average range on this test. Utilizing the XBASS program, these two narrow ability areas were considered divergent. Therefore, an additional measure of visual memory was given. The Recognition of Pictures subtest from the DAS-II was administered. On this test, STUDENT was presented with pictures of familiar objects for 5 seconds. She was then presented with an array of drawings and was required to identify the pictures in the array that were originally shown. STUDENT’s score on this subtest fell in the Above Average range. When considering all subtest scores to comprise a Gv cluster score, STUDENT’s score on the Picture Recognition subtest from the WJ IV: Cog was considered divergent and is not utilized when calculating her overall Gv ability score. STUDENT’s Gv score of 111 falls in the Above Average range, and is considered an intact ability.

*FLUID REASONING (Gf) cohesive cluster based on XBASS (SS=79)*

The Fluid Reasoning cluster includes the broad ability to reason, form concepts, and solve problems using unfamiliar information or novel procedures. Fluid Reasoning is a complex mixture of many mental operations, such as identifying relations, drawing inferences, recognizing and forming concepts, identifying conjunctions, and recognizing disjunctions. The ability also includes quantitative reasoning. This cluster is comprised of the Number Series and Concept Formation tests. The Number Series test measures quantitative reasoning. On this test, STUDENT was presented with a series of numbers with one or two missing in a series. She then determined the missing number(s). STUDENT performed in the Below Average range on this test. Paper and pencil were provided and STUDENT was observed to use the paper on several items. She was also observed to count differences using her fingers. The Concept Formation test is a measure of inductive reasoning, which is the ability to discover the underlying characteristic (e.g., rule, process, trend, class membership) that governs a problem or set of materials. On this test, STUDENT was presented with a complete stimulus set and derived the rule for each item. With the exception of the last several items, she was given immediate feedback regarding the correctness of each response, thereby, making this a controlled learning task. STUDENT performed within the Average range on this test. Utilizing the XBASS program, these two narrow ability areas were considered divergent. Therefore, an additional measure of fluid reasoning was given.

The Analysis-Synthesis test from the WJ IV: Cog was administered as an additional measure of Fluid Reasoning (Gf). It is a measure of General Sequential Reasoning, which is the ability to start with a stated rule, premise, or condition, and then engage in one or more steps to reach a solution to a novel problem. On this test, STUDENT was required to analyze the presented components of an incomplete logic puzzle and identify the missing components. This was also a controlled learning task, in that she was given immediate feedback regarding the correctness of her responses before each new item was presented. She performed in the Below Average range. When considering all subtest scores to comprise a Gf cluster score, STUDENT’s score on the Concept Formation subtest from the WJ IV: Cog was considered divergent and is not utilized when calculating her overall Gf ability score. STUDENT’s Gf score of 79 falls in the Well Below Average range, and is considered a normative weakness. Although her overall Gf falls in the Well Below Average range, it should be noted that STUDENT presented Average range abilities in the area of Inductive Reasoning. This suggests that she will likely do better on tasks of inductive reasoning, than reasoning tasks that involved deduction or quantitative reasoning skills.

*SHORT-TERM MEMORY (Gsm) cohesive cluster based on XBASS (SS=87)*

Short-Term Memory is the ability to hold information in immediate awareness and then use it within a few seconds. The Short-Term Working Memory cluster is comprised of the Verbal Attention and Memory for Words tests. The Verbal Attention test measures short-term working memory and can sometimes be described as verbal working memory. On this task, STUDENT listened to an intermingled series of animals and numbers presented on an audio recording. She was then asked to answer a specific question regarding the sequence (i.e., “Say the animal that came before 5”). She performed in the Average range on this task. The Memory for Words test is a measure of Memory Span, which is the ability to attend to and immediately recall temporally ordered elements in the correct order after a single presentation. STUDENT was required to listen to a string of words of increasing length presented from an audio recording. She then had to repeat back the words in the same order. She performed in the Below Average range on this measure. When considering both tests administered, STUDENT’s tests were considered cohesive. Her Gsm score falls in the Below Average range, but is still within one standard deviation from the mean. Therefore, it is considered an intact ability.

*AUDITORY PROCESSING (Ga) cohesive cluster based on XBASS (SS=58)*

Auditory Processing is the ability to encode, synthesize, and discriminate auditory stimuli, including the ability to employ auditory information in task performance. Phonological Awareness measures an individual’s awareness of the sound structure in a spoken word. This includes the ability to distinguish units of sound (i.e., syllables within words, individual phonemes within consonant clusters, onset-rime units within syllables and word-length units in compound words). Children with well-developed phonological awareness learn to read more easily than do children with poorly developed phonological awareness. This ability area was measured by the Elision, Blending Words, and Phoneme Isolation subtests from the CTOPP-2.

The Elision subtest measures the ability to remove phonological segments from spoken words to form other words. On this measure, STUDENT listened to a word, repeated the word, and was then asked to say the word without a specific sound. For example, she is instructed to “say ‘bold.’” Then she is told, “Now say ‘bold’ without saying /b/,” and the answer would be “old.” On this subtest, STUDENT performed in the Well Below Average range. She did well on removing the beginning or ending sounds of simple words. She was unsuccessful when asked to remove sounds that fell in the middle of words (e.g., say “snail” without saying /n/ = sail). She would say just the beginning or end of the word while leaving out other parts from before or after it that should still be present.

The Blending Words subtest measures the ability to synthesize sounds to form words. On this subtest, STUDENT listened to a series of audio-recorded separate sounds and was then asked to put the separate sounds together to make a whole word. For example, “What do these sounds make: t-oi?” and the correct answer is “toy.” STUDENT’s performance fell in the Below Average range. As the number of isolated sounds she needed to blend together into one word increased, the more difficulty STUDENT presented.

The Phoneme Isolation subtest measures the ability to isolate individual sounds within words. On this subtest, STUDENT was first presented with words that had three sounds and he had to identify either the beginning, middle, or ending sound of the word. As the test progressed, she was presented with words that had more letter sounds and she had to identify a specific letter sound, such as the *second sound* in the word. These items become difficult because the correct answer cannot be obtained by using a spelling strategy of simply naming the sound of the second letter in the word (e.g., “Island”). STUDENT performed in the Extremely Below Average range. She presented with great difficulty isolating individual phonemes. For example, “What is the last sound in rat?” and she stated “at.”

The XBASS system was utilized to determine cohesion. When considering all subtest scores to comprise a Ga cluster score, STUDENT’s score on the Blending Words subtest was considered divergent and is not utilized when calculating her overall Ga ability score. STUDENT’s Ga score of 58 falls in the Extremely Below Average range, and is considered a normative weakness.

*PROCESSING SPEED (Gs) cohesive cluster based on WJ IV: Cog (SS=85)*

Processing Speed is the ability to quickly perform both simple and complex cognitive tasks, particularly when measured under pressure to sustain controlled and concentration. The Perceptual Speed cluster is comprised of Letter-Pattern Matching and Pair Cancellation. The Letter-Pattern Matching test is a perceptual speed task and measures the speed at which STUDENT can make visual symbol discriminations and identify common spelling patterns. On this task, STUDENT was asked to locate and circle the two identical letter patterns in a row of six patterns within a time limitation. STUDENT performed in the Average range on this test. The Pair Cancellation test is another measure of perceptual speed and measured the speed at which STUDENT could identify the same pattern of pictures (a ball followed by a dog) within rows of the same pictures and tea cups in various orders. STUDENT performed within the Below Average range on this test. Based on STUDENT’s performance on these two tests, her Gs falls within the Below Average range. It is exactly one standard deviation below the mean.

EXPLANATION OF G-VALUE

It is important to note that in order to meet the condition for a specific learning disability, the student must display at least an average overall cognitive ability. To assist in this determination, the examiner utilized the XBASS Cross-Battery Assessment Software System. The program assigns a value based on the student’s cluster score for each of the seven cognitive domains. Students that are likely to display an average overall cognitive ability would have a G-value equal or greater than .60. In STUDENT’s case, she received a G value of .26 indicating that her overall abilities are not considered average. An overall ability estimate (Facilitating Cognitive Composite-FCC) was not achieved. See Conclusions for a visual representation of cognitive functioning.

TESTING CONDITIONS/BEHAVIOR

Cognitive and achievement testing took place over the course of two days in a quiet office location. STUDENT attended the testing sessions willingly and engaged in rapport building conversations with the evaluator. She appeared comfortable in her surroundings and rapport was easily established. STUDENT appeared open and honest when talking with the examiner about her history and her current state. Following formal assessment, STUDENT has also independently reached out to the evaluator on a couple different occasions when she has been in need of support. Throughout testing, STUDENT was a polite and cooperative participant. She appeared to put forth good effort and motivation at most times. There were a few times when she started becoming fatigued. To reduce fatigue and assist with refocusing, small breaks were provided as needed to allow STUDENT to get up and move around, get a drink of water, or use the restroom. These breaks were usually provided between subtests; however, there was occasion when it was needed in the middle of a subtest. Information regarding that break is provided in the write up below of that specific test. It should be noted that it was not a timed test and was before she had been presented with any new items; therefore, although contrary to standardization, it is this examiners belief that the break did not cause the test to be invalidated. On most tests, STUDENT persisted even on difficult items, and would try to find an answer prior to stating that she did not know. It was observed that she was more likely to state "I don't know" or "skip" on the academic achievement tests than she was on the cognitive/intellectual tests. Overall, scores obtained are believed to be a reliable estimate of STUDENT's cognitive and academic abilities.

ACHIEVEMENT

WOODCOCK JOHNSON TESTS OF ACHIEVEMENT, FOURTH EDITION

Achievement testing was conducted using the Woodcock-Johnson Tests of Achievement, Fourth Edition (WJ IV: Ach). The standard scores are based on a distribution of 100 and a standard deviation of 15. Standard scores falling within the 85-115 point range are considered within normal limits (fall within an average range).

The results obtained are presented in the table below:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Woodcock Johnson Tests of Achievement, 4th Edition** | | | | |
| **Academic Skills Battery** | **Standard Score** | **Percentile**  **Rank** | **RPI** | **Description** |
| Letter Word Identification | 77 | 6 | 23/90 | Well Below Average |
| Word Attack | 89 | 24 | 74/90 | Below Average |
| ***Basic Reading Skills*** | **81** | **11** | **48/90** | **Below Average** |
| Passage Comprehension | 90 | 25 | 74/90 | Average |
| Calculation | 74 | 4 | 13/90 | Well Below Average |
| Math Facts Fluency | 84 | 14 | 38/90 | Below Average |
| ***Math Calculation*** | **78** | **7** | **24/90** | **Well Below Average** |
| Applied Problems | 91 | 27 | 72/90 | Average |
| Number Matrices | 78 | 8 | 28/90 | Well Below Average |
| ***Math Problem Solving*** | **82** | **12** | **50/90** | **Below Average** |
| Writing Samples | 97 | 42 | 87/90 | Average |

BASIC READING SKILLS

The Basic Reading Skills cluster is a combination of Letter-Word Identification and Word Attack tests and is an aggregate measure of sight vocabulary, phonics, and structural analysis that provides a measure of basic reading skills. Overall, STUDENT performed within the Below Average range on this cluster (SS=81). On these tasks, STUDENT was presented with lists of real words and nonsense words. Observations and results indicate that she had difficulty applying phoneme-grapheme relationships to sound out more difficult and unfamiliar words. She attempted to sound out more difficult words initially, but then stated “I don’t know” for several of the final items presented. She was unsuccessful on the following words: accustomed, stamina, breathes, and thoroughfare. She stated “I don’t know,” for the following words: silhouette, staunchest, millinery, heuristic, and scepter. She successfully read the following words: veteran, sphere, contrary, cologne, and ferocious. STUDENT performed in the Well Below Average range on the Letter Word Identification test. On the Word Attack test, STUDENT applied phoneme grapheme relationships to sound out nonsense words, but had more difficulty as the words became more complex and longer. She performed in the Below Average range. Results suggest that she may likely find on-grade level basic reading tasks to be difficult.

READING COMPREHENSION

Reading Comprehension cluster was measured using the Passage Comprehension test. The Passage Comprehension test measures the ability to use syntactic and semantic clues to identify a missing word in text. STUDENT was required to read a short passage and identify a key missing word that makes sense in the context of the passage. She performed in the Average range on this measure. These results suggest that STUDENT will likely find on-grade level reading comprehension tasks to be manageable.

MATH CALCULATION

The Math Calculation cluster is comprised of the Calculation and Math Facts Fluency tests. Overall, STUDENT performed in the Well Below Average range on this cluster. The Calculation test is a measure of basic mathematical computation skills. It requires the student to perform addition, subtraction, multiplication, division, and combinations of these basic operations, as well as algebraic and geometric operations. STUDENT performed in the Well Below Average range on this test. She was able to complete addition and subtraction problems with and without regrouping; however, she did make an error on one multi-number addition problem with regrouping. She also completed simple multiplication and division problems. She was not accurate in adding numbers with a decimal in which she had to add a place value to make the numbers line up. She accurately subtracted a fraction, but did not add fractions correctly. She was unsuccessful on more complicated division involving larger numbers, or with decimals. She was also inaccurate on an algebraic item asking her to solve for x in an equation. She did not try items that involved reducing a fraction, order of operations, or multiplication with a negative integer. On the Math Facts Fluency test, STUDENT was presented with simple single digit addition, subtraction, and multiplication problems. She was required to complete as many as possible within a 3-minute period. This task also required her to pay attention to the mathematical sign as it alternated between items. STUDENT performed in the Below Average range on this task. She got one of the items incorrect. These overall results suggest that STUDENT is likely to find on-grade level math calculation tasks to be difficult.

MATH PROBLEM SOLVING

The Math Problem Solving cluster is a combination of Applied Problems and Number Matrices tests and provides an aggregate measure of problem solving, analysis, and reasoning. Overall, STUDENT performed within the Below Average range on this cluster (SS=82). On the Applied Problems test, STUDENT was presented with word problems in writing as they were also orally presented. She then had to recognize the procedure to be followed, and perform relatively simple calculations. This is a measure of her ability to analyze and solve math problems. She performed in the Average range on this test. STUDENT appeared tired at the start of this task. A break was taken after the first two items were administered to allow her to get up and walk around. This helped her to refocus and then the rest of the test was administered. She accurately answered items related to probability, calculating time elapsed, median, and multi-step addition and subtraction. She was unsuccessful on identifying miles on a map in terms of inches, algebraic equation, calculating a discount, cutting a recipe in 1/3, and identifying interest costs. STUDENT stated that she was not good with fractions. STUDENT utilized the pencil and paper provided to work out the problems. She persisted and put forth good effort on items before indicating that she did not know how to solve one. On the Number Matrices test, a matrix was presented to STUDENT, and she had to identify the missing number(s). This is a measure of quantitative reasoning. STUDENT performed within the Well Below Average range on this test. She did not utilize paper and pencil to answer these problems and provided answers relatively quickly. She did not appear to put forth as much motivation and effort to this test as she did on the Applied Problems test. Results indicate that STUDENT may find on-grade level math problem solving tasks to be difficult.

WRITTEN LANGUAGE

Written Language was assessed using the Writing Samples test. On the Writing Samples test, STUDENT wrote sentences that were evaluated for their quality of expression. The difficulty of the items increased by increasing passage length, level of vocabulary, and the sophistication of the content. This is a measure of STUDENT’s skill in writing responses to a variety of demands. STUDENT performed within the Average range on this test. Results suggest that STUDENT should find on-grade level written expression tasks to be manageable.