

**See your child's potential**

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**ASSESSMENT OF COGNITIVE SKILLS**

CHILD: John B  
ADDRESS: 1, The Road  
Townsville

AGE: 10 years 8 months  
DATE OF BIRTH: 18/6/97

DATE OF ASSESSMENT: 16/2/2008  
DATE OF REPORT: 25/2/2008

ASSESSMENT BY: An Associate  
REPORT BY: A Qualified Psychologist

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## **INTRODUCTION**

*This section tells you about the assessment and the scores it produces.*

John was assessed using the Wechsler Intelligence Scale for Children – 4<sup>th</sup> Edition UK. This is a clinical assessment instrument used to assess a wide range of thinking and reasoning skills in children and adolescents aged from 6 years to nearly 17 years. It is given on a one to one basis by a psychologist who has training and experience with this particular instrument. There are four main sections of the scale giving five main scores as follows:

<b>Area of Assessment</b>	<b>Skill Sector</b>
Verbal Comprehension	Language and Verbal Reasoning
Perceptual Reasoning	Practical and Non Verbal Reasoning
Working Memory	Short Term Memory
Processing Speed	Visual Matching and Visual Motor Skills
Full Scale	Aggregated Performance on the above four skill sectors
General Ability Index	Aggregated Performance on Verbal Comprehension and Perceptual Reasoning

The *Verbal Comprehension* score records results on listening to questions and giving spoken answers. This section of the report is made up of three subtests evaluating John's skills in understanding verbal information, thinking and reasoning with words and interpreting actions that typically take place on an everyday basis – essentially explanation skills.

The *Perceptual Reasoning* results indicate performance on tasks that require practical thinking and reasoning to do with designs, pictures and puzzles that do not require the use of words to reach solutions. Some of the tasks require fast working against the clock so there are elements of both accuracy and fluency in the process of reaching a solution.

The *Working Memory* results refer to tasks involving the retention of numerical and letter information and the application of rules prior to recall. Work in this area requires short term memory, receptive attention and concentration in order to achieve success.

The *Processing Speed* Score sets out results in tasks requiring the ability to match symbols and make decisions about them according to prescribed rules - together with the facility to transfer information and make judgements at speed.

The Full Scale score is made up from a combination of the Verbal Comprehension, Perceptual Reasoning, Working Memory and Processing Speed subscales and gives an overall aggregated result.

The General Ability Index is made up of the first two scales namely Verbal Comprehension and Perceptual Reasoning only.

## Reporting of Results

*Here you can read about how to interpret and understand the results.*

The scores in the tables below demonstrate John's performance compared with a group of individual children or adolescents of the same age sampled from across the UK. On each of the scales there is a standard score computed from the results of the test. The highest possible score is 160 and the lowest possible score is 40. 50% of all those taking the test will score less than 100, and 50% will score more than a 100. An average score would be in the range from 90 to 109.

Another way of expressing the results is in the form of a percentile rank. This refers to the percentage of individuals of the same age that would be expected to score less than the subject's individual result on any of the subtests and scales. For example a percentile rank of 71 would mean that around 71% of young people taking the test would score lower than the subject.

It is important to appreciate that no psychological test is perfectly accurate as tends to be the case with a physical measurement such as length or weight. Any individual child or adolescent might score slightly higher or lower at any one time due to a number of factors such as motivation, fatigue, exuberance, confidence, determination, anxiety and poor general attention. Factors affecting performance can vary from day to day and even minute by minute with particular individuals – but compared to other similar type assessment this instrument is amongst the most accurate. Confidence limits indicate the range in which 'theoretically correct scores' can be found.

The table immediately below can be usefully applied in the process of interpreting results:

### Test Score Interpretation Guide

<b>Standard Scores</b>	<b>Scaled Scores</b>	<b>Percentile Rank</b>	<b>Rating</b>
St.Sc 130 and above	16+	Percentile 98 and Above	Exceptionally High
St.Sc in the range 120 to 129	14 to 16	Percentile 91 to Percentile 97	High
St Sc in the range 110 to 119	12 to 14	Percentile 75 to Percentile 90	High average
St.Sc in the range 90 to 109	8 to 12	Percentile 25 to Percentile 74	Average
St.Sc in the range 80 to 89	6 to 8	Percentile 9 to Percentile 24	Low average
St.Sc in the range 70 to 79	4 to 6	Percentile 3 to Percentile 8	Below average
St.Sc 69 and below	4 or less	Percentile 2 and Below	Well below average

The following tables give John's results.

**Table 1: WISC IV Test Scores (Composite)**

Scales of WISC IV UK	Standard Score Ave=90 to 110	Range of probable results allowing for errors 95% of the time	Percentile Rank Ave=25 to 75	Qualitative Range
Verbal Comprehension (VCI)	99	92-106	47	Average
Perceptual Reasoning (PRI)	110	102-117	75	High Average
Working Memory (WMI)	102	94-109	55	Average
Processing Speed (PSI)	94	86-104	34	Average
Full Scale (FSIQ)	103	98-108	58	Average

**Table 2: Subtest Scores**

**Verbal Comprehension Subtest Score Summary** (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Similarities	11	63
Vocabulary	10	50
Comprehension	9	37

**Perceptual Reasoning Subtest Score Summary** (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Block Design	12	75
Picture Concepts	13	84
Matrix Reasoning	10	50

**Working Memory Subtest Score Summary** (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Digit Span	11	63
Letter-Number Sequencing	10	50

**Processing Speed Subtest Scores Summary** (Total Raw Score to Scaled Score Conversions)

Subtests	Scaled Score	Percentile Rank
Coding (CD)	9	37
Symbol Search (SS)	9	37

John was given all 10 subtests of the Wechsler Intelligence Scale for Children -- 4th Edition (WISC IV).

## Interpretation of WISC-IV Results

*This section details John's profile*

John was administered ten subtests of the Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV) from which his composite scores are derived. The Full Scale IQ (FSIQ) is derived from a combination of ten subtest scores and is considered the most representative estimate of global intellectual functioning. John's general cognitive ability is within the Average range of intellectual functioning, as measured by the FSIQ. His overall thinking and reasoning abilities exceed those of approximately 58% of children his age (FSIQ = 103; 95% confidence interval = 98-108). He performed better on nonverbal than on verbal reasoning tasks. Such differences in performance, however, are not especially unusual among children in general.

John's verbal reasoning abilities as measured by the Verbal Comprehension Index are in the Average range and above those of approximately 47% of his peers (VCI = 99; 95% confidence interval = 92-106). The Verbal Comprehension Index is designed to measure verbal reasoning and concept formation. John performed comparably on the verbal subtests contributing to the VCI, suggesting that these verbal cognitive abilities are evenly developed.

John's nonverbal reasoning abilities as measured by the Perceptual Reasoning Index are in the High Average range and above those of approximately 75% of his peers (PRI = 110; 95% confidence interval = 102-117). The Perceptual Reasoning Index is designed to measure fluid reasoning in the perceptual domain with tasks that assess nonverbal concept formation, visual perception and organisation, simultaneous processing, visual-motor coordination, learning, and the ability to separate figure and ground in visual stimuli. John performed evenly on the perceptual reasoning subtests contributing to the PRI, suggesting that his visual-spatial reasoning and perceptual-organisational skills are similarly developed.

John's ability to sustain attention, concentrate, and exert mental control is in the Average range. He performed better than approximately 55% of his age-mates in this area (Working Memory Index = 102; 95% confidence interval 94-109).

John's ability in processing simple or routine visual material without making errors is in the Average range when compared to his peers. He performed better than approximately 34% of his peers on the processing speed tasks (Processing Speed Index = 94; 95% confidence interval 86-104).

## Personal Strengths and Weakness

*This section tells you what kinds of things your child is best at – or struggles with. Here you can see that John has a relatively even and average profile – but may be held back by some visual processing difficulties.*

Processing visual material quickly is an ability that John performs less well than his nonverbal reasoning ability. Processing speed is an indication of the rapidity with which John can mentally process simple or routine information without making errors. Because learning often involves a combination of routine information processing (such as reading) and complex information processing (such as reasoning), a relative weakness in the speed of processing routine information may make the task of comprehending novel information more time-consuming and difficult for John. Thus, this relative weakness in simple visual scanning and tracking may leave him less time and mental energy for the complex task of understanding new material. Although apparently less developed than his verbal and nonverbal reasoning abilities, John's speed of information processing abilities are still within the Average range and better than those of approximately 34% of his age-mates (Processing Speed Index = 94; 95% confidence interval 102-117).

## Conclusions from this Assessment

John is a 10-year-old child who completed the WISC-IV. His general cognitive ability, as estimated by the WISC-IV, is in the Average range. John's general verbal comprehension abilities were in the Average range (VCI = 99), and general perceptual reasoning abilities were in the High Average range (PRI = 110). John's general working memory abilities are in the Average range (WMI = 102), and general processing speed abilities in the Average range (PSI = 94). John's ability to process visual material quickly is also a weakness relative to his reasoning ability.

*You can see that John has a fairly even profile, with no subscale score more than three points away from the population average of 10. His speed of information processing may make comprehending novel information more difficult. The important thing is that he is quite capable of verbal and nonverbal reasoning – he just may need slightly more time to read or scan the information. This is something that it may be useful for his teachers to know. If John is achieving noticeably below-average results in any subject at school, it may be that further input or assessments would be advised. You can choose to book a telephone consultation if you want more individual advice on how to help your child maximise their strengths and manage any difficulties they have. We can also help you decide if further assessments are necessary.*

## **How to use this information**

This assessment should be seen in conjunction with other information before considering further action.

This assessment can be used as a basis for discussion with an educational or clinical psychologist if you choose to commission a telephone consultation. It will also be possible to discuss specific issues connected with the assessments and any concerns related to educational or other matters. It may be that additional assessments or interventions will need to be considered. Advice in relation to this can be part of the discussion.

In order to maximise the efficiency of the time available we would suggest that you formulate a list of questions for discussion. You may want to e-mail these to us once you have booked the telephone consultation.

## ***Child Potential Profiling***