Child Potential Profiling
Tel: 01273 527210
Fax: 01273 243097
info@childpotential.co.uk
www.childpotential.co.uk

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ASSESSMENT OF COGNITIVE SKILLS

CHILD:	David R
ADDRESS:	32, Sherwin Road Hornby-on-Sea
AGE:	8 years 5 months
DATE OF BIRTH:	7/10/98
DATE OF ASSESSMENT:	17/3/2007
DATE OF REPORT:	19/3/2007
ASSESSMENT BY:	An Associate
REPORT BY:	A Qualified Psychologist

THE DRIVE CLINIC
30 The Drive
Hove
BN3 3JD

INTRODUCTION

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

David was assessed using the Wechsler Intelligence Scale for Children – 4th 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 six main scores as follows:

Area of Assessment	***Skill Sector***
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 David'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 David'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

Standard Scores	***Scaled Scores***	***Percentile Rank***	***Rating***
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 David'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 time	Percentile Rank Ave=25 to 75	Qualitative Range
Verbal Comprehension (VCI)	106	**99 to 112**	66	Average
Perceptual Reasoning (PRI)	112	**103 to 119**	79	High Average
Working Memory (WMI)	86	**79 to 95**	18	Low Average
Processing Speed (PSI)	80	**73 to 91**	9	Low Average
General Ability Index (GAI)	108	**102 to 113**	70	Average
Full Scale (FSIQ)	99	**94 to 104**	47	Average

Table 2: Subtest Scores

Verbal Comprehension Subtest Scores

Subtests	Sub Test Content	Scaled Score	Percentile Rank
Similarities	Verbal concepts	13	84
Vocabulary	Word knowledge	10	50
Comprehension	Explanation skills	11	63

Perceptual Reasoning Subtest Scores

Subtests	Sub Test Content	Scaled Score	Percentile Rank
Block Design	Two-dimensional puzzle	13	84
Picture Concepts	Non verbal concepts/links	11	63
Matrix Reasoning	Figural Reasoning	12	75

Working Memory Subtest Scores

Subtests		Scaled Score	Percentile Rank
Digit Span	Short Term Memory for Digits	10	50
Letter Number Sequencing	Working Memory for Digits and Letters	5	5

Processing Speed Subtests Scores

Subtests		Scaled Score	Percentile Rank
Coding	Fast Visual Motor Skills	6	9
Symbol Search	Fast Visual Matching	7	16

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

This section details David's profile.

The Full Scale IQ (FSIQ) is obtained from the combination of 10 subtest scores and may be considered the most representative estimate of global functioning. David's general aggregated 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 47% of children his age

(FSIQ=99; 95% confidence interval= 94 to 104). He performed slightly better on non-verbal than on verbal reasoning tasks, but there is no significant meaningful difference on the basis of these results between David's ability to reason with and without the use of words.

David's verbal reasoning abilities measured by the Verbal Comprehension Index (VCI) is in the average range and above those of approximately 66% of his peers (VCI = 106; 95% confidence interval = 99 to 112). The Verbal Comprehension Index aims to measure verbal reasoning and concept formation. David's performance on the verbal subtests contributing to the VCI is variable - although it is not especially unusual. Examination of David's performance on individual subtests provides additional information regarding his specific verbal abilities.

David's non-verbal reasoning abilities as indicated by the Perceptual Reasoning Index (PRI) is in the high average range and above those of approximately 79% of his peers (PRI = 112; 95% confidence interval= 103 to 119). The Perceptual Reasoning Index is designed to measure fluid reasoning of a perceptual nature using tasks examining non-verbal concept formation, two dimensional puzzle construction and figural reasoning. David performed at similar levels on the perceptual reasoning subtests contributing to the PRI, suggesting that his visual spatial reasoning and perceptual organisational skills are generally even.

David's ability to sustain attention, concentrate, and exert mental control is in the low average range. He performed better than approximately 18% of his age mates in this area. (Working Memory Index = 86; 95% confidence interval 79 to 95).

David performed considerably better on the Digit Span subtest (Scaled Score = 10) than on the Letter-Number Sequencing subtest (Scaled Score = 5). A direct assessment of David's short-term auditory memory, performance on the Letter-Number Sequencing subtest requires attention, concentration, and mental control and can be influenced by the ability to correctly sequence information. Mental control is the ability to attend to and hold information in short-term memory while performing some operation or manipulation with it - and then to correctly produce the transformed information. This weakness may impede the process of complex information and slow new learning.

David's ability in processing simple routine visual material without making errors is in the Low Average range when compared to his peers. He performed better than approximately 9% of his peers on the processing speed tasks (Processing Speed Index PSI = 80; 95% confidence interval 73 to 91). Processing visual material quickly is an ability that David performs poorly compared to his verbal and non-verbal reasoning ability. Processing speed is an indication of the rapidity with which David can mentally process simple 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 weakness in the speed of processing routine information may make the task of comprehending novel information more time consuming and difficult for David. Thus, this weakness in simple visual scanning and

tracking may leave him less time and mental energy for the complex task of understanding new material.

Strengths in the Profile

This section tells you what kinds of things your child is best at. Here you can see that David's strengths are in verbal and visual logic.

David's best performance was among the verbal reasoning tasks with the Similarities subtest. His strong performance here was better than most youngsters of his age. This is a test that requires a response to a series of word pairs by explaining how the words of each pair are alike. The subtest examines his ability to abstract meaningful higher-order concepts and relationships when the questions are presented verbally. He achieved a result whereby around 84% of individuals of similar age taking the test would score lower than his own result.

David's result on the Block Design subtest was the strongest of the subtest scores in the non-verbal perceptual reasoning subscale. He performed better than most others in the UK of similar age. This test requires an individual to use to construct a mosaic design. It assesses non-verbal fluid reasoning and the ability to organise visual and spatial information.

The results suggest good average functioning in both the areas of verbal comprehension and perceptual reasoning that is both verbal and non-verbal skills.

Weaknesses in the Profile

This section tells you where any difficulties might lie. For example, David struggles with attention and task application.

The results in the working memory subscale are quite erratic, which may suggest some variability in attention and application to task as well as memory retention.

Results in the processing speed subscale are also relatively weak compared to other areas of the profile suggesting difficulties with fast visual and visual motor skills.

Weaknesses in the profile of this kind are often associated with specific learning and attentional difficulties.

Conclusions from this Assessment

This assessment indicates that David's general cognitive abilities are in the average range in both verbal and non-verbal skills; however, his working memory and processing speed are relative weaknesses - in the low average to below average range. It is likely that he has some difficulty sustaining concentration and completing routine tasks involving visual and visual motor skills.

You can see that David might be held back because of his difficulties with sustaining attention – even though he is good at logical reasoning. We can provide advice on how to help your child manage any difficulties they have, point you to appropriate resources such as books and websites and 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. Working memory is a complex area and we would suggest you look at some of the resources listed at the bottom before deciding on how to proceed:

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 prior to the telephone consultation.

Resources

The University of York has a specialist Centre for Working Memory and Learning and a useful website at www.york.ac.uk/res/wml. You will see a link on the left for Information for Teachers & Parents.

There is a book (authors: Gathercole and Alloway) called Working Memory and Learning: A Practical Guide for Teachers and Other Professionals if you want to see more detailed information.

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