

Interpreting Standardised Data

Raven's Standard Progressive Matrices

- *The Raven's test provides an overall index of a person's ability to perceive and think non-verbally ... it is a non-verbal intelligence test.*

The Progressive Matrices have been described as one of the purest and best measures of general intellectual functioning available. They are designed to provide a reliable estimate of a person's capacity to think clearly when allowed to work steadily and undisturbed at his or her own speed. Students cannot fake a high score but can have a bad day and get a poor score.

The test covers the whole range of intellectual development from the time a child is able to grasp the idea of finding a missing piece to complete a pattern, to the levels of ability required to form comparisons and reason by analogy. The test is extremely robust and measures the same thing in a whole range of cultural, socio-economic and ethnic groups.

Raven's scores are reported in stanines of 1-9 (see notes overleaf explaining stanines).

A differential between non-verbal potential and verbal achievement arises when people have not received or for some reason have not been able to acquire, the general command of the English language their intellectual capacity warrants.

PAT - Reading Comprehension

- *The PAT - Reading assesses students' reading comprehension skills.*

The PAT - Reading Comprehension test assesses students' ability to construct meaning from text. It test focuses on extended texts - containing at least two narrative texts, one poem, and a range of transactional texts (reports, explanations, and procedural and persuasive texts). Within each test there is a range of text types, text content, text length, text difficulty, question type, and question difficulty.

PAT - Reading Comprehension scores are reported in stanines of 1-9 (see notes overleaf explaining stanines).

PAT Mathematics

- *The PAT - Mathematics assesses students' mathematical abilities across all of the maths strands - number, algebra, geometry and measurement, and statistics & probability.*

The Mathematics faculty unpacks the information about which questions the student has answered correctly to determine whether a student is consistent across all the learning areas or has strengths and weaknesses. It allows teachers to identify which content/skill area needs most emphasis.

PAT - Mathematics scores are reported in stanines of 1-9 (see notes overleaf explaining stanines).

Science: Thinking With Evidence

- *The STWE test assesses students' ability to examine new data or information, and then analyse and use that information ... i.e. to 'think with evidence'.*

The STWE test assesses how well students use evidence to think about scientific contexts and issues. It identifies students' ability to think and their relative strengths and weaknesses with regard to using evidence in science.

The test result can be used as a measure of the student's ability to 'think with evidence'. The higher the STWE score the more sophisticated is a student's thinking in terms of evidence. Little preexisting science knowledge is required to do well in the test, because the test students' ability to assess and use new information, not repeat existing knowledge.

STWE provides a raw score between 3 and 103. Students can then be sorted into three categories based on their thinking ability (see table).

	Bottom 23%	Middle 54%	Top 23%
Year 9	3 - 47	48 - 64	65 ⁺
Year 10	3 - 51	52 - 68	70 ⁺

STWE data is broken into broad stanines as follows:

Stanine 1-3 bottom 22% of students nationally; Stanine 4-6 middle 56% of students nationally; Stanine 7-9 top 22% of students nationally.

What Do The Results Mean?

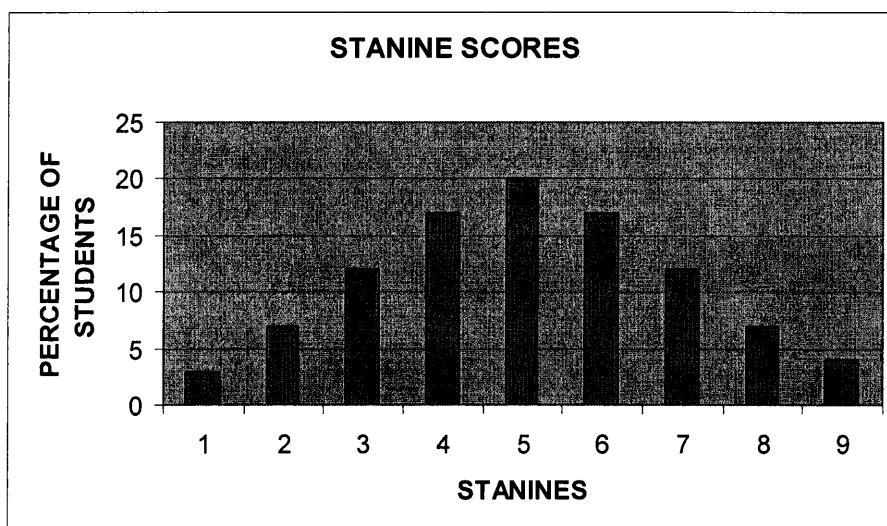
The final results for all tests are standardised against the national population, i.e. all students at the same academic age level sit the same or virtually identical test. Their scores are then ranked across the whole population.

Stanines

For Ravens and PAT tests, the final results are broken into 'stanines'. There are always nine stanines, with the highest stanine (stanine 9) representing students who demonstrate the highest ability in that test.

For example a student with a higher stanine in the PAT - Reading Comprehension test will be able to cope very well with reading and interpreting written text. Or a student with a low stanine in the PAT - Mathematics test will struggle with mathematical concepts and tasks.

Stanines are distributed across the student population as shown in the graph below:



This means that :

- Stanine 1 *students in the bottom 4%. These are typically students with learning difficulties.*
- Stanine 2 *students in 4th to 10th percentile*
- Stanine 3 *students in 11th to 22nd percentile*
- Stanine 4 *students in 23rd to 39th percentile*
- Stanine 5 *mid-range students. It represents students in the 40th-59th percentile, i.e. 20% of the population.*
- Stanine 6 *students in 60th to 76th percentile*
- Stanine 7 *students in 77th to 88th percentile*
- Stanine 8 *students in 89th to 95th percentile*
- Stanine 9 *students in the top 4% of the population. These are typically gifted students in that subject area.*