

Key Concepts in Mathematics – Subitising

If these concepts are not fully developed, students will find it very difficult to engage meaningfully with core aspects of the Number, Algebra and Functions strands in later years.

Subitising

Often referred to as *trusting the count*, subitising is the ability to instantaneously recognise the number of objects in a small group without needing to count them.

How does the concept develop?

By about **2yrs** of age children can recognise 1, 2 or 3 objects without being able to count with meaning.

By about **4 yrs** of age mental powers have developed and children can recognise groups of 4 objects without being able to count.



This skill is called **subitising** and appears to be based on the mind's ability to form stable mental images of patterns and associate them with a number.

It is thought that the maximum number for **subitising** even for most adults is 5.

So, for groups of numbers beyond 5 other mental strategies are utilised.

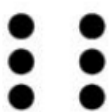
Part-Part-Whole Relationships

i.e. understanding that a number is made up of smaller parts

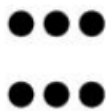
Together with

Rapid Mental Arithmetic

So, it may be possible to recognise more than 5 objects if they are arranged in a particular way.



2 rows of 3



3 rows of 2



5 and 1

What can I do to help?

Encourage Mental strategies ✓

Discourage Simply counting ✗

How?

Introduce an element of speed into tasks.

Encourage students to reflect and share their strategies.

Why?

- ❖ Verbalising brings the strategy to a conscious level and students learn about their own thinking.
 - ❖ Other students are given the opportunity to pick up a new strategy.
- ❖ The teacher is given an opportunity to assess the type of thinking so that they can adjust the teaching accordingly.