

## Strategies to help children's mathematical understanding and reasoning

What do you notice?

What is the same and what is different?

These questions can provide opportunities for children to look at and discuss different representations. Either those provided by the teacher, or perhaps examples of their own methods and representations.

Always, Sometimes, Never

For example: When you add two odd numbers, the total is odd.

*Is this statement always, sometimes or never true?*

This strategy can be used as a way to investigate different statements and encourage children to understand why something works, or why it is represented in a particular way. This particularly helps children's mathematical thinking.

Odd one out

This is a strategy where three or more examples of different representations are displayed and children are asked which one *could* be the odd one out. This encourages children to explain reasons for their choices.

POG

This is a strategy where children are asked to draw or write a 'peculiar' example of something e.g. a 'peculiar' example of a triangle. Then they are asked to draw or write an 'obvious' example. Finally, they are asked to think of a general rule about the focus e.g. that all triangles have three sides. Again, children are thinking about different representations and then explaining their reasons for choosing their particular 'peculiar' and 'obvious' examples.