

Mathematics

From Belinda Haley and Cheryl Barker, Mathematics Steering Committee

Understanding the strategies of Ann Baker's Secret Code

Rainbow Facts (rf)

'Rainbow 10' facts include any fact that adds to 10, such as $3 + 7$ or $2 + 8$. A rainbow diagram is an excellent way to identify all the number facts that make 10. Students make the facts by adding the numbers at opposite ends of each rainbow colour.

This strategy is sometimes called 'make 10' or 'addition facts to 10'. Rainbow facts can also be shown using a ten frame and using 2 different coloured dots or counters.



$$8 + 2 = 10$$

$$2 + 8 = 10$$

Rainbow 10 extensions: Make 100 and Make 1 000

In the second half of **Year 2**, the rainbow 10 facts are extended to multiples of 10. The strategy of adding multiples of 10 that equal 10 tens is called '**Make 100**'. Bundling material is useful for showing the extension.

$$\text{e.g. } 40 + 60 = 100 \text{ (4 bundles of ten and 6 bundles of ten)}$$

In **Year 3**, the strategy is extended again to include multiples of 100 (the **make 1 000** strategy).

$$\text{e.g. } 200 + 800 \text{ (2 hundreds and 8 hundreds)}$$

Students might also make generalisations about the Rainbow Facts strategy that allow them to add other 2-digit numbers mentally.

$$\text{e.g. } 43 + 67 \text{ (4 tens and 6 tens is 10 tens; 3 and 7 is 10; 10 tens and 1 more ten is 11 tens) = 110}$$

Some ideas to use at home

Memory Tens - This game is played like *Memory*. It can be played using either a normal pack of playing cards or cards with the numbers 0-10 on them. Place all the cards face down on the table in rows. Each player takes turns turning over two cards. If the two cards make a ten, the player collects the two cards. If their two cards do not make a ten, they turn them back over. When all of the cards are gone or no more matches can be made, the player that has collected the most cards wins!

Go Ten - Played in the same way as *Go Fish*, with the aim of the game being to make a ten. If a player had a card with 2 dots, he would ask his opponent, "Do you have an 8?" If the opponent has that card, they give it away, if not, they say "go ten".