Can I recall all pairs of numbers that total 20?

Teaching guidance

Key vocabulary

add, total, sum, plus, subtract, take away, difference, minus, equals, number fact, pair, number sentence, pattern

Models and images, resources and equipment
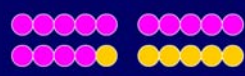

Jigsaw to make pairs to 20

$$15 + 5 = 20$$

Use counters and then the Number Facts ITP to build an image of each fact to 20 and help children see how they can use knowledge of number facts to 10

$6 + 14 = 20$

$$20 = 12 + 8 \qquad 8 + 12 = 20$$
$$20 - 8 = 12 \qquad 20 - 12 = 8$$
$$(10 + 2 + 8 = 10 + 10 = 20)$$
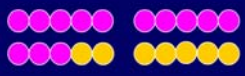
$7 + 13 = 20$

$$20 = 13 + 7 \qquad 7 + 13 = 20$$
$$20 - 7 = 13 \qquad 20 - 13 = 7$$
etc.
$$(10 + 3 + 7 = 10 + 10 = 20)$$

Slidey box cards

$$20 - \boxed{} = 7$$

Ask children to suggest the number that is hidden. The 'slider' can be moved to cover different numbers in the calculation.

Teaching tips

- Plan regular activities for children to learn, rehearse and apply number facts rather than simply testing their recall. Children will forget facts unless they are given regular and varied opportunities to recall and use them. Encourage children to say the answer as a number sentence, for example 'The total of 12 and 8 is 20', as this helps to link the question to the answer and can help them to use the full range of vocabulary associated with addition and subtraction.

- Use a variety of strategies and activities to help children to learn facts, including:
  - o kinaesthetic – for example manipulate objects, use actions;
  - o visual – use images and models such as flashcards, bead strings;
  - o oral – make up a rhyme for a difficult fact; all say the 'fact of the day' at the start and end of every teaching session;
  - o written – children can make their own flashcards;
  - o patterns – patterns can help children to learn a set of facts
    (e.g. 10 + 10 = 20, 11 + 9 = 20, 12 + 8 = 20).

- Use the Number facts ITP to show 20 counters. Highlight the last one and ask what number sentence could be written. Click on the number sentence to show this. Highlight the penultimate counter and repeat. Continue doing this in order to build up pairs to 20.

  Reset the ITP and using the subtraction option put the last counter in the pot and then show the number sentence. Continue to subtract one and explore the effect this has on the number sentence.

- Games provide a good vehicle for learning facts, for example Pelmanism (children match number fact cards that total 20).

- Use models and images to help children see how they can derive new facts from known ones. For example, help children see how knowing 8 + 2 = 10 helps you to work out that 18 + 2 = 20.

- Remind children of BOGOF (Buy One, Get Others Free), for example the fact 16 + 4 = 20 gives you three 'free' facts: 4 + 16 = 20, 20 - 16 = 4 and 20 - 4 = 16. Rehearse addition and subtraction facts together to reinforce the link.

- Ensure that children see number facts written in different ways.

  ■ + 13 = 20   20 = 19 - ★   20 = ◆ + ●