

These starter questions are part of a teaching sequence that can be found here:  
<https://wrht.org.uk/msy2>

## Mental Oral Starters

### Activity 1

*Objectives: To know by heart addition and subtraction facts for every number up to 10*

*Resources: Coat hanger with 10 pegs five in each of two colours, whiteboards*

- Show the coat hanger and remind children that it can be used to 'see' the pairs that make 10. Move pegs apart and ask children to say number sentences to match.
- Now I want you to work in pairs to write on one board all the addition number sentences that total 10. Look at the coat hanger to help you if you need to.
- After a short time, take feedback discussing  $7+3$  and  $3+7$  and showing the two forms by simply turning the coat hanger round.
- Now I want you to say some of the subtraction number sentences to me. For instance you could say 10 subtract 5 equals 5. Give me some more.
- Illustrate them on the coat hanger as they are said using a cloth to hide quantities.
- The children could be asked to record the subtraction sentences on the other whiteboard within the pairs of children. Take feedback drawing attention to when children have been systematic in their recording.
- The activity above practises pairs that make 10. The pairs that make single digit numbers can be practised in the same way using the relevant number of pegs on the hanger.

### Activity 2

*Objective: Know by heart addition and subtraction facts for ten*

*Resources: A coat hanger with five red and five blue pegs*

- Count the pegs together.
  - *How many red/blue pegs?*
  - *How many altogether?*
  - *Yes five and five are ten*
- Slide one peg away from the nine
  - *How many pegs have been taken away?*
  - *How many left?*
  - *Who can write the number sentence?*
  - *If we put the pegs together what will the number sentence be? ( $9+1=10$ )*
- Repeat with other number pairs encouraging the children to say/write the addition and subtraction number facts.
- Encourage children to know how many pegs, by if necessary, using their fingers to match what can be seen with the pegs.

### Activity 3

*Objectives: To find all pairs with a total of 20*

*Resources: 20 bead frame, class set of 3x3 Bingo cards*

3	13	11
1	8	16
5	9	2

- Have the 20 bead frame to hand to provide an image of 20 that children can refer to.
- Ask children to choose 9 numbers from 1 to 20 and to write them in their Bingo grids. Advise them to choose some that are below 10 and some that are above.
- Keep a record of the numbers you choose to say.

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- *I'm thinking of the number that you have to add to 17 to make 20.*
- If the children have that number (3) on their grid they put a line through it.
  - *I'm thinking of the number that you have to subtract from 20 to leave 5.*
- Continue until someone shouts Bingo. Then continue until a few more children can complete their card.
- Go through the questions checking the winner's answers. (That's why you have to record what you have asked!)

#### Activity 4

*Objective: Know by heart addition and subtraction facts for twenty*

*Resources: A coat hanger with five red, five blue, five yellow and five green pegs, whiteboards and pens for each child*

- Count the pegs emphasising each multiple of five.
  - *How many pegs in each colour set?*
  - *Can we count them in fives?*
  - *If we put five on one side how many will be left?*
  - *How do you know?*
  - *What is the number sentence? (20-5=15)*
- Jot the number sentence on the board.
  - *If we put the pegs together what will the number sentence be?*
- Jot this on the board (15+5=20).
- Read them both.
- Give out whiteboards and pens and divide the class in half, the adders and the takeawayers.
- Make number sentences with the pegs.
- Groups write the appropriate number sentences.
- Keep a fast lively pace.
- After five sentences check the answers. The team with the most correct answers get a team point.
- Swap roles and repeat.

#### Activity 5

*Objective: Use equal = to represent 'equality' i.e. 6+4=7+3*

*Resources: Whiteboards and pens for each pair of children*

- Write number sentences on the board, for example  
 $6 + 4 = 7 + \square$   
 $9 + 1 = 5 + \square$   
 $8 + 2 = 4 + \square$
- Ask pairs to work together to solve the number problems.
- You may need to remind them that both sides need to have the same answer, they need to equal, they need to balance.
- Give the children a short time to work these out.
- Choose pairs to explain how they solved them.
- Ask children to make up two examples of their own.
- This activity could be extended for number pairs for twenty.

#### Activity 6

*Objective: Find all pairs of multiples of ten with a total of a hundred and record corresponding addition and subtraction facts*

*Resources: Fingers*

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- Tell the children that each of their digits is going to have a value of ten.
- Count in unison raising a finger to match the count from ten to a hundred.
- Remind children how similar this is to number pairs for ten.
- You may want to write both sets on the board so that the children can see the similarities.
- Show a hundred.
- Bend down ten and say.
  - *Hundred take away ten is ninety, ninety add ten is a hundred.*
  - *Hundred take away twenty is eighty, eighty add twenty is a hundred.*
  - *Continue up to a hundred take away a hundred is zero, a hundred add zero is a hundred.*
- Now try the following and encourage the children to use their fingers.
  - *Sixty and how many make a hundred?*
  - *How did you find out?*
- Repeat for other addition and subtraction pairs for a hundred.

### Activity 7

*Objective: Imagine what action would be needed to solve a word problem and decide what calculation would be necessary (+ or -)*

*Resources: Fingers*

- Ask children to put their hands behind their backs.
- Explain that you will be telling them a number story.
- You will need them to show the answer with their fingers.
  - *Eight birds are perched on the branch of a tree.*
  - *A dog comes along and barks and five fly away (3).*
  - *When the dog goes away three birds fly back onto the branch.*
  - *How many birds on the branch? (6)*
  - *How did you solve the first part of the story?*
  - *Who can write the first number sentence? (8-5=3)*
  - *What was the second number sentence? (3+3=6)*
- Try other addition and subtraction number stories and sentences.