Year 3: Autumn term 2

Topics studied this half term:

- Addition and subtraction
- Multiplication and division

Within addition and subtraction, your children will be learning to:

- Add two 3-digit numbers – not crossing 10 or 100
- Add two 3-digit numbers – crossing 10 or 100
- Subtract a 3-digit number from a 3-digit number – no exchange
- Subtract a 3-digit number from a 3-digit number – exchange
- Estimate answers to calculations
- Check their answers

Within multiplication and division, your children will be learning to:

- Multiply using equal groups
- Multiply and divide by 3, 4 and 8
- Recite the 3, 4 and 8 times tables

Tips for good homework habits:

Choose a quiet place to work, preferably sitting at a table, where your child can work comfortably without being disturbed.

Addition

HERE'S THE MATHS

Adding ones, tens and hundreds to a 3-digit number means answering calculations similar to: 234 + 7, 234 + 70 and 234 + 700; and missing number calculations 234 + ☐ = 241, 234 + ☐ = 304 and 234 + ☐ = 934. This involves using and applying knowledge of number bonds to 20. An empty number line is a useful model to help your child record their thinking, especially in examples where the tens or hundreds boundary is crossed.

ACTIVITY

231	457	989
845	502	673
326	718	164

You will need:

- set of cards with digits 1–9
- pencil and paper

What to do

- Choose one of the 1–9 cards. Do not put it back in the set.
- Take turns to add the chosen single digit number to each of the 3-digit numbers on the grid.
- Discuss which answers have crossed the tens boundary.
- Choose a different card and repeat.
- Play for 10 minutes at a time.

QUESTIONS TO ASK

What happens to the tens digit when you add 4 to 135?

What happens to the tens digit when you add 8 to 135?

Add 7 to each number in the top row of the grid.

Add 60 to each number in the middle row of the grid.

Add 200 to each number in bottom row of the grid.

Subtraction

HERE'S THE MATHS

Subtracting ones, tens and hundreds from a 3-digit number means answering calculations similar to: 612 − 5, 612 − 50 and 612 − 500 and missing number calculations 612 − ☐ = 607, 612 − ☐ = 562 and 612 − ☐ = 112. This involves using and applying knowledge of number bonds to 20. An empty number line is a useful model to help your child record their thinking, especially in examples where the tens or hundreds boundary is crossed.

ACTIVITY

What to do

- Choose three different cards from the 1–9 set and write a list of all the possible 3-digit numbers.
- Return the cards to the pack and choose a single card.
- Take turns to subtract the chosen single digit number from each of the 3-digit numbers.
- Choose different cards and repeat.
- Play for 10 minutes at a time.

You will need:

- set of cards with digits 1–9
- pencil and paper

Variation

- Give the single card a value ten times its face value and subtract that, e.g. if you pick a 4, subtract 40.

QUESTIONS TO ASK

Which number is written first in a subtraction calculation? Why?

What is 537 − 40? Explain how you calculated the answer.

What must you subtract from 482 to leave zero in the tens column?

Multiplication and division

HERE'S THE MATHS

Your child needs to learn the key facts of the 4 times table: 1 × 4 = 4, 2 × 4 = 8, 5 × 4 = 20 and 10 × 4 = 40. From these they can deduce missing ones e.g. 4 × 5 = 20, therefore 4 × 6 is 20 plus 4, making 24. Because multiplication and division are reversible, one fact provides three further facts e.g. 4 × 9 = 36, 9 × 4 = 36, 36 ÷ 4 = 9 and 36 ÷ 9 = 4. Another way to calculate the 4 times table is to double the 2 times table, e.g. 2 × 3 = 6 so 4 × 3 is double that answer, i.e. 12.

ACTIVITY

What to do

- With your child, write the numbers in the 4 times table on the cards from 4 to 48.
- Put them in the container and take turns to choose a card and say four multiplication and division facts for the number that use the 4 times table, e.g. for 28, 4 × 7 = 28, 7 × 4 = 28, 28 ÷ 4 = 7 and 28 ÷ 7 = 4.
- If further practise is required, put the card back so that it can be chosen again.
- Keep the cards so that the activity can be played again. (This activity can be adapted to use for any times table.)

You will need:

- 12 small squares of card and a container
- pen

Variations

- When your child is confident with the 4 times table, play 'How many 4s in . . . ?' against the clock. Start the timer. Take out a card, e.g. 20, and ask, 'How many 4s in 20?' As soon as your child answers 5, draw out the next card. Make sure that you take your turn at answering too!
- Make a new set of cards for the 40 times table to use in the activities.

QUESTIONS TO ASK

Why are all the numbers in the 4 times table even?

How many 4s in . . . ?

What is 4 × 9?

Count backwards in 4s from 48.

Count in 4s starting at 2. (Choose different starting numbers.)

Multiplication and division

HERE'S THE MATHS

The lesson focuses on introducing the 8 times table. Your child needs to learn the key facts: 1 × 8 = 8, 2 × 8 = 16, 5 × 8 = 40 and 10 × 8 = 80 and use these to deduce missing ones. Also, because 8 = 4 × 2, you can find eight times a number by doubling the answer for the 4 times table, e.g. to find 8 × 6, 4 × 6 = 24, double 24 is 48, so 8 × 6 = 48.

ACTIVITY

48	64	28	88
40	24	56	42
56	16	34	96
24	60	88	72
32	64	78	24
16	40	96	30

You will need:
- pencil and paper

What to do

- Explain to your child that in each row one number is not in the 8 times table.
- Cover all except the first row and ask them to identify which one is not in the 8 times table.
- Take turns to spot the rogue number in each row.
- Now design new grids for each other to try.
- Discuss how to choose numbers that make it tricky to spot the 'wrong' number.

QUESTIONS TO ASK