Year 4: Spring term 1

Topics studied this half term:

- Area
- Fractions

Within area, your children will be learning to:

- Understand what area is
- Calculate area by counting squares
- Make shapes with different areas
- Compare area

Within fractions, your children will be learning to:

- Find equivalent fractions
- Use fractions greater than 1
- Count in fractions
- Add 2 or more fractions
- Subtract 2 fractions
- Subtract fractions from whole amounts
- Calculate fractions of a quantity
- Solve problems involving calculating quantities

Tips for good homework habits:

Turn off the TV while your child is doing homework.

Area

HERE'S THE MATHS

Your child is learning to measure the perimeter of rectangles and squares in centimetres and metres. They are introduced to the rule P = 2(a + b) where P is the perimeter and a and b are the lengths of the sides. The concept of area is introduced by counting squares, leading on to multiplying the number of squares in a row by the number of columns.

ACTIVITY

1 12 cm	2 36 cm	3 100 cm
4 48 cm	5 60 cm	6 24 cm

You will need:

- 1–6 dice
- pencil and paper

What to do

- The grid shows different perimeters of rectangles.
- Roll the dice to decide which perimeter to investigate.
- Both sketch as many different rectangles for that perimeter as possible.
- Compare sketches.
- Roll the dice to try another perimeter.
- Play for 10 minutes.

Variation

- Find the area of the different rectangles.

QUESTIONS TO ASK

What is the perimeter of a 6 cm square?

The perimeter of a rectangle is 36 m and the length equals twice the width. What is the length and width?

Explain the rule P = 2(a + b).

Fencing costs £10 per metre. How much does it cost to fence a 20 m square?

What is area? How is it measured?

Fractions

HERE'S THE MATHS

Your child is learning how to find a non-unit fraction by dividing by the denominator and multiplying by the numerator, e.g. to find $\frac{3}{4}$ of 28, divide by 4 to find a quarter, which is 7. Then multiply 7 by 3 to find $\frac{3}{4}$. Your child is also developing their understanding of equivalent fractions, for example $\frac{2}{4} = \frac{1}{2}$.

ACTIVITY

1 Eighths of 40	2 Tenths of 80	3 Eighths of 80
4 Tenths of 100	5 Eighths of 64	6 Tenths of 50

You will need:
- 1–6 dice
- pencil and paper

What to do
- Take turns to roll the dice and use the table above to determine the denominator and the amount.
- Roll the dice again to determine the numerator and the result of the calculation is the score.
- For example, first dice rolled is 5, second dice rolled is 3. Find $\frac{3}{8}$ of 64, which is 24 and becomes the score.
- Play for 5 minutes.
- The winner has the higher score.

Variations
- First player to reach 100 is the winner.
- Make the grid easier (use halves and quarters).

QUESTIONS TO ASK

Explain how to find $\frac{3}{5}$ of £20.

What is $\frac{3}{4}$ of 100?

Add $\frac{1}{8} + \frac{5}{8}$

What is $\frac{7}{10} - \frac{3}{10}$?

How many tenths must be added to $\frac{3}{10}$ to make one whole?

Fractions

HERE'S THE MATHS

Your child is learning about hundredths – two places of decimals. They count on in hundredths from any hundredths fraction. They can divide an amount by 100 to find $\frac{1}{100}$ and multiply by the numerator to find a non-unit number of hundredths, e.g. find $\frac{6}{100}$ of 200: $\frac{1}{100}$ is 2, 6 × 2 = 12.

ACTIVITY

Grid 1: finding hundredths

1 100	2 700	3 500
4 900	5 200	6 300
7 400	8 600	9 800

Grid 2: finding tenths

1 70	2 220	3 350
4 40	5 550	6 250
7 120	8 20	9 80

You will need:
- 1–6 dice
- 1–9 cards

What to do
- Choose whether to work on hundredths or tenths.
- Pick a card to decide which number on the grid to use.
- Put the card back in the pile and shuffle the pack.
- Pick a second card to be the numerator.
- Both work out the value of the non-unit fraction, e.g. working on hundredths, first card is 6, use the number 300. Second roll is 9. Find $\frac{9}{100}$ of 300 = 27.
- Check each other's answers and continue for 10 minutes.

QUESTIONS TO ASK

How do you find $\frac{4}{5}$ of an amount?

What is a tenth of 2680?

What is a hundredth of 7600?