Year 5: Spring term 2

Topics studied this half term:

- Decimals & percentages
- Decimals

Within decimals and percentages, your children will be learning to:

- Read and write decimals up to 2 d.p.
- Write decimals as fractions
- Understand thousandths
- Write thousandths as decimals
- Round decimals
- Order and compare decimals
- Understand percentages
- Write percentages as fractions and decimals
- Find equivalent fractions, decimals and percentages

Decimals

- Add decimals within 1
- Subtract decimals within 1
- Find complements to 1
- Add decimals – crossing the whole
- Add decimals with the same number of decimal places
- Subtract decimals with the same number of decimal places
- Add decimals with a different number of decimal places
- Subtract decimals with a different number of decimal places
- Add and subtract wholes and decimals
- Write decimal sequences
- Multiply decimals by 10, 100 and 1000
- Divide decimals by 10, 100 and 1000

Tips for good homework habits:

Take a break before your child gets bored or overwhelmed.

Decimals

HERE'S THE MATHS

The focus is on adding and subtracting decimals with a different number of decimal places. When using formal written methods, your child needs to set out the calculation so that digits of the same place value are correctly aligned underneath one another. This becomes second nature once their understanding of place value is firmly embedded.

ACTIVITY

What to do

- Choose 4 digits and use them to write a whole number, a number with 1 decimal place, a number with 2 decimal places and a number with 3 decimal places.
- Challenge one another to make numbers which, when added, give the smallest (or largest) possible total.
- Compare answers.
- Repeat with new digits.
- Continue for 10 minutes.

You will need:

- pencil and paper

Variation

- Set a new challenge to get as close as possible to a particular whole number, e.g. 5000.

QUESTIONS TO ASK

What is the value of 9 in 2·439?

What has to be added to 0·72 to make 1?

What is 1 − 0·43?

What is the total of 3·7 + 11 + 1·28?

What is 23·38 rounded to one decimal place?

Percentages (including fractions and decimals)

HERE'S THE MATHS

The focus is on percentages. Your child needs to understand that 'per cent' is 'number of parts per hundred' and to recognise percentage equivalents of fractions. The most important equivalents to know are $\frac{1}{4}$, $\frac{1}{2}$ and $\frac{3}{4}$, then tenths and, if possible, twentieths.

ACTIVITY

Percentages

5%	90%	40%	80%	30%
95%	10%	100%	45%	70%
60%	20%	15%	65%	85%
35%	75%	55%	25%	50%

You will need:
- 20 counters or coins
- timer (or phone with timer)

Fractions answers

$\frac{1}{20}$	$\frac{9}{10}$	$\frac{2}{5}$	$\frac{4}{5}$	$\frac{3}{10}$
$\frac{19}{20}$	$\frac{1}{10}$	1	$\frac{9}{20}$	$\frac{7}{10}$
$\frac{3}{5}$	$\frac{1}{5}$	$\frac{3}{20}$	$\frac{13}{20}$	$\frac{17}{20}$
$\frac{7}{20}$	$\frac{3}{4}$	$\frac{11}{20}$	$\frac{1}{4}$	$\frac{1}{2}$

What to do
- Cover the fraction grid.
- Take turns to choose one of the squares and change the percentage into the simplest fraction.
- Time how long it takes to complete the grid and try to improve your time.

QUESTIONS TO ASK

What does 'per cent' mean?

What is 0·57 as a percentage?

Change 35% to a fraction.

Percentages (including fractions and decimals)

HERE'S THE MATHS

The focus is on handling percentages. Your child is learning the percentage and decimal equivalents of fractions and how to solve problems involving percentages. They calculate percentages of numbers and amounts. To find 70% of a quantity, first find 10% ($\frac{1}{10}$) and then multiply the answer by 7.

ACTIVITY

SALE REDUCTION	1 5%	2 10%	3 20%	4 25%	5 40%	6 50%

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

ITEM	Beanie hat £20	Rucksack £80	Fleece jacket £60	Jeans £40	Trainers £100	T-shirt £30

What to do
- You each have £200 and have to try to buy one of every item.
- Take turns to roll the dice to see the sale discount offered.
- Decide what to buy, calculate the cost and take the amount away from £200.
- If you don't have enough money to buy the items you still need, you miss that go.
- The winner is the first person to have bought one of each item.

Variation
- Make a new grid of items to buy and use reductions of 10%, 25%, 30%, 50% and 75%.

QUESTIONS TO ASK

The answer is 5% – what is the question?

The answer is 65% – what is the question?

The answer is 100% – what is the question?

The answer is 0·4 – what is the question?

The answer is $\frac{32}{100}$ – what is the question?