Measurement (length)

HERE'S THE MATHS

Your child is carrying out practical measurement of lengths this week, gaining confidence in using the metric units of length and converting from one unit to another. They know the imperial unit, the inch, and its rough metric equivalent in centimetres: 1 inch ≈ 2·5 cm.

ACTIVITY

What to do
- One person turns over a card and converts this number of inches to centimetres, e.g. Queen, 12 inches = 30 cm.
- Find something that you estimate is this length.
- The other person uses the ruler or tape measure to check that it is reasonably close in length – agree an acceptable error margin.
- Change roles and repeat.
- Continue for 10 minutes.

Variation
- Use the cards to estimate lengths in metres (you would probably need to do this outside).

Useful to know:
- 1 inch ≈ 2.5 cm

You will need:
- cm ruler or tape measure
- pencil and rubber
- pack of cards, Jack represents 11, Queen 12 and King 13

QUESTIONS TO ASK

Change 207 cm to metres.

What is 2340 m in kilometres?

Change 1·6 m to centimetres.

How do you change centimetres to inches?

Use your finger and thumb to show me the approximate size of 1 inch.

Date: _____   **Name:** _____

MATHS TOPICS

These are the maths topics your child will be working on during the next three weeks:
- Multiplication and division
- Fractions
- Measurement (length)

KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:
- use the formal written method of short division to calculate HTO ÷ O, expressing the remainder as a number, a fraction or a decimal
- identify thousandths and relate them to tenths and hundredths
- know the imperial unit 'inch' and the rough metric equivalent in centimetres.

TIPS FOR GOOD HOMEWORK HABITS

Always take a break before your child gets bored or overwhelmed.

Multiplication and division

The focus this week is on division. Your child is learning to use a variety of strategies to divide, including the formal written method of short division to calculate HTO ÷ O. Until this year, the division calculations that your child met divided exactly without a remainder. Now, they are learning to express the remainder as a number, a fraction or a decimal and also to appreciate that sometimes the answer to a division problem needs rounding up and at other times it needs rounding down. For a question such as how many full packets there are, round down. If it asks how many cars are required to take everyone, round up – the final car will be part full.

ACTIVITY

What to do
- Each person turns over 3 red cards and writes the six possible 3-digit numbers.
- Turn over a black card. This will be the divisor (the number you divide by).
- Divide each number and note down the remainder.
- Add the remainders.
- You may like to check the division calculations on a calculator.
- The winner has the smaller number.

You will need:
- set of cards from 1–9 (e.g. from a red suit of cards)
- set of cards from 2–12 (e.g. from a black suit of cards)
- calculator (optional)

Variation
- Begin as previously, but this time, predict the remainder. Work out the calculation and if you are correct, score a point. (At this stage, your child should be able to predict remainders when dividing by 2, 5 and 10. They will probably need to guess when dividing by other numbers, though you may know some rules.)

QUESTIONS TO ASK

What is the largest possible remainder when you are dividing by 4?

50 people want to hire rowing boats. A maximum of 6 people can go in each boat. How many boats will be needed?

Give another example of when you need to round up the answer to a division problem.

Muffins are sold in packs of 6. A baker makes 50. How full packets are there?

Give another example of when you need to round down the answer to a division problem.

Fractions

This week your child will be introduced to thousandths – decimals with three decimal places. They are learning that $0 \cdot 4$, $\frac{4}{10}$, is the same as $0 \cdot 40$, $\frac{40}{100}$ and the same as $0 \cdot 400$, $\frac{400}{1000}$.

ACTIVITY

What to do
- Turn over three cards, e.g. 3, 7 and Jack.
- Make all the possible thousandths from these numbers, i.e. $\frac{37}{1000}$, $\frac{73}{1000}$, $\frac{307}{1000}$, $\frac{307}{1000}$, $\frac{730}{1000}$, $\frac{730}{1000}$.
- Convert them into decimal form and order them, i.e. $0 \cdot 037$, $0 \cdot 073$, $0 \cdot 307$, $0 \cdot 370$, $0 \cdot 703$, $0 \cdot 730$.
- Repeat with new cards.
- Continue for 10 minutes.

You will need:
- pack of playing cards with the 10s removed (picture cards represent zero)

Variation
- Have three cards each and make the largest decimal number. The person with the larger number scores a point. Repeat 10 times. The person with the higher score is the winner.

QUESTIONS TO ASK

How do you write $\frac{1}{1000}$ as a decimal?

What is $0 \cdot 789$ as a fraction?

What is $\frac{1}{3} + \frac{1}{4}$?

How do you find the answer to $\frac{2}{3} - \frac{1}{6}$?

What is $\frac{13}{1000}$ as a decimal?