

# Measurement of length

## HERE'S THE MATHS

Length is measured in metres, centimetres and millimetres.  $1\text{ m} = 100\text{ cm}$  and  $1\text{ cm} = 10\text{ mm}$ . Using millimetres allows accurate measurement. Your child needs lots of practise estimating lengths and using a ruler. Make sure that they start measuring at the correct place on the ruler where the scale begins and not right at the end.

## ACTIVITY

### What to do

- Both of you draw widely spaced lines of lengths 1 cm (10 mm), 4 cm (40 mm), 10 cm (100 mm) and 16 cm (160 mm) as accurately as possible.
- In two minutes, each find four real objects (e.g. toys or objects from the kitchen) that are as close as possible to these lengths, using the lines to test.
- Carefully measure the lengths of the real objects to the nearest mm and calculate the difference between the drawn length and the actual length, e.g. a glasses case has a length of 16 cm 4 mm; that is 4 mm bigger than 16 cm.
- Add up the differences for all four objects. The winner is the person with the smallest sum.

### You will need:

- ruler with mm marked
- paper and pencil

### Variation

- Repeat using different lengths using objects from another room.

## QUESTIONS TO ASK

Use your hands to estimate 15 cm. Check with a ruler.

Hold up an object, e.g. a book, and ask your child to estimate the height and width to the nearest centimetre. Use a ruler to check.

Change 5 cm to mm.

Change 120 mm to cm.

- Ask more questions like these and ask your child to make up questions to ask you.



# Year 3 Maths Newsletter 6



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 of length

## KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:

- recall and use multiplication and division facts, including halving, for the 4 and 8 times tables
- recognise and use unit and non-unit fractions with small denominators
- measure, compare, add and subtract lengths, using metres, centimetres and millimetres.

## TIPS FOR GOOD HOMEWORK HABITS

Take a break before your child gets bored or overwhelmed.

# Multiplication and division

## HERE'S THE MATHS

Doubling and halving are strategies with which your child is familiar.  $4 = 2 \times 2$ , so to divide by 4, you can halve a number and halve it again, e.g. to divide 28 by 4, halve it to give 14, then halve it again to give the answer 7, so  $28 \div 4 = 7$ .

Because  $8 = 2 \times 2 \times 2$ , to divide by 8, you can halve a number, halve the answer and halve it again to give the final answer, e.g. to divide 48 by 8, halve it to give 24, halve it again to give 12 and halve it again to give the answer 6, so  $48 \div 8 = 6$ .

## ACTIVITY

24	88	64	800	80
32	48	96	72	400
200	8	40	56	16

### You will need:

- 15 counters or coins to cover the numbers

### What to do

Note: You can redraw this table on a larger piece of paper.

- Ask your child to choose a number and tell you how to divide it by 4, using halving, e.g. your child chooses 16, and says 'half of 16 is 8 and half of 8 is 4 so 16 divided by 4 is 4'.
- If they are correct, they cover the number.
- Now it is your turn to choose a number.
- Repeat until all the numbers are covered.

### Variation

- Play the game as before but divide the numbers by 8, again using halving, e.g. half of 64 is 32, half of 32 is 16, half of 16 is 8, so 64 divided by 8 is 8.

## QUESTIONS TO ASK

Start at 24 (48, 96) and count backwards in 2s (4s, 8s).

What numbers are in both the 2 times and 4 times table? Is there a pattern?

What numbers are in both the 4 times and 8 times table? Is there a pattern?

What numbers are in both the 4 times and 5 times table?

# Fractions

## HERE'S THE MATHS

Your child is learning to find unit and non-unit fractions of quantities and numbers using diagrams and apparatus. They understand what the numerator and denominator represent and can order fractions with the same denominator, e.g.  $\frac{2}{5}$  is less than  $\frac{3}{5}$ .

They know that when the numerator is the same as the denominator, the value is 1, e.g.  $\frac{5}{5} = 1$ . They understand that to find  $\frac{1}{4}$  of a set of objects, you divide the number by 4.

## ACTIVITY

Fraction trains!		

### What to do

- Ask your child to choose two colours to colour the first train.
- You write the fractions that describe the train, e.g. if 4 of the six carriages are blue and 2 are green, it is  $\frac{4}{6}$  blue and  $\frac{2}{6}$  green.
- Change roles and complete the grid.

### Variation

- Use three colours for the train.
- Draw more trains

### You will need

- coloured pencils

## QUESTIONS TO ASK

How do I find  $\frac{1}{2}$  ( $\frac{1}{4}$ ,  $\frac{1}{5}$ ) of 40 objects? Explain.

How many eighths do I need to add to  $\frac{5}{8}$  to make a whole?

What is  $\frac{3}{4}$  of 12?

What does  $\frac{2}{5} + \frac{3}{5}$  equal?

Which is bigger,  $\frac{1}{3}$  or  $\frac{1}{8}$ ?