

# Measurement of mass



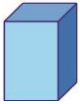


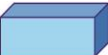


## HERE'S THE MATHS

Mass is measured in kilograms (kg) and grams (g): 1 kg = 1000 g. The mass of an object never changes; weight is a measure of the pull of gravity on an object's mass. On the earth, gravity is fixed, so that although mass and weight are not the same, in everyday language we interchange them. It is helpful to practise using kitchen scales.

Your child is learning to change masses from kg to g and vice versa, e.g.  $2\frac{3}{4}$  kg = 2000 g + 750 g = 2750 g, and to use their knowledge of number to add and subtract masses.

## ACTIVITY

### What to do

1	2	3	4	5	6	7	8
							
Mass =							

- Ask your child if the biggest parcel will be the heaviest? Discuss their answer.
- Take turns to roll the dice and pick one piece of paper to decide the mass of parcel 1 e.g. if a 3 is rolled and  $\frac{1}{2}$  kg pulled out of the bag, the mass of parcel 1 is  $3\frac{1}{2}$  kg. Repeat for the other parcels and complete masses of the parcels.
- Use the parcels to ask your child questions similar to those below.

### You will need:

- 1–6 dice
- a small bag with 4 small pieces of paper marked  $0$ ,  $\frac{1}{4}$  kg,  $\frac{1}{2}$  kg and  $\frac{3}{4}$  kg

### Variation

- Replace the pieces of paper with ten pieces marked 0, 100 g, 200 g up to 900 g to give masses such as 4 kg 400 g. Ask similar questions.

## QUESTIONS TO ASK

What is the total mass of parcels 3 and 6?

What is the mass of parcel 5 in grams?

Which parcel has the greatest mass? Which parcel has the smallest mass?



# Year 3 Maths Newsletter 2



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 mass

## KEY MATHEMATICAL IDEAS

During these three weeks your child will be learning to:

- recall and use multiplication and division facts for 2, 3, 5 and 10 times tables
- recognise, find and write fractions of a set of objects with small denominators, e.g.  $\frac{1}{4}$  and solve problems involving fractions
- measure, compare, add and subtract mass using kilograms and grams.

## TIPS FOR GOOD HOMEWORK HABITS

Help your child to read any instructions and discuss the homework before they start, ensuring that they fully understand the task.

# Multiplication and division

## HERE'S THE MATHS

The week focuses on multiplication and division facts, revisiting the 2, 5 and 10 times tables and introducing the 3 times table. Your child needs to learn the key facts:  $1 \times 3 = 3$ ,  $2 \times 3 = 6$ ,  $5 \times 3 = 15$  and  $10 \times 3 = 30$ . From these they can deduce missing ones e.g.  $3 \times 10 = 30$ , therefore  $3 \times 9$  is 30 minus 3, making 27. Because multiplication and division are reversible, one fact provides three further facts e.g.  $3 \times 7 = 21$ , so  $7 \times 3 = 21$ ,  $21 \div 3 = 7$  and  $21 \div 7 = 3$ .

## ACTIVITY

### What to do

9	21	24	12	6
18	30	15	3	27

- Cover the numbers in the table with counters or coins.
- Take turns to choose a number to uncover and say four multiplication and division facts for the number that use the 3 times table e.g. for 27:  $3 \times 9 = 27$ ,  $9 \times 3 = 27$ ,  $27 \div 3 = 9$  and  $27 \div 9 = 3$ .
- If further practice is required, put the counter back so that it can be chosen again.

### Variation

- Number the squares 1–10. Put paper slips 1–10 in a bag and pick a number from the bag.
- Allow the use of other tables, e.g. 12 also has facts from the 2 times table:  $2 \times 6 = 12$ ,  $6 \times 2 = 12$ ,  $12 \div 2 = 6$  and  $12 \div 6 = 2$ .

### You will need:

- 10 counters or coins to cover the numbers
- for the variation, paper slips numbered 1–10 in a bag

## QUESTIONS TO ASK

I am thinking of the number that is  $3 \times 4$ . Point to the number in the table.

What is  $3 \times 5$ ? How can I work out  $3 \times 6$  using this fact?

How many threes are there in 24? Explain how you worked it out.

Starting at 2, count in fives to 52. (Use different starting numbers. Count backwards.)

What is  $3 \times 10$ ? Can you make up a word problem for this number sentence?

# Fractions

## HERE'S THE MATHS

Studying fractions involves some specific vocabulary and your child will find the topic easier if they learn and understand these words. The **denominator** is the number of equal groups something has been divided into. The **numerator** is the number of groups chosen. A **unit fraction** is one part of the whole, e.g.  $\frac{1}{4}$ . **Non-unit fractions** have more than one part of the whole, e.g.  $\frac{3}{4}$ . When the numerator and denominator are the same, the fraction is equal to one, e.g.  $\frac{4}{4} = 1$ ,  $\frac{5}{5} = 1$ .

## ACTIVITY

### What to do

$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{4}$
$\frac{1}{5}$	$\frac{1}{8}$	$\frac{1}{10}$

### You will need:

- timer (or phone with timer)
- pencil and paper

- Take turns to choose a fraction from the grid.
- Using the timer, draw the fraction in as many ways as possible in a given time, colouring the unit fraction, e.g. for  $\frac{1}{4}$ , colour  $\frac{1}{4}$  of a circle,  $\frac{1}{4}$  of a square,  $\frac{1}{4}$  of a rectangle, 4 objects with 1 coloured, 8 objects with 2 coloured, etc.
- Discuss each other's drawings. Make sure your child is clear that fractions must be equal parts.

### Variation

- Introduce more fractions, e.g. sixths.

## QUESTIONS TO ASK

How can you find the denominator of a fraction?

What does the numerator of a fraction show?

Which is bigger,  $\frac{1}{2}$  or  $\frac{1}{4}$ ? Explain why.

How many fifths make one whole?

Add together  $\frac{1}{5} + \frac{3}{5}$ .