

# Lesson 172 • Kilograms and grams

## Learning objectives

Children will:

- read scales with measurements in kg and g.
- use operations to solve mass problems.

## Australian Curriculum Content Descriptions

### Measurement and Geometry

*Using units of measurement*

**ACMMG061** Measure, order and compare objects using familiar metric units of length, mass and capacity; recognise the importance of using common units of measurement; recognise and use centimetres and metres, grams and kilograms, and millilitres and litres.

### Key vocabulary

kilograms, kg, mass, grams, g, kilos, weigh, estimate, thermometer, millilitres, co-ordinates

### Extra assistance

When introducing kilograms and grams, relate the units to ordinary objects and give students a chance to heft them and get a feel for the weights. A paperclip is about 1 gram. A pencil is about 10 g. A bar of soap is around 100 g. A bag of five apples is about 500 g. A litre bottle of water weighs about 1 kilogram. Ask them to identify things that are more than, less than or equal to one of these items in weight, and heft them, then weigh them to see if they are right.

## Worksheet answers

### Worksheet 1

- 1 a 1 kg b 5 kg c 2 kg  
d 80 kg e 11 kg f 15 kg  
2 a 4 b 2 c 3  
d 5 e 1

### Worksheet 2

- 1 a 250 g b 500 g c 750 g  
d 700 g e 50 g f 900 g  
2 a 4 b 1 c 3  
d 5 e 2

### Worksheet 3

- 1 a 150 g b 3 kg c 750 g  
d 1 kg e 300 g f 4.5 kg  
2 a 7.5 kg b 3.15 kg c 8.25 kg  
d 4.15 kg e 4.45 kg f 9.7 kg

### Worksheet 4

- 1  $5 \times 4 = 20$  kg  
2  $900 + 3000 = 3900$  g = 3.9 kg  
3  $2 \times 2.5 = 5$  kg  
4  $10 \times 500 = 5000$  g = 5 kg  
5  $3 \times 300 = 900$  g = 0.9 kg  
6  $500 + 3000 + 2500 = 6000$  g = 6 kg

Mathseeds Lesson sequence	TEACH Content and skills	PRACTISE Children will:	APPLY
<i>Animated Lesson:</i> Measuring mass	Introduce the measurement units kilograms and grams. Use a scale to measure mass. Solve mass word problems.	read scales measuring mass in kg or g. Use operations to find the answers to mass problems.	<b>Worksheet 1</b> Kilograms
<i>Informal mass:</i> Light, Heavy, Heaviest, What Does It Weigh?, Pebble Mass	Estimate the mass of common objects. Balance the scales.	order items from lightest to heaviest. Choose the best mass estimate. Use pebbles to balance the scales.	<b>Worksheet 2</b> Grams
<i>Mass units:</i> Balance the Scales, Pet Store, Fish Market	Balance the scales. Read masses written in kg, g and a mixture of both. Read masses written in grams.	add weights to balance the scales. Order the pets by mass from heaviest to lightest. Make the scale match the mass given.	<b>Worksheet 3</b> Mass
<i>Other measurements:</i> Thermometers, Water mLs, Read the Map	Read a thermometer. Read mL measurements on a jug. Use co-ordinates to identify a square on a grid map.	choose the temperature shown. Select the amount of liquid shown in millilitres. Select the item at the given co-ordinates.	<b>Worksheet 4</b> Word problems
<i>End of Lesson Quiz</i>	Test understanding of lesson content and skills.	complete a 10 question quiz to earn a reward game.	<i>Reward game:</i> Monster Mayhem

Name \_\_\_\_\_



= 50 kg



= 10 kg

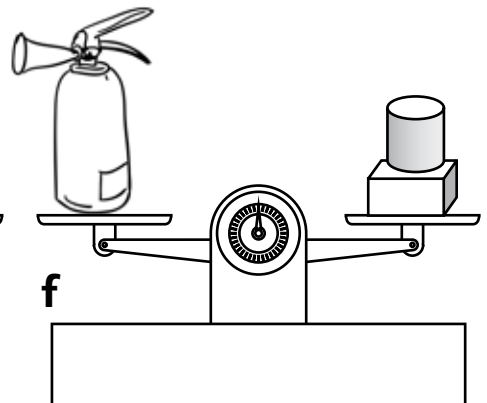
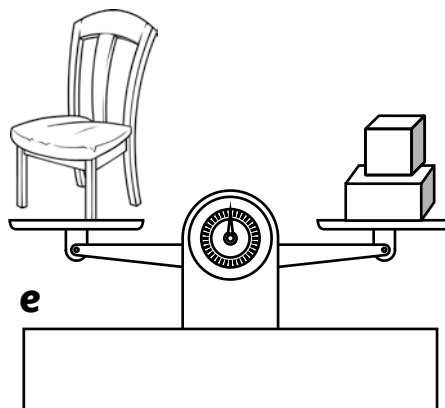
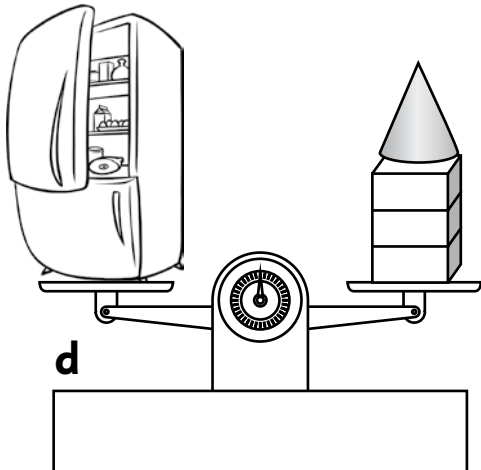
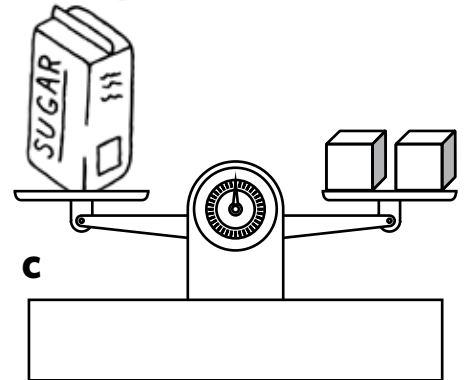
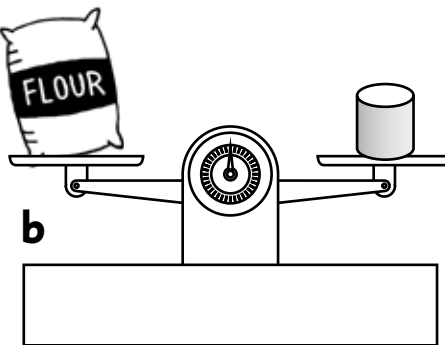
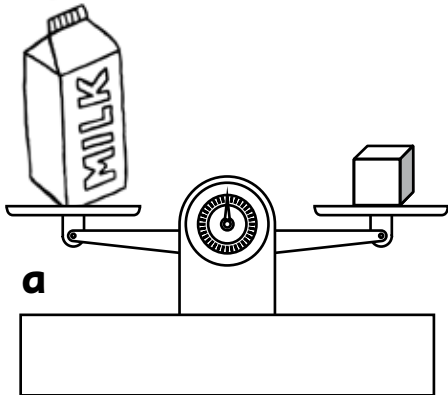


= 5 kg

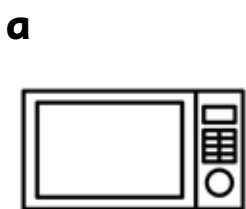


= 1 kg

1 Write the mass in kilograms.

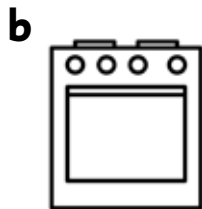


2 Number these items from 1 to 5, heaviest to lightest.



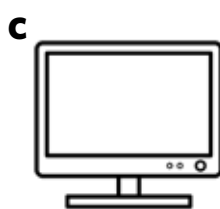
17 kg

□



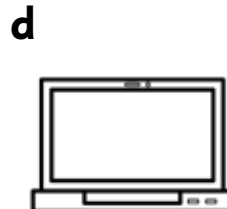
45 kg

□



24 kg

□



3 kg

□

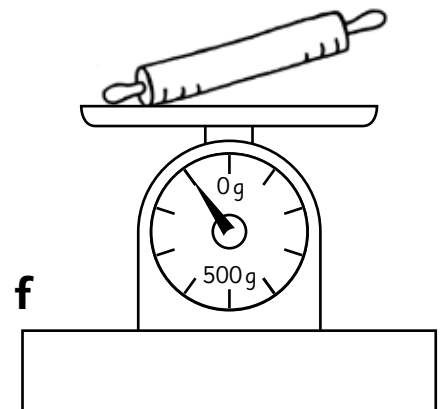
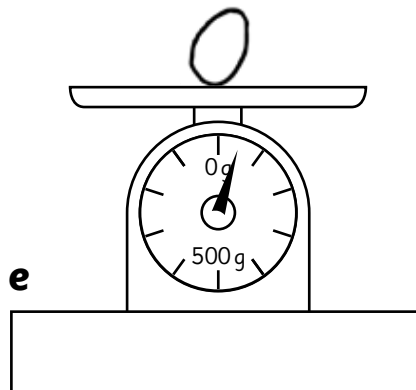
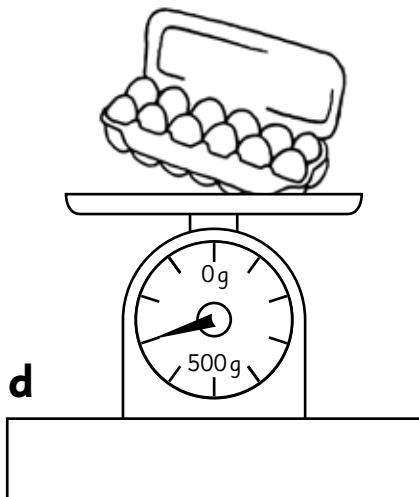
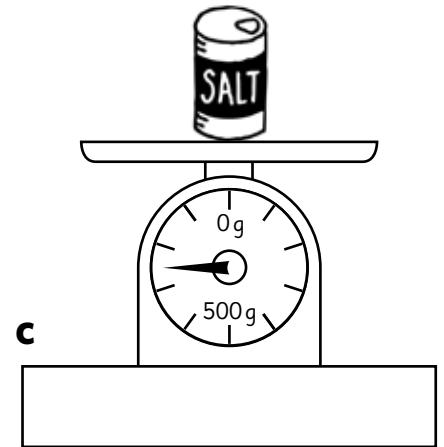
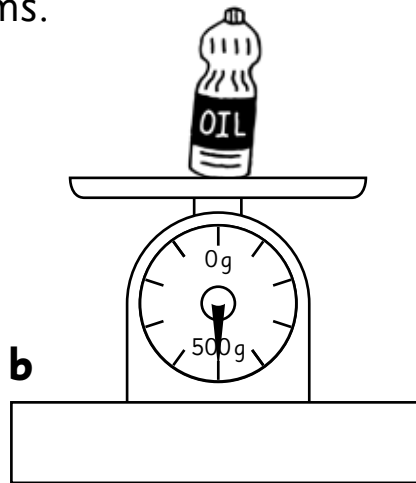
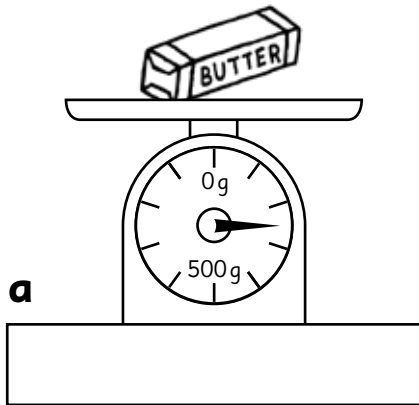


75 kg

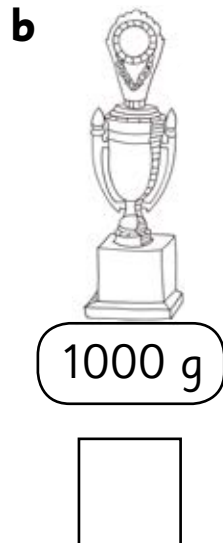
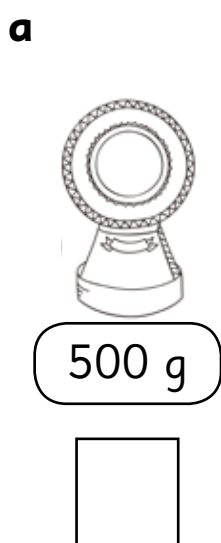
□

Name \_\_\_\_\_

1 Write the mass in grams.

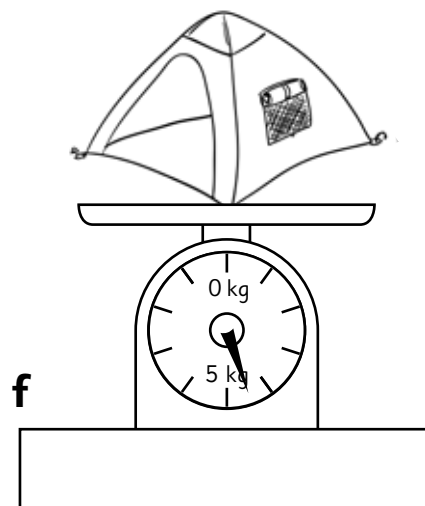
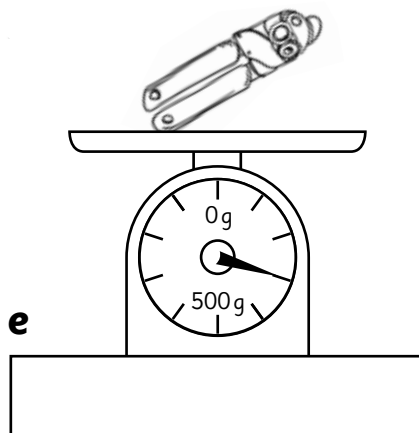
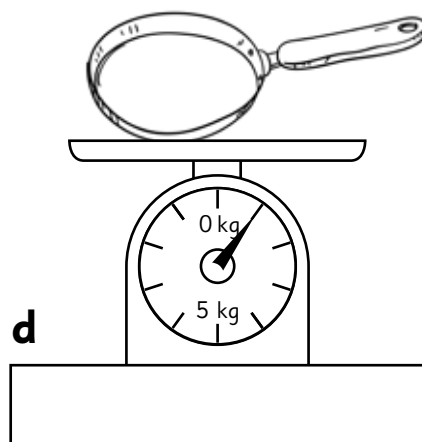
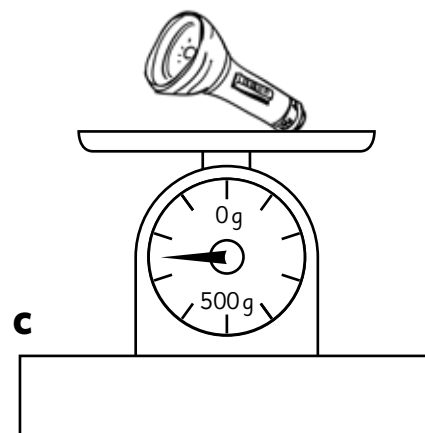
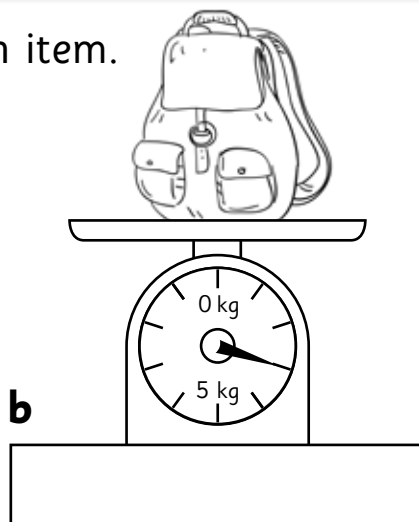
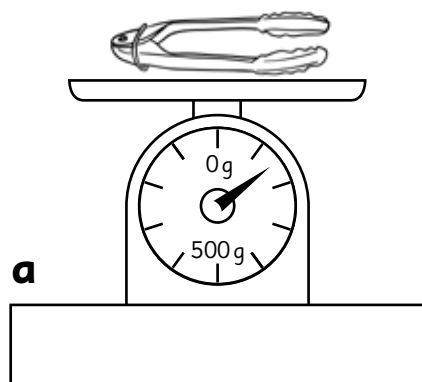


2 Number these trophies from 1 to 5, heaviest to lightest.



Name \_\_\_\_\_

1 Write the mass of each item.



2 Work out the weight of each pack and its contents in kilograms.

**a** pack + tent = \_\_\_\_\_

**b** pack + tongs = \_\_\_\_\_

**c** pack + tent + torch = \_\_\_\_\_

**d** pack + frypan + tongs = \_\_\_\_\_

**e** pack + frypan + tongs + can opener = \_\_\_\_\_

**f** pack + everything = \_\_\_\_\_

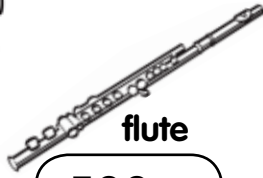


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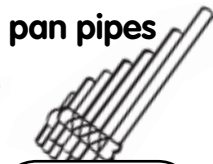
trumpet

900 g



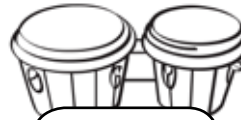
flute

500 g



pan pipes

300 g



bongos

2.5 kg



saxophone

3 kg



guitar

4 kg

Write an equation to answer each question in kilograms.

- 1 Pinky is teaching a music lesson. She brings five guitars.  
How much do these instruments weigh altogether?  
\_\_\_\_\_
- 2 Dash plays the trumpet and the saxophone. When she takes both to a concert, how much weight is she carrying?  
\_\_\_\_\_
- 3 Luna has two sets of bongos. When she packs them into one box to move house, how much does that box weigh?  
\_\_\_\_\_
- 4 Belle is ordering a special crate for shipping ten flutes. How much weight does the crate need to be able to hold?  
\_\_\_\_\_
- 5 Spike buys pan pipes for his friends. He has three sets in his shopping bag. How much does his bag weigh?  
\_\_\_\_\_
- 6 Sunny is moving overseas. She has to check in her instruments for the plane trip – a flute, saxophone and bongos. How much weight is she checking in?  
\_\_\_\_\_