

Helping Your Child with Measurement

Using Appropriate Units · Prep to Year 6 · Australian Curriculum Mathematics

We measure things every day — at the shops, in the kitchen, in the garden. Your child learns to measure from their very first year of school. The big idea is always the same: **pick the unit that suits what you are measuring.**

Year level	What your child learns	Try this at home
Prep	Comparing — no units yet Your child looks at objects and decides which is bigger, heavier or longer. No numbers or units yet — just words and hands. Key words: attribute (the thing you are measuring — like length or mass), length , mass (weight), capacity (how much a container holds), compare (decide which is more or less).	Hold one object in each hand. Which feels heavier? "Which bag is heavier — the rice or the flour?" "Is the table longer or shorter than the door?"
Year 1	Informal units Your child measures using everyday objects — like paperclips or blocks. These are called informal units . All units must be the same size and placed end-to-end with no gaps. This is called using uniform units.	"How many paperclips long is your pencil?" "Why did you and your friend get different numbers?" Measure things with a shoe or a block.
Year 2	Choosing the right informal unit Your child learns to pick the best object to measure with. A big thing? Use a big unit. A small thing? Use a small unit. Using the right unit gives a more accurate result. Accurate means close to the real size. Key word: appropriate unit — the unit that best suits the job.	"Would you use a teaspoon or a cup to fill this bucket? Why?" Compare two containers using the same cup to pour and count.
Year 3	Metric units Australia uses the metric system — a set of units everyone agrees on. Your child now learns the standard units: length: centimetre (cm), metre (m) mass: gram (g), kilogram (kg) capacity: millilitre (mL), litre (L) estimate means making a smart guess before you measure.	Look at food labels together. "Is this in grams or kilograms?" "Guess how many grams this apple is before we weigh it."
Year 4	Reading measuring tools Your child reads scaled instruments — tools like rulers, scales and jugs that have numbers and lines on them. They read the lines between the numbers too. formal unit = a standard metric unit (cm, g, mL, etc.) informal unit = an everyday object used to measure temperature is also measured in degrees Celsius (°C) .	Pour water into a measuring jug. "What does the line between 250 mL and 500 mL mean?" "What tool would you use to check the temperature outside?"
Year 5	Choosing the best metric unit Your child now compares metric units and picks the best one. Smaller units = more accurate answers. kilometre (km) — long distances metre (m) — height, room size centimetre (cm) — everyday objects millimetre (mm) — small or exact things kilogram (kg) — people, bags of food gram (g) — small food items litre (L) — bottles, buckets millilitre (mL) — small liquid amounts	"Would you measure the walk to school in metres or kilometres?" "Which is more accurate for your phone — cm or mm?"
Year 6	Converting between units Your child changes from one unit to another. This is called converting . The metric system uses prefixes — word parts at the start that tell you the size: milli- means ÷ 1 000 (e.g. 1 m = 1 000 mm) centi- means ÷ 100 (e.g. 1 m = 100 cm) kilo- means × 1 000 (e.g. 1 km = 1 000 m) Two measurements that are equal are called equivalent . Example: 125 cm = 1.25 m	"How many cm is 1.25 metres?" Answer: 125 cm "How many mL in 2.5 litres?" Answer: 2 500 mL

 How big is each unit? Helpful benchmarks

 Length	 Mass	 Capacity
1 mm — thickness of a credit card 1 cm — width of your little fingernail 10 cm — width of your palm 1 m — height of a doorknob from the floor 1 km — about 10–12 minutes walking	1 g — one small paperclip 10 g — two teaspoons of sugar 100 g — a small chocolate bar 500 g — a block of butter 1 kg — a bag of flour or a litre of water	1 mL — about 20 drops of water 5 mL — one teaspoon 250 mL — one cup 600 mL — a standard water bottle 1 L — a carton of milk

Helping at Home — Measurement

Worked examples and questions to ask · Prep to Year 6

How it works — worked examples

Prep — Comparing without units

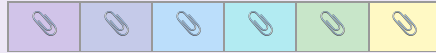
Task: Which book is heavier?

How: Hold one book in each hand. The heavier one pulls your hand down more. This is called **hefting**.

Words to use: "This one is heavier." "They feel about the same." "That one is the lightest."

Year 1 — Measuring with informal units

Task: How long is this pencil case?



= 6 paperclips long

Important: All units must be **the same size** and placed **end-to-end** — no gaps, no overlaps.

Year 3 — Picking the right metric unit

Which unit fits best?

What you measure	Best unit	Why
Length of a pencil	centimetres (cm)	A pencil is a small everyday object
Height of a fence	metres (m)	Too big for centimetres
Weight of an apple	grams (g)	An apple is light — kg is too big
Weight of a bag of flour	kilograms (kg)	Kilograms suit heavier things
Water in a teaspoon	millilitres (mL)	Very small amounts need small units

Year 5 — Smaller units = more accurate

Measuring the width of a phone:

Unit	Reading	Is it useful?
metres (m)	0 m (rounds to zero!)	No — far too big
centimetres (cm)	8 cm	Close, but not exact
millimetres (mm)	76 mm	✓ Best choice

Remember: Smaller units give more **accurate** answers. Pick the unit that gives you a useful number.

Questions to ask your child

You do not need to know the answer. Just ask the question and let your child explain it to you!

P Prep

- Which is heavier — the tin or the box?
- Find something longer than your arm.
- Which cup holds more water?

1 Year 1

- How many blocks long is the table?
- Why do you need to use the same size blocks?
- What happens if you leave gaps?

2 Year 2

- Would a cup or a teaspoon be better to measure this bucket? Why?
- Which unit would work better for this small jar?

3 Year 3

- What unit is on this food packet — grams or kilograms?
- Guess how heavy this fruit is before we weigh it.
- How many millilitres are in this bottle?

4 Year 4

- What does the line between 200 mL and 300 mL mean?
- Would you measure your bedroom in mm or m? Why?
- What tool would you use to check the temperature?

5 Year 5

- Would you measure the walk to school in metres or kilometres?
- Which gives a more accurate answer — cm or mm for your phone?
- Can you find something that weighs about 1 kilogram?

Year 6 on next page

Year 6 — Converting between units

Metric prefixes — easy to remember:

Prefix	What it means	Example
milli- (m-)	÷ 1 000 — very small	1 m = 1 000 mm 1 L = 1 000 mL 1 kg = 1 000 g
centi- (c-)	÷ 100	1 m = 100 cm
kilo- (k-)	× 1 000 — very big	1 km = 1 000 m 1 kg = 1 000 g 1 kL = 1 000 L

Quick check: 1.25 m = 125 cm = 1 250 mm 2.5 L = 2 500 mL 3.2 kg = 3 200 g

6 Year 6

- How many centimetres is 2.4 metres?
- 2.5 litres — how many millilitres is that?
- What does the prefix 'kilo' mean? What about 'milli'?

Things to try at home

Any age: Hold two things and guess which is heavier. Then weigh them to check.

Year 1–2: Measure your couch using a shoe. How many shoes long is it?

Year 3: Look at food packets. Find items in grams, kilograms, mL and litres.

Year 4: Fill a measuring jug to different levels. Ask your child to read each amount.

Year 5: Measure your phone in cm, then in mm. Which feels more accurate? Why?

Year 6: Conversion challenge: 1.75 kg = ? g. 3 200 mL = ? L. 450 cm = ? m.

Key words to learn together

attribute: the thing you measure — length, mass, capacity, temperature

informal unit: an everyday object used to measure, e.g. a paperclip

formal unit: a standard metric unit — mm, cm, m, km, g, kg, mL, L

estimate: a smart guess before you measure

accurate: close to the real measurement

convert: change from one unit to another, e.g. metres to centimetres

prefix: milli- (÷1 000) centi- (÷100) kilo- (×1 000)