

Teacher's sheet

Familiarity With International Metric Units

Ask students to say the names of units for measuring length. Encourage them to think of as many as possible. List the units on a board, poster or computer, separating them into two unlabelled columns. Have students write on their sheet as you write each unit.

When no more units can be added, ask students if they can figure out why you have separated the units into two separate lists: (metric in one list and Imperial in the other).



Explain to students that most countries in the world now use units that are in List A, called the **metric** units of measure for length. The metric system was devised by a team of French scientists who wanted a standard interrelated system for length, weight (mass) and capacity, based around the properties of water.

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1 L of water has a mass of 1 kg
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- 1 L of water = 10 cm x 10 cm x 10c m (a 10 cm cube)
- 1 g of water = 1 cm³

Australia does not use Imperial units for official purposes, and students do not need to learn them.

N.B. In international air travel, pilots and air traffic controllers use feet to measure altitude, one of the last remaining uses of the Imperial units still in general use around the world.

The US spelling of several metric units is different to other countries, including Australia. Australian students should always use Australian spelling.

Spelling length units

- (Australia) : (US)
- metre : meter
- centimetre : centimeter
- millimetre : millimeter
- kilometre : kilometer



1)

2)

3)

4)

5)

Student's sheet

Which units of measure for length have you heard before? Write the units in the two lists when your teacher instructs you to:



- If you have heard people using Imperial units, which ones were they using, 6) and in what context (e.g. fishing, sewing, people's height)? Why do you think that is?
- Write the relationship between the metric units: 7)

1 L has a mass of kg of water

1	L =	cm cube	(cm ³)
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Research question: Horses' heights are still measured using a traditional unit. 8) What is the unit, and how is it used?



Student's sheet

Which units of measure for length have you heard before? Write the units in the two lists when your teacher instructs you to:

	List	Α	List B				
	metre centimetre millimetre kilometre light year micrometre or micron (1 millionth) nanometre (1 billionth)		inch foot yard ^{le answers} furlong mile				
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	meter						
5)	Which Imperial unit is the standard for airplanes' altitude?						
6)	If you have heard people using Imperial units, which ones were they using, and in what context (e.g. fishing, sewing, people's height)? Why do you think that is?						
	Answers will vary						
7)	Write the relationship between the metric units:						
	1 L ha	is a mass of <u>1</u> kg of water	1 L = <u>1</u> cm cube (cm ³)				
8)	Research question: Horses' heights are still measured using a traditional ur What is the unit, and how is it used? Hand: 4 inches (or 10 cm)						
	A horse's height is measured at the withers (tallest part of the back).						
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