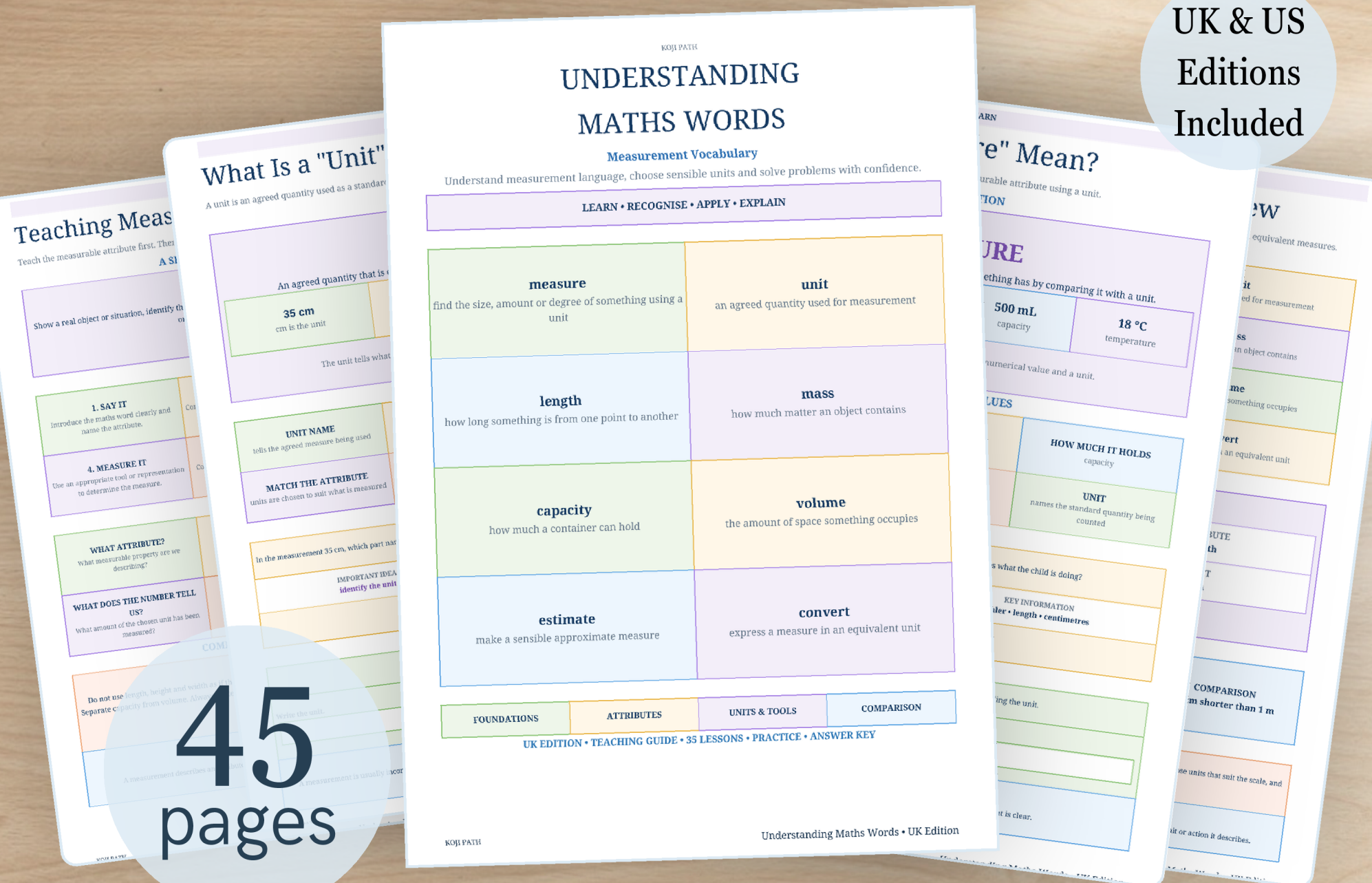


Understanding Maths Words

Measurement Vocabulary

Measurement language • Attributes • Units • Problem-solving

UK & US
Editions
Included



What's Included

A look inside both 45-page editions

- 35 Teaching Lessons
- Clear Vocabulary Definitions
- Measurement Attributes
- Units & Sensible Units
- Worked Examples
- Child Practice Questions
- Three Answer-Key Pages
- UK & US English Editions Included

LEARN

What Is "Length"?

Length is the measurable distance from one point to another along an object or line.

DEFINITION

LENGTH

How long something is from one point or end to another.

14 cm pencil	2 m door	5 km river	ruler tool
------------------------	--------------------	----------------------	----------------------

Length is an attribute. The unit tells how that length is measured.

LOOK FOR THESE CLUES

END TO END measure between two chosen endpoints	LONG / SHORT comparison words for length	RULER / TAPE common measuring tools
START AT ZERO align the first endpoint with 0	NUMBER + UNIT write the complete measurement	SENSIBLE UNIT match the unit to the scale

SEE IT IN A QUESTION

A ribbon is 85 cm long. Which measurement attribute is being described?

IMPORTANT IDEA identify the measurable attribute	KEY INFORMATION 85 cm + end to end
--	--

length

TRY IT

Which is a more sensible unit for the length of a classroom: centimetres or metres?

Write the unit and explain your choice.

REMEMBER
Length tells how long something is between two points. A complete length measurement includes both a numerical value and a unit.

KUJ PATH Understanding Maths Words • UK Edition

Teaching Measurement Vocabulary

Teach the measurable attribute first. Then connect it to the unit, tool and comparison language.
A SIMPLE TEACHING ROUTINE

THE SIX STEPS

1. SAY IT Introduce the measurable attribute clearly and name the attribute.	2. SHOW IT Connect the word to a real object, quantity or point.	3. CHOOSE THE UNIT Choose a standard unit that matches the attribute and scale.
4. MEASURE IT Use an appropriate tool or representation to determine the measure.	5. COMPARE IT Compare the measurement with another value or a useful benchmark.	6. EXPLAIN IT Ask the child to explain the attribute, unit, tool and result independently.

QUESTIONS TO ASK

WHAT ATTRIBUTE? What measurable property are we describing?	WHICH UNIT? Which unit is appropriate for this measurement?	WHICH TOOL? Which tool would measure it reliably?
WHAT DOES THE NUMBER TELL US? What amount of the attribute has been measured?	EXACT OR ESTIMATED? Was the amount measured directly or indirectly (approximated)?	HOW DOES IT COMPARE? Use precise comparison language and explain the reasoning.

What Is a "Unit"?

A unit is an agreed quantity used as a standard for measurement.
DEFINITION

UNIT

An agreed quantity that is counted or compared when something is measured.

35 cm cm is the unit	4 kg kg is the unit	750 mL mL is the unit
--------------------------------	-------------------------------	---------------------------------

The unit tells what kind of standard quantity the number is counting.

LOOK FOR THESE CLUES

UNIT NAME tells the agreed measure being used	UNIT SYMBOL is shortened way to write a unit	WITH A NUMBER a measurement normally needs both parts
MATCH THE ATTRIBUTE units are chosen to suit what is measured	CONSISTENT MEANING standard units have agreed sizes	NOT THE TOOL the unit is not the instrument used to measure

SEE IT IN A QUESTION

In the measurement 35 cm, which part names the unit?

IMPORTANT IDEA
Identify the unit

KEY INFORMATION
35 cm

Measurement Words Overview

These words work together to describe measurable attributes, units, comparisons and equivalent measures.
KEY VOCABULARY

measure Find the size, amount or degree of an attribute using a unit	unit an agreed quantity used for measurement
length how long something is from one point to another	mass how much matter an object contains
capacity how much a container can hold	volume the amount of space something occupies
estimate make a sensible approximate measure	convert express a measure in an equivalent unit

HOW THE WORDS WORK TOGETHER

OBJECT ribbon	ATTRIBUTE length
VALUE 85	UNIT cm

measurement = numerical value + unit

ONE MEASURE + DIFFERENT DESCRIPTIONS

What Is "Distance"?

Distance tells how far it is from one point, object or place to another.
DEFINITION

DISTANCE

The length of the space between two points or places.

30 cm objects apart	5 m across a room	2 km between places	point to point endpoints
-------------------------------	-----------------------------	-------------------------------	------------------------------------

Distance is length without, especially useful when the endpoints are separate places or points.

DISTANCE LANGUAGE

HOW FAR? a common question for distance	BETWEEN names the two endpoints	NEAR / FAR everyday comparison language
SHORT DISTANCE use a smaller unit	LONG DISTANCE use a larger unit	SCALE MATTERS choose a unit that suits the distance

SEE IT IN A QUESTION

The library is 3 km from the school. What measurement word describes this?

IMPORTANT IDEA
describe how far apart two places are

KEY INFORMATION
school to library = 3 km

distance

Teach the Meaning First

What Does "Measure" Mean?

LEARN

What Does "Measure" Mean?

To measure is to find the size, amount or degree of a measurable attribute using a unit.

DEFINITION

MEASURE

To find how much of a measurable attribute something has by comparing it with a unit.

12 cm length	2 kg mass	500 mL capacity	18 °C temperature
------------------------	---------------------	---------------------------	-----------------------------

A complete measurement usually includes a numerical value and a unit.

LOOK FOR THESE CLUES

HOW LONG length	HOW HEAVY mass	HOW MUCH IT HOLDS capacity
HOW HOT OR COLD temperature	HOW LONG IT LASTS duration	UNIT names the standard quantity being counted

SEE IT IN A QUESTION

A child uses a ruler to find the length of a ribbon. Which measurement word describes what the child is doing?

IMPORTANT IDEA Find an attribute using a unit	KEY INFORMATION ruler • length • centimetres
---	--

MEASURE

TRY IT

A book is 24 cm long. Write the complete measurement, including the unit.

Write the measurement.

REMEMBER

A measurement combines a numerical value with a unit so the amount is clear.

ROB PATTI Understanding Maths Words • UK Edition

What Is a "Unit"?

LEARN

What Is a "Unit"?

A unit is an agreed quantity used as a standard for measurement.

DEFINITION

UNIT

An agreed quantity that is counted or compared when something is measured.

35 cm cm is the unit	4 kg kg is the unit	750 mL mL is the unit
--------------------------------	-------------------------------	---------------------------------

The unit tells what kind of standard quantity the number is counting.

LOOK FOR THESE CLUES

UNIT NAME tells the agreed measure being used	UNIT SYMBOL a shortened way to write a unit	WITH A NUMBER a measurement normally needs both parts
MATCH THE ATTRIBUTE units are chosen to suit what is measured	CONSISTENT MEANING standard units have agreed sizes	NOT THE TOOL the unit is not the instrument used to measure

SEE IT IN A QUESTION

In the measurement 35 cm, which part names the unit?

IMPORTANT IDEA Identify the unit	KEY INFORMATION 35 cm
--	---------------------------------

cm

TRY IT

Write the unit in the measurement 4 kg.

Write the unit.

REMEMBER

A measurement is usually incomplete without its unit. The same number can describe very different amounts when the unit changes.

ROB PATTI Understanding Maths Words • UK Edition

Perimeter or Area?

COMPARE

Perimeter or Area?

Perimeter and area describe different attributes of the same two-dimensional shape.

COMPARE THE MEANINGS

	PERIMETER	AREA
MEANING	distance around the boundary	the surface covered inside
UNITS	length units, e.g. cm	square units, e.g. cm ²

REAL-WORLD CLUES

FENCE distance around a garden boundary	CARPET surface covering a room floor	ROUNDER length around a display
TILES surface covered on a wall	FRAME distance around a picture	GRASS SEED surface area of a lawn

SEE IT IN A QUESTION

A gardener wants edging all the way around a rectangular flower bed. Should they find perimeter or area?

IMPORTANT IDEA The edging follows the outside boundary	KEY INFORMATION around • boundary • edging
--	--

perimeter

TRY IT

A classroom needs new carpet to cover the entire floor. Should you find perimeter or area?

Write the measurement word and explain why.

REMEMBER

Ask what the problem describes: the boundary around a shape means perimeter; the flat surface inside means area.

ROB PATTI Understanding Maths Words • UK Edition

Explicit teaching pages help children understand measurement language, choose sensible units and explain their reasoning.

Practise & Apply

What Does "Accuracy" Mean?

Accuracy describes how close a measurement is to the correct value.

DEFINITION

ACCURACY

The quality of being correct or very close to the true value. The accuracy of a measurement depends on a suitable tool, careful positioning and the skill of the person measuring.

ACCURACY LANGUAGE

What is a "Mixed Measurement"?

A mixed measurement uses two related units to describe one amount.

DEFINITION

MIXED MEASUREMENT

A measurement written with a larger unit and a smaller related unit. For example, 1 m 35 cm. Together, the two parts describe the total length.

What does "Convert" Mean?

Converting the measured amount to the same unit.

DEFINITION

CONVERT

Write a measurement in a different unit. Use a known relationship between units and multiply or divide as appropriate.

CONVERT LANGUAGE

What Is a "Mixed Measurement"?

A mixed measurement uses two related units to describe one amount. For example, 1 m 35 cm. Together, the two parts describe the total length.

DEFINITION

MIXED MEASUREMENT

Measurement Vocabulary Review

Strong measurement reasoning begins by identifying the attribute, value and unit.

DEFINITION

CHOOSE • MEASURE • CHECK

Choose the measurable attribute and a sensible unit. Estimate when useful, measure or calculate carefully, and check whether the result is reasonable.

TWO UNITS both describe the same attribute	LARGE UNIT write the larger unit first
ONE TOTAL the parts combine to make one total	UNIT keep each unit separate

CHOOSE • MEASURE • CHECK LANGUAGE		
ATTRIBUTE what is being measured?	VALUE the numerical amount	UNIT how the value is interpreted
METHOD estimate, measure or calculate	ACCURACY read tools and scales carefully	REASONABLENESS does the answer make sense?

SEE IT IN A QUESTION

A child needs the length of a desk. Which three decisions should be made before recording the result?

IMPORTANT IDEA identify what, how and in which unit	KEY INFORMATION length • suitable tool • sensible unit
attribute, method/tool and unit	

TRY IT

What does "Equivalent" Mean?

Two measurements that represent the same amount using different units.

DEFINITION

EQUIVALENT MEASUREMENTS

Measurements that are equal in value even though their numbers or units look different. To prove they are equivalent, convert them to a common unit.

DIFFERENT FORM numbers or units may differ	CONVERT change to a common unit
EQUAL SIGN shows the values match	VERIFY use the unit relationship

SEE IT IN A QUESTION

10 centimetres equivalent measurements?

KEY INFORMATION $2 \times 100 = 200$
--

They are equivalent

TRY IT

_____ centimetres.

REMEMBER

Convert them to the same unit to check.

Recognise • Choose • Measure • Calculate • Explain