

Number and Algebra: Fractions and Decimals: Paperclip Chains

Australian Curriculum

This lesson plan could be used to support the teaching and learning of the following Content Descriptions from the Australian Curriculum.

Y6: Number and Algebra, Fractions and Decimals





















Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)








Multiply and divide decimals by powers of 10 (ACMNA130)

Child-Friendly Aim: To multiply and divide numbers by 10, 100 and 1000 to convert units of measurement.	Success Criteria: I can multiply and divide numbers by 10,100 and 1000 by moving each digit one, two or three places to the left or right. I can multiply and divide numbers by 10,100 and 1000 to convert between mm, cm and m.	Resources: Lesson Pack Whiteboards and pens - class set
	Key/New Words: Decimal point, tenths, hundredths, mm, cm, m, millimetres, centimetres, metres.	Preparation: Differentiated Paperclip Chains Activity Sheets – one per child

Prior Learning: It will be helpful if the children are confident in multiplying and dividing numbers by 10, 100 and 1000.

Learning Sequence

	Trios: Children match up the measurement problem, the calculation required to solve it and the answer. Children may use a whiteboard to work out the correct answer.	
	Paperclip Record: Use the illustration on the Lesson Presentation to explain what paperclip chains are.	
	Converting Lengths: Remind children how to convert between different units of measurement, as they did in the Trios starter activity. Can the children multiply or divide by 10, 100 or 1000 to convert between mm, cm and m?	
	Multiplying and Dividing by 10, 100 and 1000: Use this menu to access the slides below if required. The children will not need to view these if they can multiply and divide by 10, 100 and 1000 confidently. Select only the ones they need.	
	Multiplying by 10: Use the prompts on the Lesson Presentation to remind children how to multiply by 10.	
	Multiplying by 100: Use the example on the Lesson Presentation to practise multiplying by 100.	
	Multiplying by 1000: Remind children, using the example on the Lesson Presentation , how to multiply by 1000.	
	Dividing by 10: Use the prompts on the Lesson Presentation to remind children how to divide by 10.	
	Dividing by 100: Use the example on the Lesson Presentation to practise dividing by 100.	
	Dividing by 1000: Remind children, using the example on the Lesson Presentation , how to divide by 1000.	

	<p>Paperclip Chains: Children complete differentiated Paperclip Chains Activity Sheets, multiplying and dividing numbers by 10, 100 and 1000.</p> <p>Can the children multiple and divide numbers by 10, 100 and 1000 to convert between mm, cm and m?</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="245 232 325 311">  <p>Children match up the length conversions then convert between metres, centimetres and millimetres to work out paperclip chain lengths.</p> </div> <div data-bbox="628 232 708 311">  <p>Children use length conversions and multiply and divide by 10, 100 and 1000 to establish which paperclip chains are the longest.</p> </div> <div data-bbox="1011 232 1091 311">  <p>Children use more challenging length conversions and multiply and divide by 10, 100 and 1000 to establish which paperclip chains are the longest.</p> </div> </div>	
	<p>Measurement Maths: The children mind-map other units of measurement which require multiplying or dividing by 10, 100 or 1000 to convert them. Can they think of any real-life situations where they might need to apply this learning?</p>	

Exploreit

Puzzleit: Children convert between units of measurement to complete this [CrossNumber Puzzle](#).

Practiseit: Use the excellent activities in this [Activity Pack](#) to practise converting units of measurement.