

Number and Algebra: Fractions and Decimals:

Decimal Place Value Reasoning

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 solve multiplying and dividing decimals by powers of 10 reasoning questions.	Success Criteria: I can break down complex decimal power of 10 problems into smaller steps. I can use mathematical language to explain solutions to decimal problems. I can use inverse operations by multiplying or dividing by 10, 100 and 1000 to solve a mystery number.	Resources: Lesson Pack
Key/New Words: Decimal, fraction, tenth, hundredth, thousandth.		Preparation: Decimal Place Value Reasoning Activity Sheet – one per child

Prior Learning: It will be helpful if children have experience identifying the value of digits in whole numbers and recognise tenths and hundredths in the context of money and measurement.

Learning Sequence

	Guided Maths Question 1: Use the step-by-step slides on the Lesson Presentation to model how to answer a reasoning question based on ordering calculations involving multiplying and dividing numbers with up to three decimal numbers by 10, 100 and 1000. Can children order calculations involving multiplying and dividing numbers by 10, 100 and 1000?	
	Partner Maths Question 1: Children work in partners to apply the previous teacher modelling to a similar question displayed on the Lesson Presentation , discussing their reasoning. Answer included.	
	Guided Maths Question 2: Use the step-by-step slides on the Lesson Presentation to model how to answer a second reasoning question based on using inverse operations to discover a mystery decimal number. Can children use inverse operations to solve decimal problems?	
	Partner Maths Question 2: Children work in partners to apply the previous teacher modelling to a similar question displayed on the Lesson Presentation , discussing their reasoning. Answer included.	
	Guided Maths Question 3: Use the step-by-step slides on the Lesson Presentation to model how to answer a third reasoning question involving decimal numbers on a partially labelled number line.	
	Partner Maths Question 3: Children work in partners to apply the previous teacher modelling to a similar question displayed on the Lesson Presentation , discussing their reasoning. Answer included.	
	Reasoning Practice: Children complete the Decimal Place Value Reasoning Activity Sheet to show that they can solve reasoning questions involving the place value of numbers to three decimal places.	
	Reasoning Practice Answers: Use the slides on the Lesson Presentation to discuss the answers to the independent activity questions and self-assess.	