

AUSTRALIAN CURRICULUM MATHEMATICS

General Capabilities:

Literacy	Numeracy ✓	ICT ✓	Critical and creative thinking	Ethical Behaviour	Personal and social Competence	Intercultural Understanding
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Cross-curriculum priorities:

Aboriginal and Torres Strait Islander histories and Cultures	Asia and Australia's engagement with Asia	Sustainability
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WEEK/ LESSON	AUSTRALIAN CURRICULUM LINKS			Prof	SPECIFIC LESSON OBJECTIVE	ASSESSMENT (what & how)	TEACHING & LEARNING EXPERIENCES (include learner diversity)	KEY QUESTIONS	RESOURCES
	N & A	M & G	S & P						
1/1		✓		Understanding, fluency, problem solving and reasoning	(ACMMG197) 1. Recognise and name parts of a circle. 2. Recognise the relationship between diameter and radius. 3. Students will enjoy and realise the benefits of working in pairs to solve a problem.	Electronic quizzes about circle terms. Discussion about the relationship between diameter and radius.	Intro: Introduce the topic of circles which will be covered over the next four lessons and the teachers topic website. Ask the students to enter the website and read through the introduction and task pages. Main: Ask the class to follow the Prezi slideshows about circle terms in lesson 1 of the website and to complete the associated quizzes. Introduce the Geogebra exercise and ask the class to work in pairs to determine the relationship between radius and diameter. Closure: Ask the class what the relationship is between radius and diameter.	How does diameter relate to radius? What is the name for the perimeter of a circle?	Lesson 1 of http://mathsyr8.weebly.com
1/2		✓		Understanding, fluency, problem solving and reasoning	(ACMMG197) 1. Populate the spreadsheet following collection of the required data. 2. Recognise the relationship between diameter and circumference. 3. Students will enjoy and realise the benefits of working in pairs to solve a problem.	Quiz about the relationship between circumference and diameter. Exit question about the relationship between circumference and diameter.	Intro: Ask the class to enter lesson 2 of website. Recap on previous lesson by playing the circle term movie and asking the class to state the names of parts of a circle. Main: Introduce the GeoGebra exercise and ask the class to work in pairs to populate the spreadsheet with ten different sized circle diameters and its circumference. Discuss the results to determine the relationships between circumference and diameter. Students to undertake quiz independently to check understanding of relationship. Tell the class the number they have discovered is called Pi and tell them they learn more about Pi in the next lesson. Closure: Ask the students to answer the poll question at the end to determine if the objective was met. Ask them to follow the link to Sumdog, log in and start the allocated activity, which should be completed for homework.	Is there a relationship between circumference and diameter of the circular objects? What is the relationship?	Lesson 2 of http://mathsyr8.weebly.com www.sumdog.com

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1/3	✓			Understanding, fluency, problem solving and reasoning	(ACMMG197) 1. Define Pi and know it's approximate value. 2. Show numbers to a specific number of decimal places. 3. Contribute to a group activity to create a pi em to help memorise Pi.	Electronic quiz about circle circumference. Electronic quiz on decimal places. Exit question about the value of Pi.	Intro: Ask class to enter lesson 3 on the website. Quick quiz about the value of Pi, the formula for the circle circumference to recap. Main: Ask the class to work through the lesson to learn more about Pi, it's history and how Pi can be shown as a symbol or fraction and its number to specific decimal places. The students will discover about memorising Pi and learn who the current world record holder is for memorising Pi. Ask the class to work in groups of four to create a "Pi em" (poem about Pi) to help them memorise Pi. Ask the students to complete the decimal place quiz independently. Closure: Show the class the article about the crop circles in UK. Ask the class to answer the poll question to determine they recognise Pi.	What is Pi? How does Pi relate to the circumference of a circle? What is the value of Pi?	Lesson 3 of http://mathsyr8.weebly.com
1/4	✓			Understanding, fluency, problem solving and reasoning	(ACMMG197) 1. Recognise that a formula must exist to calculate the area of a circle. 2. Measure the area of a circle using formula. 3. Contribute positively when working in pairs.	Discussion and observation. Electronic quiz calculating circle areas. Exit question about formula for the area of a circle.	Intro: Ask the class to enter lesson 4 on the website. Ask the class how we would calculate the area of a rectangle and what we have learnt about Pi. Main: Ask the class to work in pairs and use the Geogebra exercise to create different sized circles with differing segment numbers to try and determine the formula for the area of a circle. Ask the class if anyone has figured out the formula from the exercise. Tell the class what the formula is and ask the students to complete the quiz independently. Closure: Ask the students to answer the poll question at the end to determine if the objective was met. Ask them to follow the link to Sumdog, log in and start the allocated activity, which should be completed for homework.	Can Pi help us find the area of a circle? What is the formula to calculate the area of a circle?	Lesson 4 of http://mathsyr8.weebly.com www.sumdog.com