

### Lesson Plan

<b>Date:</b>	<b>Class: Year 10</b>	<b>Subject: Math</b>
<b>Learning Intention:</b> I am learning to solve right-angled triangle problems using trigonometric ratios		<b>Success Criteria:</b> <ul style="list-style-type: none"> <li>• Recall prior learning of trigonometric ratios               <ul style="list-style-type: none"> <li>○ Sides of triangles</li> <li>○ Ratio names and formulas</li> </ul> </li> <li>• Calculate unknown angles using trigonometric ratios</li> </ul>

**Commented [LS1]:** AAP: I am learning to solve right-angled triangle problems  
ILG: I am learning to respond to questions about angles

### Lesson Structure

Stage	Teacher	Students	Key Strategies/Adjustments
<b>Opening</b>	List Hypotenuse, Adjacent Side and Opposite Side on the board	In pairs record a student-generated definition to describe each of the listed sides of a triangle	Cooperative learning Student definitions Visuals Mnemonic Given ratios
	Check definitions with students and record on board with a visual to support	Complete a revision sheet identifying the sides of triangles	
	State ratio mnemonic from previous lesson – record full and abbreviated forms as students recall	Identify/recall trigonometric ratios	
<b>I Do</b> <i>(Modelled)</i>	Play video on calculating angles using trigonometric ratios	Watching video	Multimodal Thinking prompts Worked example Visuals
	Worked example with thinking prompts and visuals: <ul style="list-style-type: none"> <li>- What am I given?</li> <li>- What do I need to find?</li> <li>- What ratio can I use?</li> <li>- Formula</li> <li>- Substitute</li> <li>- Rearrange</li> <li>- Calculate</li> </ul>	Watching and listening Taking note of the prompts and subsequent action of the teacher	
<b>We Do</b> <i>(Guided/Shared)</i>	Write a problem to be solved on the board	Complete worked example as a class – teacher moving the class through the prompts, teacher and peers correcting as needed	Cooperative learning Prompting and correcting Focused and intensive teaching
	Provide another problem (provide focus and intensive support)	Complete the problem on mini whiteboards with a pair	
<b>You Do</b> <i>(Independent)</i>	Provide independent practice questions in a variety of formats to be completed and submitted to teacher for review post lesson (provide focus and intensive support)	Choose format of questions to complete: <ul style="list-style-type: none"> <li>- Partner poster questions around the room</li> <li>- Individual worksheet</li> <li>- Online, interactive questions</li> <li>- Questions from board with access to video from start of the lesson</li> </ul>	Choice Multimodal Variety of scaffolds Cooperative learning
<b>Closing</b>	Pose question: <ul style="list-style-type: none"> <li>- How can you tell when to use trigonometric ratios or Pythagoras' theorem?</li> </ul>	Respond to question	
<b>Wrap-up</b>	Exit routines		

**Commented [LS2]:** AAP: State a definition of a triangle and record in book  
ILG: Draw a triangle

**Commented [LS3]:** AAP: Measure the sides of triangles with a ruler  
ILG: Identify which triangle is bigger when given two concrete representations

**Commented [LS4]:** AAP: Teacher drawing explicit attention to the parts and measurements of the triangle  
ILG: Teacher making explicit comments about size of angles

**Commented [LS5]:** AAP and ILG: Targeted questioning about the properties of the triangles

**Commented [LS6]:** AAP: Targeted question to be completed with peer tutoring, and then using the calculator to support pair to complete class problem  
ILG: Intensive teaching with size of angles – small to large

**Commented [LS7]:** AAP: Questions involving calculation of unknown angles using addition and subtraction – focused/intensive teaching as required  
ILG: Sequencing angles from smallest to largest – focused/intensive teaching as required