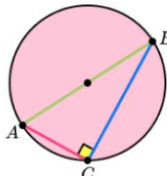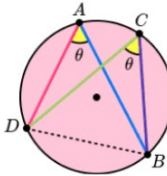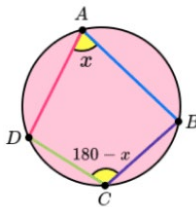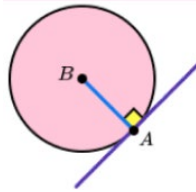# Knowledge Rich Curriculum Plan

Year 10 Higher – Geometry 4

Lesson	Intended Knowledge:	Tiered Vocabulary	Prior Knowledge:	Steps to Success:	Feedback
To learn how to apply the circle theorems.	• Students will know that the angle at the centre of a circle is double the angle at the circumference. **Opportunity for challenge:** • Students will know how to solve multi-step problems involving angles at the centre and circumference.	**Theorem** – a statement that has been proved, or can be proved **Circumference** – the perimeter of a circle	• Students need to be able to label parts of a circle. • Students need to know how to find missing angles in isosceles triangles and quadrilaterals.	The angle at the centre is double the angle at the circumference. 	
To learn how to apply the circle theorems.	• Students will know that the angle in a semi-circle is 90° **Opportunity for challenge:** • Students will know how to solve multi-step problems involving a mixture the circle theorems learnt so far.	**Semi-circle** – half of a circle	• Students will need to know how to find missing angles in triangles.	The angle in a semi-circle is 90° 	
To learn how to apply the circle theorems.	• Students will know that angles in the same segment are equal **Opportunity for challenge:** • Students will know how to solve multi-step problems involving a mixture the circle theorems learnt so far.	**Segment** – a region bounded by a chord and a corresponding arc lying between the chord's endpoints	• Students need to know how to find missing angles in triangles and quadrilaterals. • Students need to know how to find missing angles that are vertically opposite.	Angles in the same segment are equal. 	
To learn how to apply circle theorems.	• Students will know that the opposite angles of a cyclic quadrilateral add to 180° **Opportunity for challenge:** • Students will know how to solve multi-step problems involving a mixture the circle theorems learnt so far.	**Cyclic quadrilateral** – a quadrilateral whose vertices all lie on the circumference of a circle	• Students need to know find missing angles in isosceles triangles and quadrilaterals. • Students need to know how to find missing angles on parallel lines using knowledge of co-interior angles.	Opposite angles in a cyclic quadrilateral add upto 180° 	
To learn how to apply circle theorems.	• Students will know that two tangents from the same point to a circle are equal in length • Students will know that the radius of a circle meets the tangent at 90 degrees • Students will know that angles in alternate segments are equal **Opportunity for challenge:** • Students will know how to solve multi-step problems involving all of the circle theorems.	**Tangent** – a straight line that touches a circle at only one point **Alternate** – the opposite in position	• Students need to know how to find missing angles in triangles and quadrilaterals. • Students need to know how to use Pythagoras' to find the missing sides of right-angled triangles.	The angle between a tangent and radius is 90° Tangents which meet at the same point are equal in length.	

Lesson	Intended Knowledge:		Tiered Vocabulary	Prior Knowledge:	Steps to Success:		Feedback
					Alternate segment theorem.		
	Exam Preparation 6						