

WHAT DO WE ALREADY *know*?

- Know the vocabulary of circles.
- Know angle facts including angles on a point, meeting on a line and in a triangle.
- Know angle facts involving parallel lines.
- Know the properties of special quadrilaterals.

Stage 10 – Conjecturing

THE BIG PICTURE

- Investigate geometric patterns using circles.
- Explore circle theorems
- Make and prove conjectures

KEYWORDS

- Radius
- Radii
- Tangent
- Chord
- Theorem
- Conjecture
- Derive
- Proof
- Prove
- Counterexample

Conjecturing- Targets

	Before Topic	After Topic	Teacher Mark
Create a chain of logical steps to create a proof in a geometrical situation and justify solutions.			
Know that 'the angle in a semicircle is a right angle'			
Know that 'the angle at the centre is double the angle at the circumference'			
Know that 'angles in the same segment are equal'			
Know that 'opposite angles in a cyclic quadrilateral sum to 180° '			
Know that 'two tangents from an external point are equal in length'			
Know that 'a radius is perpendicular to a tangent at that point'			
Know that 'a radius that bisects a chord is perpendicular to that chord'			
Know the alternate segment theorem			
Use a combination of known and derived facts to solve a geometrical problem			
Identify when a circle theorem can be used to help solve a geometrical problem			