

Circles

Station guide

This station builds upon students' prior experience of circles and also some of the ideas explored at Quadratics. The resources aim to encourage students to make connections between geometrical properties of the circle and its Cartesian equation.

Good starting points include resources such as [Sector spirals](#) and [Cones](#) as these offer students practise at finding arc lengths and sector areas.

Some resources, such as [Teddy bear](#) and [Finding circles](#) require students to work with and manipulate the Cartesian equation of the circle in a variety of forms. Using graphing software to explore and confirm findings is a good way of helping students to connect the algebra and geometry of the circle. This is emphasised in [Pairs of circles](#) and [Olympic rings](#).

The resource [Elliptical crossings](#) is an opportunity for students to apply their experiences with the circle to a problem involving an ellipse. This is a nice way of broadening students' thinking and encouraging them to make connections between mathematical experiences.