

# Introducing Calculus

## Station guide

The resources at this station offer students the opportunity to encounter many mathematical ideas that are fundamental to understanding calculus. While many of the skills required to tackle these problems will be familiar to students already, the connections between them and these particular applications of them may not be.

None of the machinery of calculus is introduced here, instead resources focus on some of the ideas behind calculus. Students have to think about gradients of curves in [Gradient match](#) and [Zooming in](#) and how you might approximate the area under a curve in [Approximating areas](#) and [Is the Serpentine Lake really 40 acres?](#) A more kinematic approach is taken to the ideas behind calculus in [Walk-sorting](#), [Discussing distance](#) and [Speed vs velocity](#).

Students who are given the opportunity to grapple with some of these ideas, before working on those at the next calculus station, will be better placed to appreciate why and when calculus can be useful and will be better placed to make sensible decisions about efficient approaches to solving problems.