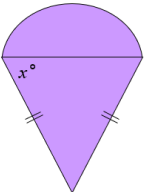
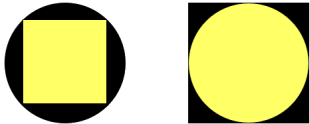
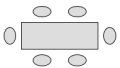
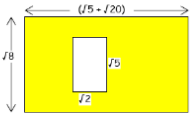
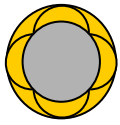


SUPER-CURRICULAR ACTIVITIES

GCSE: Mathematics Years 10 & 11

<p>Watch the film 'Apollo 13.'</p>	<p>The integers from 1 to 9 are listed on a whiteboard 1, 2, 3, 4, 5, 6, 7, 8, 9 The mean of all the numbers in the list is 5. Some extra eights and nines are added to the list. The mean of the list is now 7.3 How many eights and nines are added?</p>	<p>The diagram shows a semi-circle and an isosceles triangle which have equal areas. What is the value of $\tan x^\circ$</p> 
<p>Which is a better fit – a square peg in a round hole or a round peg in a square hole?</p> 	<p>Undertake a virtual tour of the National Museum of Computing. Follow Link 1 (below)</p>	<p>Read 'The Cabinet of Mathematical Curiosities' by Ian Stewart.</p>
<p>Watch the film 'Hidden Figures.'</p>	<p>Can you find out how many ways you can arrange the letters in a four-letter word. Is there a formula? How would you do this for a five-letter word?</p>	<p>There are six people in the Micklefield family: 2 parents, 2 girls and 2 boys. They all sit around the table as shown. The two girls never sit opposite or next to each other. The two boys never sit opposite or next to each other. The parents never sit opposite or next to each other. How do the Micklefield family sit at the table?</p> 
<p>Undertake a virtual tour of the History of Science Museum. Follow Link 2 (below)</p>	<p>Use the resources on this link to make your own Celtic Knots. Follow Link 3 (below)</p>	<p>A large rectangular piece of card is $(\sqrt{5} + \sqrt{20})$ cm long and $\sqrt{8}$ cm wide. A small rectangle $\sqrt{2}$ cm long and $\sqrt{5}$ cm wide is cut out of the piece of card.</p> <p>What percentage of the original rectangle remains?</p> 
<p>Read 'Alex's Adventures in Numberland' by Alex Bellos.</p>	<p>The diagram shows two circles and four equal semi-circular arcs. The area of the inner shaded circle is 1. What is the area of the outer circle?</p> 	<p>Undertake a virtual tour of the Science Museum. Follow Link 4 (below)</p>

	Reading task		Creative task		Watching task		Student-led task
	Research task		Writing task		Listening task		Trip or visit



SUPER-CURRICULAR ACTIVITIES

Links to websites used in this Super-Curricular GCSE Activities sheet:

Link 1: <https://www.tnmoc.org/3d-virtual-tour>

Link 2: <https://www.hsm.ox.ac.uk/current-exhibitions-and-displays>

Link 3: <https://nrich.maths.org/5365>

Link 4: <https://www.sciencemuseum.org.uk/virtual-tour-science-museum>

	Reading task		Creative task		Watching task		Student-led task
	Research task		Writing task		Listening task		Trip or visit