






Year 6 – Summer 1

<p>Science</p> 	<p>Create a 3D maze using a shoebox or cardboard box and design a system of mirrors to guide a beam of light (from a torch or LED) from the entrance to the exit without opening the lid.</p> <p>Must include:</p> <ul style="list-style-type: none"> • At least three reflective surfaces • A labelled diagram showing the path of the light beam • An explanation of how reflection helps the beam travel around corners
<p>Technology</p> 	<p>Make a device that uses light to send messages!</p> <p>What to do:</p> <ul style="list-style-type: none"> • Build a light sender (use a torch and card to make flaps, sliders, or colour filters). • Make 3 different signals (e.g., short flash, long flash, red light). • Create a code (e.g., 1 flash = YES, 2 flashes = HELP). • Test it with a partner from a few metres away. • Explain what worked and what you would improve.
<p>Engineering</p> 	<p>Build a working periscope that allows you to see over or around obstacles.</p> <p>Rules:</p> <p>Must use recycled materials (e.g., cereal boxes, plastic mirrors)</p> <p>Must show correct 45° reflection angles</p> <p>Explain where periscopes are used in the real world (e.g., submarines)</p>
<p>Arts</p> 	<p>Build a sculptural artwork designed to cast interesting shadows when lit.</p> <p>Requirements:</p> <ul style="list-style-type: none"> • Use mixed recycled materials • Shadows must create a recognisable shape (e.g., an animal, landmark, silhouette of a person) • Include an artist's explanation of how you used opaque, transparent, and translucent materials
<p>Maths</p> 	<p>Shadow Puppet Angles & Transformations</p> <ul style="list-style-type: none"> • Analyse the angles used to project shadows. • Explore transformations (e.g., how rotating a puppet by 15°, 30°, 60° changes the shadow). • Present findings clearly with diagrams.

Children in Year 6 can bring any STEAM Challenge work they complete into school or submit it on Seesaw.