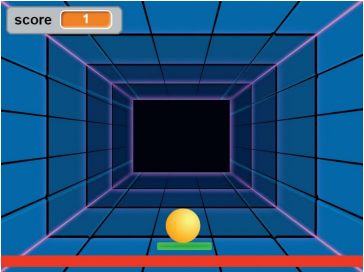
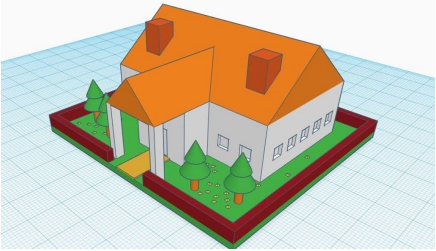
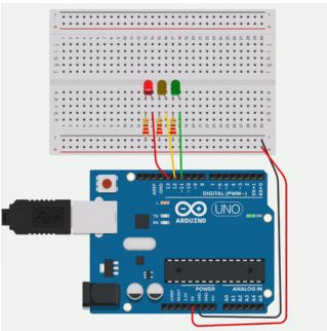


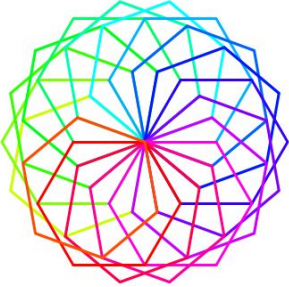
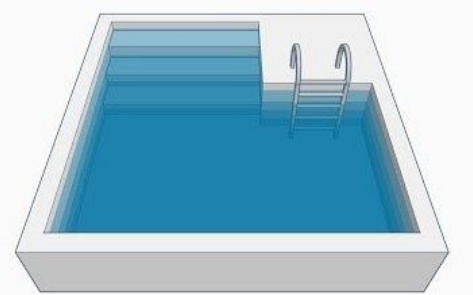
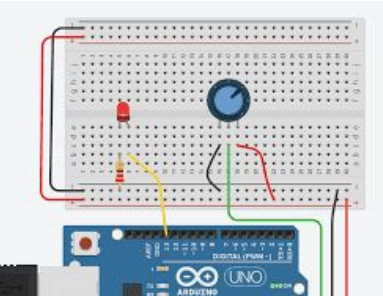


**Virtual Workshop Activities**

**Below is more information about the 30-minute projects:**

Time and Title	Description	Learning Objectives
<p>Coding Workshop   <b>Pong Game</b></p> 	<p>In this project, you will make a bouncing ball game with sounds, points, and other effects using Scratch software.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>● PC or Laptop.</li> <li>● Internet Connection.</li> <li>● A <a href="#">Scratch account</a>.</li> <li>● 7+ YO child with a curious mind.</li> </ul>	<ul style="list-style-type: none"> <li>● Learn about animations.</li> <li>● How to respond to mouse events.</li> <li>● How to add variables.</li> <li>● Learn about repetitions.</li> <li>● Learn about conditions.</li> <li>● Learn about logical operators &amp; mathematics.</li> </ul>
<p>3D Design Workshop   <b>Design a house</b></p> 	<p>In this project, you will design a house using Tinkercad software. After completing this project, you will be able to create your own unique design or personalize your house further on your own.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>● PC or Laptop.</li> <li>● Internet Connection.</li> <li>● A <a href="#">Tinkercad account</a>.</li> <li>● 9+ YO child with a curious mind.</li> </ul>	<ul style="list-style-type: none"> <li>● Learn about architecture engineering.</li> <li>● How to change the dimensions and orientations of an object.</li> <li>● How to use the solid or holes function.</li> <li>● How to align or group your objects together.</li> </ul>
<p>Robotics Workshop   <b>LEDS and Breadboard</b></p> 	<p>In this project, you will create a circuit that blinks a LED in a pattern through coding and using an Arduino microcontroller.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>● PC or Laptop.</li> <li>● Internet Connection.</li> <li>● A <a href="#">Tinkercad account</a>.</li> <li>● 9+ YO child with a curious mind.</li> </ul>	<ul style="list-style-type: none"> <li>● How to make a circuit and wiring components.</li> <li>● How to use a breadboard.</li> <li>● How to use Arduino's digital and analog pins to send HIGH and LOW signals to a LED.</li> <li>● How to use the oscilloscope (signal graph).</li> <li>● How to use resistors.</li> <li>● How to add and edit components.</li> <li>● How to code the Arduino using drag and drop programming language.</li> <li>● Learn about prototyping and simulation.</li> </ul>

**Below is more information about the 45 minutes - 1 hour projects:**

Time and Title	Description	Learning Objectives
<p>Coding Workshop   <b>Pattern Generator</b></p> 	<p>In this project, you will learn how to draw colourful patterns using Scratch.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>● PC or Laptop.</li> <li>● Internet Connection.</li> <li>● A <a href="#">Scratch account</a>.</li> <li>● 7+ YO child with a curious mind.</li> </ul>	<ul style="list-style-type: none"> <li>● Add the pen extension in Scratch.</li> <li>● How to add variables.</li> <li>● Learn about repetitions.</li> <li>● Learn about conditions.</li> <li>● Learn about logical operators and mathematics.</li> </ul>
<p>3D Design Workshop   <b>Swimming Pool</b></p> 	<p>In this project, you will design a swimming pool using TinkerCad and you will be able to personalise your own design further later on.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>● PC or Laptop.</li> <li>● Internet Connection.</li> <li>● A <a href="#">TinkerCad account</a>.</li> <li>● 9+ YO child with a curious mind.</li> </ul>	<ul style="list-style-type: none"> <li>● Learn about architecture engineering.</li> <li>● How to change the dimensions and orientations of an object.</li> <li>● How to use the solid or holes function.</li> <li>● How to align or group your objects together.</li> </ul>
<p>Robotics Workshop   <b>Potentiometer</b></p> 	<p>In this project, you will create a circuit that uses a potentiometer to light up a LED through coding and using the serial monitor.</p> <p>Requirements:</p> <ul style="list-style-type: none"> <li>● PC or Laptop.</li> <li>● Internet Connection.</li> <li>● A <a href="#">TinkerCad account</a>.</li> <li>● 9+ YO child with a curious mind.</li> </ul>	<ul style="list-style-type: none"> <li>● How to make a circuit and wiring components.</li> <li>● How to use a breadboard.</li> <li>● how to use Arduino's analog inputs and LEDs.</li> <li>● How to use resistors.</li> <li>● How to add and edit components.</li> <li>● How to code the Arduino using drag and drop programming language.</li> <li>● Learn about prototyping and simulation.</li> </ul>