




# Root Robot Introduction Lesson

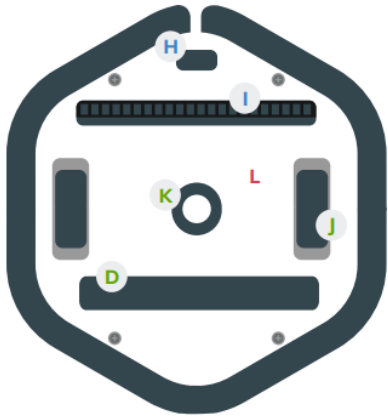
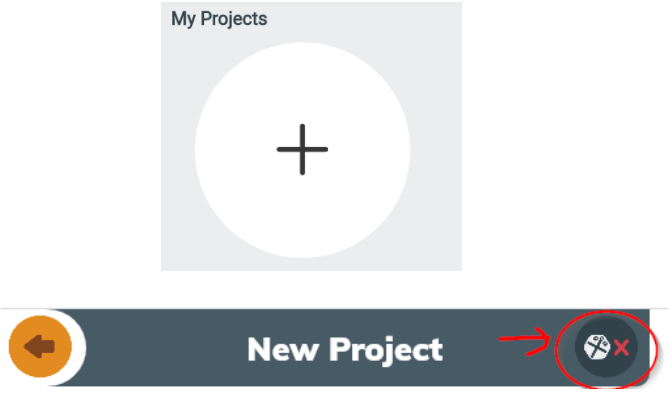
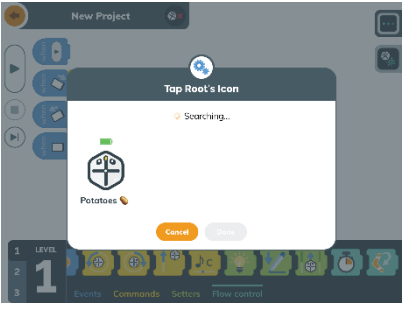
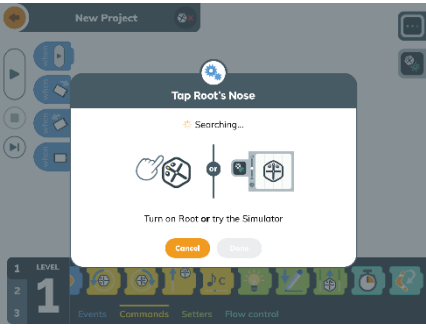
## Introduction



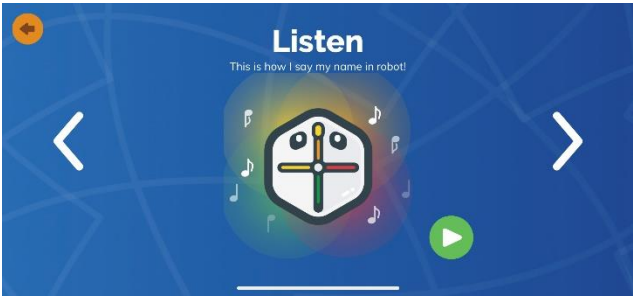
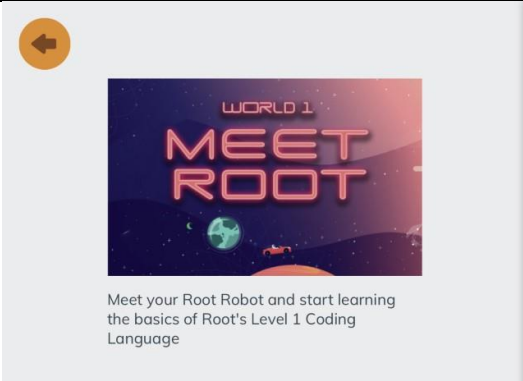
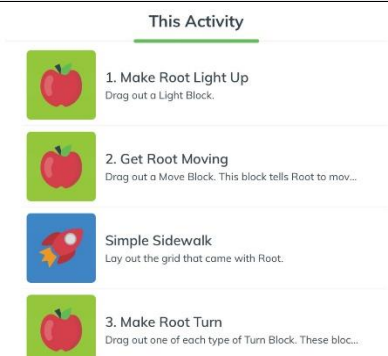
Students will learn the basic functions of Root and how to rename their robot in the app. Working in groups of 2, they will collaborate to complete each tutorial in the Root Robot app.



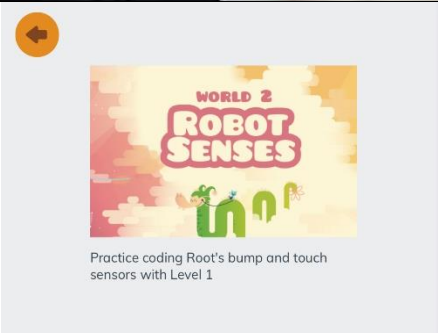
## Materials:

Ipads (enough for one to every two students), Root Robots (1:2 students), laminated mats (1:2 students. Available in LRC Root kits), dry erase markers (in LRC Root kits), dry towels or paper towel to erase lines (1:2 students), Large tables or solid, flat, clean surface to place mats.

Steps		
1		<p>Divide Students into Groups of 2</p> <p>Give each student group a Robot, an Ipad, two different coloured dry erase pens, a page of stickers, and a laminated mat (provided in kit)</p>
2		<p>Press down on Root's yellow nose for 3-5 seconds to turn Root on or off.</p> <p>The eyes will turn blue and the Root will make a little noise as it powers on or off.</p> <p>Explain the Parts of Root and the various functions using the alphabetized system below.</p>
3	 <p style="text-align: center;">Top</p>	<p>Top:</p> <ul style="list-style-type: none"> <li>A. Power button</li> <li>B. USB C charging port</li> <li>C. LED strips</li> <li>E. Light Sensors</li> <li>F. Bumper (2)</li> <li>G. Touch Sensors</li> <li>K. Marker Holder</li> <li>M. Dry-Erase surface</li> </ul>

4		<p>Bottom:</p> <ul style="list-style-type: none"> <li>H. Edge Sensor</li> <li>I. Colour Scanner</li> <li>J. Wheels</li> <li>K. Marker Holder</li> <li>L. Magnets</li> <li>D. Eraser</li> </ul>
5		<p><u>Have students click on a new project in the Root app by clicking on the + sign (left)</u></p> <p>Then have students connect to their robot by clicking on the icon to the right of the project label.</p>
6		<p>When students click on the connection icon, a list of available robots should show up on the screen. Available robots are robots that are turned on but they are not currently connected to any iPad apps.</p> <p>Your robot should be turned on and you will know if it is yours when, if you click on its name, it lights up blue at the same time. Click 'done' when you have selected your robot.</p>
7		<p>If your robot is not turned on, and no other robots are available, the screen to the left will appear. Make sure your robot is turned on!</p> <p>You turn on your robot by pressing the yellow 'nose' of your bot for two seconds. You will know it is turned on because the 'eyes' will light up and it will make a little sound.</p>

8		<p>Students will then begin renaming their robot.</p> <p>Have them scroll down in the IRobot app to the “Hello” Activity symbol, pictured left.</p> <p>Have them select the third activity from the Menu, entitled “Setup Root”.</p>
9		<p>Have Students follow the activity steps carefully as they create a ‘new name’ for their bot.</p> <p>It is important that students click the blue ‘done’ button when they have typed in the new name. If they do not do this, Root will revert back to its former name.</p>
10		<p>Students can also hear the robot say its new name in Root language!</p> <p>Just press the green ‘play’ button at the end of the activity.</p>
11		<p>Now students are ready to begin their first tutorial in the app.</p> <p>Have them begin working in ‘World 1: Meet Root’</p> <p>There are approximately 9 tutorials in this activity, taking students through most of the basic functions of the program.</p>
12		<p>Have students follow each step in the tutorials, and remind them that they need to complete each one in the activity before moving to the next set of tutorials.</p> <p>The steps are explained on the right hand of the screen, accompanied by images.</p>

13		<p>It is up to you if you want students to use markers in the first lesson or not.</p> <p>I rarely do, as the stickers provide an opportunity for students to personalize their bots and create an obstacle course for their bots.</p>
14		<p>Students should always have a microfiber cloth handy to clean any marker lines as fingers merely smudge the colour into the mats.</p>
15		<p>Depending on the time you have, you can have students move onto the next series of tutorials, entitled 'Robot Senses'.</p> <p>Most importantly, have fun and take lots of photos!</p>



### Tips...

1. If student robots are moving slowly, have them go completely out of the app (press the home button) to disconnect from their robot. When they go back in, they can reconnect and the robot should go much faster.
2. For best results, have students rename their robot at the beginning of the lesson. This way, when they accidentally disconnect from their robot (as they inevitably will), they will easily be able to find their bot on the list. The robot re-naming function is available in the 'Hello' program (see below for icon)



3. Students can also use their pens to design their robot to set it apart from other bots. Just remember to wipe clean with a dry cloth afterward!