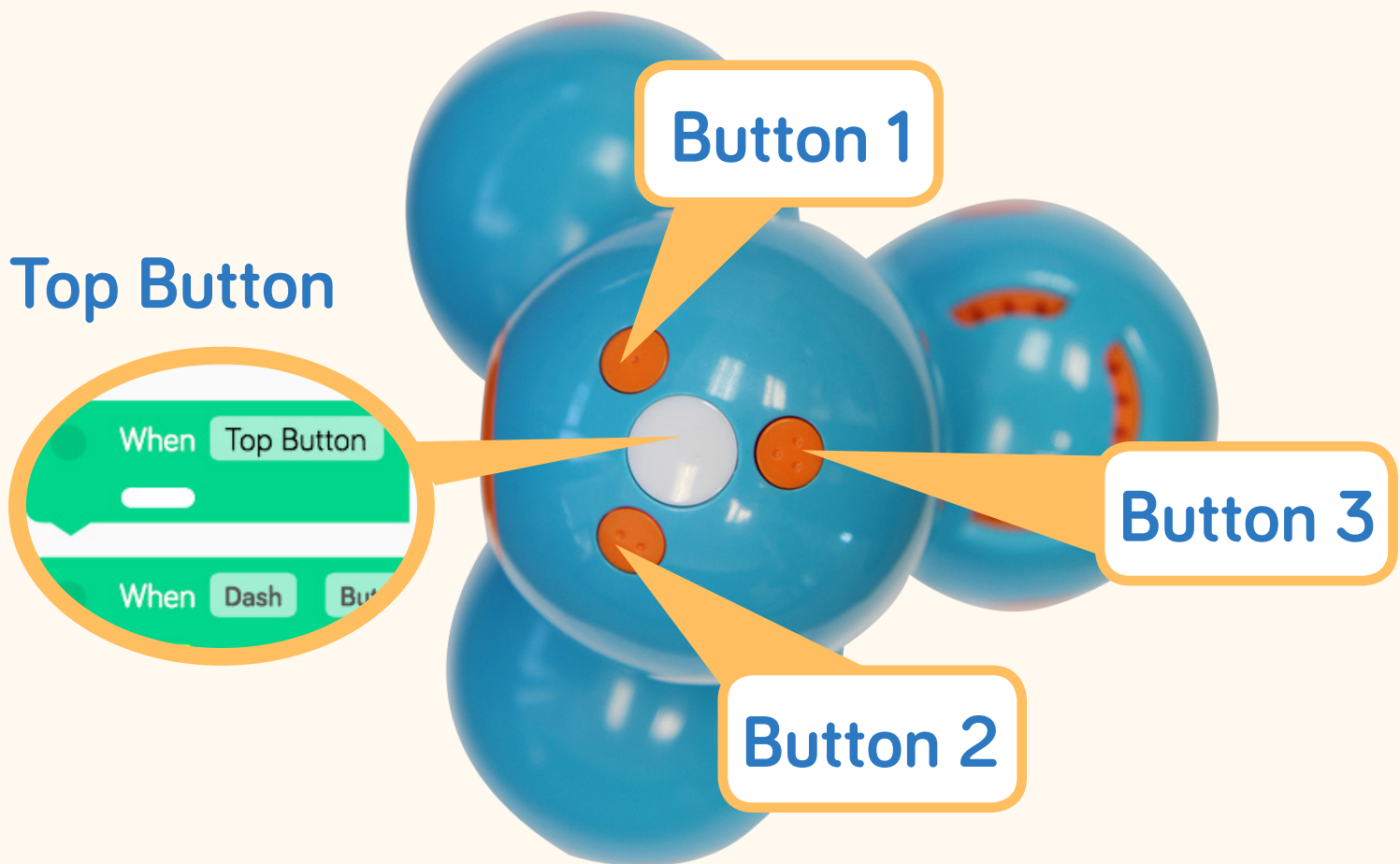


Robot Guts

Dash & Dot are small but mighty robots! They both have many intricate parts that allow interactions with the environment and with one another! In this edition of Robot Guts, we're going to talk about Dash & Dot's **sensors** and how you can use Blockly to program robot actions and reactions!



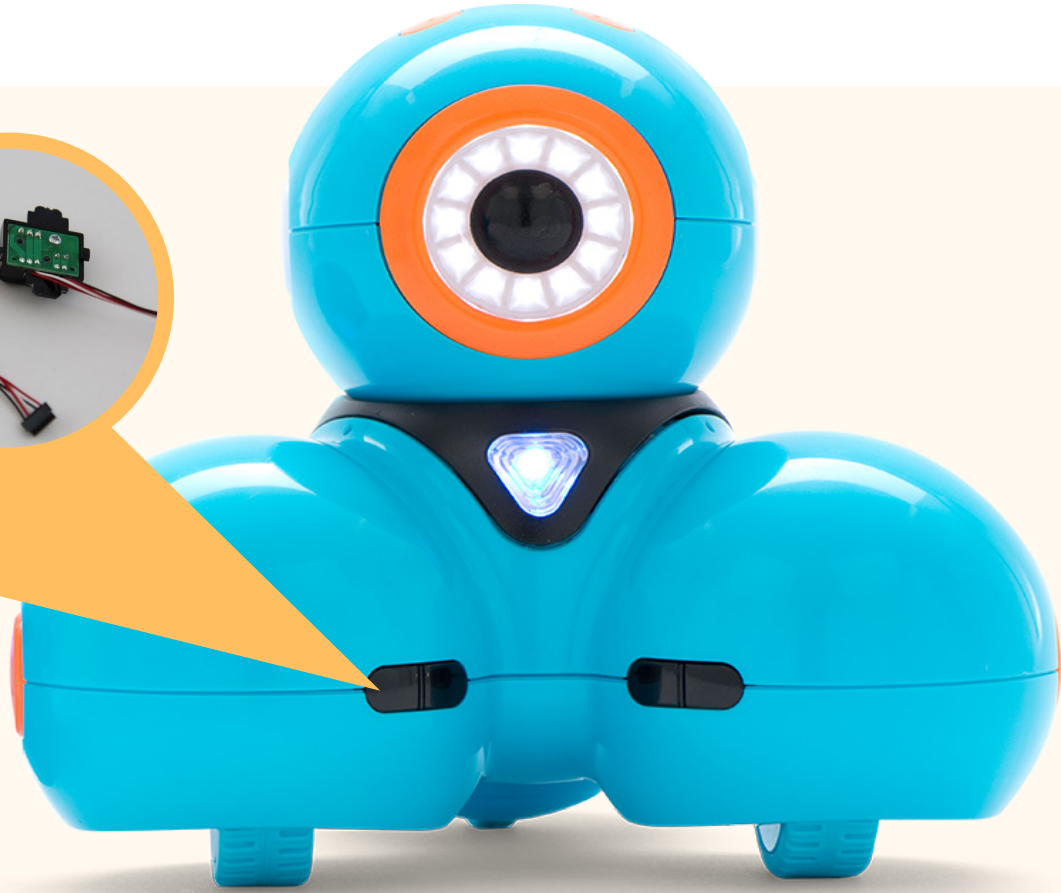
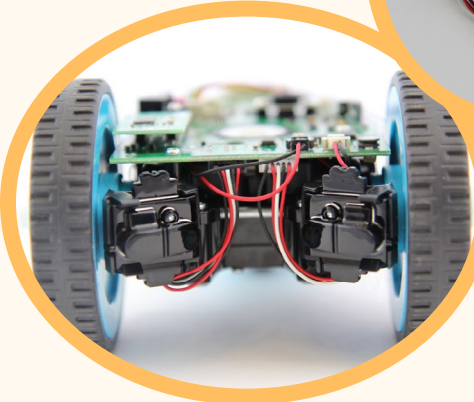
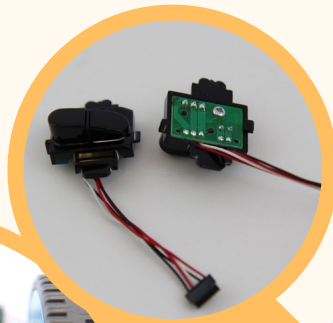
Dash & Dot each have four round buttons on the top of their heads that can be used to trigger the execution of programs in Blockly. In the Start menu, simply drag out the “**When Top Button**” block, and build your program by stacking blocks underneath it. Once you're ready to run your program, activate it by pressing Dash or Dot's Top Button!

Once you have mastered using the When blocks in the **Start** menu, try using any or all of the buttons as events to trigger robot behaviors! To do so, check out the blocks in the **Control** menu and start experimenting!

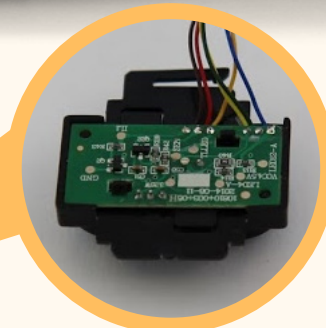
Distance Sensors

Dash has three distance sensors. These sensors allow Dash to know where objects are, and how far away they are! Dash can detect objects that are approximately 12 inches in front or behind. You can use Blockly to program Dash to react to an **obstacle in front**, or an **object behind**! These reactions can be programmed by using the Start or Control blocks, similar to the Buttons.

Front Distance Sensor x 2



Back Distance Sensor



How will you use distance sensors to program Dash to react to objects in the way in Blockly?

