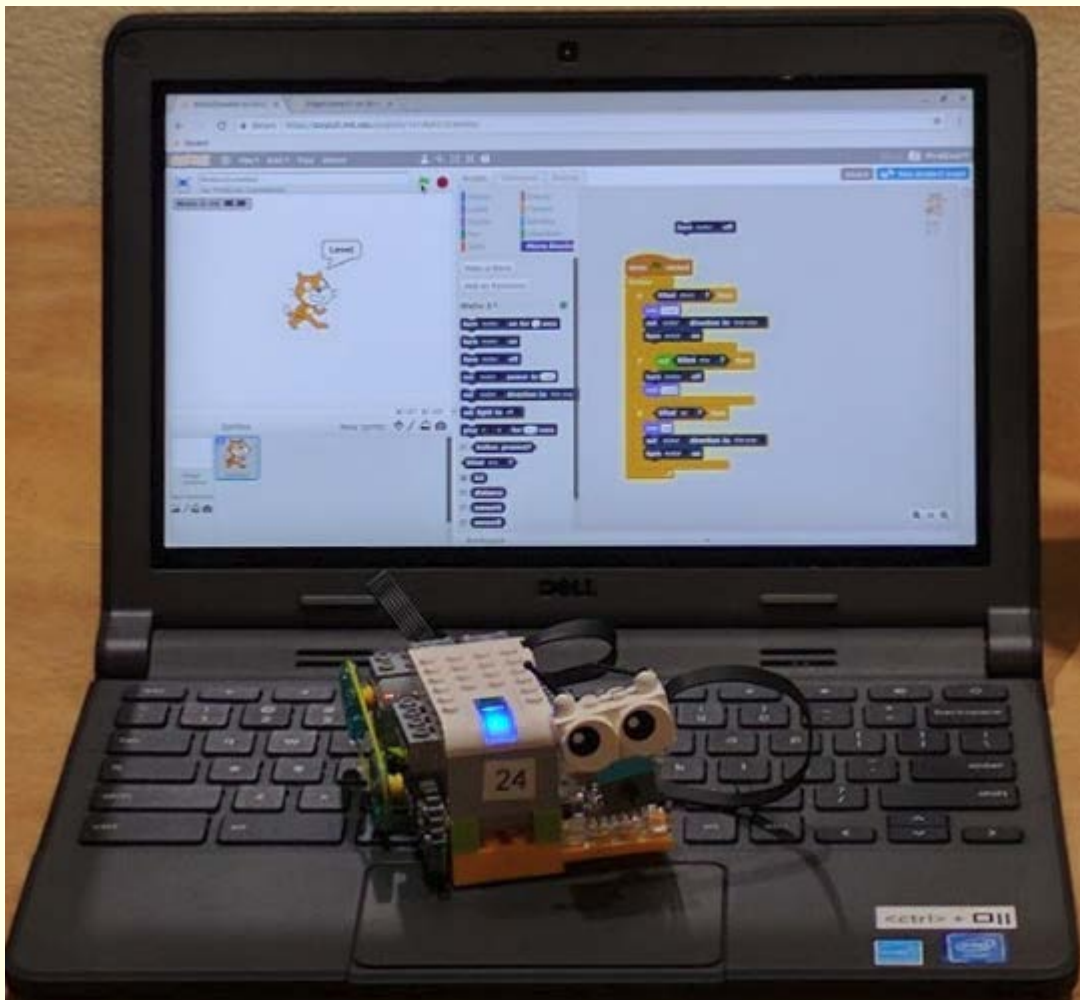


Level Headed

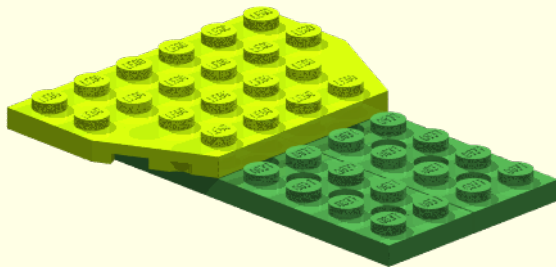
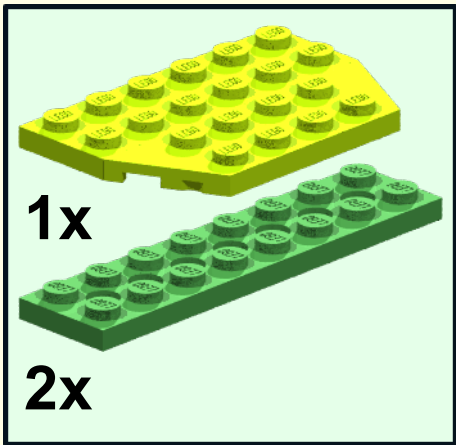
Scratch + WeDo 2.0

The robot reacts when it's tilted by displaying which way it has been tilted and by running the motor and gears until its head is level again.

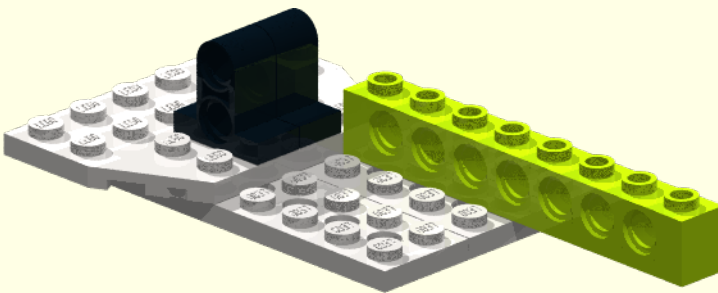
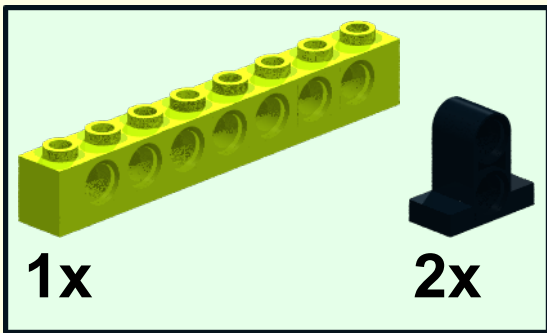


Building Instructions

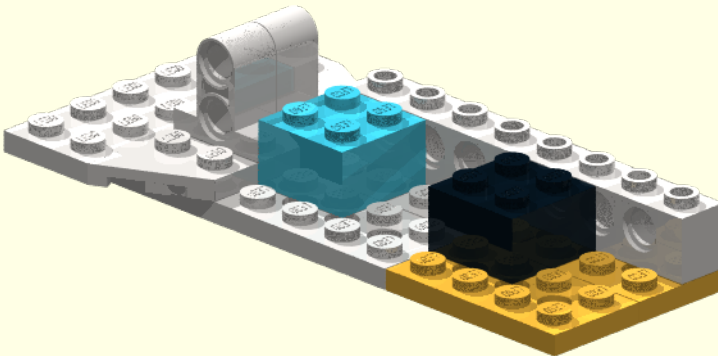
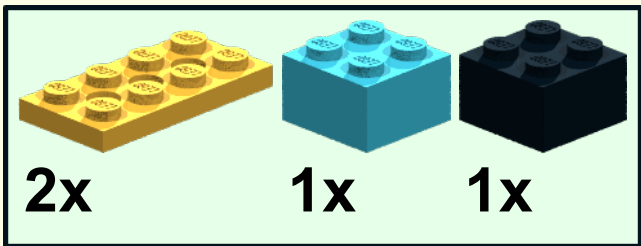
1



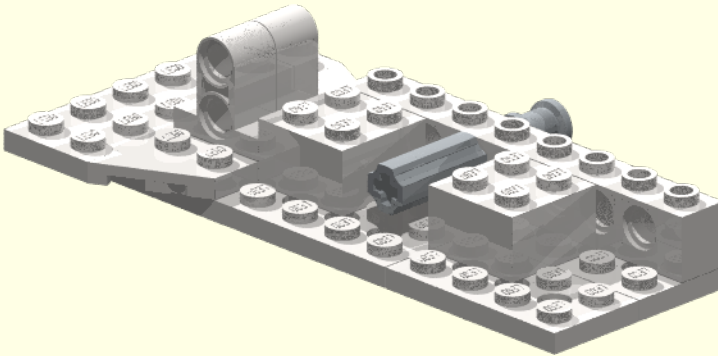
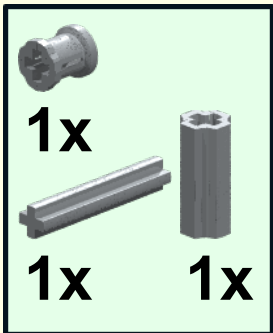
2



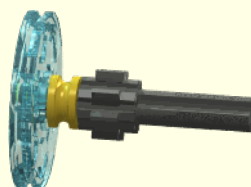
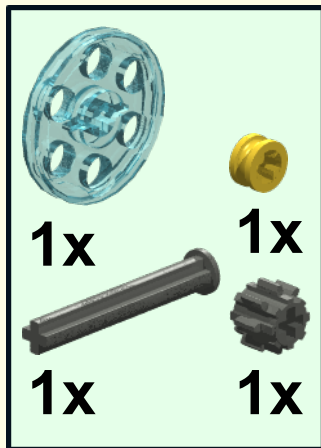
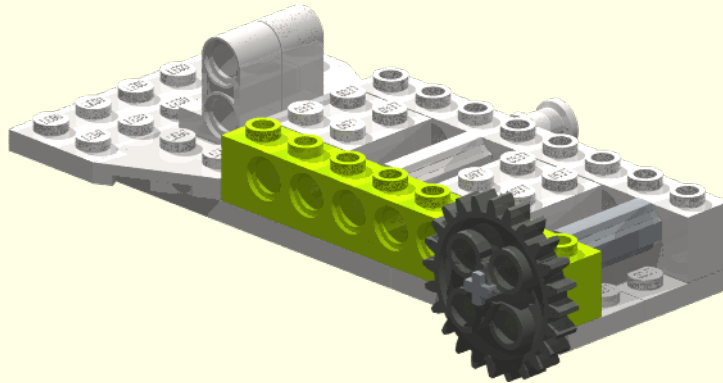
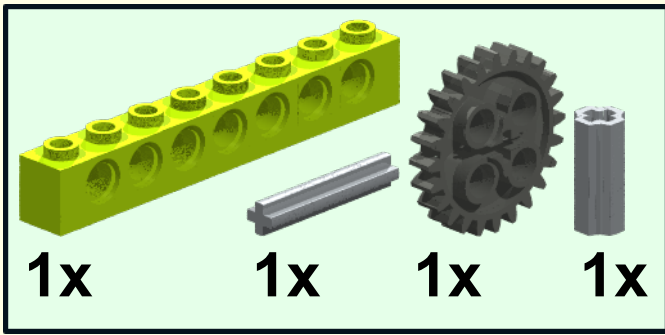
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4



5



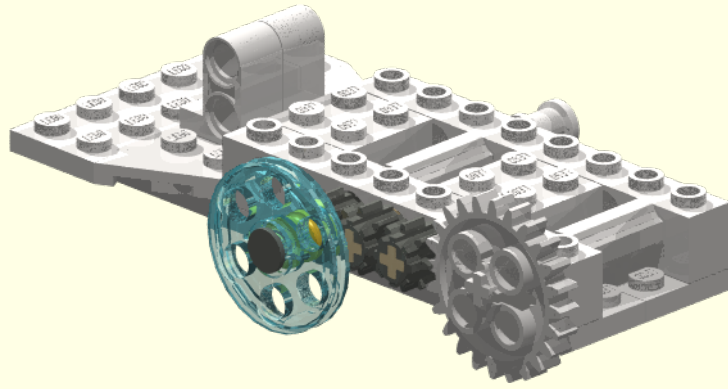
6



2x



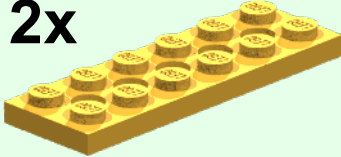
2x



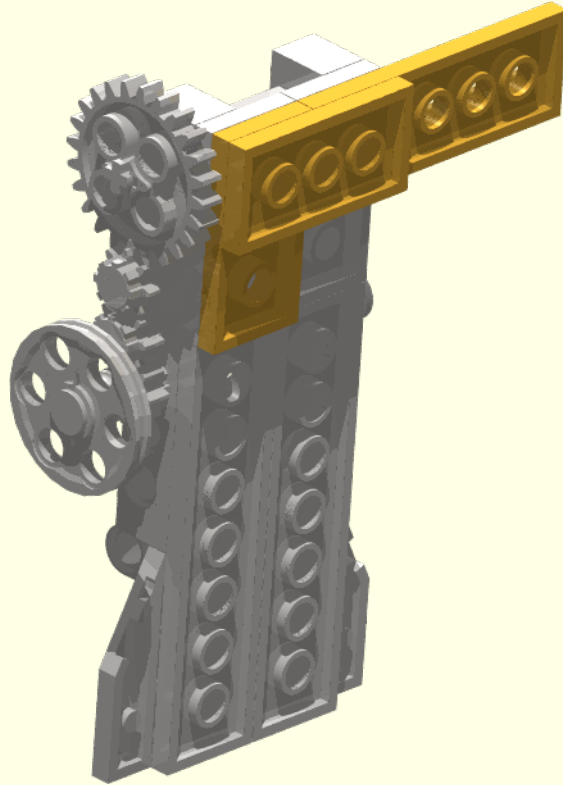
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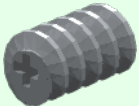
2x



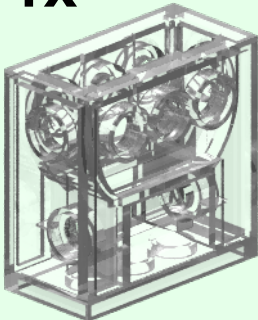
1x



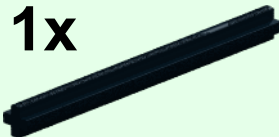
8



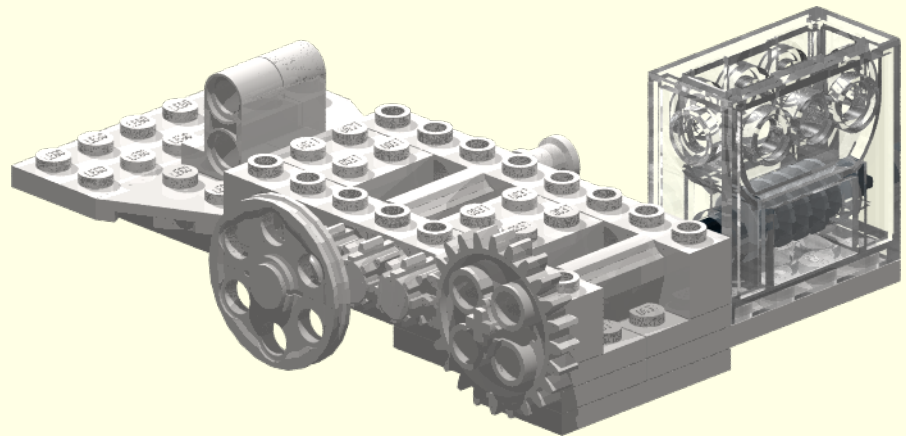
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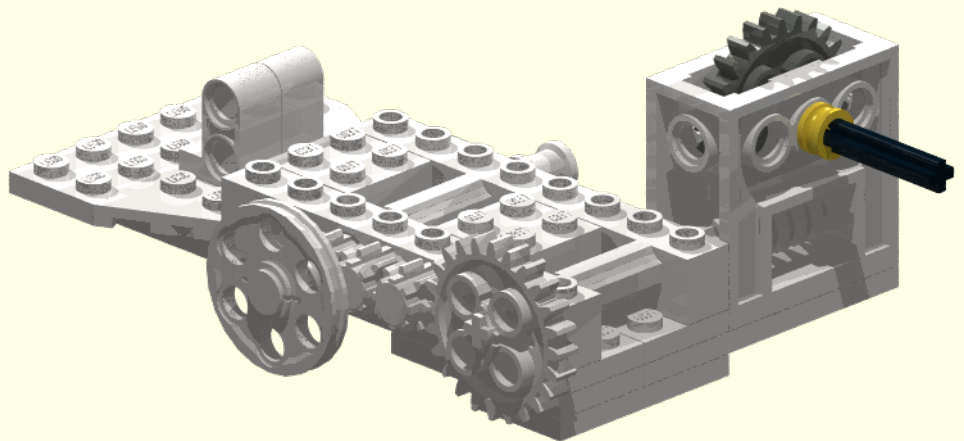
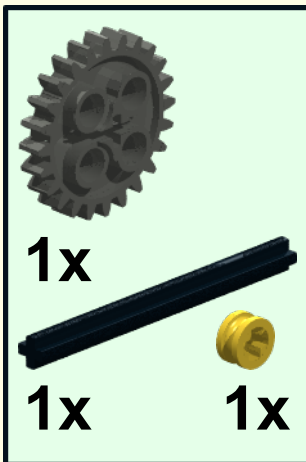
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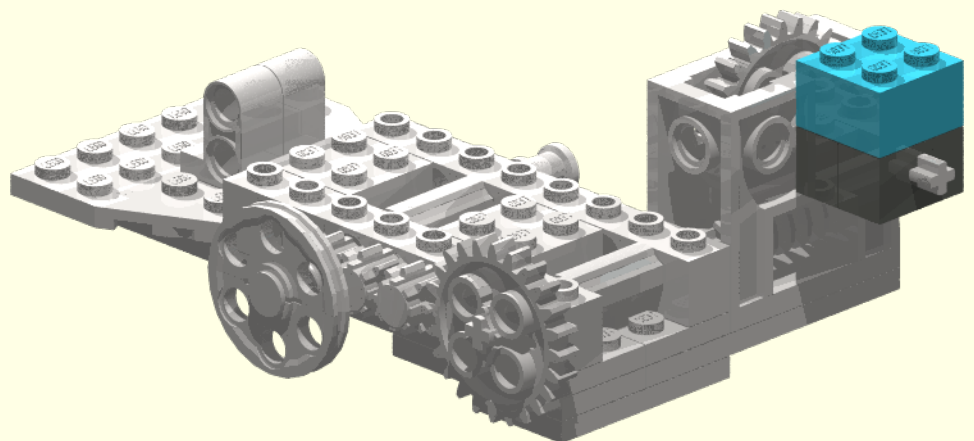
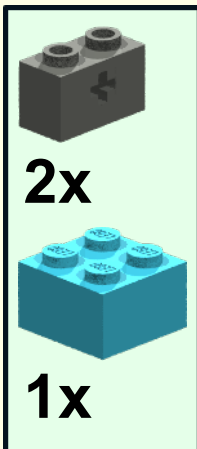
1x



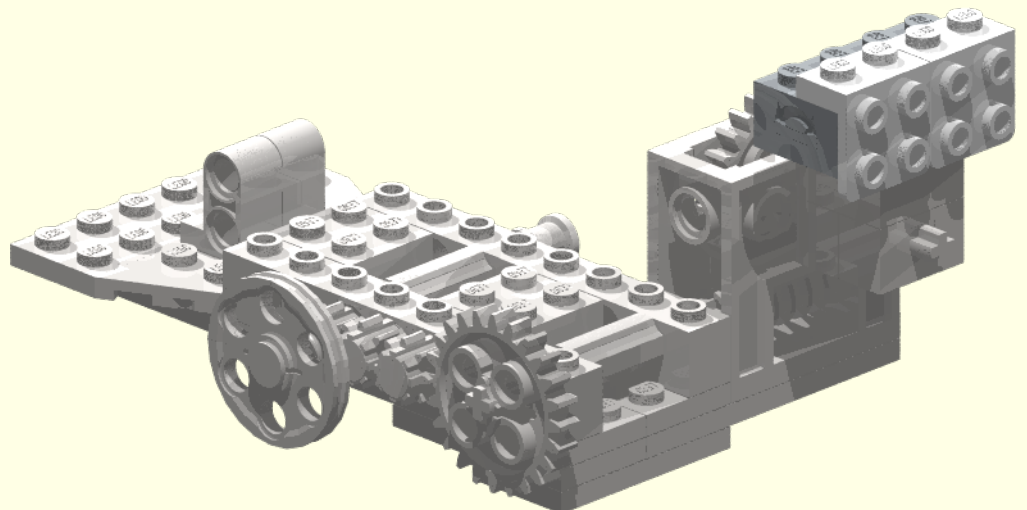
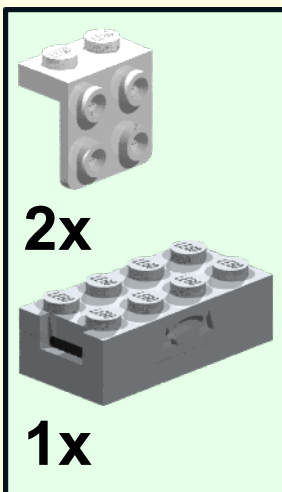
9



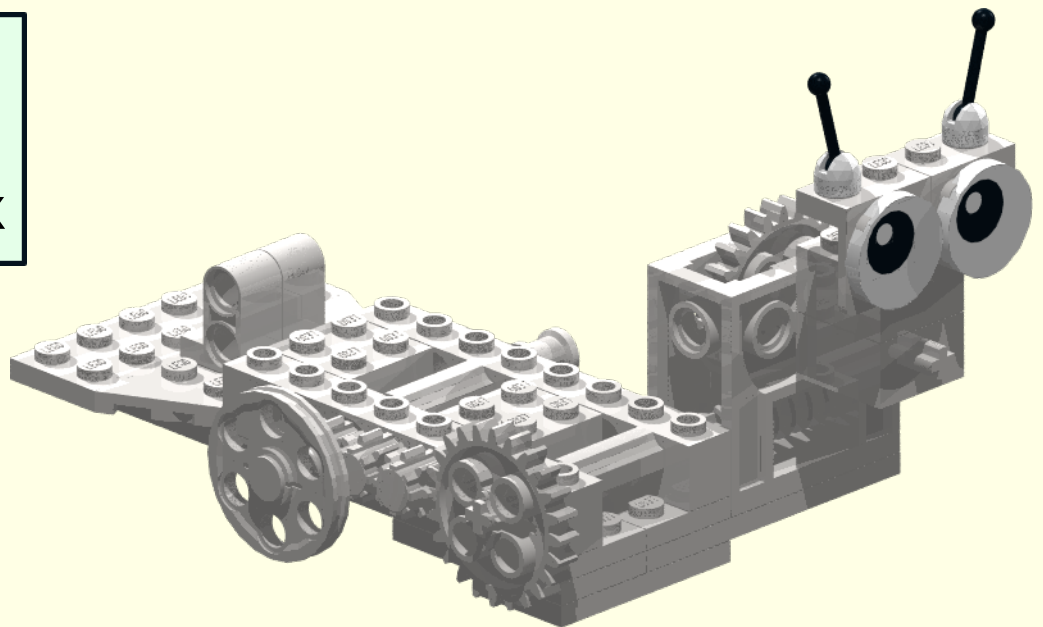
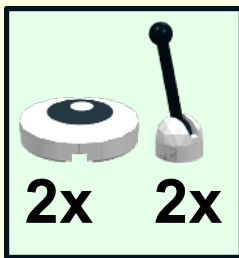
10



11

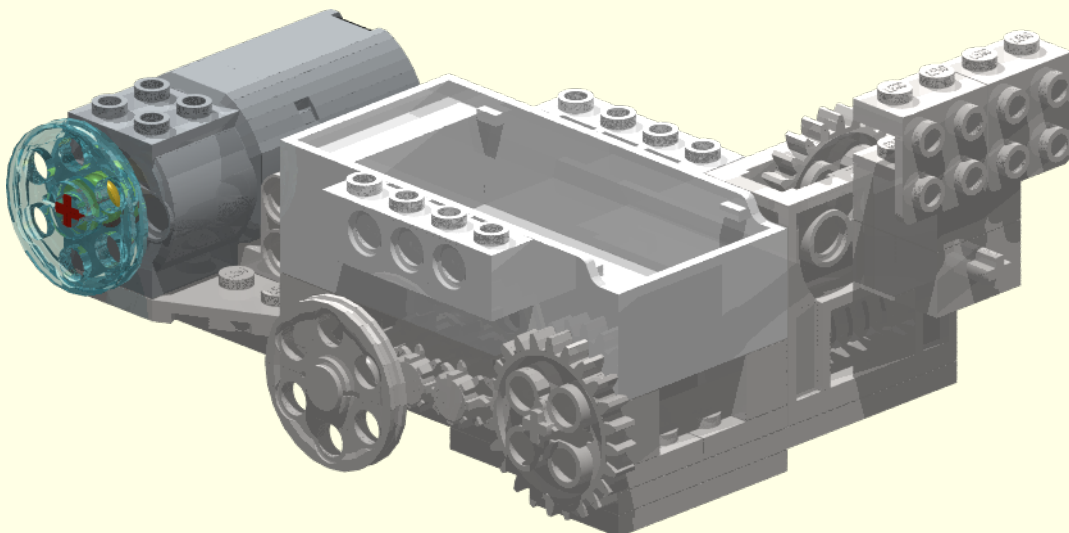
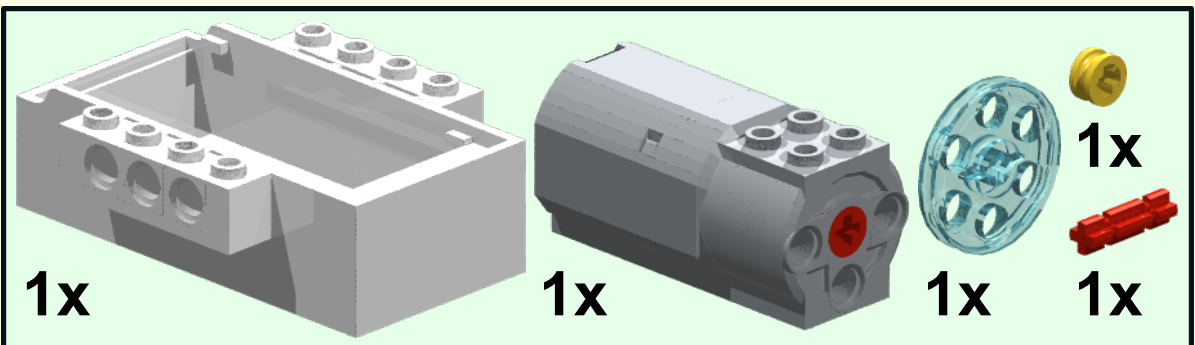


12

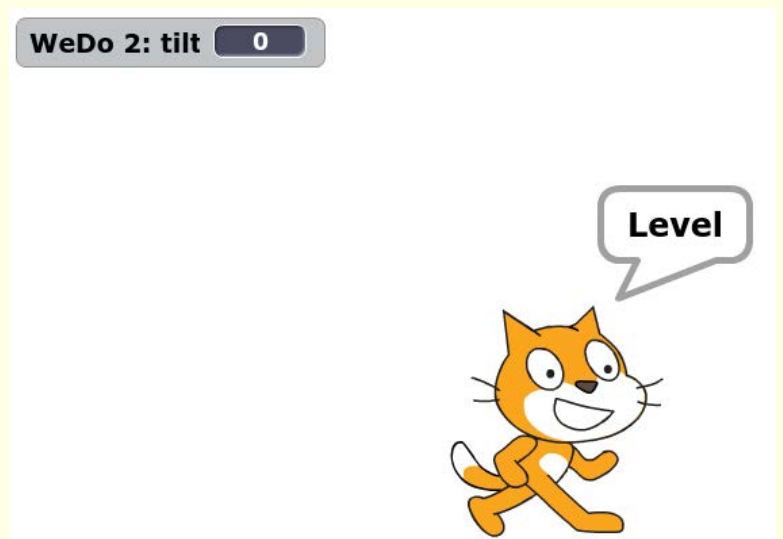
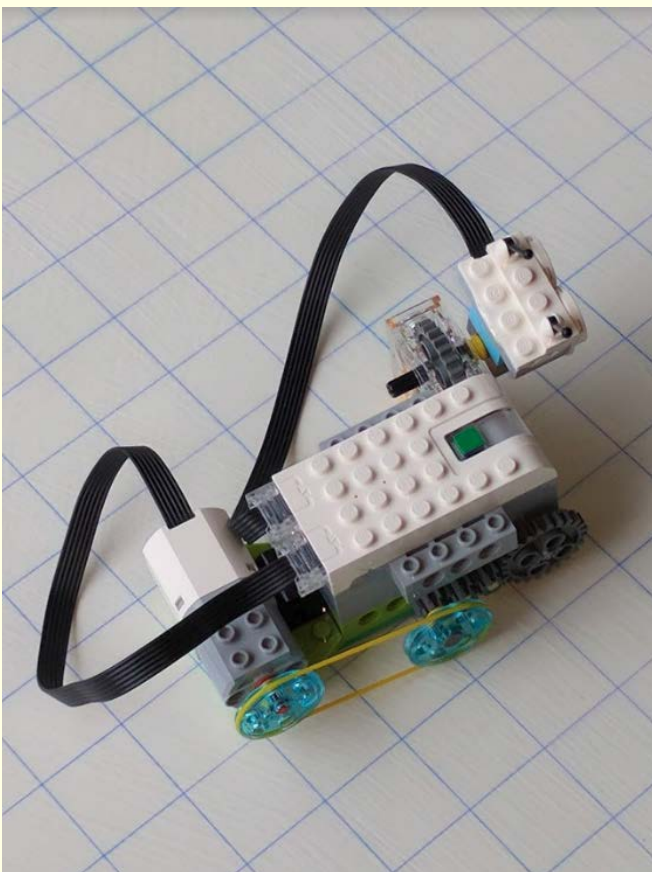
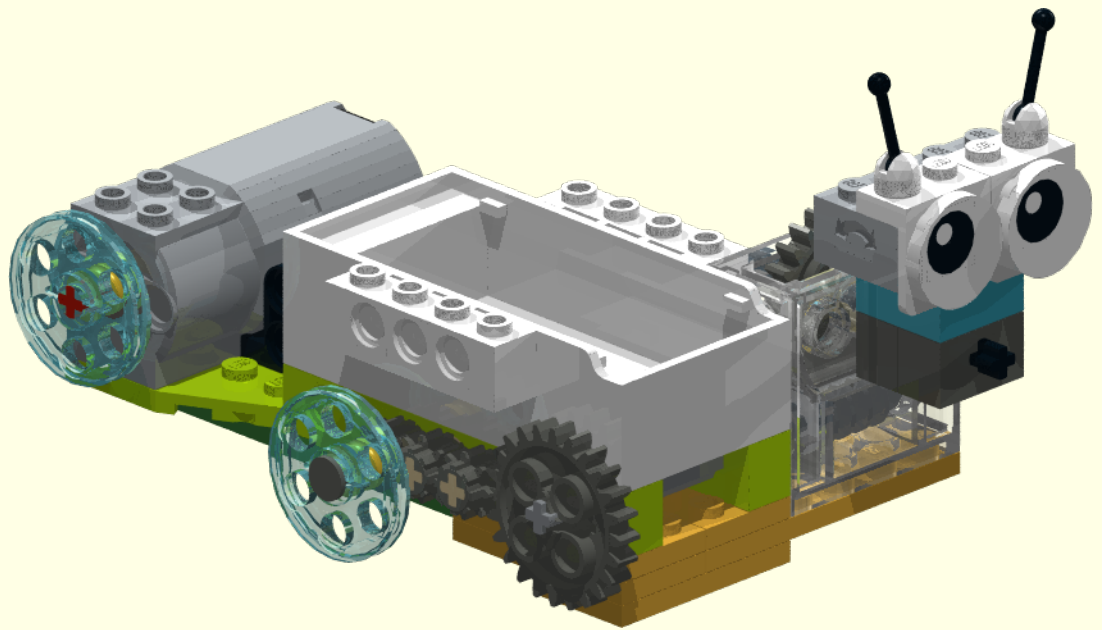


Note that as of June 2017, the LPub3D version 2.0.20 program used to create these instructions only displays the bottom half of the WeDo 2.0 SmartHub when using POV-Ray for rendering!

13



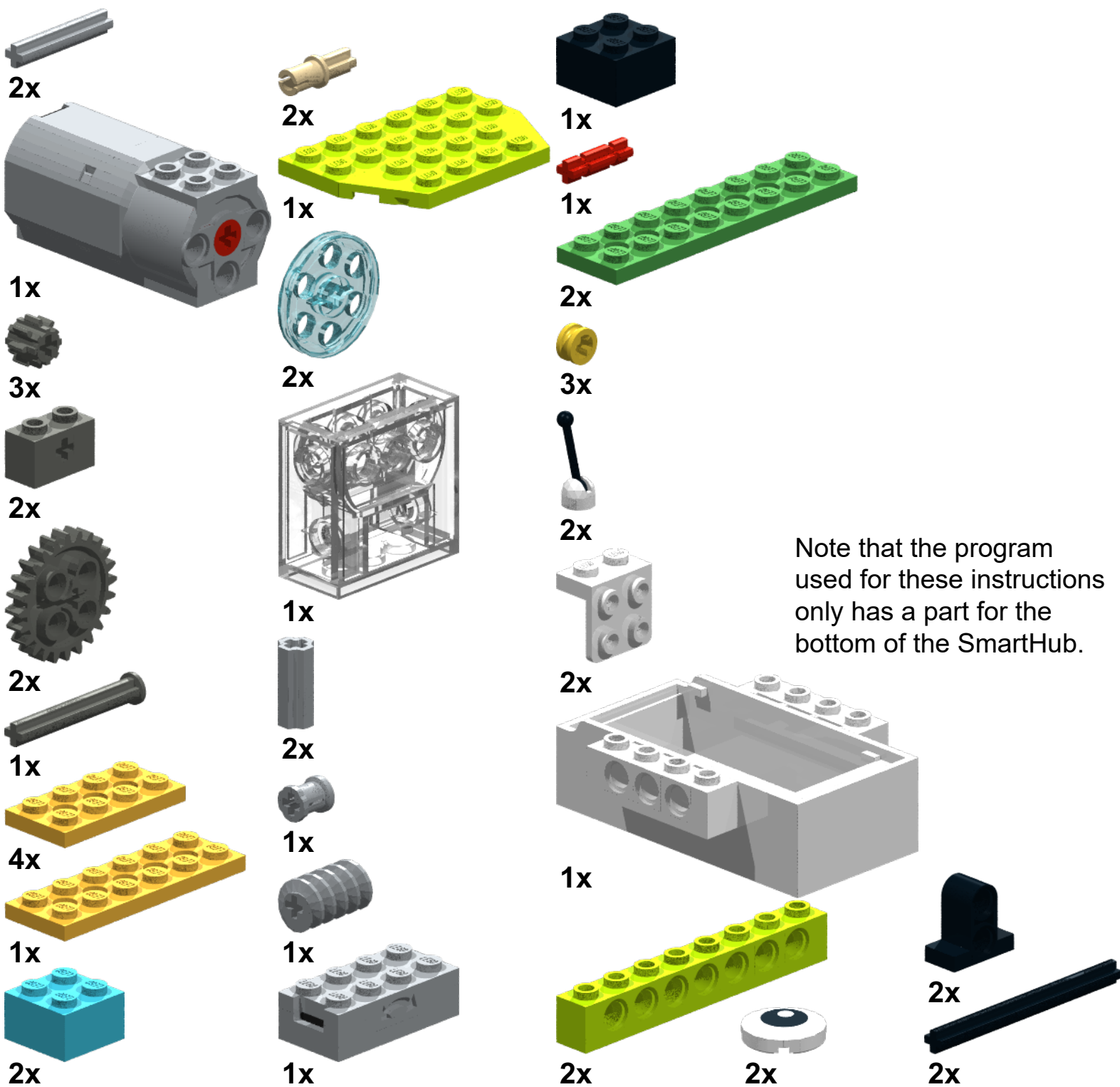
Add the
yellow rubber
band to
complete the
assembly:



Write a Scratch program that reacts to how the robot is tilted.

If tilted right, the cat says "Right" and the motor starts and rotates the robot's head until the head is level. The cat then says "Level."

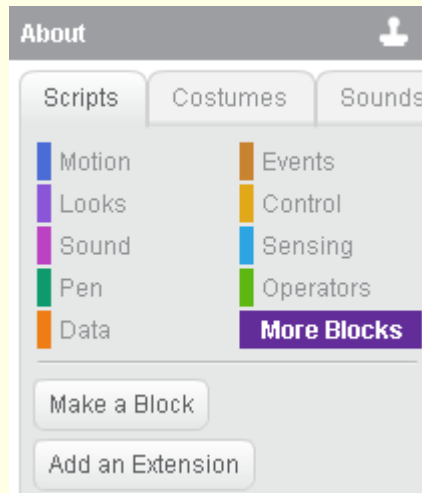
If tilted left, the cat says "Left" and the motor starts and rotates the robot's head until the head is level and the cat says "Level."



Programming WeDo 2.0 with Scratch on a Chromebook

December 2016

1. First add the WeDo 2.0 extensions to the Scratch environment on your Chromebook:
 - Click the More Blocks button, and then click the Add an Extension button:

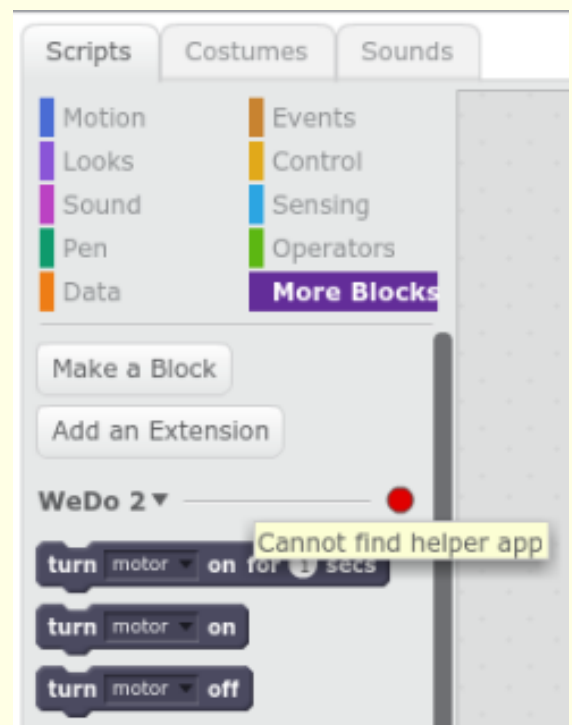
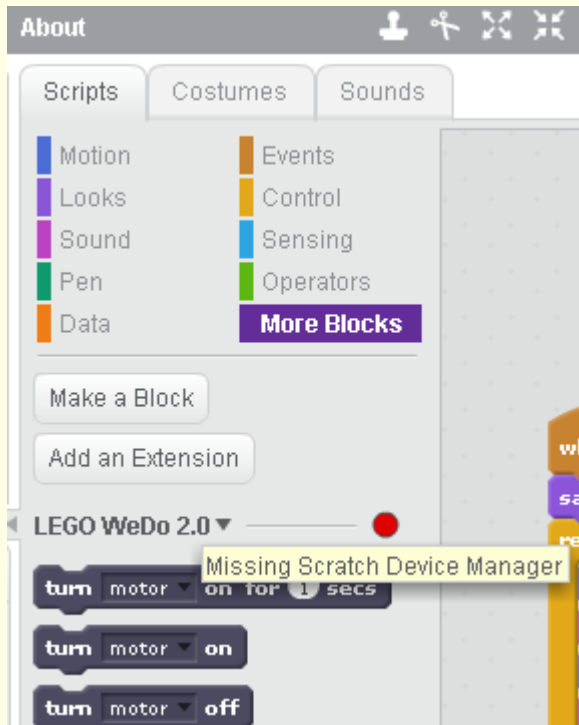


- From the Extension Library, click the WeDo 2.0 image then click OK in the lower right corner:

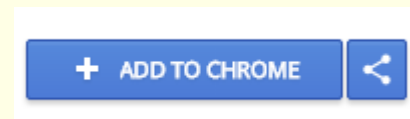
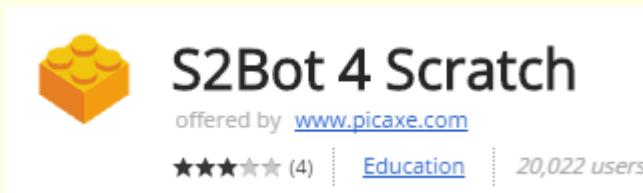


Programming WeDo 2.0 with Scratch on a Chromebook

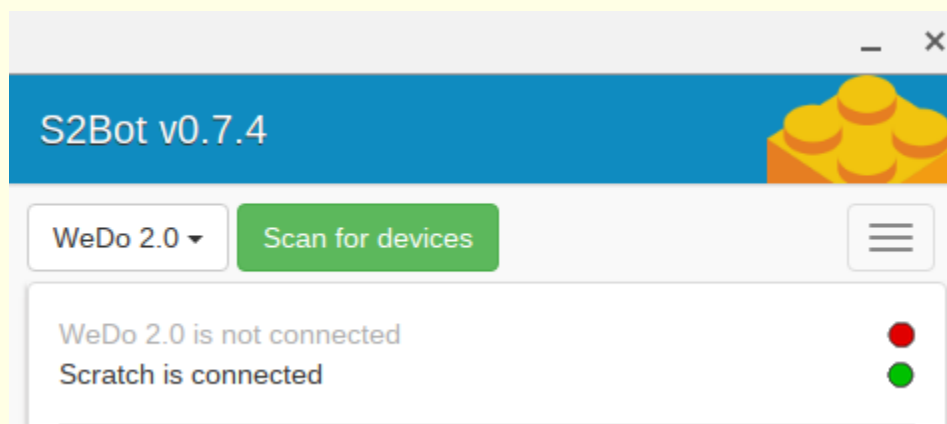
- This will populate your programming blocks area with WeDo 2.0 commands. Hovering the mouse over the red dot shows “Missing Scratch Device Manager” or “Cannot find helper app” which means that your Chromebook isn’t paired with the WeDo Smarthub:



2. Install the S2Bot 4 Scratch app to pair your Chromebook with your WeDo 2.0 Smarthub.
- Search the Chrome Web Store for S2Bot 4 Scratch. When you find it, click to Add to Chrome:

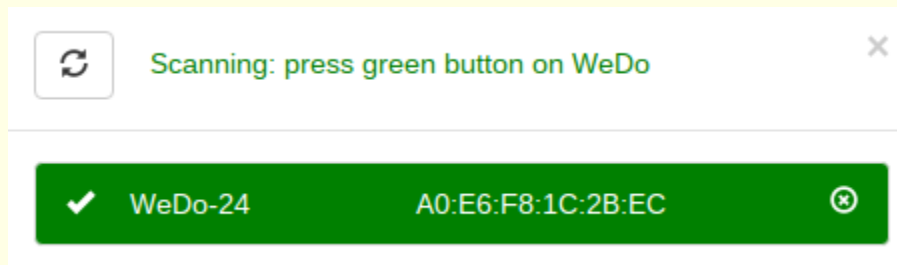


- Launch S2Bot 4 Scratch. It should show that “Scratch is connected” (green dot = yes) and WeDo 2.0 is not connected (red dot = no):

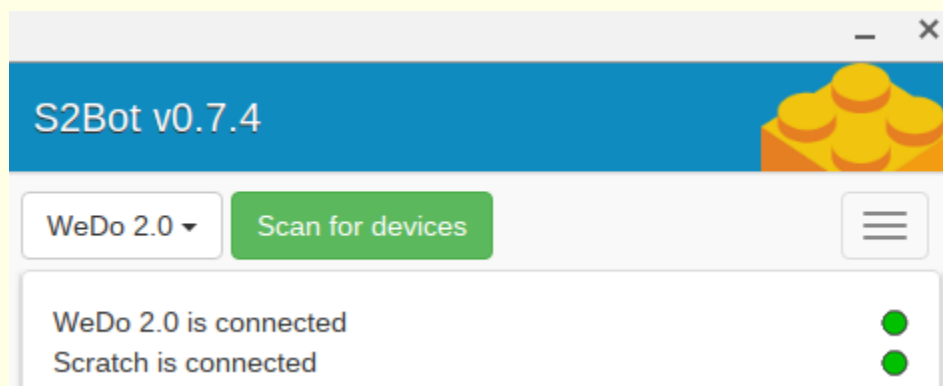


Programming WeDo 2.0 with Scratch on a Chromebook

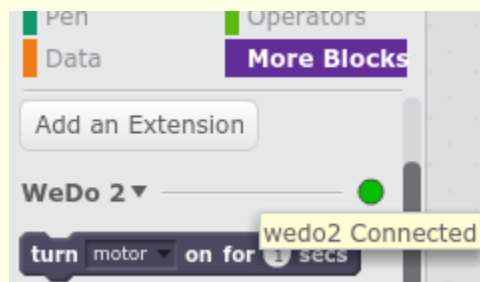
- Click the “Scan for devices” button in S2Bot 4 Scratch, and press the square green button on the WeDo 2.0 Smarthub to start the pairing process. When your Smarthub appears, click its name to confirm the pairing:



- S2Bot 4 Scratch should now show that both Scratch and your WeDo 2.0 Smarthub are connected:



- Do not close S2Bot 4 Scratch.** Minimize it and go back to your Scratch session in your browser. You should see the WeDo Smarthub connected (green dot):



- Test it. Plug a motor in to one of the Smarthub ports, and click the “turn motor on for 1 secs” command at the top of the list of commands. You should see the motor turn for one second. You’re ready to program WeDo 2.0 with Scratch!

Scratch Program Solution

