Do Not Print this Page

This is inserted so that the 2-page view shows a single double-sided sheet.

When saving to PDF, choose print options and pages 2 to last page

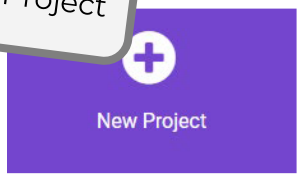
Build a Remote Control Robot: Code the Controller

Tutors: Don't use this sheet if ready-coded controller microbits used

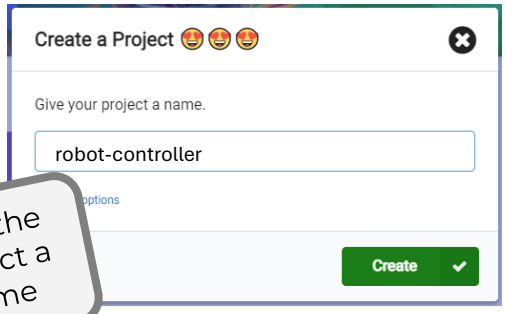
Create a Project for the Controller

1. Go to the Makecode website https://makecode.microbit.org/

2. Click on New Project



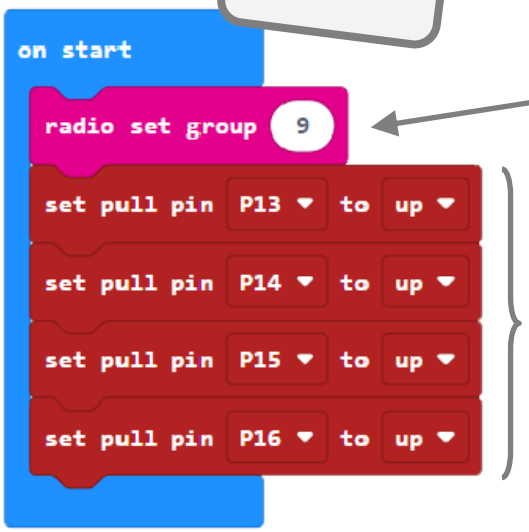
3. Give the project a name



Set up the Radio Channel and Buttons

First set up the radio channel and the buttons on your controller. The Microbit's radio will be used so your controller can send messages to your robot.

1. Add this code

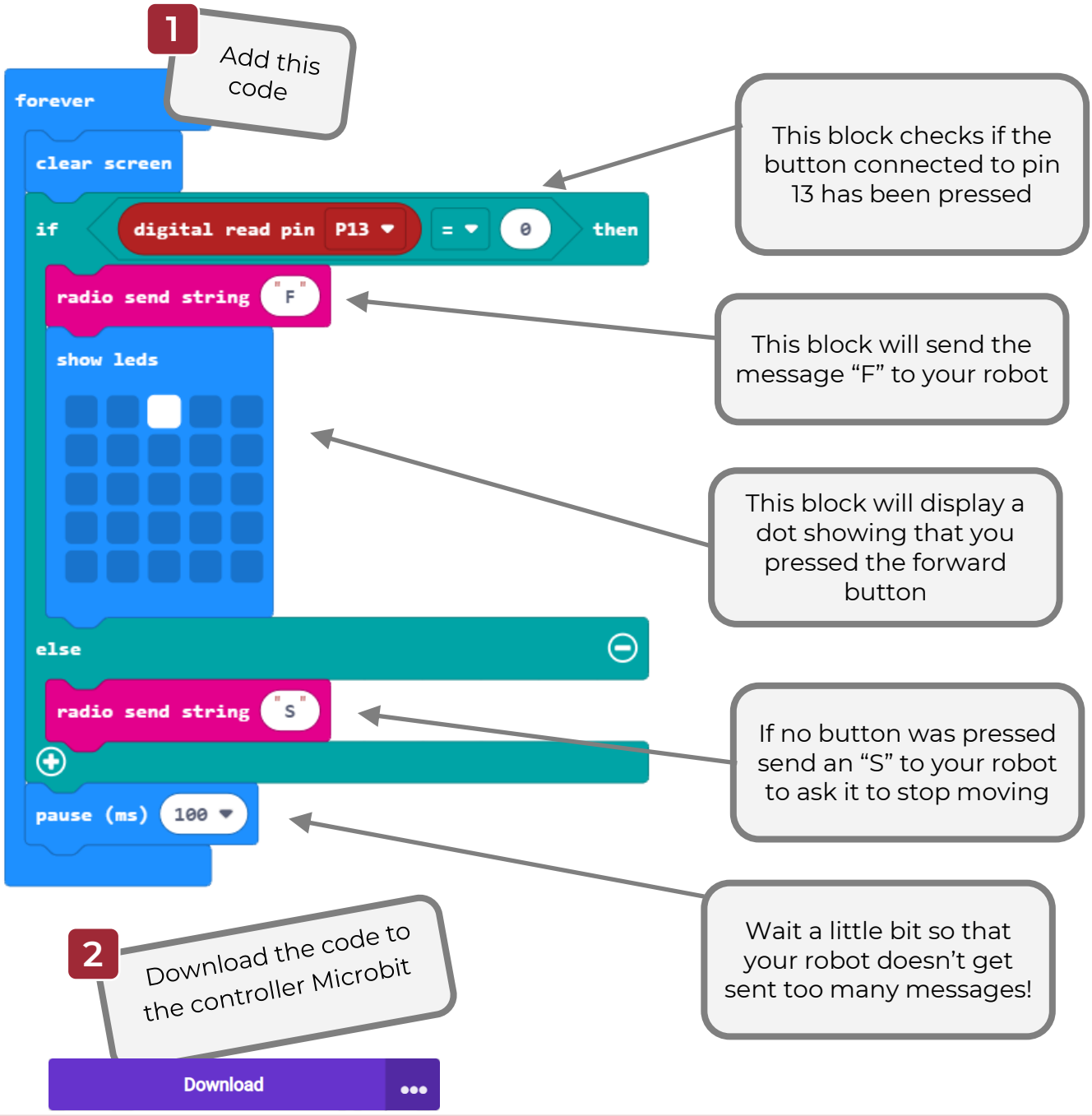


Change your radio channel number to one that no one else in the room is using. Otherwise you will control someone else's robot!

These blocks pull the pins for the buttons to HIGH (1). When they are pressed they will change to LOW (0)

Respond to the F Button

Now get your controller to send a message “F” when the forward button is pressed.



Your challenge!

The code you have on your controller allows you to only control the forward movement of the robot. That’s not very useful!

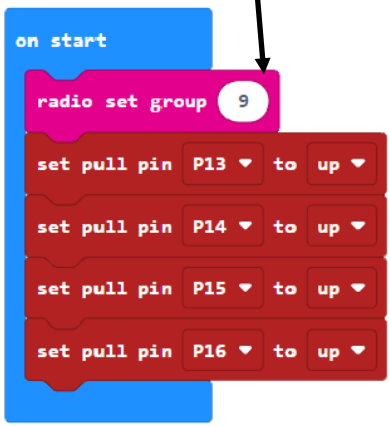
Can you get other commands working: left, right and backwards?

Hint: You will need to change the code on both the controller and robot. The controller must send different messages, such as “L”, “R” and “B” for left, right and backwards. The robot must then respond with the correct movement.

Build a Remote Control Robot: Solution

Controller

Make sure the controller channel number matches the robot channel number



You need to respond to each button and send a message to the robot