



# *Programming the Sphero RVR: Getting Started*

Robotics Curriculum  
IT Adventures



# Programming the micro:bit

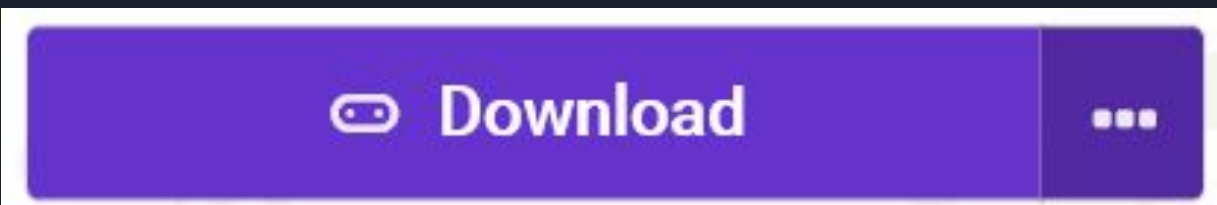


The RVR is controlled via the BBC micro:bit in the IT Adventures Robotics program. This chip can be programmed via the Microsoft *MakeCode for micro:bit* program (left). The program can be downloaded and installed from the “Microsoft Store”, found on any standard Windows PC.

After installing *MakeCode for micro:bit*, plug in the micro:bit to the PC using any microUSB cable. This should come included in the kit, and connects to the port on the micro:bit (right). Once both ends are plugged in, this portion should be good to go!



Now that the micro:bit has been connected to the computer, the last step will always be to download the program to the micro:bit. Following any of the lessons provided, students should be able to write a program in *MakeCode*. Once they are ready to test it on the micro:bit, all that needs to be done is to click the “Download” button in *MakeCode* (below), located in the bottom-left corner. *MakeCode* should automatically compile and write the code to the micro:bit.



# Connecting the micro:bit to the RVR

After any program has been successfully downloaded to the micro:bit, the next step is to connect it to the Sphero RVR. This follows the same connection process as connecting the micro:bit to the PC, except in this instance, the USB end connects to the RVR (see the image below for connection details).



This standard way of connecting it isn't the most secure, though. To create a more secure connection, have the students attach the pegboard to one of the toppers. This can be done using some of the twist ties, and will be necessary in the later weeks - so encourage them to be creative! Following this, the micro:bit attachment can be snapped onto the top of pegboard (as shown in the image below), and the micro:bit can be slid into it. This still requires a USB connection, but is much more secure for the micro:bit than only connecting it via USB.

