Robot Races
Designed for use with the Finch

Teachers: This program allows students to control their robot with either the keyboard arrows (space bar to stop) or a light source such as a flashlight. Additionally, a timer is built in. When the green flag is pressed the Finch’s nose starts out green. As soon as the Finch registers movement, the nose color turns off and the timer starts. When the Finch encounters an obstacle, the nose turns red, and the Finch and the timer stop. To reset the Finch and its timer, you must press the green flag again.

Finch set up:

- Plug the Finch into the computer.
- Start the BirdBrain application. The lights flashing on the Finch should cease.
- Click “Open Snap!” and select level 4. Using the “Import...” option, open the .XML file “RobotRaces.xml”
- The code blocks should be hidden. If not, press the maximize button to hide them.
- One way to use this program is to have possible answers on the floor around the room. Students will determine the answer to a question you give them and then race their robots to the correct answer. Make sure there is an obstacle at the answer so the timer works correctly. They will lead their Finch robot to the correct answer on the floor using the keyboard or flashlights (or other light sources). To switch to keyboard controls, press ‘k’. To switch to light controls, press ‘l’.
- Have them race themselves or race against another group. If you want the timer to start when the question is given, have them drive their robots to a starting spot once the question is posted. How you run this is up to you!
Welcome to robot races with the Finch!

Your teacher should have already set up your Finch and the robot racing program on your laptop. If they have not, do this now.

Finch set up:

• Plug the Finch into the computer.
• Start the BirdBrain application.

To start the program, press the green flag.

Your Finch’s nose will light up green. To move the Finch by keyboard, press ‘k’. To move the Finch by light source, press ‘l’. Once your Finch begins to move, the nose color will turn off and the timer will start. When your Finch encounters an obstacle, the nose will glow red and the timer and your Finch will stop.

Follow your teacher’s instructions for how to play, and win, the race.

Have fun!