

Input, Output and Movement	Grade 3 Forces and Motion
Student Handout	

Part 1: Input and Output with Arrows

Create a program that will display the following on your MicroBit:

- Tilt your MicroBit to the left – Shows an arrow pointing to the left (West)
- Tilt your MicroBit to the right – Shows an arrow pointing to the right (East)
- Tilt your MicroBit so the logo is up – Shows an arrow pointing up (North)
- Shake your MicroBit – Shows an arrow pointing down (South)

Bonus: Code your MicroBit so it displays a symbol (checkmark, smile, etc.) when the MicroBit is not moving.

Part 2: Acceleration in the X, Y and Z Directions

Create a program that uses the computer to plot acceleration in three different directions. Be sure to use the ‘Show data Device’ option to get the graph on the computer while your MicroBit is plugged in.

- Plot acceleration in the X direction
- Plot acceleration in the Y direction
- Plot acceleration in the Z direction

What way did you notice the biggest changes in the graph when you moved the MicroBit

1. In the X direction: _____
2. In the Y direction: _____
3. In the Z direction: _____

Part 3: Motion Sensor

You’ll need a partner for this activity.

- On one MicroBit, create a program that sends a radio signal when motion is detected.
- On the second MicroBit, display a message or symbol when it receives a radio signal.