

MAKER SKILLS LIBRARY

Maker Skill: micro:bit Accelerometer

Your micro:bit has a built-in accelerometer, a kind of sensor that can sense movement, direction, and vibration. You can use the accelerometer to create code that tells your micro:bit to react based on the way your micro:bit is facing and/or the movements detected by the accelerometer.

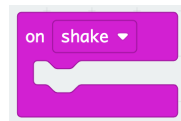
To get started:

- Head to <https://makecode.microbit.org/> and click on “New Project”
- You can manipulate the on-screen micro:bit to simulate the accelerometer, but depending on what you want to create using the accelerometer, you may want to use a physical micro:bit to test it out. Make sure your micro:bit is plugged in and connected correctly.
- Check out [this tutorial](#) to learn how to download a program to your micro:bit.

To code your accelerometer:

- Click on  Input to display the magenta “Input” coding blocks.

Blocks to Try:



This block will tell your micro:bit to run whatever code is placed inside of it when the accelerometer senses that the micro:bit has been shaken. You can change the gesture that will trigger the code to run by clicking “shake” and choosing from the menu of available options. For example:



- Logo up, Logo down, screen up, screen down, and tilt (left and right) will all cause the code inside the block to run when the micro:bit is held in a certain position.



- Free fall will cause the code inside the block to run when the accelerometer senses that the micro:bit is falling (we don't recommend dropping your micro:bit without protection!)



- 3g, 6g, and 8g will cause the code inside the block to run when the accelerometer feels impacts of different strengths. The “g” represents the amount of force needed to trigger the code, so a 3g impact is easier to trigger than an 8g impact.

Code an interactive project with your accelerometer! Try some of these coding challenges.

- Create a tilt-instrument, which plays different notes through the speaker depending on which way you hold the micro:bit.
- Make a step counter or another kind of tracker that keeps track of movements using the accelerometer.
- Create a face on the LED matrix that reacts to how you’re holding the micro:bit.