

Microbit LED Strip Thermometer

60 minutes (2 periods)

Robotics & Engineering Basics

WHAT THIS LESSON DOES

Begin by creating a new Microbit project and adding the neopixel extension. Set up the LED strip and program the A button to display the temperature. Light up the LED lights according to the temperature, with more lights for higher temperatures. Download your project, connect your LED strip to your Microbit, and watch the LED strip light up according to the temperature.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop skills to create and manage a new Microbit project.
- Understand and apply the neopixel extension to program the LED strip.
- Gain knowledge on setting up the LED strip and displaying temperature on the Microbit screen.
- Learn to light up the LED lights on the strip according to the temperature readings.
- Acquire practical skills in downloading the project, connecting the LED strip to the Microbit, and testing the functionality.

BEFORE THE BELL

- Prepare for this lesson by familiarising yourself with the Microbit project platform and the neopixel extension. Understand how to set up the LED strip and how to program the A button to display temperature. Be ready to guide students in lighting up the LED lights according to temperature readings and downloading their projects onto their Microbits. Ensure you know how to correctly connect the LED strip to the Microbit.

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HOW THE LESSON RUNS

Create a new Microbit project

Add the neopixel extension

Setup the LED Strip

Show the temperature

Light up the LED lights

Download the project and send it to your microbit

Connect your LED Strip