

LED Flags

60 minutes (2 periods)

Robotics & Engineering Basics

WHAT THIS LESSON DOES

In this step-by-step lesson, you'll learn how to create LED flags using a Microbit project. You'll start by making simple bicolor and tricolor flags, then progress to a more challenging task of coding the LED to represent the American flag. This lesson combines creativity with coding skills.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand and apply the concept of bicolor and tricolor flags using LED strips.
- Create and manage a new Microbit project effectively.
- Utilise the neopixel extension to program the LED strip.
- Develop skills to set up and interact with the LED strip using code.
- Apply coding skills to create complex patterns, such as the American flag, on the LED strip.

BEFORE THE BELL

- Prepare to guide students in creating LED flags using a Microbit project. They will need to understand how to add the neopixel extension and set up the LED strip. Facilitate as they create bicolor and tricolor flags, using the example of Malta and Ireland respectively. Encourage creativity and problem-solving skills for the challenge of representing the American flag.

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HOW THE LESSON RUNS	
Introduction	
Create a new Microbit project	
Add the neopixel extension	
Setup the LED Strip	
Make a bicolor flag	
Make a tricolor flag	
Challenge	