

LESSON 9

Microbit Fruit and Veg Piano

60 minutes (2 periods)

Robotics & Engineering Basics

WHAT THIS LESSON DOES

Get ready to turn fruit and vegetables into a musical instrument with your Microbit! Follow simple steps to create a circuit using your body and fresh produce, programming your Microbit to play unique notes and display icons.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand and apply the concept of electrical conductivity using the human body and various fruits and vegetables.
- Identify and utilise the components of a Microbit, including its pins and GND.
- Create and modify a Microbit project using the makecode.microbit.org platform.
- Program Microbit pins to play different musical notes and display different icons.
- Test and troubleshoot a simple electrical circuit using a Microbit, crocodile clips, and conductive materials.

BEFORE THE BELL

- Spark curiosity by connecting the concept of conductivity to everyday items like fruit and vegetables, setting up an engaging hands-on activity. Prepare by ensuring all materials, including Microbits and crocodile clips, are ready and tested beforehand. Guide students through coding steps patiently, encouraging customisation of notes and icons to boost creativity. Watch for potential issues like incorrect wiring or power supply problems, offering troubleshooting tips as needed. Facilitate active participation by having students test circuits collaboratively, and wrap up by discussing real-world applications of conductivity to deepen understanding and maintain excitement. This lesson does require physical microbit devices, crocodile clips and some fruit and vegetables.

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HOW THE LESSON RUNS	
Introduction	
What you need	
Create a new Microbit project	
Program Pin 0	
Program Pin 1	
Program Pin 2	
Send the code to your Microbit	
Connect the crocodile clips	
Test that the circuits work	
Connect the fruit and veg	