

LESSON 33

Music Maker

60 minutes (2 periods)

Microbit Basics

WHAT THIS LESSON DOES

Embark on a musical journey by creating a new project named 'Music Maker'. Learn to add music code using the 'music.play' function and design your own melody. Finally, test your creation by pressing the 'A' button, either on the simulator or on your physical Microbit.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop skills to create a new project in a digital environment.
- Understand and apply the 'music.play' function in coding to create melodies.
- Modify tempo in music code to alter the speed of the melody.
- Design a personalised melody using the provided tool.
- Test and evaluate the functionality of the created music code on a simulator or physical device.

BEFORE THE LESSON

- Open and test the Microbit coding environment on pupil devices; confirm simulator sound works.
- Plan devices per pupil or per pair; charge optional physical Microbits if you will use them.

Music Maker

HOW THE LESSON RUNS

Create a New Project

Add the Music Code

Test Your Music

TEACHING MOVES

- 1. Create a New Project. Get every pupil to create a new project and name it Music Maker before anyone adds code.
- 2. Add the Music Code. Build the `onButtonPressed` and `music.play` code together. Show how to swap the melody string and change the 120 tempo value.
- 3. Test Your Music. Have pupils press A on the simulator first. Only download to a physical Microbit once the melody already plays on screen.

WHAT TO WATCH FOR

- Pupils expect the melody to start on its own and do not press button A. Point to the `onButtonPressed` block and have them press A on the simulator while watching for the play.
- Pupils change the tempo number without a clear idea whether the tune will get faster or slower. Try one higher and one lower value than 120 side by side so they hear the difference.

DIFFERENTIATION

- Emerging: Sit with them to create and name the project, then add the starter `music.play` code together. Pair them with a partner who can help them press A and listen on the simulator.
- Developing: Ask them to pick a gallery melody and change the tempo once, then explain what they hear. Have them tell you what the melody string and the tempo number each control.
- Proficient: Challenge them to design their own melody in the tool and test two different tempos. If a physical Microbit is available, have them download and compare it with the simulator.