

LESSON 36

Your first Python program

40 minutes

Strand 3: Coding at the next level

Built in Python

Outcome 3.1

WHAT THIS LESSON DOES

Students write and run their first Python program in the micro:bit Python editor, linking familiar ideas from blocks to typed code, indentation, comments, and sequence.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
3.1	creatively design and write code for short programming tasks to demonstrate the use of operators for assignment, arithmetic, comparison, and Boolean combinations

WHAT STUDENTS SHOULD BE ABLE TO DO

- Write and run a first Python program (LO 3.1)
- Connect Python ideas back to the Scratch and Arcade concepts you already know (LO 3.1)

BEFORE THE BELL

- Students logged in to the platform with devices ready and a modern browser open.
- Open the micro:bit Python editor in a new tab and check that Run works on a sample project.
- Have a projector or board ready to model the editor layout, the Run button, and a short indentation example.
- Decide the class save routine for Python projects so work is there next lesson.

WHAT YOU NEED

Item	Qty	Per	If you do not have it
tablet or laptop with Python	1	pair	run the lesson on the IWB with students taking turns

Your first Python program

HOW THE LESSON RUNS

4 min	introduction	Start: what we're building
6 min	content	Blocks to text: what changes
5 min	content	Access the Micro:bit Python Editor
4 min	content	Python Indentation
4 min	content	Python Comments
2 min	content	Write Your First Python Program
3 min	content	Add Comments to Your Code
4 min	content	Understanding Code Sequence
2 min	content	Wrap Up
3 min	content	Make sense: what worked, what broke
2 min	content	Reflect
1 min	summary	What you covered

TEACHING MOVES

- Model the first typed lines on the board before pairs type, reading each line aloud so students hear the link to blocks they already know (show, wait, scroll).
- Treat indentation as a named debugging skill: ask whether a line should sit inside a block or stand alone before anyone hits Run.
- When sequence is introduced, pause after Run and ask what happened first, second, and third so order stays visible.
- Keep the wrap-up short; the learning is in running and fixing the short program, not in extra theory.

WHAT TO WATCH FOR

- Missing or mistyped from `microbit import *` so display commands fail: restore that first line and Run again.
- Indentation errors after colons or mixed tabs and spaces: realign with four spaces and re-run.
- Quotes or brackets left unmatched in `display.scroll` or image names mistyped: compare carefully to the model line and fix spelling before Run.

DIFFERENTIATION

- Support: Provide a printed checklist (import line, scroll message, Run) and stay with pairs on the first successful run.
- Extension: Invite confident students to change the message, swap images, or adjust the sleep time and explain the new sequence.
- Extension: Ask them to add one clear comment that would help a classmate understand each main line.