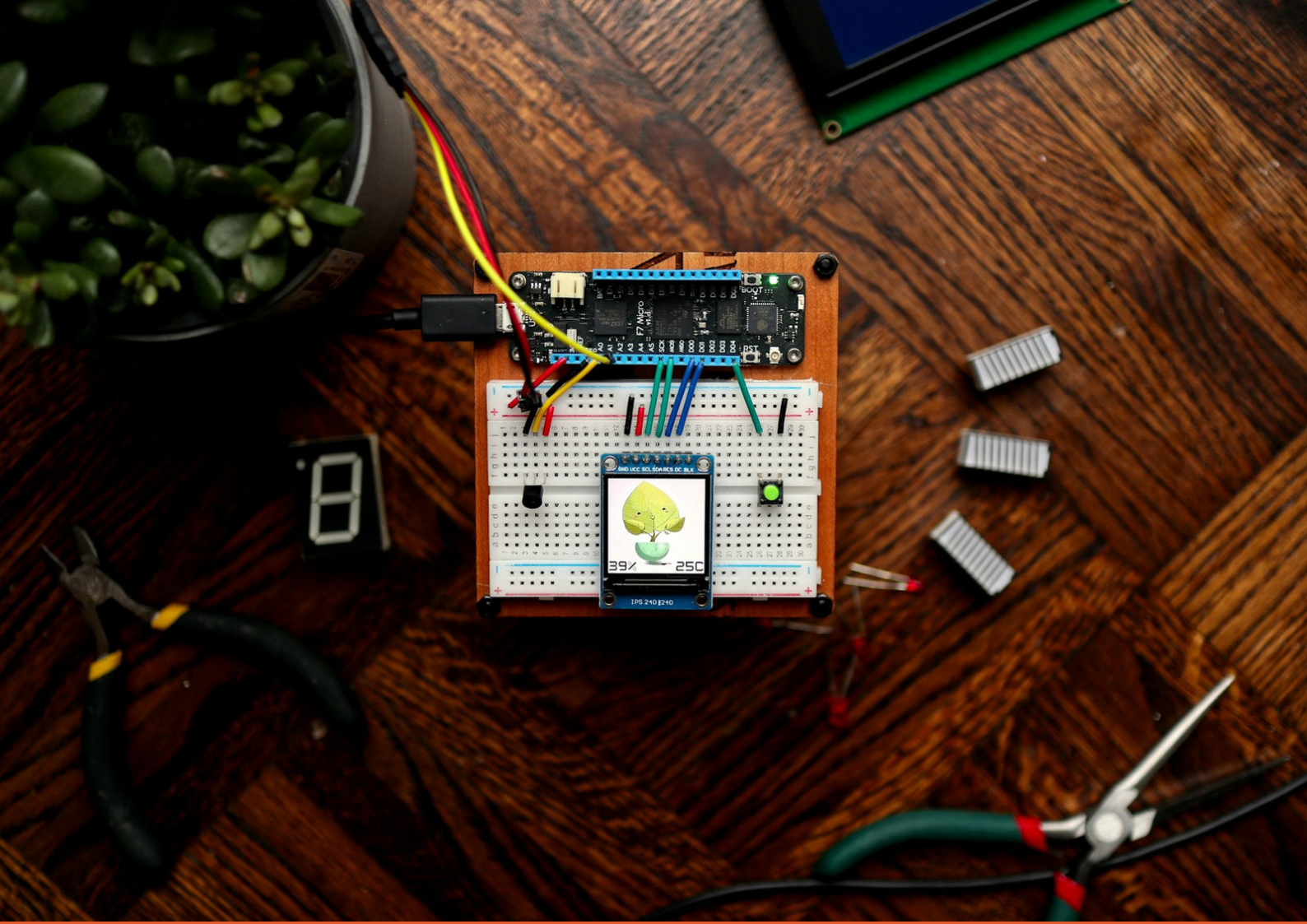




EduTrend Contents

EDUTECH · ROBOTICS RESOURCES FOR STUDENTS · PRIMARY

Expected vs Happened

Learn a simple habit for getting unstuck when code does not work

Ages 8–11

Level: Developing

45 minutes

Pairs · up to 30

Activity 02

Inside: activity at a glance · step-by-step session plan · facilitator notes · 3 pupil worksheets · assessment checklist

ACTIVITY 02 · AT A GLANCE

Expected vs Happened

Pairs receive four short micro:bit programs in the MakeCode simulator, each with a bug. For each, they write one line on what they expected and one line on what happened, then use the difference to find and fix the bug. They collect their best tips into a class “getting unstuck” poster to use at home and school.

Learning outcomes

By the end of the session pupils can:

- describe expected behaviour;
- describe actual behaviour;
- use the difference to find bugs;
- share debugging tips.

KEY WORDS

expected · actual · bug · debug · simulator · tip

CURRICULUM LINKS

Science: predictions and results.
English: precise writing. PSHE: resilience.

1**SENSE**

What can it detect?

2**THINK**

What should it decide?

3**ACT**

What should it do?

4**TEST**

Run it

5**DEBUG**

Find and fix

6**IMPROVE**

Make it better

Materials (per pair)

- Devices with MakeCode (simulator)
- Four buggy starter programs
- Worksheets 1, 2 and 3

Before the session

- Prepare four buggy programs.
- Share links or files.
- Print worksheets.
- Plan pairs.

SAFETY

Use the online editor as directed. No accounts needed for the simulator.

ACTIVITY 02 · SESSION PLAN

Step by step

Writing exactly what was expected and what happened often points straight to the problem.

Time	What happens	Say or ask
0–5 min Hook	A program that “does not work”.	<i>“What did you expect?”</i>
5–30 min Debug	Four buggy programs.	<i>“What is the difference?”</i>
30–38 min Tips	Share strategies.	<i>“What helped most?”</i>
38–45 min Poster	Make a class poster.	<i>“What will you do next time?”</i>

CHALLENGE CARD (print or copy onto the board)

Fix four buggy programs by writing what you expected and what happened each time, then share your best getting-unstuck tip.

ACTIVITY 02 · FACILITATOR NOTES

The learning know-how in brief

When code does not work, writing down exactly what you expected and what happened instead often points to the problem. It turns a vague feeling of being stuck into a clear clue.

Simulators let learners test code before they have a device. Short, specific notes make it easier to ask a teacher, friend or online community for help.

Common ideas to listen for

- “It is broken.” Describe exactly how.
- “Start again from scratch.” Find the difference first.
- “Asking for help is cheating.” It is what programmers do.

Adapting the activity

Support

Start with one program together.

Stretch

Write a buggy program for a partner.

WORKSHEET 1

Bug notes

Name: _____

Class: _____ Date: _____

Expected and happened.

Bug notes

Program	Expected	Happened
1		
2		
3		
4		

WORKSHEET 2

Fixes

What did you change?

Fixes

Program	Fix	Worked?
1		
2		
3		
4		

WORKSHEET 3

My best tip

For getting unstuck.

My tip and why it works

FOR THE TEACHER

Assessment checklist

Use during the session. One sheet covers up to eight pupils; copy as needed.

Pupil	Describes expected and actual	Finds bugs	Shares strategies

Suggested codes: W = working towards · E = expected · G = greater depth

ABOUT THIS ACTIVITY

Expected vs Happened is a sample activity from the EduTrend Contents Edutech Robotics Resources for Students programme (primary, level: developing). Every activity in the programme follows the same format: a practical challenge, a clear session plan, facilitator notes and ready-to-print worksheets, so that teachers, club leaders and parents can run it without extra preparation.

Full 15-, 20- and 32-week programmes are available from EduStore at edutrend.org.

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