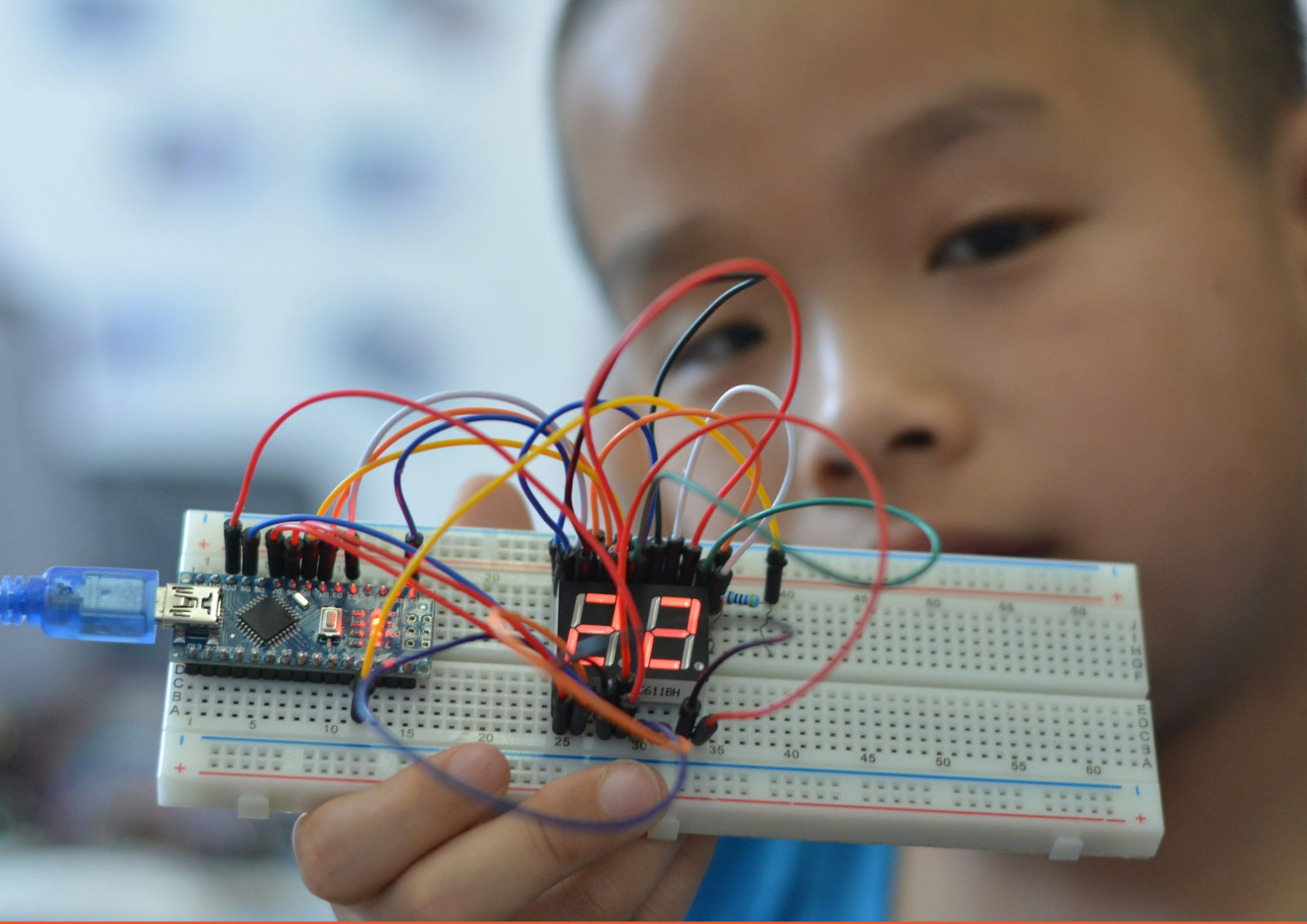




EduTrend Contents

EDUTECH · ROBOTICS RESOURCES FOR STUDENTS · PRIMARY

Scratch Robot Pet

Code an on-screen robot pet that responds to events and conditions

Ages 7–10

Level: Foundation

45 minutes

Pairs · up to 30

Activity 01

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

ACTIVITY 01 · AT A GLANCE

Scratch Robot Pet

Pairs design a robot pet sprite in Scratch. They make it move with a forever loop, react to key presses and clicks with events, and use a variable for energy. When energy is low, a condition makes the pet say it is hungry, and clicking food restores energy. Pairs test, fix bugs and show a partner.

Learning outcomes

By the end of the session pupils can:

- use events;
- use loops;
- use a variable and a condition;
- test and fix bugs.

KEY WORDS

sprite · event · loop · variable · condition · bug

CURRICULUM LINKS

Science: what living things need.

Art: character design. Maths: counting down.

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 Scratch
- Planning sheet
- Worksheets 1, 2 and 3

Before the session

- Check Scratch access.
- Prepare a starter project.
- Print planning sheets.
- Print worksheets.

SAFETY

Use school accounts or offline Scratch. Do not share personal details in projects.

ACTIVITY 01 · SESSION PLAN

Step by step

Scratch lets pupils practise loops, events and conditions before using a real robot.

Time	What happens	Say or ask
0–5 min Hook	Show a robot pet demo.	<i>"How does it know it is hungry?"</i>
5–15 min Move	Forever loop movement.	<i>"What keeps it moving?"</i>
15–25 min React	Key and click events.	<i>"What triggers each action?"</i>
25–38 min Energy	Variable and condition.	<i>"When is it hungry?"</i>
38–45 min Share	Test and show a partner.	<i>"What bug did you fix?"</i>

CHALLENGE CARD (print or copy onto the board)

Code a robot pet that moves with a loop, reacts to events, and uses an energy variable with a condition to ask for food.

ACTIVITY 01 · FACILITATOR NOTES

The learning know-how in brief

Events start code when something happens, such as a key press. Loops repeat actions. Conditions check whether something is true, such as energy being less than 3.

A variable stores a value that changes, like the pet's energy. The same ideas are used to program real robots later.

Common ideas to listen for

- "The pet decides by itself." It follows code.
- "Variables are fixed." They change.
- "A condition checks once." Inside a loop it keeps checking.

Adapting the activity

Support

Start with movement and one event.

Stretch

Add a sleep mode when energy reaches zero.

WORKSHEET 1

My pet plan

Name: _____

Class: _____ Date: _____

Plan behaviours.

My pet plan

Trigger	What the pet does
Start	
Key press	
Click	
Low energy	

WORKSHEET 2

Bugs

Record bugs.

Bugs

Bug	Fix
1	
2	
3	

WORKSHEET 3

Explain

How does your pet work?

Explain the loop, event and condition

FOR THE TEACHER

Assessment checklist

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

Pupil	Uses events	Uses loop and condition	Fixes bugs

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

ABOUT THIS ACTIVITY

Scratch Robot Pet is a sample activity from the EduTrend Contents Edutech Robotics Resources for Students programme (primary, level: foundation). 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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