



EduTrend Contents

EDUTECH · ROBOTICS RESOURCES FOR TEACHERS · HIGH SCHOOL

Teach-Back: Design a Robotics Lesson

Plan and teach a short robotics activity for younger pupils

Ages 15–18

Level: Advanced

2 × 60 minutes

Teams of 3

Activity 05

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

ACTIVITY 05 · AT A GLANCE

Teach-Back: Design a Robotics Lesson

Teams choose a learning outcome for younger pupils, such as using a loop, and pick a free resource from the micro:bit Educational Foundation, LEGO Education or Raspberry Pi Foundation. They plan a 20-minute activity with a hook, task, prediction check and tidy-up routine, rehearse, teach it and evaluate using feedback.

Learning outcomes

By the end of the session students can:

- plan from a learning outcome;
- choose and adapt a resource;
- teach and check understanding;
- evaluate with feedback.

KEY WORDS

learning outcome · resource · plan ·
check for understanding · feedback
· evaluation

CURRICULUM LINKS

English: communication. PSHE:
leadership. Computing: deepening
understanding by teaching.

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 team)

- Robots or kits
- Access to free lesson resources
- Lesson plan template
- Feedback forms
- Worksheets 1, 2 and 3

Before the session

- Arrange a younger class or group.
- Print templates.
- Check kits.
- Print worksheets.

SAFETY

Follow safeguarding guidance when working with younger pupils; a teacher is always present.

ACTIVITY 05 · SESSION PLAN

Step by step

Start from the learning outcome, not from the kit; this mirrors good scheme-of-work planning.

Time	What happens	Say or ask
S1: 0–15 min Outcome	Choose a learning outcome.	<i>“What should they learn?”</i>
15–35 min Resource	Choose and adapt a resource.	<i>“Does it fit the outcome?”</i>
35–60 min Plan	Write the lesson plan.	<i>“How will you check understanding?”</i>
S2: 0–20 min Rehearse	Practise and refine.	<i>“Is the timing realistic?”</i>
20–60 min Teach and evaluate	Teach and collect feedback.	<i>“Did they learn it?”</i>

CHALLENGE CARD (print or copy onto the board)

Plan, teach and evaluate a 20-minute robotics activity for younger pupils, starting from a clear learning outcome.

ACTIVITY 05 · FACILITATOR NOTES

The teaching know-how in brief

Good robotics lessons start from curriculum outcomes, not from the kit. The activity is chosen because it practises the concept, such as loops or sensors.

Checks such as asking pupils to predict what a program will do show understanding better than a finished model alone. Teaching others also deepens the teacher's own understanding.

Common ideas to listen for

- "A fun activity is a good lesson." It must teach the outcome.
- "If they finished, they learned." Check understanding.
- "More content is better." Focus on one idea.

Adapting the activity

Support

Provide a ready resource to adapt.

Stretch

Design a two-lesson sequence.

WORKSHEET 1

Lesson plan

Name: _____

Class: _____ Date: _____

Plan your activity.

Lesson plan

Part	Plan
Outcome	
Resource	
Hook	
Task	
Check	
Tidy-up	

WORKSHEET 2

Feedback

Collect feedback.

Feedback

Source	What went well	Improve
Pupils		
Teacher		
Our team		

WORKSHEET 3

Evaluation

Evaluate your lesson.

Did pupils meet the outcome? How do you know?

FOR THE TEACHER

Assessment checklist

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

Student	Plans from outcome	Checks understanding	Evaluates with evidence

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

ABOUT THIS ACTIVITY

Teach-Back: Design a Robotics Lesson is a sample activity from the EduTrend Contents Edutech Robotics Resources for Teachers programme (high school, level: advanced). 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.

© 2026 EduTrend Contents. This activity may be printed and copied for use with students in your own school, club or home. It may not be resold or published elsewhere. Photos: Centre for Ageing Better / Unsplash.