



EduTrend Contents

EDUTECH · ROBOTICS RESOURCES FOR TEACHERS · PRIMARY

Predict the Robot

Read a program and predict what the robot will do before running it

Ages 7–10

Level: Foundation

40 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

Predict the Robot

Pairs receive program cards for a floor robot or on-screen robot. For each card they predict and draw the path on a grid before running it. They then run the program, compare, and explain any differences. Finally they write a program for a partner to predict. The teacher uses predictions as a quick check of understanding.

Learning outcomes

By the end of the session pupils can:

- read a simple program;
- predict its result;
- compare prediction and result;
- write a program for others.

KEY WORDS

predict · program · path · compare · explain · check

CURRICULUM LINKS

Maths: position and direction.
English: reading instructions.
Science: predictions.

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)

- Program cards
- Grid sheets
- Floor robot or device with a robot simulator
- Worksheets 1, 2 and 3

Before the session

- Print program cards of increasing difficulty.
- Prepare grids.
- Check robots or simulator.
- Print worksheets.

SAFETY

Keep floor areas clear. Adults handle charging.

ACTIVITY 01 · SESSION PLAN

Step by step

Predictions reveal misconceptions quickly; note who predicts turns incorrectly.

Time	What happens	Say or ask
0–5 min Hook	Teacher shows a program.	<i>"Where will it end?"</i>
5–20 min Predict	Draw paths for three cards.	<i>"Why do you think that?"</i>
20–30 min Check	Run and compare.	<i>"Were you right?"</i>
30–37 min Create	Write a program for a partner.	<i>"Can they predict it?"</i>
37–40 min Reflect	What helps predictions?	<i>"What tricked you?"</i>

CHALLENGE CARD (print or copy onto the board)

Predict the paths of three robot programs, check them by running them, and write a program for a partner to predict.

ACTIVITY 01 · FACILITATOR NOTES

The teaching know-how in brief

Predicting what a program will do is a powerful check of understanding. It shows whether pupils can trace code step by step rather than just copying.

Quick formative checks like this help teachers see who understands sequencing and turning, which a finished model alone may hide.

Common ideas to listen for

- “The robot moves while turning.” It turns on the spot.
- “Programs run in any order.” They run step by step.
- “If it works, I understand it.” Predicting proves understanding.

Adapting the activity

Support

Use cards without turns first.

Stretch

Predict programs with loops.

WORKSHEET 1

Predictions

Name: _____

Class: _____ Date: _____

Draw or describe paths.

Predictions

Card	Predicted end square	Actual end square
1		
2		
3		

WORKSHEET 2

Differences

Explain mistakes.

Differences

Card	What was different	Why
1		
2		
3		

WORKSHEET 3

My program

Write one for a partner.

My program and its answer

FOR THE TEACHER

Assessment checklist

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

Pupil	Predicts paths	Explains differences	Writes programs

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

ABOUT THIS ACTIVITY

Predict the Robot is a sample activity from the EduTrend Contents Edutech Robotics Resources for Teachers 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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