

GRADE 5 LEARNING PACK

# The Garden Sensor

Connect coding, systems and feedback through narrative.

**LEARN • PRACTISE • CREATE • REFLECT**

Original BrightPencil Kids resource - adult-led where appropriate

A4 edition • 12 purposeful pages • review copy

**Print. Learn. Grow.**

# Grown-up guide

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## Learning objective

Connect coding, systems and feedback through narrative.

## Use this pack well

- Model the first example aloud, then let the learner try.
- Ask “How do you know?” more often than “Are you finished?”.
- Use real objects, talk, movement or observation when the activity suggests it.
- Stop or shorten the session if attention or enjoyment drops.
- Open-ended pages can have many successful answers.

## Quality note

This resource was written originally for BrightPencil Kids. Curriculum sources informed scope and progression only; no third-party worksheet or story text is reproduced.

# Read the story

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## PART 1

Owen built a model greenhouse controller. A moisture sensor produced a number, and the program switched on a pump when the reading was below a chosen threshold.

## PART 2

During testing, the pump stayed on even after the soil became wet. Owen blamed the sensor.

## PART 3

His sister traced the program and noticed that the code checked the sensor only once, before the pump started. There was no new input inside the loop.

## PART 4

They changed the program so it reread the sensor, waited briefly and stopped when the threshold was reached.

## PART 5

Owen's debugging note said, 'A system needs fresh feedback if its action is supposed to respond to changing conditions.'

Summarise the problem in no more than three sentences.

Identify the turning point where the character changes method or interpretation.

Match each inference to the strongest story evidence.

Write an alternative choice and predict a plausible consequence.

Explain the transferable strategy from the story in your own words.

## Try it beyond the page

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### Real-world / hands-on connection

Retell the reasoning problem to a trusted adult and explain which evidence mattered most.

### Before you finish

What did you notice?

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What evidence, object or example helped you?

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What would you change if you tried again?

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# Create something

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## Your project

Create a one-page response: key evidence, inference, strategy learned and a new scenario where it could help.

Use this space for planning, drawing, mapping, designing or notes.

CHALLENGE

# Think deeper

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1. Why did the pump stay on?

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2. What did the new program add?

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3. What is feedback in this story?

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# Quick review

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1. In one sentence, explain the big idea of “The Garden Sensor”.

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2. Draw or write one example that shows you understand.

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3. Choose one activity from this pack and explain the strategy you used.

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4. Write one question you still have.

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# Answer & discussion notes

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Use these as guidance, not scripts. Open questions can have different successful responses when the reasoning is sensible and evidence-based.

## 1. Suggested response

The sensor value was not reread.

## 2. Suggested response

Repeated input checks and a stop condition.

## 3. Suggested response

New state information used to adjust action.

## Review before publication

Check age fit, factual accuracy, clarity, accessibility, rights provenance and whether the activity works in practice. This file remains a review copy until those checks are signed off.

FINISH

# My learning reflection

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**I finished this BrightPencil learning pack.**

**One thing I understand better now:**

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**A strategy that helped me:**

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**Something I created or noticed:**

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**My next small question or goal:**

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