
SIX EXPERIENCES / SUGGESTED SIX-WEEK PATHWAY

Skills to use, explain and grow

Test edge cases and explain the limits of your conclusion.

About 45 minutes per experience. Use one experience each week, or split it into shorter sessions. Grade labels are flexible starting points.

Your course map

1. Troubleshoot one variable at a time - page 2
2. Disagree using reasons - page 3
3. Inspect a percentage claim - page 4
4. Accumulate a list total - page 5
5. Minimise data in a form - page 6
6. Choose between competing designs - page 7

A useful learning routine

Read the goal and example. Follow the four steps. Try the three questions. Make the project, explain your choices and reflect. Spend roughly half the session making and explaining.

Review levels: with support / independently / applied to a new task. Accept spoken or drawn evidence when it demonstrates the skill. A practice score or self-review is not a certificate.

Print A4 portrait at 100% or Actual size. These are paper workbooks, not fillable forms. Learner questions and teacher answers are in separate documents. Version: 12 October 2026.

EXPERIENCE 1 / DIGITAL CONFIDENCE

Troubleshoot one variable at a time

Diagnose a simple file problem using a test log. | About 45 minutes

Answers and reasons

1. B. It makes causes easier to identify

You can connect the observed difference to the factor you changed.

2. A. Separate symptom from cause and explain or demonstrate it

Show the actual work or action described by the lesson criterion. An adult or partner can review it.

3. D → C → B → A: Observe → Hypothesise → Test → Record

The example follows: Observe → Hypothesise → Test → Record. Explain what each step does.

Project evidence

Investigate a fictional file-opening problem. Create a symptom, hypothesis, test and result table.

- ☐ Separate symptom from cause
- ☐ Change one factor per test
- ☐ Record unsuccessful tests honestly

Teaching guidance

Do not disable security tools or install unknown software to solve the exercise.

Model one step, invite the learner to try the next, then ask for an explanation. Give feedback on the evidence rather than speed.

Transfer challenge

Use the same method for a formatting problem.

Review: with support / independently / transfer

EXPERIENCE 2 / CREATE AND COMMUNICATE

Disagree using reasons

Compare a proposal fairly and respond to its evidence. | About 45 minutes

Answers and reasons

1. B. Let us compare space and access for both options

Shared criteria focus discussion on the proposals.

2. C. Represent the other view fairly and explain or demonstrate it

Show the actual work or action described by the lesson criterion. An adult or partner can review it.

3. D → C → B → A: Listen → Compare → Reason → Revise

The example follows: Listen → Compare → Reason → Revise. Explain what each step does.

Project evidence

Hold a role-play discussion about two classroom improvements. Record an agreed criterion and a revised idea.

☐ Represent the other view fairly

☐ Use relevant evidence

☐ Avoid personal attacks

Teaching guidance

Do not require a learner to disclose a personal conflict.

Model one step, invite the learner to try the next, then ask for an explanation. Give feedback on the evidence rather than speed.

Transfer challenge

Find a compromise that meets the shared goal.

Review: with support / independently / transfer

EXPERIENCE 3 / DATA AND DECISIONS

Inspect a percentage claim

Check both numerator and denominator. | About 45 minutes

Answers and reasons

1. C. 60

Use the given numbers: the answer is 60. Explain your counting or calculation.

2. B. Use the supplied values accurately and explain or demonstrate it

Show the actual work or action described by the lesson criterion. An adult or partner can review it.

3. D → C → B → A: Read → Represent → Calculate → Interpret

The example follows: Read → Represent → Calculate → Interpret. Explain what each step does.

Project evidence

Represent the 12 successes and 8 other outcomes. Write the percentage and sample size together.

- ☐ Use the supplied values accurately
- ☐ Show a calculation or count with its meaning
- ☐ State a fair comparison or limitation

Teaching guidance

Ask the learner to show intermediate work. Use fictional data; no real pupil records are needed.

Model one step, invite the learner to try the next, then ask for an explanation. Give feedback on the evidence rather than speed.

Transfer challenge

Compare 3 of 5 with 12 of 20 without claiming equal certainty.

Review: with support / independently / transfer

EXPERIENCE 4 / COMPUTATIONAL THINKING

Accumulate a list total

Trace a loop that updates an accumulator. | About 45 minutes

Answers and reasons

1. C. 12

$2 + 4 + 6 = 12$; each item is added once.

2. A. Initialise the accumulator and explain or demonstrate it

Show the actual work or action described by the lesson criterion. An adult or partner can review it.

3. D $\rightarrow$ C $\rightarrow$ B $\rightarrow$ A: Initialise $\rightarrow$ Item 1 $\rightarrow$ Item 2 $\rightarrow$ Item 3

The example follows: Initialise $\rightarrow$ Item 1 $\rightarrow$ Item 2 $\rightarrow$ Item 3. Explain what each step does.

Project evidence

Make a trace table for the list and for an empty list. Explain the initial value.

☐ Initialise the accumulator

☐ Update once per item

☐ Test an empty input

Teaching guidance

Trace before testing. These are learning models and pseudocode, not instructions to run arbitrary downloaded code.

Model one step, invite the learner to try the next, then ask for an explanation. Give feedback on the evidence rather than speed.

Transfer challenge

Adapt the trace to count only values above 3.

Review: with support / independently / transfer

EXPERIENCE 5 / RESPONSIBLE TECHNOLOGY

Minimise data in a form

Collect only information needed for a stated purpose. | About 45 minutes

Answers and reasons

1. B. Home address

An address does not help decide an activity.

2. C. Match fields to purpose and explain or demonstrate it

Show the actual work or action described by the lesson criterion. An adult or partner can review it.

3. D → C → B → A: Purpose → Review → Minimise → Explain

The example follows: Purpose → Review → Minimise → Explain. Explain what each step does.

Project evidence

Redesign a fictional poll and write a purpose, access and deletion plan. Do not collect real responses.

- ☐ Match fields to purpose
- ☐ Remove unnecessary personal data
- ☐ Explain access and retention

Teaching guidance

This is a design exercise, not legal advice or an actual data collection.

Model one step, invite the learner to try the next, then ask for an explanation. Give feedback on the evidence rather than speed.

Transfer challenge

Consider whether even optional free text could reveal private details.

Review: with support / independently / transfer

EXPERIENCE 6 / DESIGN AND LIFE SKILLS

Choose between competing designs

Compare alternatives against explicit criteria. | About 45 minutes

Answers and reasons

1. A. Applying the same relevant criteria

Shared criteria support a transparent comparison.

2. B. Apply the same criteria and explain or demonstrate it

Show the actual work or action described by the lesson criterion. An adult or partner can review it.

3. D → C → B → A: List → Criteria → Compare → Choose

The example follows: List → Criteria → Compare → Choose. Explain what each step does.

Project evidence

Create a comparison table for two paper sign designs, then choose one for a stated setting.

- ☐ Apply the same criteria
- ☐ Use observations rather than preference alone
- ☐ Explain a trade-off

Teaching guidance

A decision can be reasonable without one design winning every criterion.

Model one step, invite the learner to try the next, then ask for an explanation. Give feedback on the evidence rather than speed.

Transfer challenge

Change the setting and reconsider the choice.

Review: with support / independently / transfer

KEEP THE LEARNING GOING

Explain your next step

Choose one work sample. Explain an improvement you made, the evidence you used and where you could use the skill next.

Support and safe practice

Use fictional examples and approved tools. Ask an adult for help with instructions and classroom materials. No public posting, live AI account, purchase or personal information is needed.

Online companion

<https://www.heliolearn.com/skills/grade-8/>

Use the web pages for controllable animations and automatic exercise feedback. New practice-space notes stay in the browser and do not sync to school accounts. Download notes before changing devices. Help: <https://www.heliolearn.com/skills/help/>

Curriculum context

Original enrichment activities with an editorial grade progression. These are not a complete examination-board syllabus or formally endorsed by the organisations below.

ISTE student standards: broad digital-learning context

<https://iste.org/standards/students>

UNICEF: transferable skills across childhood and adolescence

<https://www.unicef.org/lac/en/transferable-skills-development>

UNESCO: student AI competencies

<https://www.unesco.org/en/articles/ai-competency-framework-students>