
SIX EXPERIENCES / SUGGESTED SIX-WEEK PATHWAY

Skills to use, explain and grow

Justify trade-offs and document a reproducible method.

About 50 minutes per experience. Use one experience each week, or split it into shorter sessions. Grade labels are flexible starting points.

Your course map

1. Automate a safe repeated workflow - page 2
2. Communicate uncertainty honestly - page 3
3. Interpret a comparison without claiming causation - page 4
4. Compare search strategies - page 5
5. Evaluate errors across groups - page 6
6. Run a pilot and decide what changes - 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

Automate a safe repeated workflow

Plan a bounded automation with a preview and recovery path. | About 50 minutes

Answers and reasons

1. A. Stop and resolve the collision

A collision could overwrite or confuse files. Resolve it before acting.

2. B. Bound the scope 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: Scope → Preview → Validate → Recover

The example follows: Scope → Preview → Validate → Recover. Explain what each step does.

Project evidence

Write pseudocode and a preview table for renaming six fictional files. Do not run it on real school folders.

- ☐ Bound the scope
- ☐ Detect name collisions
- ☐ Explain recovery

Teaching guidance

Evaluate the plan and tests; no bulk file mutation is required.

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

Add a test for an empty folder.

Review: with support / independently / transfer

EXPERIENCE 2 / CREATE AND COMMUNICATE

Communicate uncertainty honestly

Distinguish a measured result, estimate and unsupported guess. | About 50 minutes

Answers and reasons

1. C. These three trials took 18-22 minutes

It reports the actual observed range.

2. A. Separate observations from estimate 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: Measure → Summarise → Qualify → Recommend

The example follows: Measure → Summarise → Qualify → Recommend. Explain what each step does.

Project evidence

Write a brief planning note using the three times. Label the estimate and supporting observations.

- ☐ Separate observations from estimate
- ☐ Keep uncertainty visible
- ☐ Make an actionable recommendation

Teaching guidance

Avoid inventing probabilities from only three observations.

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

Rewrite the note for a younger reader.

Review: with support / independently / transfer

EXPERIENCE 3 / DATA AND DECISIONS

Interpret a comparison without claiming causation

Describe an observed difference and possible confounding factors. | About 50 minutes

Answers and reasons

1. A. 20

Use the given numbers: the answer is 20. Explain your counting or calculation.

2. C. 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

Report both completion rates and two alternative explanations. Propose a fairer comparison.

- ☐ 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

Distinguish a 20 percentage-point difference from a relative percentage increase.

Review: with support / independently / transfer

EXPERIENCE 4 / COMPUTATIONAL THINKING

Compare search strategies

Explain when binary search is applicable. | About 50 minutes

Answers and reasons

1. C. Sorted input

Ordering lets a comparison safely exclude part of the list.

2. B. State the sorted-input requirement 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: Set → Middle → Narrow → Find

The example follows: Set → Middle → Narrow → Find. Explain what each step does.

Project evidence

Trace linear and binary search for 14. Count comparisons and state the midpoint rule.

☐ State the sorted-input requirement

☐ Trace the same target fairly

☐ Count comparisons consistently

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

Test a missing target and a one-item list.

Review: with support / independently / transfer

EXPERIENCE 5 / RESPONSIBLE TECHNOLOGY

Evaluate errors across groups

Look beyond an overall accuracy figure. | About 50 minutes

Answers and reasons

1. C. 40%

$$4 / 10 \times 100 = 40\%.$$

2. A. Calculate rates correctly 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: Count → Calculate → Compare → Investigate

The example follows: Count → Calculate → Compare → Investigate. Explain what each step does.

Project evidence

Write an evaluation note for the fictional results. Include group rates, sample-size limits and a question to investigate.

- ☐ Calculate rates correctly
- ☐ Compare relevant error types
- ☐ Avoid calling a tiny test conclusive

Teaching guidance

Use fictional groups A and B; do not infer sensitive traits about real students.

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

Explain how false positives and false negatives could have different effects.

Review: with support / independently / transfer

EXPERIENCE 6 / DESIGN AND LIFE SKILLS

Run a pilot and decide what changes

Use a small trial to learn before expanding. | About 50 minutes

Answers and reasons

1. A. To notice an unintended problem

A benefit metric alone may hide a cost or failure.

2. C. Set a bounded scope 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: Bound → Measure → Observe → Decide

The example follows: Bound → Measure → Observe → Decide. Explain what each step does.

Project evidence

Plan a fictional book-swap pilot with two measures, a stop condition and a review date.

- ☐ Set a bounded scope
- ☐ Include unintended effects
- ☐ Connect the next decision to evidence

Teaching guidance

Do not run a real event or collect pupil data as part of this 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

Propose a change if participation rises but misplaced books also increase.

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-10/>

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>