

LESSON 5

The Numbers: Spreadsheets for Real Decisions

60 minutes

Working with Spreadsheets

WHAT THIS LESSON DOES

Turn your project proposal into a working spreadsheet with real formulas. Learn to build budgets, inventories, and data summaries that update automatically when numbers change.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand spreadsheet structure and how cells, rows, and columns work together
- Enter and format different data types accurately, including currency
- Write formulas using SUM, AVERAGE, COUNT, MIN, and MAX with cell references
- Create a working spreadsheet for a real project that recalculates automatically

BEFORE THE BELL

- Make sure students can open their 04_polished_proposal from lesson 4: it gives them the numbers to build around.
- Build the Galway trip budget in step 3 once yourself before the lesson, so you know where the class will stall.
- Students need access to Excel Online or Google Sheets via their school cloud account.
- Students need their Something Real project details (from their earlier proposal) ready.

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HOW THE LESSON RUNS

5 min	introduction	Introduction
5 min	content	Key Concepts
20 min	activity	Step-by-step Task: Galway Trip Budget
3 min	content	Common Issues
2 min	content	Pick Your Shape
15 min	activity	Portfolio Build: Your Numbers Sheet
5 min	content	Reflection
5 min	summary	Lesson Summary

TEACHING MOVES

- Model the first formula (SUM) on the whole class together, then pause to let students catch up before moving to AVERAGE. Call out the cell address aloud as you type it.
- When students struggle with range selection, project your screen and walk through it step-by-step: click the first cell, hold Shift, then click the last cell.
- Before they start their own sheet, ask two students to show their Galway budget to the class, and celebrate the ones where they tested the autofill and saw the totals update.
- Circulate during the Portfolio build phase; if a student's formula shows the formula as text (not a number), pause them and fix the cell format together rather than letting them continue frustrated.

WHAT TO WATCH FOR

- Formula displays as text instead of a number: select the cell, change format from Text to Number, then re-type the formula starting with =.
- Student forgets the = sign at the start of a formula: remind them = always starts a formula; without it, the spreadsheet treats it as plain text.
- SUM or AVERAGE applied to the wrong range: have them click and drag to select the correct cells, then re-enter the formula.

DIFFERENTIATION

- Support: Assign Budget or Inventory shape to students unsure of formulas; both use the same three-part structure as the worked example. Sit with them during the task and model the second formula (AVERAGE) together.
- Support: The column headings for each shape are on the students' screen in step 5, so a student who is unsure can type those into row 1 and go straight to entering data and writing formulas.
- Extension: Challenge confident students to try Timeline or Survey Results shape, or ask them to add a fourth formula type (like IF) to flag items that exceed a budget threshold.