

Formula Auditing: Trace Dependents and Precedents

60 minutes

ICT Specialism 3: Spreadsheets

Outcome M3.U2.3

WHAT THIS LESSON DOES

Learn to inspect spreadsheet formulas by switching to a view that displays calculations instead of results. Trace which cells feed into others and verify accuracy on complex sheets. Capture evidence of your checks for a portfolio workbook.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
M3.U2.3	Create and apply formulas and recognise error values in formulas.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Use show-formulas view and trace dependents or precedents
- Spot-check formulas on complex sheets
- Screenshot formula view evidence from a portfolio workbook

BEFORE THE BELL

- Have the sample sm3_formula_audit model text ready on a slide or the board.
- Have physical copies of the common issues table ready if needed.
- Have a short demo workbook with at least three linked formulas ready on the classroom screen.
- Confirm students can open an existing sm3 workbook with working formulas.

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HOW THE LESSON RUNS

5 min	introduction	Introduction
4 min	content	Key concepts
15 min	activity	Step-by-step task
3 min	content	Common issues
5 min	content	Sample evidence model
15 min	activity	Independent practice
5 min	content	Reflection
8 min	summary	Lesson summary

TEACHING MOVES

- Model show-formulas view and one full precedent/dependent cycle on the classroom screen before students begin, using the small sample sheet described in the introduction step.
- Run the sample evidence model on the board before independent practice so weaker writers have sentence stems.
- Checkpoint: every student shows screenshot + scrap notes before creating sm3_formula_audit.
- Circulate during independent practice to verify screenshots display formula text.
- Use the reflection time for brief pair discussions on surprising formula chains.
- Reserve the end block for a visual check that completed audit files show equals signs and labelled notes.

WHAT TO WATCH FOR

- Students capture screenshots of calculated values only, direct them to enable show-formulas view first.
- Shortcut keys fail on school keyboards, immediately suggest using the menu path instead; Mac + Sheets needs Cmd + `.
- Misidentifying precedents and dependents, use live examples and the labelled note stems to clarify the difference.
- Students audit the Centra demo table instead of their own workbook, redirect them to their own project sheet or a practice tab.

DIFFERENTIATION

- Support: Offer a pre-prepared sample workbook for guided practice and allow pairs for the evidence document.
- Extension: Challenge students to audit a second sheet or run the deliberate break-and-fix extension.
- Support: Keep the three-line sample note visible while they type.