

Course Title:	Spreadsheet Modelling
Unit Title:	Introduction to Spreadsheet Skills
Teacher Name:	[Insert Name]
Class:	KS4 (Ages 14-15)
Duration per session:	45 minutes
Number of sessions:	12
Learner Profile:	SEND, Non-attenders, Behavioural

Prepare for adaptive teaching:

- **Dyslexia:** Use clear, uncluttered resources; provide written instructions in accessible fonts; allow use of text-to-speech tools.
- **ADHD:** Break tasks into manageable steps; use timers and clear routines; provide frequent positive feedback and movement breaks.
- **Autism spectrum disorder:** Provide visual schedules, minimise sensory distractions; use explicit, concrete instructions; allow for individual workspaces.
- **Emotional and behavioural disorders:** Build positive relationships; set clear expectations; employ restorative approaches; offer choices to encourage autonomy.
- **Specific learning difficulties:** Scaffold tasks, provide checklists and visual aids; encourage collaborative learning; differentiate questioning.

These strategies help all learners access content, reduce anxiety, encourage engagement and improve learning outcomes.

Session	Topic	Learning Objective(s)	Lesson Activities	Resources
Non-teaching 1				
2	Introduction to Spreadsheet Modelling	Understand what spreadsheets are and their basic uses. Identify key features of spreadsheet software.	<ul style="list-style-type: none"> • Class discussion: What is a spreadsheet? 	Interactive whiteboard, projector, sample spreadsheets, computers with spreadsheet software (e.g., Microsoft Excel, Google Sheets), handouts

			<ul style="list-style-type: none"> • Teacher demonstration of spreadsheet interface (toolbar, cells, rows, columns). • Pupils explore example spreadsheets and identify features. • Paired activity: List possible uses of spreadsheets in real life. 	
3	Entering Data	Enter text, numbers and dates into spreadsheet cells correctly. Navigate and select cells efficiently.	<ul style="list-style-type: none"> • Demonstration: Entering data into cells. • Guided practice: Pupils enter given sets of data into a blank spreadsheet. • Challenge: Rearranging data using cut, copy and paste. • Support: Visual step-by-step guides for SEND learners. 	Computers with spreadsheet software, printed data sets, visual guides, peer support sheets
4	Formatting Tables (Basic)	Format cells and tables for clarity (font, size, colour, borders). Understand why formatting matters for readability.	<ul style="list-style-type: none"> • Teacher demonstration: Changing font, size, cell colour, and borders. • Pupils format a provided data table for clarity. • Discussion: When is formatting helpful or unhelpful? • Extension: Exploring conditional formatting preview. 	Computers, sample tables, formatting checklists, step-by-step handouts

5	Formatting Tables (Advanced)	Apply advanced formatting: aligning text, merging cells, adjusting column width and row height, using cell styles.	<ul style="list-style-type: none"> • Demonstration: Alignments, merging, adjusting sizes, applying cell styles. • Pupils reformat an unorganised data set using advanced formatting. • Peer assessment: Check each other's formatting for accessibility. • Support: Provide templates and visual reminders for SEND learners. 	Computers, sample data sets, templates, peer assessment rubrics
6	Introduction to Formulae	Understand the purpose of formulae. Enter basic formulae using cell references.	<ul style="list-style-type: none"> • Demonstration: How to enter a simple formula (addition, subtraction). • Pupils practise creating and editing basic formulae. • Mini-whiteboard activity: Predict the outcome of different formulae. • Support: Use formula cards and visual aids for SEND learners. 	Computers, formula cards, mini-whiteboards, visual aids
7	Sum Functions	Use SUM and related functions (AVERAGE, MIN, MAX) to perform calculations on data sets.	<ul style="list-style-type: none"> • Demonstration: Using SUM, AVERAGE, MIN, MAX. • Guided practice: Pupils calculate totals and averages for given tables. • Challenge: Find errors in prepared formulae and correct them. 	Computers, sample spreadsheets, scaffolding sheets, error-checking cards

			<ul style="list-style-type: none"> Support: Highlight function syntax and provide scaffolding sheets. 	
8	Applying Formulae and Functions	Combine formulae and functions to solve practical problems. Check and interpret results.	<ul style="list-style-type: none"> Pupils are given a scenario (e.g., budgeting, stock control) and must use formulae/functions to solve it. Small group work: Discuss solutions and possible errors. Peer review: Check each other's work. Support: Provide step-by-step task sheets for SEND learners. 	Scenario sheets, computers, peer review checklists, task breakdown sheets
9	Introduction to Conditional Formatting	Understand what conditional formatting is. Apply simple conditional formatting to highlight data.	<ul style="list-style-type: none"> Teacher demonstration: Conditional formatting basics (highlighting values above/below a threshold). Pupils experiment with conditional formatting on sample data sets. Discussion: When is conditional formatting useful? Support: Use visual prompts and guided steps for SEND learners. 	Computers, sample data sets, visual prompts, step-by-step guides
10	Advanced Conditional Formatting	Apply complex conditional formatting (using rules, colour scales, data bars). Interpret formatted data for decision making.	<ul style="list-style-type: none"> Demonstration: Setting up rules, colour scales, data bars. Pupils apply advanced formatting to a scenario-based data set. 	Computers, complex data sets, scenario sheets, extension activity guides

			<ul style="list-style-type: none"> • Class discussion: How does formatting affect interpretation? • Extension: Experiment with creating custom rules. 	
11	Review and Practice	Consolidate knowledge of entering data, formatting, formulae and conditional formatting. Identify and correct common errors.	<ul style="list-style-type: none"> • Quiz: Recap of key skills learned. • Independent practice: Pupils complete a mini-project using all skills covered. • Peer assessment and feedback session. • Support: Provide checklists and model examples for SEND learners. 	Quiz sheets, computers, project brief, checklists, example answers
12	Assessment and Reflection	Demonstrate ability to independently use spreadsheet skills in a set task. Reflect on learning and areas for improvement.	<ul style="list-style-type: none"> • Assessment: Pupils complete a spreadsheet task independently. • Self-assessment: Pupils reflect on what went well and what was challenging. • Teacher feedback and target setting for next steps. • Support: Additional time, prompts, and 1:1 support available for SEND learners. 	Assessment brief, computers, reflection sheets, teacher feedback forms

Suggestions for Higher Attaining Learners

- Introduce more complex functions (e.g., IF statements, COUNTIF, VLOOKUP).
 - Challenge with larger and more complex data sets and real-world scenarios.
 - Encourage independent project work and presentations.
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- Allow self-directed exploration of spreadsheet add-ons and automation (macros).

Suggestions for Lower Attaining Learners

- Use highly scaffolded worksheets with step-by-step instructions.
- Pair with supportive peers for collaborative tasks.
- Reduce cognitive load by limiting the number of functions introduced at once.
- Provide additional repetition and practice with immediate feedback.
- Utilise visual aids and simplified data sets.

Alignment with Curriculum Specification

This scheme of work develops digital literacy and practical skills in information technology through the use of spreadsheet software. Pupils analyse and solve problems using computational thinking (formulae, functions, data manipulation) and undertake creative projects (modelling scenarios, applying formatting). The curriculum's aims for responsible, competent, confident and creative technology use are met through repeated practice, scaffolded tasks, and reflection. Key requirements for modelling, abstraction, data representation, and digital artefact creation for a specific audience are addressed throughout the sequence.

Suggestions to Embed Wider Skills

- **Literacy:** Encourage clear labelling, use of correct technical vocabulary, and reflective writing in self-assessment tasks.
 - **Numeracy:** Use real-life data, calculation tasks, and data analysis for applying mathematical concepts within spreadsheet functions.
 - **Managing information:** Teach strategies for organising, sorting and filtering data efficiently within spreadsheets.
 - **Problem solving:** Frame tasks as scenarios requiring analysis, solution planning, and application of computational and logical thinking.
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