



Summer Fete
LESSON PLAN

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from the Maths Appeal podcast



Ages 11-14 Key Stage 3 Lesson Plan

School Summer Fete Challenge

Lesson content

This lesson focuses on financial literacy and profit/loss calculations through the real-world context of running a food stall at a school summer fete. Children use percentage reasoning, proportional thinking and data from previous years to plan stock and maximise profit. It can be extended to explore ratio, VAT and multi-variable optimisation.

Key skills

Students will develop their understanding of percentages of amounts, profit and loss calculations (income minus expenses), proportional reasoning applied to real-world data, and financial decision-making under different scenarios. The Chance Cards deepen skills in percentage change and evaluating impact on profit.

Oracy links

Encourage students to discuss and justify their stock predictions before calculating. Ask groups to explain their 'best case scenario' choice using precise mathematical language.

Concrete resources

Consider providing calculators for students who need support with multi-step calculations. A printed working-out table helps students organise income, costs, and profit clearly.

Consider using budgeting templates or using spreadsheet tools. (e.g. Excel or Google sheets)

Setting the scene

Introduce the scenario: the school is holding a summer fete and the class is helping to organise it. Open a discussion with the following questions:

- What is a fete? Have you ever been to one?
- Why put on a fete?
- Who might be coming to the fete?
- How do we let people know about it?
- What activities and stalls might you find at a fete?

Developing it further

Task 1 - Fete Activity Ideas

Present children with a list of fete activities and their costs. In small groups, children can spend a maximum of **£100** on a combination of activities from the list below:

Note: This can be a think, pair, share activity where students think individually, then share their ideas with a partner, then share with the whole class.



Item	Cost
Bouncy Castle	£50
Ice Cream Van	£30
Face Painting	£15
Hoopla Game	£10
Music/DJ	£25
Raffle Prizes	£20

Each group must choose a combination that adds up to a **maximum of £100**. Groups should give reasons for their choices. Encourage children to share their selections and compare strategies.

Enabling Prompts

- Task can be scaffolded by **reducing the scale** of the prices by a factor of 10 e.g. £10 on a combination of activities with £5, £3, £1.50 etc

Challenge

Challenge can be introduced with more complex prices e.g. £49.99, £29.99, £24.99



Task 2 - The Burger Boss Challenge

The class is in charge of the food stall for the summer fete. Their goal is not just to feed people - it is to make the biggest profit possible for the school's new sports equipment. On the food stall they will be selling: Gourmet Veggie Burgers, Ice Cream and Lemonade.

Planning: What information do we need?

Before calculating, discuss as a class what information is needed to run the food stall successfully:

- Budget and cost of food supplies
- Potential number of attendees and their spending habits
- Equipment needed

Using last year's data

Present last year's fete data to the class:

Data point	Last year's figure
Bought a burger	40% of attendees
Bought ice cream	50% of attendees
Bought a lemonade	60% of attendees
This year's expected attendance	650 people

Ask students to use this data to work out how many of each item to stock for **650 attendees** (assuming the same percentages), so they **do not run out** (wasting potential profit) but **do not have excessive leftovers** (wasting money).

Enabling Prompts

- **Remind students:** percentage of an amount = $(\text{percentage} \div 100) \times \text{total}$.
- **Work out** the number of people buying each item from 400 first, then scale up to 650.
- **Use a table with columns:** Item | % of attendees | Number from 400 | Number from 650.



Profit calculation

Using the stock quantities calculated above, students now work out the potential profit if 650 people attend, using the following prices:

Item	Unit Cost (to make)	Selling Price
Gourmet Veggie Burger	£2.40	£5.50
Ice Cream	£0.80	£3.00
Lemonade (per cup)	£0.15	£1.50

Key formula: Profit = Total Income – Total Costs

Students complete the **Working Out Table**: for each item, calculate **Total Cost** (unit cost × quantity) and **Total Income** (selling price × quantity), then find **Total Profit**.

Guided/independent work – Scenario Cards

Once groups have calculated the initial profit prediction, introduce the Scenario Cards. Each group works through the different scenarios and compares the new profit against their original prediction.

Scenario Cards:

- **Heatwave!** – It's 30°C! Drink sales double, ice cream sales rise by 25%, but burger sales drop by 50%.
- **Eco-Friendly Tax** – the school council insists on compostable plates costing 15p extra per burger sold.
- **Bulk Buy Bonus** – a local supermarket donates 100 burger components for free.
- **Cloudy weather** – The weather turns cloudy and cooler. Ice cream sales drop by 40% but hot food sales (veggie burgers) increase by 20%.
- **Rainy Day** – a sudden downpour reduces total attendance from 650 to 500 people.
- Make up your **own scenario**.

For each scenario, groups recalculate Total Cost, Total Income and Total Profit and compare with the initial prediction.

Enabling Prompts

- **For the Heatwave:** 'double' means × 2; 'up by 25%' means × 1.25; 'drop by 50%' means × 0.5.
- **For the Cloudy Weather:** Would you expect overall profit to go up, down, or stay similar? Why?
- **For the Bulk Buy Bonus:** how does reducing the cost of 100 burgers affect Total Cost?

Challenge

Ask students to determine which **Scenario Card** produces the best case scenario for the food stall. They should:

- **Rank** all scenarios by total profit, from highest to lowest.
- **Calculate** the percentage increase or decrease in profit compared to the initial prediction for each scenario.
- **Explain** which single factor (price, quantity or cost) has the greatest effect on profit.

Extending Prompt

- What **selling price** would the veggie burger need to be to double the initial profit (all else equal)?
- Could you introduce a **tiered pricing model**? E.g. early-bird pricing vs. peak-time pricing?
- If **VAT of 20%** were added to food sales, how would this affect the profit calculations?

Summary

Ask each group to share which Scenario Card gives the best outcome for the school and justify their answer using a 'Maths Reason'. Facilitate a class vote. Model the full profit calculation for the initial scenario and one Scenario Card, discussing the real-world implications of each variable : a key lesson in financial literacy and data-informed decision-making.

