



Stage 5: Budgeting and nutritional analysis

Learning objectives:

- To work within a budget
- To analyse the nutritional content of food
- To solve multi-step problems

Stage overview:

In this stage, the children will be challenged to make their menu ideas fit within a budget. They will use written calculation methods in a real life context to adapt their ideas for one of their dishes until they are affordable. The children could find out the cost of their ingredients using a supermarket website, or you could complete this lesson in a supermarket and give them the opportunity to pay for their items themselves.

An additional problem that the children will need to consider is the nutritional content of their chosen dish and they will also adapt their recipe to fit the nutritional requirements of their target market.

Materials needed:

- Access to the internet
- Shopping list template

Presentation notes:

Slide 2: The definition of 'a budget'	<ul style="list-style-type: none"> • Ask the children if they understand and can explain the term 'budget'. • A budget is a set amount of money that businesses have to spend over a set period of time. • Explain that their budget will be the amount of money they have to spend on producing one of the balanced dishes from their menu.
Slide 3: Introduce the task	<ul style="list-style-type: none"> • The children will have a budget of £1.50 per group member to buy the ingredients needed to make one of the dishes from the themed restaurant menu that they have designed. • If they find that they cannot afford their original ideas, they will need to adapt their recipe and think of ways to solve this real life problem. This is an excellent opportunity for the children to work on their addition, subtraction, problem-solving and group work skills. • Spoken language skills could also be assessed when listening to the discussions that take place.
Slide 4: Maths with meaning	<ul style="list-style-type: none"> • If completing this stage in the classroom, model how to use a supermarket website to search for ingredients and research their prices. This section of the project could alternatively be completed in a supermarket. • Ask the children to keep a running total of their costs so that they can manage their budgets effectively. • Encourage the children to think carefully about which written calculation methods they need to use in the context of this problem.

	<ul style="list-style-type: none"> • Take suggestions for the methods that have been covered and lead a discussion on the most efficient one to use. • Discuss top tips for calculating with decimals and model the method you would like them to use for addition and subtraction with decimals if needed. • Emphasise the importance of accuracy when calculating their total cost to ensure they stay within their budget. Encourage the children to therefore check their working out and take suggestions for methods they could use for this. • If completing this stage in the classroom, once the children have calculated the cost of buying their materials and checked they have stayed within their budget, ask them to write their teacher a shopping list for their chosen ingredients.
Slide 6: Nutritional analysis	<ul style="list-style-type: none"> • Demonstrate how to use the British Nutrition Foundation Explore food tool http://explorefood.foodafactoflife.org.uk/Calculator/Recipe to work out the nutritional information for their chosen recipe. • Ask the children to research the daily nutritional requirements of their chosen target market and compare this to the information for the dish they are developing. • Challenge them to think about what they could add/ remove/ change to make their recipe more nutritious or balanced and remind them to go back and adjust their budgeting calculations accordingly. • Encourage the children to think about how the nutritional benefits that they have identified could be highlighted in their advertising campaigns as an additional unique selling point of their menu. • Encourage the children to use British produce for their recipes where possible and emphasise that this will provide them with additional advantages to promote in their advertising such as lower food miles, higher welfare standards and traceability. • When is not possible to source British ingredients, ask the children to research where their chosen ingredients comes from. • Using 'Google tour builder', create a tour that starts with a shopping basket and shows from where in the world each of their chosen ingredient is sourced and how far it has travelled to bring to life the issue of food miles.

Links to the National Curriculum:

Maths	Number: Addition, Subtraction, Multiplication and Division	<ul style="list-style-type: none"> - Perform mental calculations, including with mixed operations and large numbers - Solve addition and subtraction multi-step problems in contexts, deciding which operations and methods to use and why - Solve problems involving addition, subtraction, multiplication and division - Use estimation to check answers to calculations and determine, in the context of a problem, an appropriate degree of accuracy.
	Number: fractions (including decimals and percentages)	<ul style="list-style-type: none"> - Multiply one-digit numbers with up to two decimal places by whole numbers - Use written division methods in cases where the answer has up to two decimal places - Solve problems which require answers to be rounded to specified degrees of accuracy