



Stage 7: Designing a restaurant

Learning objectives:

- To design a restaurant floor plan
- To solve problems involving area and perimeter

Stage overview:

In this stage, the children will apply their Maths learning to design a floor plan of their restaurant seating area. They will then use online shopping websites to calculate the cost of their design and ensure it fits within their budget.

Materials needed:

- Squared paper
- Access to the internet

Presentation notes:

Slide 2-3: Introduction	<ul style="list-style-type: none"> • Introduce the task: an investor has given their businesses some money to spend on decorating the seating area of their themed restaurants. • They must use the investment budget to decorate the walls and floor and purchase the tables, chairs and anything else they need to theme their restaurant.
Slide 4- 7: Calculating area and perimeter	<ul style="list-style-type: none"> • Give the children the task of designing a floor plan of their restaurant seating area. • Explain that the plan needs to be drawn to a suitable scale e.g. each square on the paper representing a metre in the restaurant. Ask the children to write record this on their plan. • Use the power point to revise how to calculate perimeter and area and ask the children to note the total floor area and perimeter of their restaurant on their designs. Encourage the children to use interesting shapes for their floor plans such as triangles, parallelograms and composite shapes.
Slide 8: Maths with meaning	<ul style="list-style-type: none"> • Explain that when they are purchasing supplies to decorate the walls and floors, they will need to work out the areas of the different surfaces that needs to be decorated and ensure they buy enough paint, wallpaper, carpet etc. for the job. • Give the children access to a DIY website so that they can research the prices of their chosen materials.
Slide 9: Maths with meaning	<ul style="list-style-type: none"> • Give the children access to a furniture website to allow them to budget for the rest of their items. • Recap the operations that the children will need to use in order to calculate total costs and stay with their budget. Model the calculation method you work like that them to use (if necessary). • Remind teams to show all of their budgeting and area calculations.



National Curriculum Links:

Maths	Measurement	
		<ul style="list-style-type: none">- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate- Use, read, write and convert between standard units, converting measurements of length, mass, volume and time from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places- Recognise that shapes with the same areas can have different perimeters and vice versa- Recognise when it is possible to use formulae for area and volume of shapes- Calculate the area of parallelograms and triangles