



Stage 8: Making a food product

Learning objectives:

To produce a food product

Stage overview:

In this stage, the children will work in their business groups to use the herbs that they have been growing, along with additional ingredients, to follow their adapted bread recipes and make their flavoured bread product. This is an excellent opportunity to provide children with meaningful, real-life opportunities to apply their Maths learning. The 'Maths with meaning' section provides ideas that could be used to teach or reinforce many of the Year 3 learning objectives in a practical way.

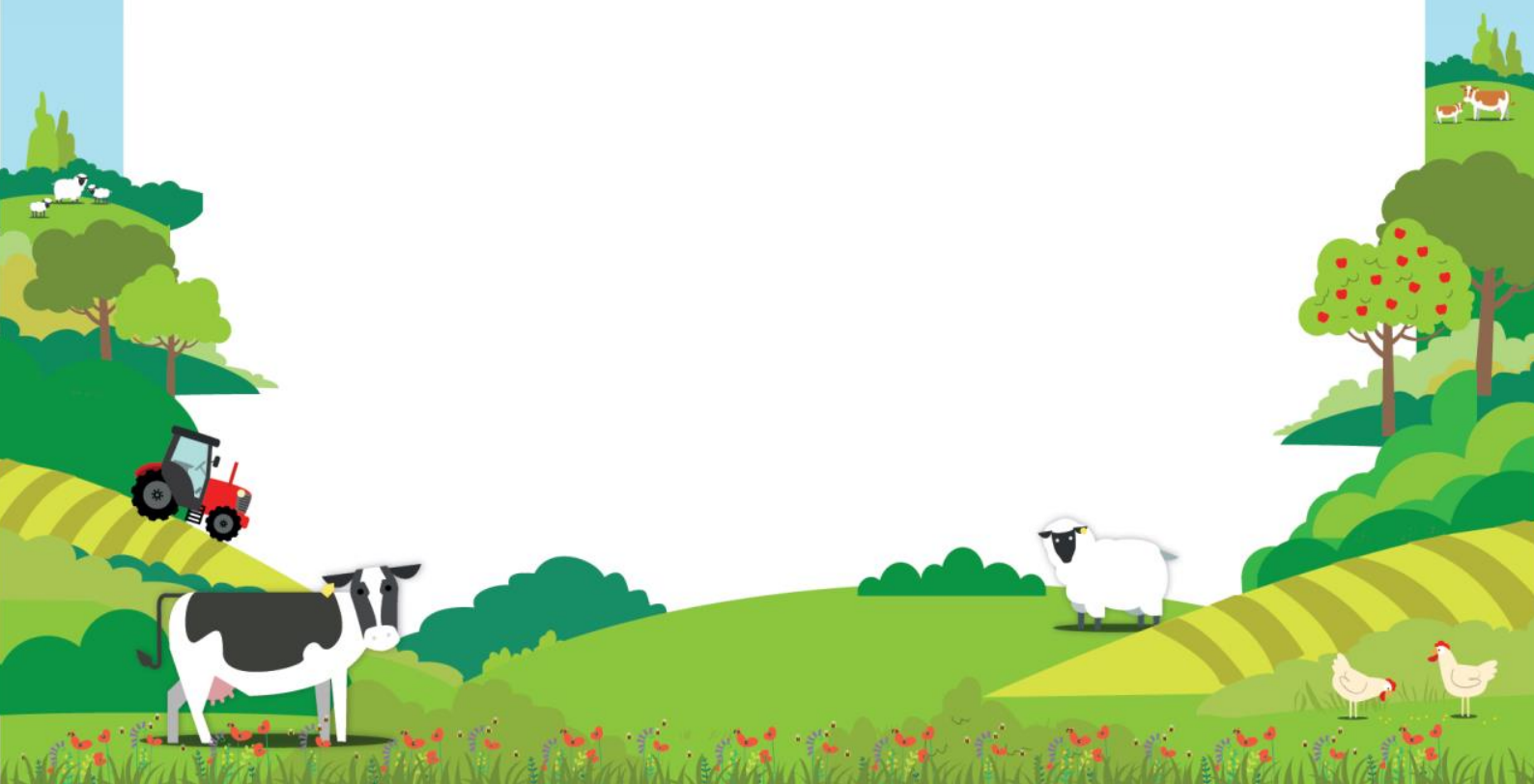
Materials needed:

- Herbs that the children have grown
- Basic bread recipes that have been adapted by the children
- Additional ingredients that the children wish to add to their bread dough
- Weighing scales
- Measuring jugs
- Mixing bowls
- Vegetable knives
- Tablespoons
- Teaspoons
- Mixing spoons

Presentation notes:

Slide 2: Where does flour come from?	- Start the children's thinking with some questions: Where does flour come from? How is it made?
Slide 3- 4: Wheat	- Use the power point to explain how wheat is used to make flour.
Slide 5: Bread	- Explain the role that each ingredient has in bread making.
Slide 6: Food hygiene	- Explain that before we can begin preparing our food products, we need to wash our hands thoroughly with soap and water, tie back long hair, roll up our sleeves, put on an apron and clean our work surfaces.
Slide 7: Safety in the kitchen	- Ask the children to look around the room and spot the potential hazards. E.g. sharp knives, peelers and graters; hot ovens, hobs, pans; slipping on spilt liquids/ food etc. - Take feedback and make sure the children's attention is drawn to the hazards before they begin preparing their products. - Use the power point to share the rules for working with sharp knives.

Slide 8-9: Preparing vegetables and herbs	<ul style="list-style-type: none"> - These slides have been produced by Primary Food Tech and provide step by step guidance on how to safely chop and prepare vegetables/ herbs. - Before the children make their flavoured bread, use the slides to model how to safely prepare the children's herb and vegetable ingredients. These slides could also be printed and laminated so the children can refer to them while they work.
Slide 10: Kneading bread	<ul style="list-style-type: none"> - Model how to knead bread and explain why it is important using the power point.
Slide 11: Evaluation	<ul style="list-style-type: none"> - Once the children have made their product using the recipe, give them the opportunity to evaluate their work using the question prompts on the slide. - The children could then use the 'Comicbook!' iPad application to make a visual guide to making bread. They could include photographs of each stage of the making and add captions, speech bubbles, thought bubbles, stickers and filters to enhance their work. - You could also use a green screen iPad application such as 'DoInk' to create a cooking show. The children could star as TV chefs creating bread, and talking about what they have learned along the way e.g. kitchen safety, where the ingredients have come from etc.



Adding a pinch of Maths with meaning!

Understanding scales:

Interpreting scales is often an area of confusion for children so exposing them to as many different scales as possible, in as many contexts as possible, is important for teaching them the basic skills that they need to interpret them accurately when they are presented in a text book, test paper or real life. Cooking is a great opportunity for this as there are so many different scales to interpret: weighing scales, thermometers, oven dials, measuring jugs etc. Take every opportunity to examine scales together during this activity!

- Start by looking at the numbers on the scale. What is the pattern? How much do they go up by each time? How can you work this out if you're not sure? (subtraction)
- If the difference between each number on the scale is, for example, 200 and there are 4 increments between each number, which operation can we use to work out how much each increment on the scale represents? (division)
- If we now know that each increment increases by 50, then we can work out how much any of the increments represent by counting on in 50s from the closest number on the scale.
- Using these steps to help the children understand the scale they are working with before they try to measure their ingredients will increase their accuracy as they can work out where on the scale they need to get to when pouring out their ingredients.

Comparing mass:

Weighing and measuring ingredients provides a useful opportunity for comparing mass and starting to introduce the relationship between grams and kilograms. This can be a tricky concept so teaching it in a practical context gives it meaning and makes it memorable which can significantly improve children's understanding.

- Taking measuring flour as an example, start by looking at how much a large bag of flour weighs (Use a 1kg bag) and explain that there are 1000 little grams in each kilogram. Write this on the board.
- Give the children the opportunity to feel how heavy a kilogram is. Then ask them to make their hands into a bowl shape and scoop out as much flour as they can hold. This will be approximately 100 grams. Ask the children to use comparative language to compare the two masses.
- Show the children various amounts of flour and ask them to estimate their masses and then check their answers by weighing them.

- Take the opportunity to look at the scale and work out the size of the intervals.
- Ask the children to look at the relationship between grams and kilograms and tell you whether there are more grams or kilograms? Why is the number of grams larger? Grams are a thousand times smaller than kilograms so we need a thousand times more of them to fill up the 1kg bag.
- Ask the children to use this information to work out how many grams would be in half a kilogram and extend them to thinking about a quarter of a kilogram.

Comparing and ordering fractions with the same denominator

- After the children have made their products and photographed them for their advertising campaigns, you could bring in some fractions learning before they sample their product.
- Ask: if I wanted to share my product with one/two other person/ people, how many EQUAL pieces will I need to divide it into? Use questioning to revise the meaning of the denominator of a fraction= how many parts the whole has been divided into.
- Ask the children to divide their product into quarters. How many pieces do you need to cut it into?
- Use questioning to revise the meaning of the numerator e.g. how many quarters have you got on your plate? Can you hold up one quarter of your product? How many quarters will be left? Reinforce each question with a written number sentence on the board.
- Ask simple questions to embed the children's understanding of the meaning of the numerator e.g. if you eat three fifths of your product and your partner eats two fifths, who will have eaten more of the whole?

Scaling:

Working with recipes is a great way to introduce simple scaling.

- Ask the children to look at how many servings their recipe will make. Ask them to think about what we would have to do if we wanted double the number of servings.
- Establish that we would need to double all of our ingredients. Clarify that doubling means multiplying by two.
- Ask the children to use this understanding to think about how we would make half the number of portions. Establish that we would need to half the quantity of each ingredient.
- Provide examples for the children to work through and extend them to thinking about larger scales e.g. three times the number of portions.

Links to the National Curriculum:

Subject	Topic	Objective
Design and Technology	Cooking and nutrition	<ul style="list-style-type: none"> - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.
	Make	<ul style="list-style-type: none"> - Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
	Evaluate	<ul style="list-style-type: none"> - Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
Computing		<ul style="list-style-type: none"> - Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.