

Sea and Learn – Lesson Plan: Making Ships Biscuits

Key Stage: Two

National Curriculum Links: DT: 2a, 2f, 5b; Eng: En1 3a; Maths: Ma3 1b

Main Subject Focus: Food Technology

Learning Outcomes:

Children will know:

- How to follow a recipe to make biscuits
- The rules of basic food hygiene and be able to put them into practice
- How to work safely in a kitchen

Resources Required:

- Food equipment - mixing bowls, spoons, forks, weighing scales, cups, cutters, baking tray, cooling rack
- Oven gloves, washing-up cloths, tea towels, cleaning cloths
- Plastic table covers, antibacterial spray, hand-washing and washing-up facilities, aprons
- Access to oven
- Basic biscuit ingredients – coarse stone-ground wholemeal flour, salt, water

Lesson Structure:

1. Introduce lesson by discussing what the type of food would have been like for sailors in Nelson's Navy. (See Teacher's Notes)
2. Focus on 'Ships Biscuits' and highlight the role they played in providing sailors' food.
3. Introduce the recipe for Ships Biscuits (Use OHP Sheet 1), looking at and discussing the ingredients and the method.
4. Remind children about food safety and hygiene in the kitchen (Using Worksheet 1 & the supporting activities sheet if time)
5. Now demonstrate how to make the ships biscuit using the recipe, showing ways of mixing, combining and shaping. Then demonstrate safe and accurate use of the equipment e.g. *the oven*, including the demonstration of food safety & hygiene.
6. Group your children accordingly and allow them to work at producing their own ships biscuits. Make sure the recipe is available to remind them of each step – you may wish to leave the recipe on the OHP where children can access the step-by-step instructions.
7. Once the biscuits have been rolled out and are ready to be baked in the oven, the children can carefully and with supervision, place them into the oven.

8. After the biscuits have been cooked and cooled, the children can taste the biscuits for themselves and share their thoughts about the taste and texture.

Extension/Homework Ideas:

- Write a set of instructions for younger children, to show how to make ships biscuits, including small illustrations.
- Write a short diary extract of life on-board a ship, focusing on your food rations and ships biscuits you have been given.
- Look at the nutritional content of the ships rations. Compare and contrast with a healthy diet today. What essential food types are missing? Ask children to find out what the consequence of this would be.
- If the recipe makes 7 biscuits, work out the total amount of ingredients needed to make 1 biscuit per person in your class. How much is required for a weeks ration for the total crew on board HMS Victory.

Sea and Learn – Teacher’s Notes (1)

Life on Board

Sailors ate with their messmates at a narrow table hooked up between the guns. Sailors needed to be strong and healthy to do all the work on the ship. They ate good meals but fresh fruit and vegetables were used up very quickly.

The common seaman's diet each day was 1lb (450 g) of ship's biscuit, 4lbs (1.8 kg) of beef, 2lbs (907 g) of pork, 2lbs (907 g) of peas, 1.5lbs (680 g) of oatmeal, 6oz (170 g) of sugar and 6oz (170 g) of butter, and 12oz (340 g) of cheese a week. However, these provisions were not fresh and often rotten after months at sea.

Often the meat was so hard it was almost inedible, even after being boiled for hours. Instead of bread (which would go mouldy) they had ships biscuit. The biscuit, also known as 'hard tack', would often contain weevils or maggots and sailors would tap their biscuits on the table to knock most of the weevils out before eating. Sometimes sailors ate their biscuits in the dark, or with their eyes closed so they could not see the maggots.

In addition to the food, the sailor also received a gallon of beer a day. This was instead of water, which went green and slimy. Sometimes the sailors had rum or wine in addition to their beer.

Information collated from: Portsmouth Historic Dockyard, Isambard Brunel School and the National Maritime Museum

Ships Biscuit Recipe

Ingredients:

1lb (450g) Medium course stoneground wholemeal flour

7g (¼ oz) Salt

Water (Enough to make a stiff dough)

Method:

1. Combine all the ingredients and mix into a stiff dough.
2. Knead the dough, then leave to stand for 30 minutes.
3. Turn the oven on and pre-heat at 220°C (Gas Mark 7)
4. Roll out the dough so that it is roughly 2.5cm (1 inch) thick.
5. Divide roughly into 7 biscuits, using a pastry cutter if necessary.
6. Put the biscuits onto a baking tray and carefully place into hot oven.
7. Bake for 30 minutes.
8. Remove from oven and place on a cooling rack in a warm place to harden and dry out.

Sea and Learn – Teacher’s Notes (2)

Food Safety Information

Pupils aged 5-7 should be able to:

- Understand that dirty food is dangerous because it contains large numbers of microbes which may cause food poisoning;
- Demonstrate safety and cleanliness in practical work, e.g. wash hands, wear an apron, tie back long hair, do not cough over food;
- Use equipment safely.

Pupils aged 7-11 should be able to:

- Understand that food can spoil and decay due to microbes, insects and other pests;
- Understand that microbes need food, warmth, moisture and time to multiply;
- Understand that food hygiene means preventing contamination by safe handling and storage so that food is safe to eat;
- Apply good personal hygiene practices;
- Organise a clean and safe food preparation area;

Food Preparation Skills Information

Pupils aged 5-7 years should be able to:

- Identify and use a range of simple hand tools;
- Demonstrate a range of skills, e.g. slice, chop, wash, grate, peel, spread;
- Prepare simple dishes, e.g. fruit salad, sandwich, toast, salad;
- Prepare food for themselves and friends, with help;
- Understand that some tools have special jobs, e.g. whisk, peeler, toaster;
- Recognise a range of basic ingredients, e.g. fruit, vegetables, bread, meat, fish, mil, eggs;
- Perform preference tests for tasting.

Pupils aged 7-11 years should be able to:

- Demonstrate an increasing range of practical food handling skills, e.g. kneading, creaming, grating, mixing;
- Understand that there are different methods of cooking, e.g. grilling, baking, frying, roasting (i.e. heat transfer);
- Weigh and measure accurately;

- Describe, with reasons, the effect of heat on taste, texture, odour and appearance;
- Demonstrate a range of shaping and finishing techniques;
- Prepare and cook simple dishes, e.g. boiled egg, grilled bacon, a sandwich filling, bread or biscuits making (i.e. follow a recipe/set of instructions);
- Select and use appropriate tools when preparing and cooking food;
- Perform preference and discrimination sensory tests for tasting.

Information: British Nutrition Foundation – Healthy Schools

Sea and Learn – Teacher’s Notes (3)

Food Safety and Personal Hygiene

The low down on bugs... Did you know?

- Bacteria are everywhere. They cannot be eliminated totally.
- Not all bacteria are harmful. For example, some help make cheese and yogurt.
- A healthy gut can contain a kilogram of bugs.
- One housefly can carry two million bacteria.
- There are 400 times more bacteria on the average workstation than on the average loo.
- Bacteria need warmth, food, moisture and time to multiply.
- In ideal conditions bacteria can double their numbers every 20 minutes and in eight hours one bacterium can multiply into four million.
- Food poisoning bacteria are very hard to detect; they do not usually affect the taste or smell of the food.
- The symptoms of food poisoning can last for days and include abdominal pains, diarrhoea, vomiting, nausea and fever.
- Food poisoning bacteria can be dangerous and can kill - although this is rare.
- Young children, the elderly, the sick and pregnant women are particularly vulnerable to food poisoning.
- The estimated cost of treating illness caused by Salmonella and Campylobacter to the NHS in England and Wales in 1999 was £27.8 million.
- In total, infectious, intestinal disease (i.e. from all causes not just foodborne) cost at least £743 million per year of which £268 million falls on the NHS and around £400 million on industry employees.

Hand washing...Did you know?

- Up to half of all men and a quarter of women fail to wash their hands after they've been to the toilet.
- Right handed people tend to wash their left hand more thoroughly than their right hand, and vice versa.
- We have between 2 and 10 million bacteria between fingertip and elbow.
- Damp hands spread 1,000 times more germs than dry hands.
- The numbers of germs on your fingertips doubles after you use the toilet.
- Germs can stay alive on hands for up to three hours.
- Millions of germs hide under watches and bracelets and there could be as many germs under your ring as there are people in Europe.

Information: Food and Drink Federation – [foodlink](http://foodlink.org.uk)

Further free educational resources are available from [foodlink](http://foodlink.org.uk), including food safety quizzes, posters etc at www.foodlink.org.uk and www.nutrition.org.uk.

Sea and Learn – OHP Sheet

Making Ships Biscuits

Ingredients:

1lb (450g) Medium course stoneground wholemeal flour

7g (¼ oz) Salt

Water (Enough to make a stiff dough)

Method:

1. Mix all the ingredients into stiff dough.
2. Knead the dough, then leave to stand for 30 minutes.
Preheat your oven to 220°C (Gas Mark 7)
3. Now, roll out the dough thickly.
4. Divide into 7 biscuits. Use a cutter if you wish.
5. Put the biscuits onto a baking tray.
6. With your teachers help, carefully place into hot oven.
DO NOT DO THIS ALONE!
7. Bake for 30 minutes. Wash up kitchen equipment and tidy away. Get out cooling rack.
8. With your teachers help, take biscuits out of oven and place on the cooling rack.
9. Let the biscuits cool, harden and dry out before tasting.

Sea and Learn – Work Sheet (1)

In the Kitchen

Look carefully at the kitchen below. Circle all the unsafe things happening in the kitchen. In your class, discuss why they are unsafe.



Image courtesy of: British Nutrition Foundation

Sea and Learn – Supporting Activity Ideas (1)

Hand Washing:

1. Smear a mixture of paint and liquid soap (“germ juice”) on the children’s hands (use gloves if risk of allergic reaction)
2. Blind-fold them and get them to wash their hands in the normal way
3. Remove the blind-fold and discuss why some areas are paint-free and others are not (usually between the fingers and around the nails)
4. This can lead into discussion about why and when it is important to wash hands and a demonstration on how to ensure hands are washed and dried thoroughly



To wash hands thoroughly:

- Always use warm water.
- It's better to wet hands before applying soap as this prevents irritation.
- Rub hands together vigorously for about 15 seconds, making sure both sides of the hands are washed thoroughly, around the thumbs, between each finger and around and under the nails.
- Then, rinse with clean water.
- Germs spread more easily if hands are wet so dry them thoroughly.
- Use a clean dry towel, paper towel or air dryer; it doesn't matter which.



Why wash hands?

1. Ask children to draw around their own hands on a large piece of paper.
2. On their paper, ask children to list:
 - What hands are used for
 - What clean things they do with their hands
 - What dirty things they do with their hands
 - When and Why it is important to wash hands
 - How to wash hands effectively
3. Ask children to feedback their responses and discuss as a class.

Ideas & images courtesy of: Food and Drink Federation – foodlink

Sea and Learn – Supporting Activity Ideas (2)

Working in the Kitchen

As a class make a list of safety rules for working in the kitchen. Should include the following:

- Don't brush or comb your hair when you are in the kitchen or near food. Always tie long hair back.
- If you are ill, avoid handling foods for others, especially if you have a tummy upset.
- Cover all cuts, burns and sores and change dressings regularly.
- Use a clean apron but don't use it to wipe your hands on.
- If you are preparing lots of food – for a family meal perhaps – take off your watch, rings and bracelets as well as washing your hands and wrists before you start.
- Do not cough, sneeze, spit or smoke near food and avoid touching your nose, teeth, ears and hair, or scratching when handling food.
- Wash your hands immediately after handling raw meat before touching any other food.
- After use, wash all crockery and utensils with hot water and washing up liquid.
- Change the water regularly then rinse in clean, hot water. Where possible leave to drain until dry.
- Use tea towels sparingly and make sure they dry out after you've used them, change them regularly and wash in a hot wash cycle. Preferably, use disposable cloths or paper towels.
- Detergents such as washing up liquids are designed to dissolve grease, oil and dirt. Disinfectants, such as bleach, are designed to kill germs.
- Use separate cloths or sponges for separate tasks; where practicable use disposable cloths. If using them more than once, wash in hot water and soap then place in a suitable disinfectant, rinse thoroughly and allow to dry

Display your food safety rules in your classroom or in the school kitchen.

Information: Food and Drink Federation – [foodlink](#)