

Food Sort (10-20 mins)

Curriculum Links (KS2):

Science: Working scientifically; Living things and their habitats

English: Reading and Comprehension

PSHE: Core Theme 1 - Health and Wellbeing

Design and technology: Cooking and nutrition

Learning Objectives for KS2:

All students will:

- understand that microbes can be found on our food and can transfer to humans.
- understand that cooking food properly can kill harmful microbes.
- understand that bacteria multiply very quickly.

Some students will:

• understand that refrigeration only stops microbes growing, it doesn't kill them.

This activity is suitable for school and community groups and is found in the "Food Bugs" section, as well as a similar activity in KS2 in the "2.3 Spread of Infection Food Hygiene" section. This activity will help participants identify that microbes can be useful or harmful. Participants are required to sort different foods according to whether they contain or are made with useful microbes or contain harmful or food spoiling microbes.



Use the introduction in the KS2 lesson plan to discuss:

- How microbes like to grow in nice warm damp places, like inside our bodies, and when they
 find somewhere they like, they grow and multiply! However, microbes don't like places that
 are very warm or cold!
- Why we need to cook food or keep it in the fridge.
- Explain that putting food in the fridge only slows or stops microbial growth, it doesn't kill them.
- The only way to kill microbes is to cook food until it is piping hot and cooked all the way through. This is because very warm temperatures kill many harmful microbes.



Before you begin you will need:

- Background and lesson plans for <u>"2.3 Spread of Infection Food Hygiene"</u> (KS2 lesson pack) or "Food Bugs" section within Beat the Bugs
- Student handout 1 from KS2 pack (SH1) of various types of food with either useful or harmful microbes within them
- Optional: To make the activity more visual, you may bring in a variety of real foods or food packaging for: fruit and vegetables, milk, yoghurt, bread, raw meat, such as raw chicken or raw sausages, eggs, and cheese, and rice.

Risk assessment: Ensure participants do not have allergies or sensitivities to the foods brought in and that participants do not consume the foods that are being used. Ensure that any empty packaging is clean and dry and does not contain any meat juices (if using).

Click here to access the resources for this activity for KS2 or Beat the Bugs for community groups

Use the following steps as a guide to implement this activity:

- Discuss with the group which foods contain the most harmful bacteria.
- Show the group pictures of various food types (SH1), or actual foods or food packaging (if using) and ask them which they think contain the useful/harmless bacteria and which contain the harmful bacteria.
- Fruit and Vegetables: Useful and Harmful Most of the microbes found on fruit and vegetables are harmless but sometimes harmful microbes can be found in the soil in which they are grown. It is therefore important to wash all fruit and vegetables before eating.
- Milk: Useful microbes fresh milk contains lactobacilli bacteria which help us digest food.
- Yoghurt: Useful microbes yoghurt also contains *lactobacilli* bacteria which help us digest food.
- Bread: Useful/Harmless microbes the yeast Saccharomyces cerevisiae helps bread to rise.
- Raw Chicken: Harmful microbes raw chicken may contain Salmonella, E. coli or Campylobacter bacteria all of which can cause food poisoning in humans.



- Raw Sausages: Harmful microbes raw meat may contain *Salmonella* or *E. coli* bacteria which can cause food poisoning in humans.
- Rice: Harmful microbes rice may contain *Bacillus cereus* and it is important you do not reheat rice more than once to stop these bacteria from growing.

Use the plenary or discussion questions to check participant's understanding after the activity is completed. Then complete action plan (Beat the Bugs).

