

Food Hygiene & Safety

Food Safety Scenarios

Background

These resources have been funded by the European Union's SafeConsume project, which is an EU-wide project to reduce illness caused by foodborne pathogens. Find out more information at <http://safeconsume.eu/>.

These resources have been developed following research with students and teachers from across Europe and have been tested with schools during development.

Following research with consumers across Europe, several food related risk behaviours have been identified which we seek to improve education on. This activity investigates common food safety beliefs and misconceptions that are applicable across England and other European countries. The lesson features common scenarios children and young people, and their families may find themselves in, and discussion points in relation to each individual scenario.

National curriculum links:

KS3: RSHE; Health and prevention, Healthy eating

KS3: Science; Living things and their habitats

KS4: Food preparation and nutrition GCSE; Cooking and food preparation - The scientific principles underlying the preparation and cooking of food.

Lesson learning outcomes:

1. To understand that foodborne illness can have severe consequences and does not contribute to strengthening the immune system
2. To understand the consequences of not following food hygiene rules at home, such as cross-contamination, and how to prevent this
3. To understand types of food labels and why these are important
4. To explain the difference between food safety and food quality
5. To understand the food cooked at home is not necessarily safer than food eaten at restaurants

Resources:

- Food Safety Scenarios PowerPoint
- Student Worksheet: Food Safety Scenarios
- Student Answer Sheet: Food Safety Scenarios

Lesson plan

Designed for 15-18 year olds, but could be adapted for 11-14 year olds.

Introduction

1. Go through each of the food safety scenarios within the **Food Safety Scenarios PowerPoint**. Each scenario features different characters in common situations.

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2. Students may work in pairs or small groups to discuss. Encourage students to write down notes for each question on the **Student Worksheet: Food Safety Scenarios**.
3. Encourage students to share feedback on each scenario in turn, with the rest of the class, and discuss their answers.
4. The **Student Answer Sheet: Food Safety Scenarios** can be used as a guide for discussion, to check all points have been raised.

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Food Safety Scenarios

Student Answer Sheet

Scenario 1

Hannah gets symptoms of foodborne illness after eating at a barbecue. Hannah visits the pharmacist to talk about her symptoms



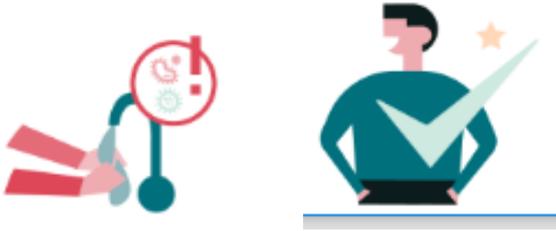
1. Do you agree or disagree with Hannah's statement about whether foodborne infections keeps our immune systems strong, and why?

2. Why might foodborne illness be more dangerous for some groups of people such as pregnant women, the elderly, children under five and people with weakened immune systems?

3. How can you ensure food is prepared safely when preparing for a barbecue? Think about safety of the consumer (the person eating the food), personal safety, and keeping tools and equipment hygienic

Scenario 2

Tiago's mum is preparing chicken for dinner that evening and takes the chicken to the sink to wash it



1. Do you agree or disagree with Tiago's comments about washing chicken and why?
2. Why might it be difficult to change food hygiene habits in the family home?
3. What food hygiene habits may you have picked up at home? Are they good or bad?
4. How can you remind yourself to follow good food hygiene rules and pick up good habits in the kitchen at home, school or work?

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Scenario 5

Maria and her brother are preparing lunch for their guests. Maria has prepared the vegetables and is about to prepare the meat.



1. Discuss the food hygiene practices that Maria should have followed while preparing the vegetables, salad, and meat. What temperature should the fridge be set to? Where should different food items be kept in the fridge?
2. Discuss whether plastic chopping boards are safer than wooden chopping boards and why?
3. Discuss how cross-contamination may occur if equipment were not used correctly in food preparation, and cleaning of surfaces?
4. Discuss whether you would use different coloured chopping boards in your household

Food Hygiene & Safety

Food Safety Scenarios

Student Answer Sheet

Scenario 1

Hannah gets symptoms of foodborne illness after eating at a barbecue. Hannah visits the pharmacist to talk about her symptoms

1. **Do you agree or disagree with Hannah's statement about whether foodborne infections keeps our immune systems strong, and why?**

With some infections our body can remember how to fight it next time (e.g. chickenpox) but usually with foodborne infections this is not the case as there are so many different kinds. Exposing ourselves to harmful foodborne microbes will not strengthen our immune system. Always wash hands after touching raw meat, after using the toilet, and before eating with hands. If we get ill from food, we must make sure we wash our hands with soap and water, drink plenty of fluids, avoid contact with other people, and avoiding cooking for others when ill. You should stay off school or work until you have not been sick or had diarrhoea for at least two days.

2. **Why might foodborne illness be more dangerous for some groups of people such as pregnant women, the elderly, children under five and people with weakened immune systems?**

The elderly, pregnant women, and children and young people are more vulnerable to the effects of illness, especially as these groups may be limited in treatment options for common infections.

3. **How can you ensure food is prepared safely when preparing for a barbecue? Think about safety of the consumer (the person eating the food), personal safety, and keeping tools and equipment hygienic**

Food on a barbecue does not cook evenly, sometimes the outside may look cooked or even charred, but it may still be undercooked inside. Check that meat is piping hot in the centre, and that with chicken there are no pink bits, and that juices run clear. The surface of the meat, especially red meat such as lamb or beef must be cooked thoroughly. Wash hands with soap and water, and all tools and equipment thoroughly. Alcohol gel (at least 60% alcohol) and wet wipes can be used if access to water is difficult outside, making sure that you clean your hands properly before eating with fingers.

Scenario 2

Tiago's mum is preparing chicken for dinner that evening and takes the chicken to the sink to wash it

1. **Do you agree or disagree with Tiago's comments about washing chicken and why?**

Tiago is correct in saying that washing chicken can cause the juices from the meat to splash over the kitchen surfaces, clothes, and hands, and contaminate them. Most chicken naturally contain bacteria such as *Campylobacter*. Cross-contamination of surfaces, hands and clothes from washing chicken may contribute to these microbes entering our bodies. If the bacteria get inside humans, it can lead to foodborne illness.

2. **Why might it be difficult to change food hygiene habits in the family home?**

People have their own ways of doing things in the kitchen, from food preparation, to cooking, and cleaning surfaces. This can include cultural practices which differ from person to person. It can be difficult to change food hygiene habits if your own practices have never caused you any harm. However, with the correct information and the opportunity to change a habit, people may be more motivated to change risky practices, such as washing chicken.

3. **What food hygiene habits may you have picked up at home? Are they good or bad?**

Discuss family dynamics and habits at home.

4. **How can you remind yourself to follow good food hygiene rules and pick up good habits in the kitchen at home, school or work?**

Suggestions can include: designing your own food hygiene fridge magnets, handwashing posters, or making a pledge to practise food safety.

Scenario 3

Hugo is making his lunch for the next day. He checks the fridge to see what he can use

1. **Do you agree or disagree with Hugo about using the ham that is past its use by date and why?**

It is not safe to eat food such as ham that is past its use by date, even if it smells and looks fine. Some foods may smell, look, or taste fine, yet harmful bacteria may have already grown on it. Most of the time, bacteria that is not visible will be on food, and this does not make the food smell any different, therefore it is important to pay attention to use by dates, as these are there for safety.

2. **What are the differences between use by and best before dates?**

“Use by” refers to when the food is still safe to eat. Food should not be consumed after this date. “Best before” refers to when the food will be at its best quality, but it is worth noting that consumption after this date should still be safe, but the quality of taste is likely to be reduced.

3. **What examples of foods can you think of that have use by dates, and best before dates? How are they different?**

Foods that usually have a use by date include meats, fish, eggs, salad, and dairy products such as milk and yoghurt. Foods that have use by dates are ones that go off quickly, and often need to be kept in the fridge to be preserved. These foods are usually moist, as bacteria like to grow in moist conditions. Foods that have best before dates are usually products such as tinned foods, bread, crisps, and some fruit and vegetables. Foods that have best before dates are usually dry goods, often sweet or salty, and do not generally need to be kept in the fridge to be preserved.

Scenario 4

Stavros and his family are having dinner at home. They are talking about a family who got ill from eating out a buffet restaurant last week

1. **Do you agree or disagree with Stavros's and his daughter's comments about eating out?**

This is an on-going scientific debate. There is limited evidence to suggest that you are more likely to get ill from food you have eaten out at a restaurant or buffet, compared to food that has been cooked at home. Many people learn initial cooking skills and basic hygiene rules from their families at home. The habits we pick up from friends and family for cooking and preparing food do not always ensure that food cooked at home is safe to eat. The likelihood of foodborne illness is dependent on food safety and hygiene behaviours, not whether it is cooked at home or at a restaurant.

2. **Do you agree or disagree with Stavros's wife's comments about foodborne illness and why?**

The likelihood of foodborne illness is dependent on food safety and hygiene behaviours, not whether it is cooked at home or at a restaurant. The way we prepare food, cook food (including meat), and our personal hygiene, tool hygiene and kitchen hygiene all contribute to food safety and our risk of contracting a foodborne illness.

3. **Why might people think that eating at buffets or restaurants is riskier than eating at home?**

There are many reasons why people may think that eating out at buffets or restaurants is riskier than eating at home. This includes not seeing the food that they are eating being cooked, not knowing whether hands have been washed, not knowing how long food has been left out for, or whether hygiene rules have been followed from preparation, to cooking, and storage. Most foodborne illnesses take a few days or weeks for symptoms to appear, therefore people are more likely to think it is the food that they ate out recently, compared to the food that they have every day at home.

Scenario 5

Maria and her brother are preparing lunch for their guests. Maria has prepared the vegetables and is about to prepare the meat.

1. **Discuss the food hygiene practices that Maria should have followed while preparing the vegetables, salad, and meat. What temperature should the fridge be set to? Where should different food items be kept in the fridge?**

Maria should have ensured that the meat was prepared on a separate chopping board to the salad and vegetables. Maria should have washed her hands properly with soap and water after handling any raw meat and ensured that the salad and vegetables were washed thoroughly too. The ideal fridge temperature is 4°C. Prepared salad could be kept on the top shelf but covered; dressing could be kept in the door; meat should be kept covered and separate from other foods to avoid any meat juices dripping onto other foods, ideally on the bottom shelf of the fridge.

2. **Discuss whether plastic chopping boards are safer than wooden chopping boards and why?**

There is no specific evidence to state whether plastic or wooden chopping boards are safer. However, plastic chopping boards may be easier to clean up properly therefore reducing the risk of cross-contamination. There is not any strong evidence that one type of chopping board is more or less safe, or more or less hygienic, whether this be made of plastic, wood, or glass. What is important is that all chopping boards are cleaned properly after every use. If a board is damaged with several deep cuts or grooves it should be replaced, as bacteria can linger within the grooves. It is also recommended that you use separate chopping boards for raw meat, to fish, and vegetables or salad; a colour code scheme for chopping boards is used in restaurants.

3. **Discuss how cross-contamination may occur if equipment were not used correctly in food preparation, and cleaning of surfaces?**

Cross-contamination can occur from different foods being placed on the same surface, e.g. preparing vegetables on the same chopping board as meat. Cross-contamination can also occur if the same knife is used for chopping meat, and then for something else, such as chopping vegetables. If surfaces are not cleaned properly, meat juices may remain and contaminate hands and other foods, or even your clothes if you touch them. It is important to clean surfaces thoroughly and wash hands well with soap and water.

4. **Discuss whether you would use different coloured chopping boards in your household**

Discuss what you use at home, and how you separate meats and vegetables during food preparation.