

Food temperature safety

LEARNING OUTCOMES

- To understand how different temperatures affect bacteria
- To understand the importance of storing food at the correct temperature
- To understand the importance of cooking at the correct temperature



RESOURCES

- Bag(s) of shopping (Engage activity)
- Food labels giving information about temperature for storage or cooking (Engage activity, Activity 2)

- Copies of Resources 1, 2 and 3
- Instruction cards prepared from Resource 4

RELATED THEMES

Food date safety (pages 62–68)

HEALTH SKILLS

Correct storage and cooking of food is essential for reducing the risk of bacterial food poisoning. This includes ensuring that frozen foods are not thawed and refrozen, that cooked or reheated food is served piping hot (above 63 °C), and that cold food items are kept in the fridge at the recommended temperature until it is time to eat them.

SKILLS FOR LIFE

In order to store and cook food at the correct temperature, learners need to:

- understand the concept of temperature and its effect on food
- understand above and below zero (positive and negative numbers)
- read information on food labels
- understand operating temperatures of e.g. fridges, freezers and ovens
- understand the use of symbols.

Core curriculum

Activities in this theme will contribute to learning in the following curriculum areas:

- understand that temperature is a measure of heat (or cold) (NMSS1/E2.8)
- read temperatures in everyday situations (NMSS1/E3.9)
- read and understand food safety instructions on food labels (LRt/E3.3)
- recognise and understand relevant key words about temperature and storage (LRw/E3.1)
- understand and use symbols (LRt/E3.9)

- Bring in a bag of shopping containing a range of items that need to be stored in different ways, such as fresh fruit or vegetables, milk, ready meals, frozen vegetables (packaging only), etc.
- Set up pairs or small groups and ask them to decide how they would store each of the items in the bag of shopping. Take feedback from each pair or group.
- Discuss what can happen if foods are not stored correctly. Bring the discussion round to the potential health hazards involved in poor or inadequate storage of food. Ask learners for their own experiences of food poisoning. What caused it? Discuss the fact that food poisoning occurs when food is eaten after it has been contaminated with bacteria. Food poisoning bacteria will thrive and multiply when there are warmth and food together.
- Look at Resource 1 and explain the scale on the chart, ensuring that 'minus' is understood as below freezing point. Discuss the effect that various temperature ranges have on bacteria. Discuss the need to cook fresh food thoroughly and according to instructions on labels; to reheat carefully; and to store appropriately (e.g. once opened store in fridge, use within two weeks of opening, etc.).
- Show examples of food labels and ask learners to locate and read storage or cooking instructions and relate these to the temperature chart.
- Ask learners for words that relate to temperature and food, such as 'piping hot', 'cooked through', 'frozen stiff', 'chilled', 'ambient', 'room temperature'. Write these words on the board or a flipchart in columns with the headings 'Hot' and 'Cold'. Words that describe warm or ambient should be added on the line between the two. Explain any terms that are new to learners or encourage them to use a glossary or dictionary.

What will happen to frozen or chilled foods if you don't put them away immediately?

Do you know anyone who has had food poisoning?

How does it help to know what happens to bacteria at different temperatures?

ACTIVITY 1

Understand the circumstances in which keeping food at the incorrect temperature is a health hazard

- Ask learners to look in pairs at the six pictures on Resource 2 and discuss the hazard to food safety shown in each picture. Where possible, they should relate this to the 'danger zone' on Resource 1.
- Encourage pairs to report back to the group the hazards identified and to give reasons. Allow plenty of time for discussion and for learners to offer solutions to the hazards.

Support

- Look at the pictures with learners. Ask questions that prompt them to think about what is happening: 'What's happening in this picture?', 'Why has the ... been put there?', 'Where should it be put?', 'How long do you think it's been there?', 'Will it be hot enough / cold enough to stop bacteria from multiplying?', 'Will it be safe to eat?'
- Refer to each picture in turn and relate it to the temperature chart. Ask learners to make a decision about whether the item is at the right temperature.

ESOL

As preparation, introduce key words for discussing the pictures; for example (storing food) 'refrigerator / fridge', 'keep in / leave out of the refrigerator / leave out', 'freeze', 'defrost', 'thaw'; (cooking food) 'pan', 'cook evenly / unevenly'.

ACTIVITY 2

Read and understand instructions on labels

- Give out some food labels or photocopies of labels and ask learners to highlight any words or phrases to do with temperature. Discuss the language used.
- Ask learners to read the information on one of the labels and say where the item should be stored (both opened and unopened if the information is on the package) and whether it is suitable for home freezing.
- Give out Resource 3. Read through the extract from a food label to illustrate how food labels give instructions on how to cook and store food items.
- Discuss which items of food a label like this could apply to (fish, meat, pizzas, garlic bread, etc.).
- Ask learners to explain what they think the risks are of cooking food from frozen. Do they have any experience of this?
- Draw learners' attention to the snowflake (*) symbol or star on the label (Resource 3). Discuss what the symbol represents. Show other examples where the symbol is included.
- Set up pairs and give each pair a set of instruction cards prepared from Resource 4. Ask them to select a card for each of the boxes on Resource 3.
- Learners may find it helpful to write the information on the cards into the appropriate boxes.

What do you have to be careful about if an instruction says 'cook from frozen'?

What does this snowflake symbol represent?

Do you refer to these snowflake symbols when storing frozen goods?

TIP

Make sure that learners understand that the star rating relates to their freezer as well as to the length of time that a product can be stored.

Support

- If learners are having difficulty with the symbols, use cards or sticky notes for learners to match up the storage requirements with the correct symbols.
- Learners may need support with reading the information on the cards.
- If appropriate, discard the cards with incorrect meanings ('distractors'), leaving just the correct meanings to choose from.
- This may be done verbally as a group activity; the cards on Resource 4 may be used as prompts – either as they appear on the page or cut up and distributed.

ESOL

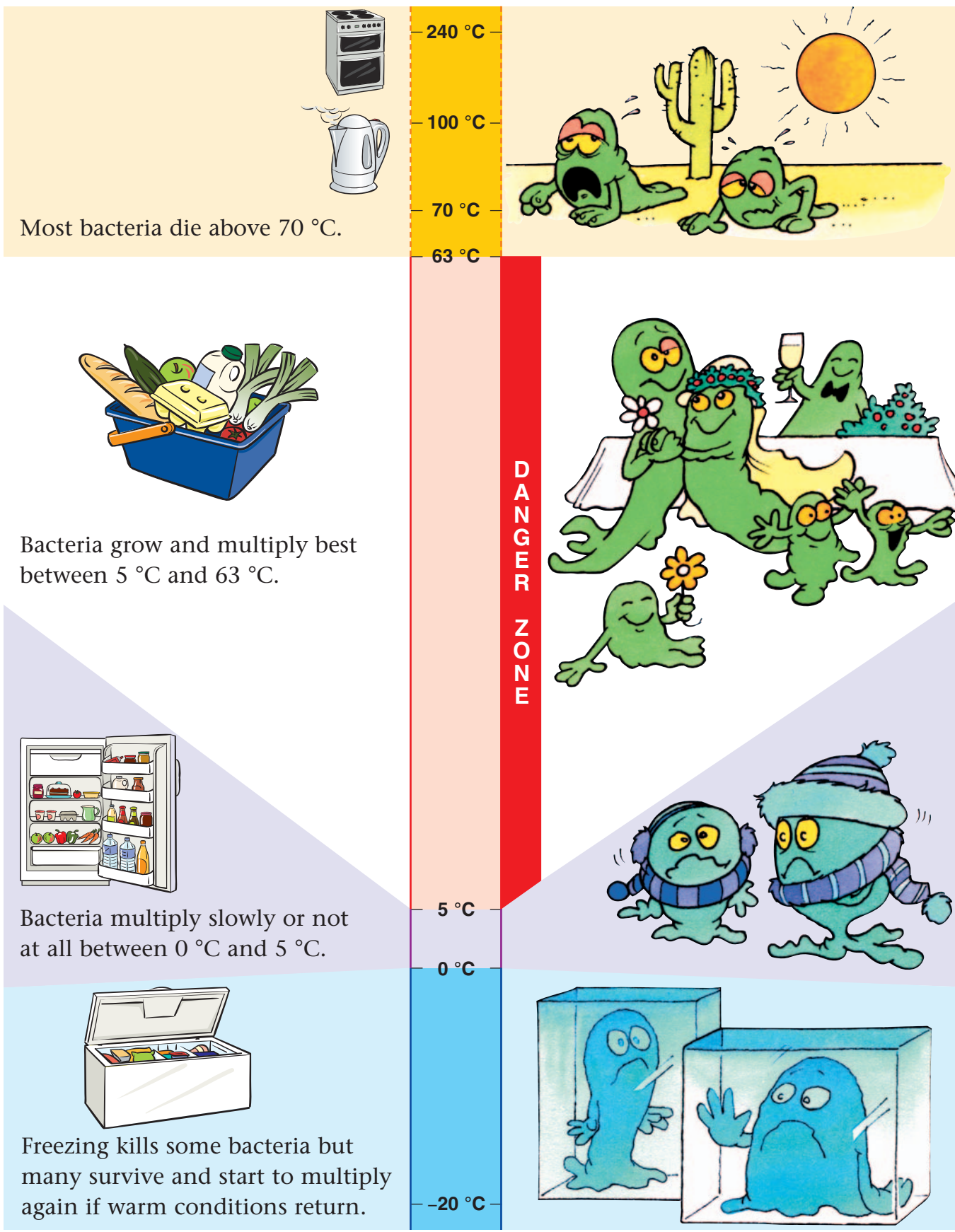
- Suggest that learners highlight any words they do not understand on the instruction cards. Encourage learners to check meanings in a bilingual dictionary, if available.
- As follow-up, give out some labels to use for practice in giving spoken instructions. Set up pairs and give each pair two different labels. Learners can then take turns to explain the cooking and storage instructions to each other.

Action

- Ask learners to look at their own storage of food at home. Suggest they read the labels and decide if their food is stored correctly.
- Also encourage learners to check that their fridges and freezers are at the right temperature.

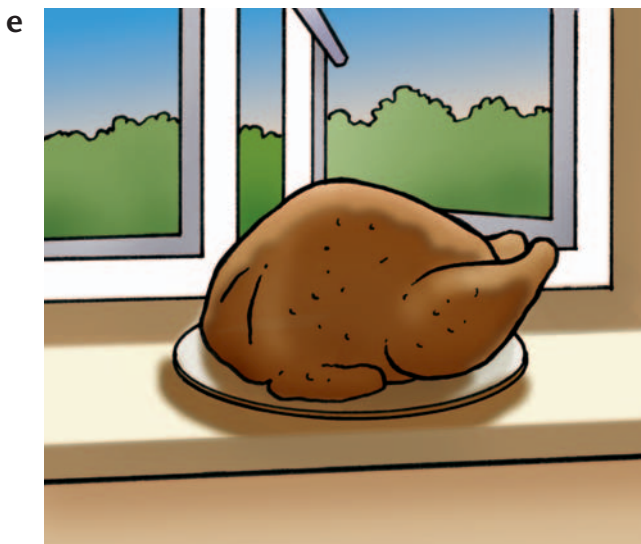
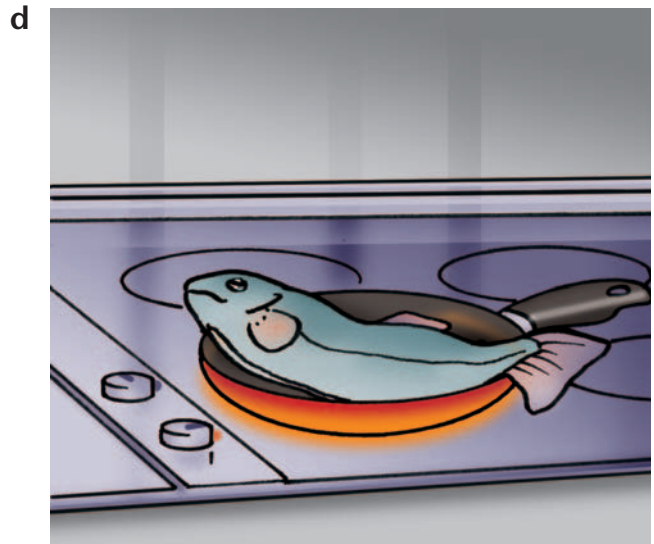
How will you check if your food is stored correctly at home?

Food groups



Food temperature safety

RESOURCE 2





Storage

- Keep refrigerated.
- Use by: See date on pack.


Suitable for home freezing

- ❄️ ■ Freeze on day of purchase.
- For freezing guidelines refer to manufacturer's handbook.

IMPORTANT:

- ❌ ■ Once thawed, do not refreeze.

Oven

 200 °C / 400 °F / Gas mark 6

from fresh	10–12 minutes
from frozen	14–16 minutes

- Remove outer packaging and film lid.
- Place in a pre-heated oven.
- Ensure food is piping hot.
- Serve immediately.

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RESOURCE 4

Keep it in the fridge.	Put it in the freezer if you haven't eaten it by the 'Use by' date.
If it has been opened, do not use it again.	Put it in an oven that has already reached the correct temperature.
Make sure the food is very hot all the way through.	Put the food on plates and eat it while it is hot.
Keep it in a cool, dark room.	Put it in the freezer the same day that you buy it.
If it has defrosted, do not freeze it again.	Put it in an oven and then turn the gauge to the correct temperature.
Make sure the food is hot on the outside and cool on the inside.	Put the food on plates and eat it in a couple of hours' time.

There are no audio scripts for this theme.

ACTIVITY 1 / Resource 2

- a** The baby's milk should not be left in the warm air while the baby is asleep.
- b** The frozen food has been left out too long and has defrosted.
- c** The juice has been left out on the worktop although the label says it should be kept in the fridge.
- d** The fish is too large for the pan, which means it will not be properly cooked through all over.
- e** The cooked chicken has been left in the hot sun. It should be covered and allowed to cool naturally.
- f** The bowl of hot custard has been put straight into the fridge. It should have been cooled first.

ACTIVITY 2 / Resources 3 and 4

Keep refrigerated. – Keep it in the fridge.

Freeze on day of purchase. – Put it in the freezer the same day that you buy it.

Snowflake symbol with a line through it – If it has defrosted, do not freeze it again.

Once thawed, do not refreeze. – If it has defrosted, do not freeze it again.

Place in a pre-heated oven. – Put it in an oven that has already reached the correct temperature.

Ensure food is piping hot. – Make sure the food is very hot all the way through.

Serve immediately. – Put the food on plates and eat it while it is hot.