 5 minutes

Student sheet – Activity 1

Your point of view

For this activity, imagine you are:

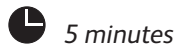
.....

- 1 List at least THREE examples, from your point of view, of benefits from effective food safety at a food establishment.
- 2 List at least THREE examples, from your point of view, of the costs (financial and non-financial) of poor food safety at a food establishment.
- 3 Nominate one of your group to present your findings.

Benefits

Costs

Continue on a separate sheet if necessary



5 minutes

Student sheet – Activity 2

Check the correct answer to the questions. If you are uncertain, check the answer closest to the one you think is right.

1 The FDA Food Code defines the person in charge as the person who:

- a decides when employees get a raise
- b is present at a food establishment at the time of an inspection and is responsible for the operation at that time
- c determines on any particular day whether employees should be excluded from work or restricted in the work they are assigned
- d manages food safety and quality.

2 The concept of reasonable care can be defined as:

- a getting food safety right as far as possible – at least nine times out of ten
- b ensuring that food is of the quality that consumers expect
- c taking every reasonable precaution and care to avoid the business committing a violation
- d bringing in independent consultants to run a ‘health check’ on the business’ food safety practices.

3 For the purposes of food safety, food is defined as:

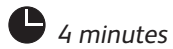
- a anything that humans can comfortably eat
- b raw, cooked or processed items of animal origin
- c any liquid, ice, beverage or chewing gum
- d any edible substance or ingredient that is intended for human consumption.

4 Foodborne illnesses are diseases caused by:

- a eating contaminated food
- b eating too much food
- c overindulging in alcohol
- d eating too little food.

5 Which of the following statements correctly describe the responsibilities of food employees:

- a keep themselves and their workplace clean
- b keep up to date with trends in food fashion and ingredients
- c wear clothing that is light colored and made of cotton
- d protect food from anything that could harm consumers
- e wash their hands before handling food
- f learn every part of the food code by heart.



4 minutes

Student sheet – Activity 3

Check the answer (or answers) you believe to be correct.

1 Which of the following is a physical hazard?

- a Viruses.
- b Bird feathers.
- c Approved cleaning chemicals used on a work surface.
- d Deli paper in a neat pile.

2 Which of the following is a chemical hazard?

- a Glass bowls stored above a food preparation area.
- b Machine grease in a can which is stored away from food.
- c Cleaning chemicals stored in a soda bottle.
- d Bacteria.

3 Which of the following are biological hazards?

- a Poisonous mushrooms.
- b Bacteria.
- c Wiping cloths used as hand towels.
- d Viruses.

4 Which of the following represent food contamination?

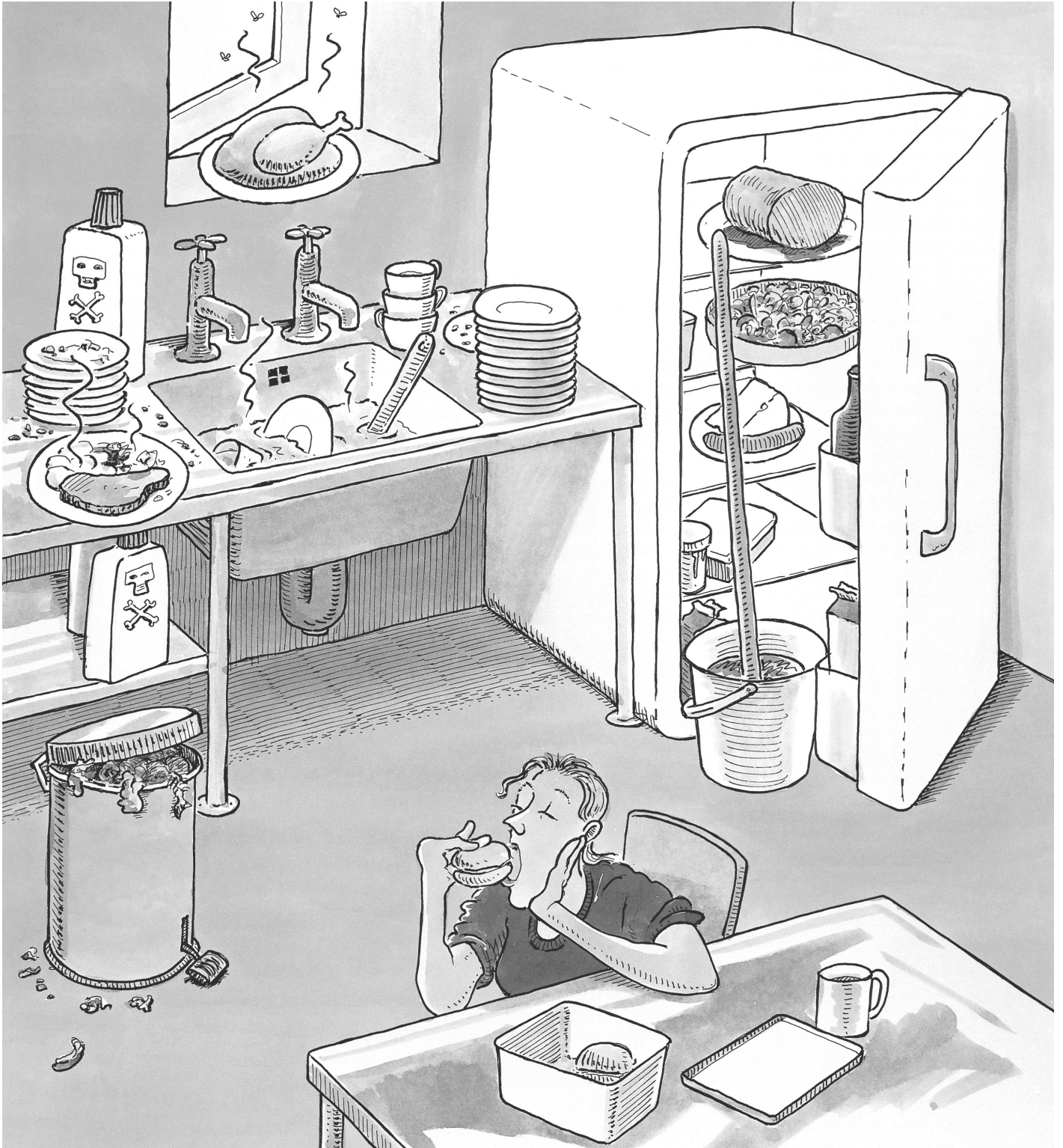
- a Bird feathers in a pecan pie.
- b Machine oil dripping onto food.
- c Fragments of glass in fries.
- d Shellfish from sewage contaminated water.

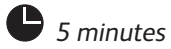
🕒 6 minutes

Student sheet – Activity 4

Circle anything in the picture that is an example of:

- a hazard to food
- any type of foodborne contamination.





5 minutes

Student sheet – Activity 5

Fill out the boxes with your answers.

Across

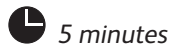
- 2 Where pathogenic bacteria come from. (6)
- 4 The microorganisms responsible for most cases of foodborne illness. (8)
- 6 Types of 'good' bacteria. (7)
- 7 The name of the process in which something gets into food that should not be there. (17)

Down

- 1 A common source of bacteria in food establishments. (6)
- 2 The process by which food goes bad. (8)
- 3 Another name for a disease-causing microorganism. (8)
- 5 A natural source of bacteria. (4)

The crossword puzzle grid consists of empty boxes for letters. The starting points for the clues are as follows:

- 1**: A vertical column of 6 boxes at the top right.
- 2**: A horizontal row of 8 boxes, starting from the second column from the right and extending left.
- 3**: A vertical column of 8 boxes, starting from the third column from the right and extending down.
- 4**: A horizontal row of 8 boxes, starting from the fourth column from the right and extending left.
- 5**: A vertical column of 4 boxes, starting from the fifth column from the right and extending down.
- 6**: A horizontal row of 7 boxes, starting from the sixth column from the right and extending left.
- 7**: A horizontal row of 17 boxes at the bottom.



5 minutes

Student sheet – Activity 6

The main sources of pathogenic bacteria are hidden in the box below. The correct answers may run across, down or diagonally across the grid.

W A T E R E V E R Y W H E R E A N D N E E R A D R O P T O D R I N K T H
B A C K T O T H E F U T U R E R A W F O O D G O I N E U N D E R G R O U
N D S O T H E E N D I S N E A R I C E T H E F I N A O C U R T A I N U P
O N O T E I N M Y L I F E M Y H R S E A K I N G D O P F O R T H E S U N
S H I O H A V I N G N O S A L T E R N A T I V E O L N O T H I N G N E
C A L I G R A P H Y I S A V I S U A L S M A T T E R E D I N G D U S T A
I M A G I N E T H E R E S N O P E S T S I T S E A S Y I F Y O U T R Y T



6 minutes

Student sheet – Activity 7

Match the organism with the description by drawing a line between the two lists.
(Hint: you may need to use some descriptions twice and to ignore some others!)

- | | |
|---------------------------------|---|
| <i>Anisakis</i> ● | ● A type of naturally poisonous fish |
| Norovirus ● | ● A parasite of hogs |
| DSP ● | ● A type of mycotoxin associated with peanuts |
| Aflatoxin ● | ● A type of foodborne virus associated with water, raw shellfish and raw fruit and vegetables |
| Reef fish ● | ● A type of foodborne virus |
| <i>Staphylococcus aureus</i> ● | ● A type of parasite associated with raw or lightly cooked seafood |
| <i>Cryptosporidium parvum</i> ● | ● A type of virus often spread by the fecal-oral route |
| Ciguatoxin poisoning ● | ● Fungi |
| PSP ● | ● Fish that may include naturally poisonous ones |
| Wild mushrooms ● | ● Bacteria, associated with poultry and eggs, that can cause a foodborne illness |
| <i>Trichina spiralis</i> ● | ● A type of fungus |
| Hepatitis A ● | ● A type of parasite associated with water |
| Types of mold and yeast ● | ● Another type of parasite |
| <i>Salmonella</i> ● | ● An illness caused by poisonous shellfish, which is characterised by diarrhea |
| | ● Bacteria associated with people |
| | ● An illness caused by a naturally poisonous warm water fish |
| | ● An illness, which may lead to paralysis, caused by a naturally poisonous fish |



5 minutes

Student sheet – Activity 8

Match the key word on the left to the definition on the right and write your answers in the box below.

Key words

- 1 Carrier
- 2 Bacterial toxin-mediated infection
- 3 Foodborne illness
- 4 Multiplication
- 5 Bacterial foodborne infection
- 6 Infective dose
- 7 Foodborne intoxication
- 8 Viral infection


Definitions

- A An illness caused by eating (or drinking) contaminated food (or drink).
- B A foodborne illness resulting from eating food contaminated by living pathogens which multiply inside the human body.
- C A foodborne illness resulting from eating food contaminated by toxins (poisons), produced by microorganisms, or harmful chemicals.
- D A foodborne illness resulting from eating food contaminated by living pathogens that produce toxins inside the human body.
- E The reproduction (or growth in numbers) of microorganisms such as bacteria and fungi.
- F The number of microorganisms that are likely to cause an illness.
- G An illness resulting from eating food contaminated by a virus.
- H A person with pathogens in his or her body who does not experience any symptoms of illness but may pass the illness on to others.

Write the letter of the definition you have chosen against the number of the key word.

- | | |
|---|---|
| 1 | 5 |
| 2 | 6 |
| 3 | 7 |
| 4 | 8 |

Student sheet a – Activity 9

 5 minutes

Which food is associated with which pathogen? Match the pathogens listed below with the pictures on Student sheet b. (Hint: some pathogens are associated with several foods. Select the most common association.) Write your selection in the space provided on Student sheet b.

Aflatoxin

Bacillus cereus

Campylobacter

Clostridium botulinum

Clostridium perfringens

Cryptosporidium

DSP or PSP

E. coli O157 (Shiga-producing *E. coli*)

Giardia

Hepatitis A

Listeria

Norovirus


Salmonella

Shigella

Staphylococcus aureus

Trichina spiralis

Vibrio

 5 minutes

Student sheet b – Activity 9

Which food is associated with which pathogen? Match the pathogens listed on Student sheet a with the foods shown below. (Hint: the names of these pathogens may be used more than once.) Write your selection in the space provided below each picture.



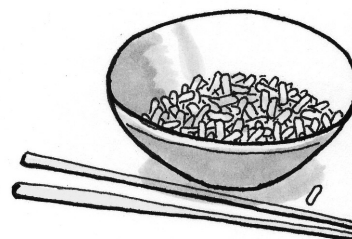
Home canning

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Bare hand contact

.....



Cooked rice

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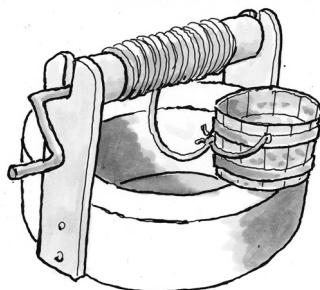


Clams

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.....

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Water

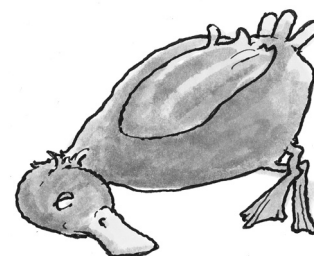
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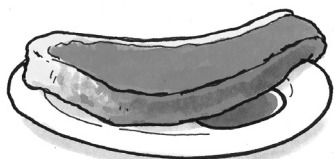
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Duck

.....



Raw beef

.....

.....

.....



Chicken

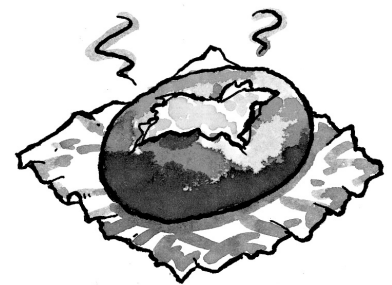
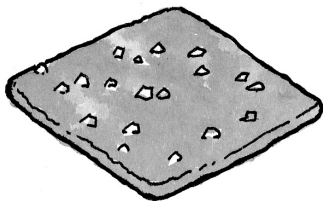
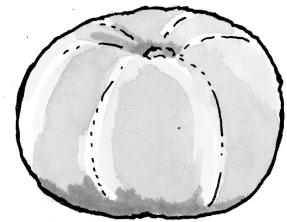
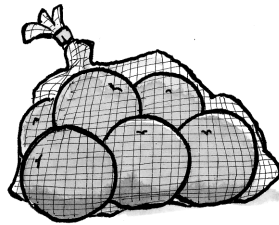
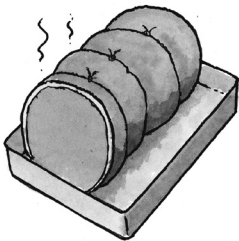
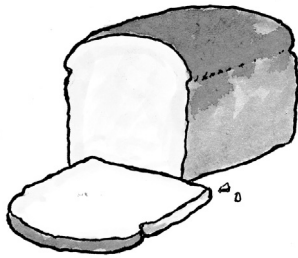
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Student sheet – Activity 10

🕒 5 minutes

Write TCS – for time and temperature control for safety food – alongside any food you consider to be potentially hazardous. Be prepared to share your selection with the rest of the group and to justify your choice.



 5 minutes

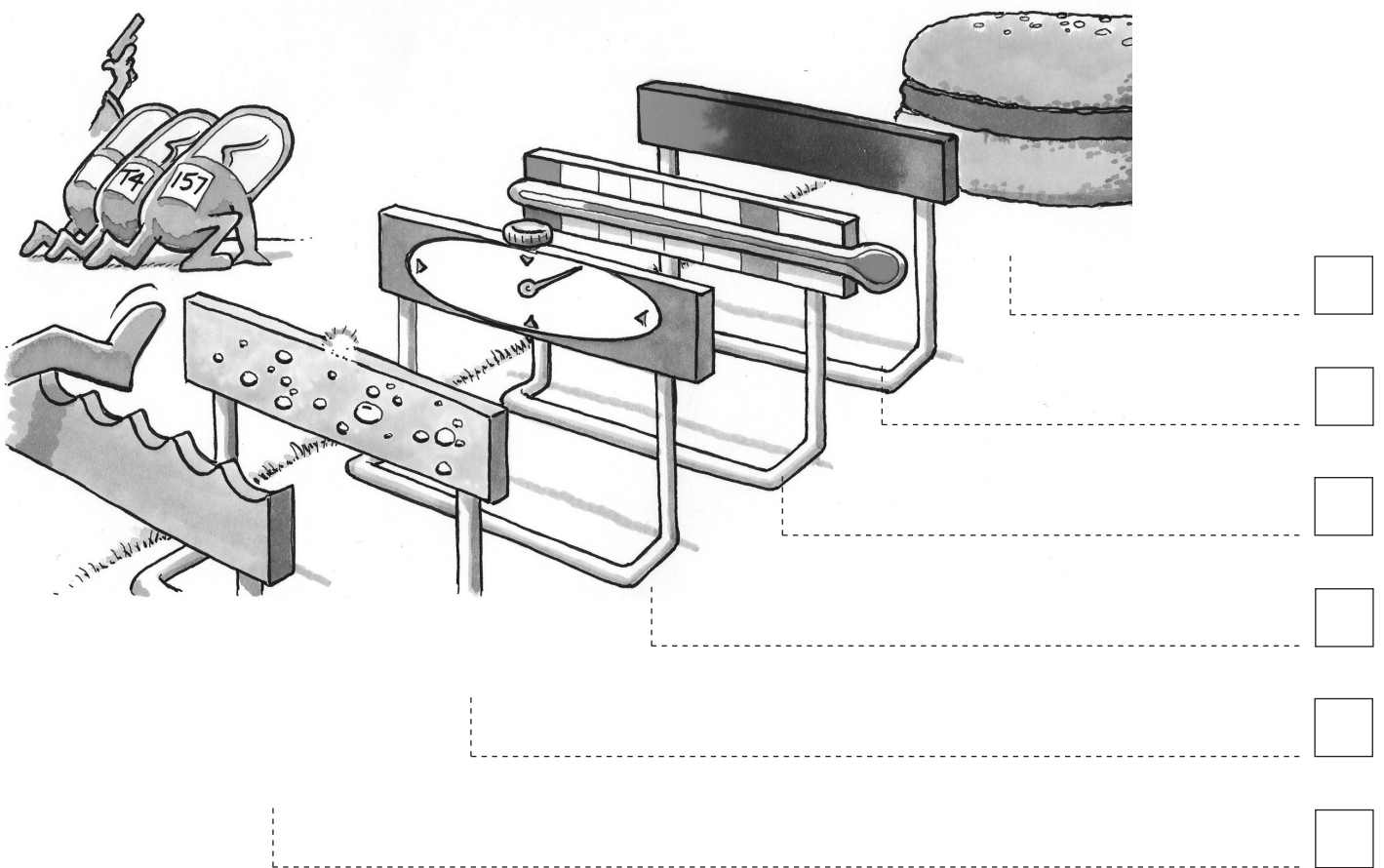
Student sheet – Activity 11


What do bacteria need?

The sketch below is the same illustration that the trainer is showing on the screen.

Decide which requirement for bacterial multiplication is suggested by each part of the sketch and write your answer on the dotted line alongside.

Then fill out the boxes by writing the letters that help you remember bacterial requirements. So, for example, if you think that they first hurdle represents oxygen, write 'oxygen' on the dotted line and a capital 'O' in the box.

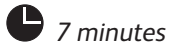


 9 minutes

Student sheet – Activity 12

Answer *True* or *False* by checking the appropriate box.

- True* *False* 1 The danger zone is a range of temperatures between 5°C and 57°C (41°F to 135°F).
- True* *False* 2 The danger zone is a range of temperatures at which pathogens do not usually grow.
- True* *False* 3 Food is most likely to be outside the danger zone if it is left on a work surface for four hours.
- True* *False* 4 When given the right conditions, pathogenic bacteria multiply roughly every 10-20 minutes.
- True* *False* 5 TCS food should be kept within the danger zone.
- True* *False* 6 Cut melon is a TCS food.
- True* *False* 7 Vine-ripened tomatoes are TCS food.
- True* *False* 8 Ready-to-eat foods never need to be washed before they are eaten.
- True* *False* 9 Ready-to-eat foods can be eaten with additional preparation aimed at achieving food safety.
- True* *False* 10 Ready-to-eat foods are often TCS foods.
- True* *False* 11 Some bacteria can survive in spore form, then emerge and multiply.
- True* *False* 12 All pathogenic bacteria can produce spores.
- True* *False* 13 Binary fission is the name given to a process used at seafood processing plants.
- True* *False* 14 Frozen foods should be stored at a temperature below -18°C (0°F).
- True* *False* 15 Reheated rice is a potential source of spores.



7 minutes

Student sheet – Activity 13

- 1 List FIVE examples of physical or chemical contamination that could occur in your workplaces.
- 2 Note whether the example is physical or chemical contamination.
- 3 Describe how such contamination could happen. Make brief notes about this below or over the page.
- 4 Nominate one of your group to present your findings.

Contaminant	Physical/chemical	Method of contamination
1		
2		
3		
4		
5		

Continue on another sheet if necessary


Student sheet – Activity 14

🕒 10-15 minutes

Draw a circle around anything in the picture that looks like a hazard to food safety.



Student sheet – Activity 15

 *Time to be advised by your trainer*

All programs

- 1 List at least TEN occasions when food employees should wash their hands.
- 2 Prepare to present your list to the whole group.

2-day certification and 1-day review programs

- 3 Describe or illustrate THREE ways to teach/remind employees when or how to wash their hands. Use another sheet of paper for this part of the exercise.
- 4 Prepare to present your suggestions to the whole group.

When should you wash your hands?

1

2

3

4

5

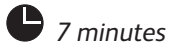
6

7

8

9

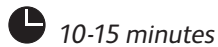
10



Student sheet – Activity 16

- 1 List THREE types of protective clothing worn by food employees.
- 2 State the reason(s) for wearing each item.
- 3 Outline how to care for the clothing.
- 4 Prepare to present your findings to the whole group.

Item of protective clothing	Reason for use	Care of clothing
1		
2		
3		



Student sheet – Activity 17

Check the answer (or answers) you believe to be correct.

1 A food handler is just starting a cold. What should a manager do?

- a Send her home from work.
- b Ask her to wear gloves for the rest of the week.
- c Allocate tasks that do not involve exposed food.
- d Allocate tasks that keep her away from customers.

2 A food handler causes a small cut to one of his fingers.

What is it good practice for a manager to ensure?

- a He wears a fabric dressing and rubber gloves.
- b He wears a waterproof dressing and single-use gloves.
- c He goes home for the day.
- d He is allocated tasks that do not involve exposed food.

3 A food handler returns to work from a tropical holiday overseas telling a story about everyone in her holiday group, including her partner, getting Salmonella Typhi food poisoning after a festival meal. The holiday ended three days ago. What should a manager do to ensure food safety?


- a Make certain she wears gloves at all times.
- b Allocate tasks away from all food.
- c Restrict her from working with exposed food until given approval by the regulatory authority.
- d Exclude her from work until approval is given by the regulatory authority.

4 Which of these groups of features are the key requirements for protective clothing?

- a Suitable for the task, clean and in good repair.
- b Suitable for the task, clean and transparent.
- c Light colored.
- d Easy to clean and up to date.

5 Which of the following conditions must be reported to the regulatory authorities if a food employee is diagnosed with one of them?


- a Severe muscle pains and stiff joints.
- b *Shigella* species, *Salmonella Typhi*, Shigatoxin-producing *E. coli* and Hepatitis A.
- c Influenza, arthritis and asthma.
- d Mesophlebitis, *Salmonella arizonae* infection, staphylitis and Hansen's Disease.

 10-15 minutes

Student sheet – Activity 18

Check either the True or the False box for each question.
Attempt every question.

- True False 1 6°C (43°F) is a temperature in the danger zone.
- True False 2 56°C (133°F) is a temperature outside the danger zone.
- True False 3 Temperature abuse is bad practice and could cause foodborne illness or even death.
- True False 4 An important aspect of temperature control is keeping food out of the danger zone.
- True False 5 Cooking can be used to destroy pathogenic organisms.
- True False 6 Spores and toxins are always destroyed by cooking temperatures.
- True False 7 Poor temperature control is the main reason behind foodborne illness.
- True False 8 When calibrating a temperature measuring device using the ice method, the indicator must stabilize at 100°C (212°F).
- True False 9 Hot foods containing liquid, such as soups, stews and sauces, should never be stirred before the temperature is measured.
- True False 10 The core or internal temperature is the correct temperature inside a refrigerator or freezer.
- True False 11 Corrective action is the steps that managers should take to retrain employees who are bad at measuring temperatures.
- True False 12 Cold TCS food should be kept at 5°C (41°F) or below.
- True False 13 The temperature of frozen food should be between 5°C (41°F) and 57°C (135°F).
- True False 14 The general guidance is to keep TCS food inside the danger zone for up to four hours.
- True False 15 Any glass in temperature measuring devices should be shatterproof.

 10-15 minutes

Student sheet a – Activity 19

Imagine that you are the new manager at a restaurant serving a wide variety of hot and cold foods. You look into the receiving area to find the scene depicted on student sheet b for Activity 19.

What should happen next?

Make a list of the first actions that the food employees need to carry out. Then make a list of subsequent steps that need to be taken.

Hint: bear in mind time and temperature control, TCS and ready-to-eat foods, non-food items, code dates and food labels.

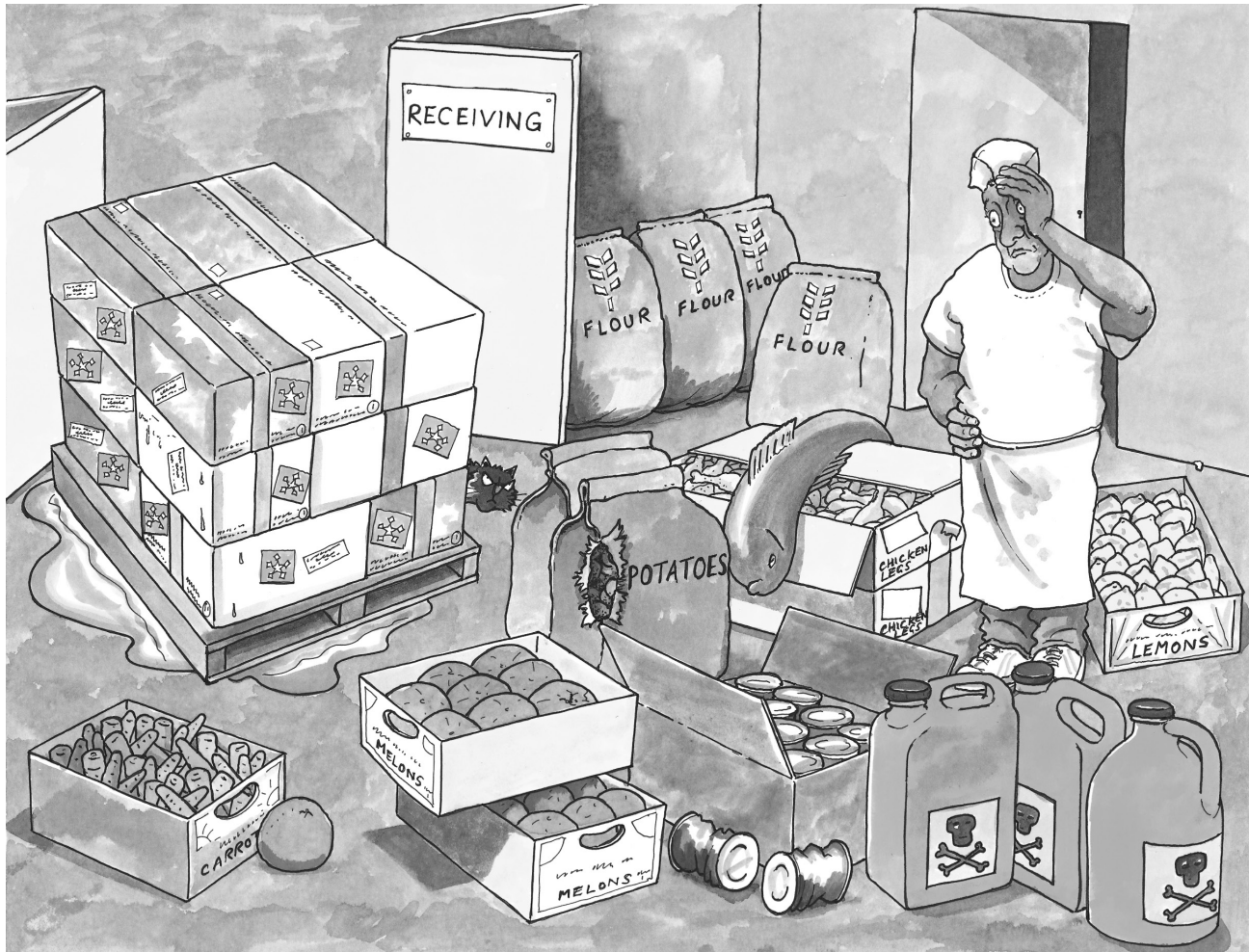
First actions

Subsequent actions

Continue on another sheet if necessary

Student sheet b – Activity 19

🕒 10-15 minutes

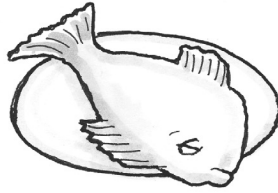
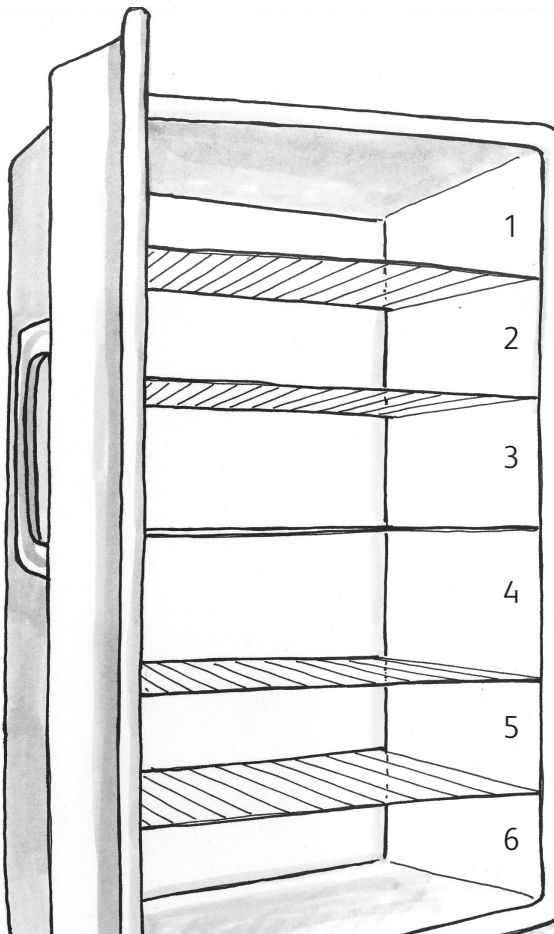


Student sheet – Activity 20

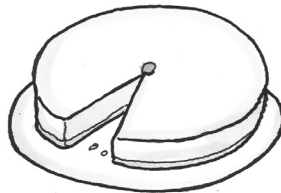
🕒 5 minutes

Imagine that you work in a very small deli which has only one multi-use refrigeration unit. On which shelf would you stack the foods illustrated?

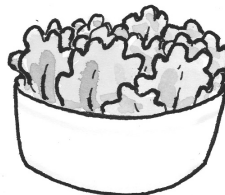
Write the shelf number on the line provided next to each food.



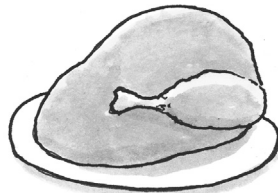
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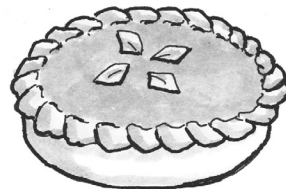
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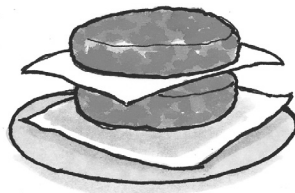
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Student sheet – Activity 21

 6 minutes

1 Spoilage is:

- a the government quality control scheme.
- b the process by which food becomes unacceptable for human consumption.
- c the treatment of food to increase shelf life.
- d the separation of rejected and accepted food in a shipment.

2 To help ensure that food is safe to eat, food purchased for your establishment must:

- a be purchased daily.
- b be double wrapped in clean transparent wrappers.
- c come from reputable vendors who obtain the food from approved sources.
- d come from within the USA.

3 FIFO is the stock rotation principle that involves:

- a using first whatever was delivered first.
- b using products which have been stored at the front of the shelf before using products stored farther back.
- c using products with the shortest shelf life before using similar products with a longer shelf life.
- d using the product first that has the longest code date.


4 TCS and perishable foods must be stored:

- a at 5°C (41°F) or below.
- b between 37°C and 57°C (98.6°F and 135°F).
- c at 57°C (135°F) or above.
- d in any cool, dry storage room.

5 The ideal temperature for storing dry goods is:

- a between 37°C and 57°C (98.6°F and 135°F).
- b at 5°C (41°F) or below.
- c between 10°C and 21°C (50°F and 70°F).
- d at -18°C (0°F) or below.

Student sheet a – Activity 22

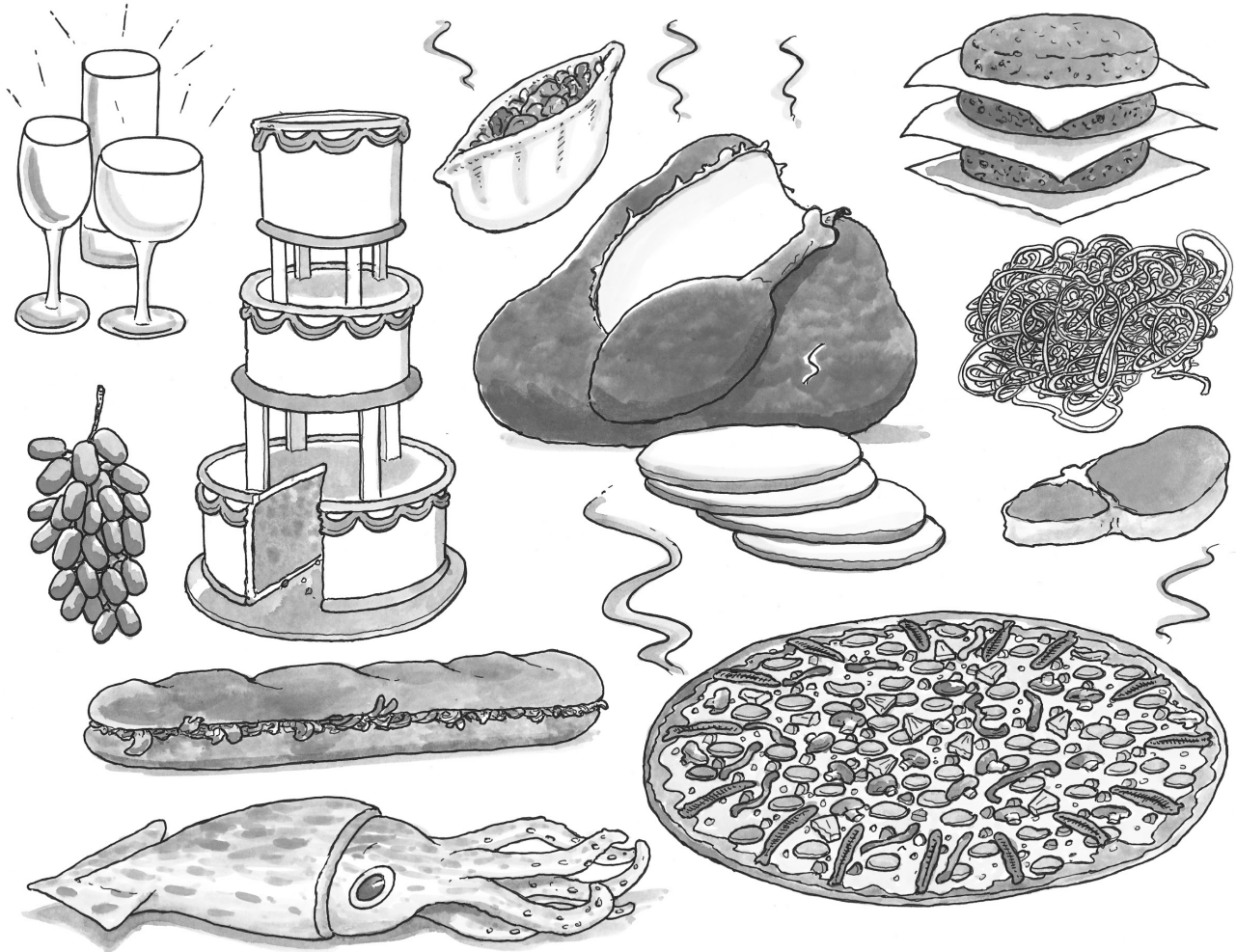
 5 minutes

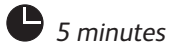
Look at the products and items illustrated on Student sheet 22b. Decide the best method for moving each item without creating a food safety hazard and write your answers in the right-hand column below. Be prepared to discuss your decisions with the rest of the group.

Item illustrated	Best way to move the item
Clean glasses	
Slice of pizza	
Slices of roast turkey	
Spaghetti	
Raw beef patties	
Slice of wedding cake	
Filled pitta	
Raw squid	
Raw pork chop	
Bunch of grapes	
'Sub' sandwich	

🕒 5 minutes

Student sheet b – Activity 22





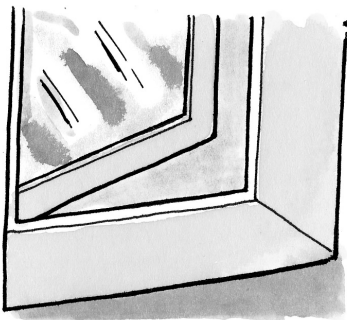
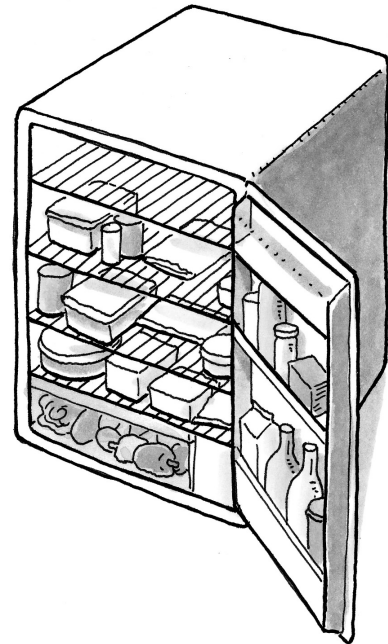
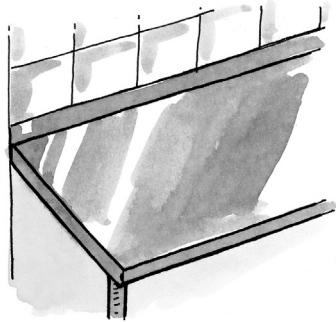
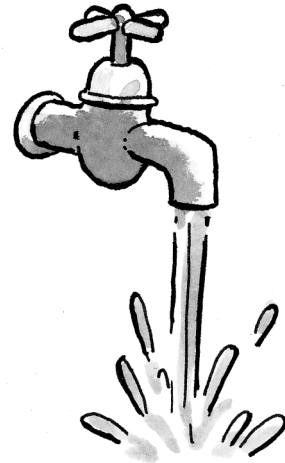
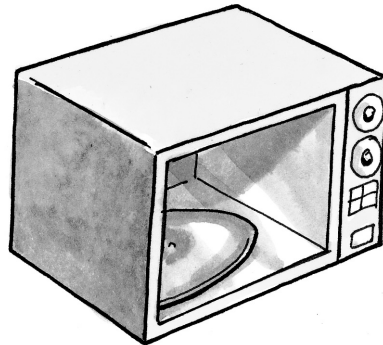
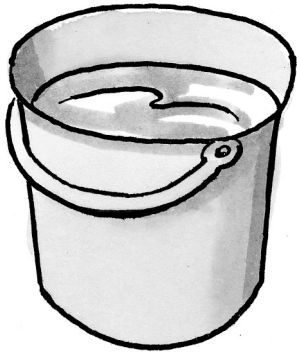
Student sheet a – Activity 23

Look at the thawing methods illustrated on student sheet 23b. Decide which methods are approved safe methods. Check the approved safe methods on the list below.


Method illustrated	Approved safe method
On a work surface	<input type="checkbox"/>
On a window ledge	<input type="checkbox"/>
In multi-use refrigeration unit	<input type="checkbox"/>
In a microwave oven	<input type="checkbox"/>
Under cold, potable, running water	<input type="checkbox"/>
In a bucket of water	<input type="checkbox"/>
As part of the cooking process	<input type="checkbox"/>

Student sheet b – Activity 23

🕒 5 minutes




Student sheet – Activity 24

 10 minutes

Fill out the missing times and temperatures on the table below.

Food item	Minimum internal temperature	Minimum holding time at the specified temperature
Poultry Stuffed poultry, fish, meat or pasta Stuffing containing fish, meat or poultry Wild game animals	°C (°F)	
Roast (rare) beef	°C (°F)	
Ground beef and pork	°C (°F)	
Fish and meat not listed elsewhere on this chart Unpasteurized shell eggs prepared for immediate service	°C (°F)	
Unpasteurized shell eggs cooked for late service	°C (°F)	
Exotic species of game animal Comminuted fish and meat Injected meat	°C (°F)	
Food cooked in a microwave oven	°C (°F)	
	Minimum surface temperature	
Steaks	°C (°F)	

Student sheet a – Activity 25

 8 minutes

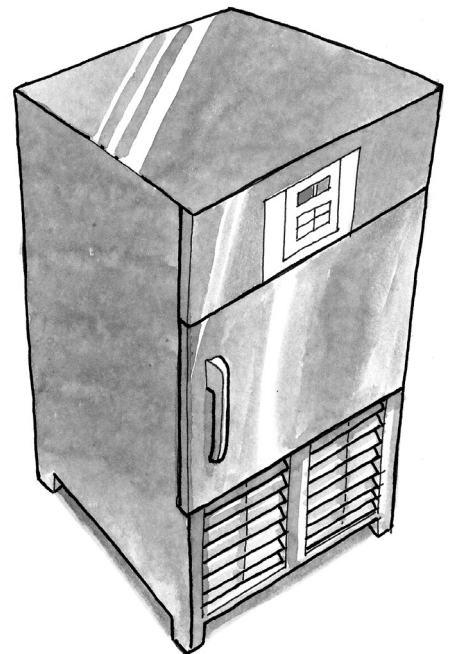
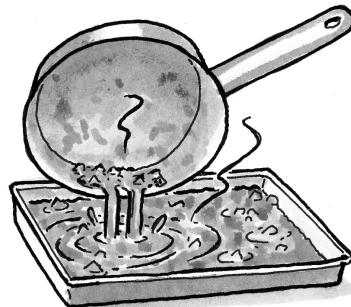
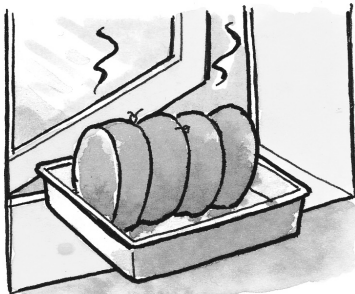
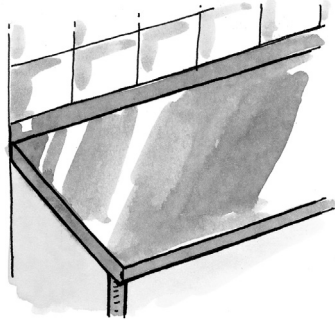
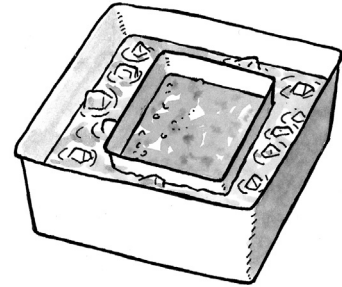
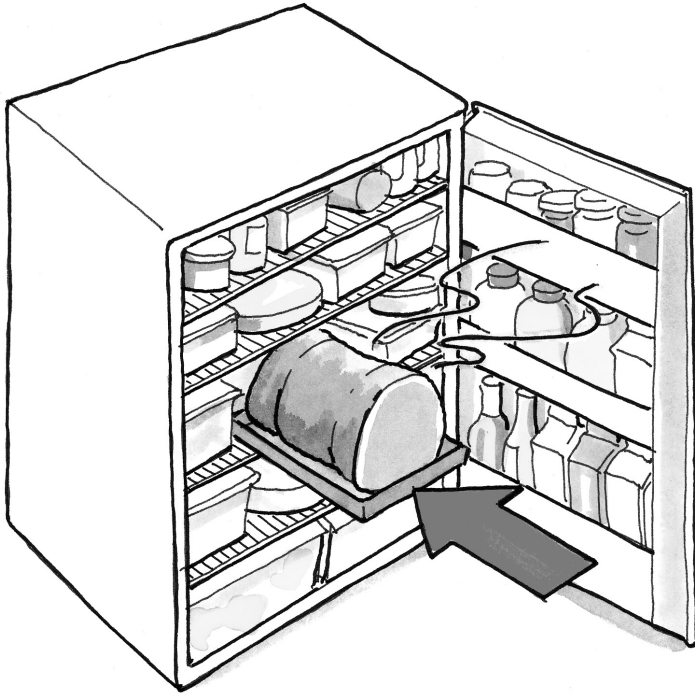
Look at the cooling methods illustrated on student sheet 25b. Decide which methods are approved as safe. Check the approved safe methods on the list below.

Method illustrated	Approved safe method
On a window ledge	<input type="checkbox"/>
On a work surface	<input type="checkbox"/>
In an ice and water bath	<input type="checkbox"/>
In a blast chiller	<input type="checkbox"/>
In a multi-use refrigeration unit	<input type="checkbox"/>
By cutting into smaller portions	<input type="checkbox"/>
By pouring into wide shallow containers	<input type="checkbox"/>


⌚ 8 minutes

Student sheet b – Activity 25

Look at the cooling methods illustrated below. Decide which methods are approved as safe. Check the approved safe methods on student sheet 25a.



Student sheet a – Activity 26

 15 minutes

Background


You are one of the assistant managers at the 'Happy Reunion', an out-of-town diner and restaurant that is popular for weddings, family meals and reunions. Today you are the person in charge.

A large party of veterans is due to arrive by bus for a lunch in the restaurant at 12 noon.

At 12.20 pm you leave the busy diner to look in on the restaurant.

Your task

- 1 Look at the illustration on student sheet 26c.
- 2 List on student sheet 26b anything you see in the restaurant that could be a hazard to food safety.
- 2 Decide which hazard needs priority attention and make a note of this and the reasons for your decision on student sheet 26b.
- 3 List the actions you would take IMMEDIATELY to safeguard food safety and make a note why you would take these steps.
- 4 Make a list of any other action you would take LATER to safeguard food safety and note your reasons why.
- 5 Nominate one of your group to present your findings.

 15 minutes

Student sheet b– Activity 26

1 Possible hazards

2 Hazard requiring priority attention

Reason

3 Immediate action(s)

Reason


4 Later action(s)

Reason

Student sheet c – Activity 26

🕒 15 minutes



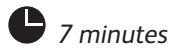
 10 minutes

Student sheet – Activity 27

- 1 Outline the stages involved in the cleaning task you have been allocated.
- 2 State the types of cleaning chemical and equipment you would use.
- 3 List the checks you would make as manager to ensure that the task was completed thoroughly and safely.
- 4 Nominate one of your group to present your findings.

Cleaning task:

Key stages of cleaning	Chemicals	Equipment	Management checks




7 minutes

Student sheet – Activity 28

Check either the True or the False box for each question.

- True* *False* 1 The rinse water temperature of warewashing machines should be between 24°C and 49°C (75°F and 120°F) for the chemical sanitizer to work properly.
- True* *False* 2 Chemical sanitizers need to be in contact with the item being sanitized for no longer than 3 seconds.
- True* *False* 3 The minimum concentration for quaternary ammonium compound used as a chemical sanitizer in food establishments is 50 parts per million (PPM).
- True* *False* 4 When manual warewashing, food contact utensils should be dried using a fabric cloth.
- True* *False* 5 In combination with hot water and agitation, a detergent should be capable of removing dirt and soiling.
- True* *False* 6 To achieve the best cleaning results, it is a good idea to mix together a number of branded cleaning products.
- True* *False* 7 Garbage should be removed from the premises regularly throughout the work period.

Student sheet a – Activity 29

 8 minutes

Match the pest and the problem

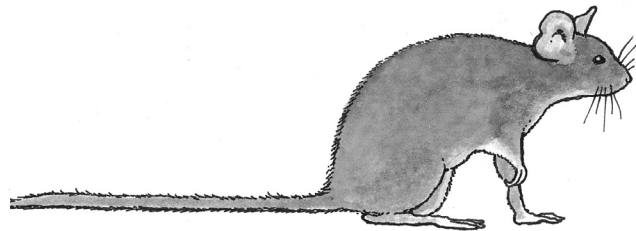
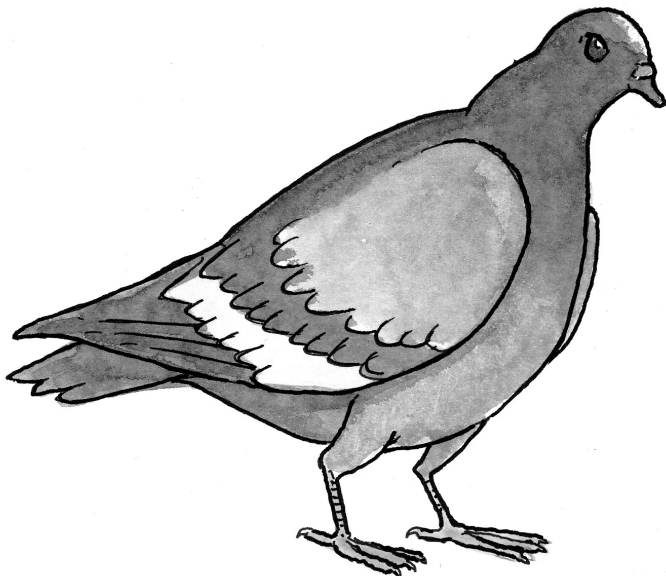
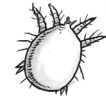
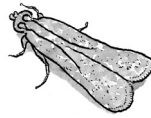
- 1 Look at the illustrations of types of pest on student sheet 29b.
- 2 Decide which of the words on student sheet 29c best describe the things that each type of pest needs
- 3 Fill out the middle column below.
- 4 Decide which of the words on student sheet 29c best describe the places that each pest could be found in food establishments with ineffective pest control programs.
- 5 Fill out the right-hand column below.
- 6 Be prepared to share your decisions and the reasons for them with the rest of the group.

Pest	Requirements/preferences	Likely habitat
Rats		
Mice		
German cockroach		
Flies		
Stored product pests		
Birds		


Continue on another sheet if necessary

🕒 8 minutes

Student sheet b – Activity 29



Student sheet c – Activity 29

 8 minutes

Match the descriptions below with the pests shown on student sheet 29b and complete the columns on student sheet 29a.


Requirements and preferences

- Vegetables
- Cereals and grain
- Meat
- Poultry
- Fish
- Nuts
- Eggs
- Fruit
- Water
- Milk
- Any exposed food
- Water
- Sewage/feces
- Garbage
- Something to gnaw
- Earth
- Soft materials for nest
- Roosts

Habitats

- Warm, dark, moist, undisturbed places
- Food stores
- Warm, dark, undisturbed places
- Upper floors of buildings
- Grain silos and stores
- Warehouses
- Mills
- Road vehicles used for food transportation
- Building foundations
- Landfill and sewage works
- Refrigerator motors/air-conditioning motors
- Roof spaces
- Water and sewage pipes
- Close to human habitation
- Food packaging

Student sheet a – Activity 31

 10 minutes

- 1 Look at the illustration on student sheet 31b.
- 2 List any factors you can see that seem beneficial to food safety.
- 3 List any factors you can see that seem harmful to food safety.
- 4 List any priorities for management action to improve food safety in the food area illustrated.
- 5 Nominate one of your group to present your findings.

Beneficial factors illustrated

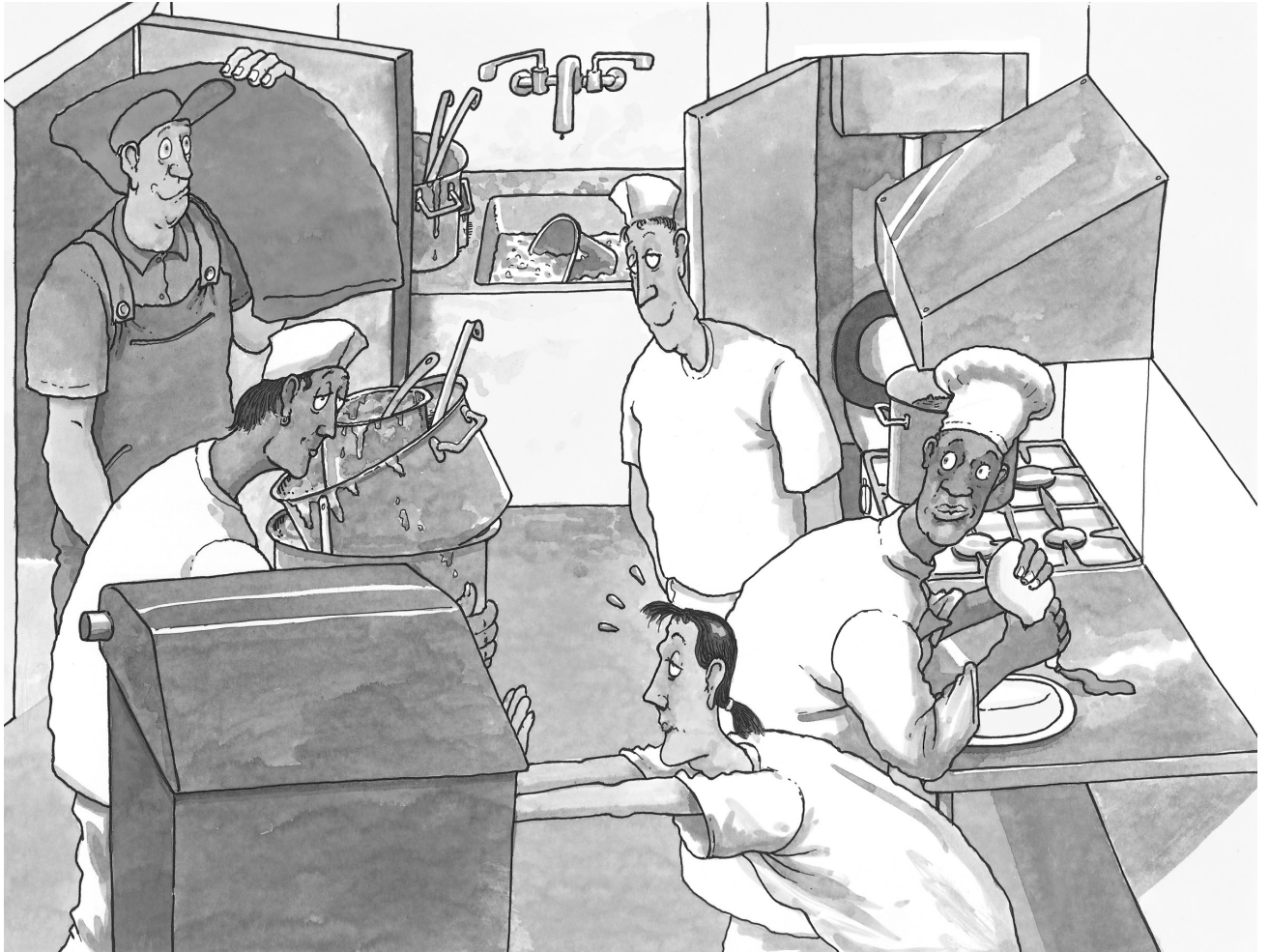
Harmful factors illustrated

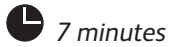
Priorities for remodeling/redesigning/reorganizing

🕒 10 minutes

Student sheet b – Activity 31

Look at the illustration below and complete student sheet 31a as instructed.





7 minutes

Student sheet – Activity 32

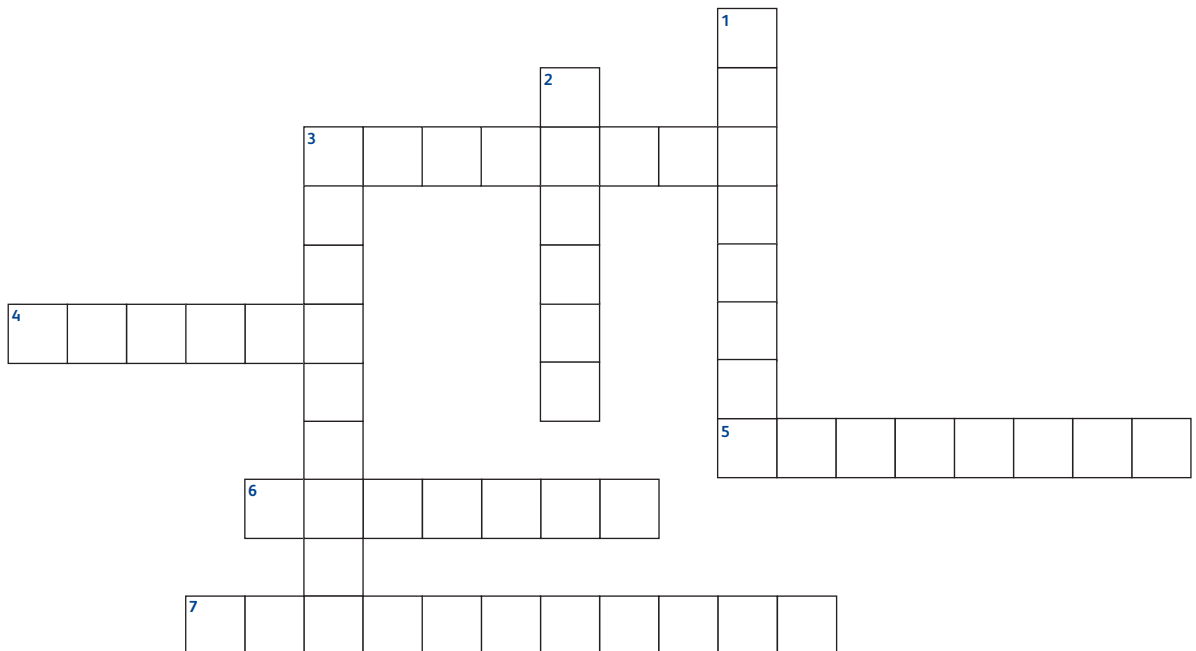
Fill out the boxes with your answers.

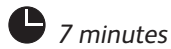
Across

- 3 An essential feature of food-contact surfaces that prevents poisoning. (8)
- 4 The ideal way to prevent the contamination of potable water supplies by contaminated water. (3, 3)
- 5 This principle for organizing tasks minimizes journeys around a food area and helps prevent cross-contamination. (8)
- 6 Treated water that is safe to drink. (7)
- 7 An essential feature of food-contact surfaces, which is an aid to creating sanitary conditions. (4, 2, 5)

Down

- 1 Cross-connections can cause this unsafe problem. (8)
- 2 The sealed edge between a floor and a wall that helps make floors easier to clean. (6)
- 3 An essential feature of the physical environment of food areas, which helps structures resist moisture and microorganisms. (9)





7 minutes

Student sheet – Activity 33

Check the correct answer to the questions.

1 Which agency is responsible for producing the model Food Code?

- a The Centers for Disease Control and Prevention.
- b The US Department of Agriculture.
- c The Food and Drug Administration.
- d The Environmental Protection Agency.

2 In order to assure a safe food handling environment, what should a food establishment have in place before it opens for business?

- a Local employees.
- b Adequate credit facilities.
- c A well-organized food safety and sanitation program.
- d Well-placed advertisements.

3 Who has legal responsibilities for ensuring that food is safe?

- a The proprietor of the business.
- b Food handlers
- c The person in charge
- d All of these.

4 Which definition best explains the concept of reasonable care?

- a Something that is easy to clean.
- b The management responsibility to get things right as often as possible.
- c The management responsibility to take all possible reasonable precautions and care to avoid committing a violation.
- d The management responsibility to provide equipment that is durable.

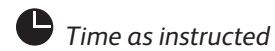
5 Which definition best describes the adulteration of food?

- a Food sold with added water to dilute it.
- b Food containing a hidden ingredient that is not stated on the label.
- c Food sold in colored overwraps that significantly alter the appearance of the product.
- d Food containing a poisonous or deleterious substance or ingredient.

6 Which three combination of words best outlines the principles behind food safety legislation?

- a Deleterious, objectionable and putrid.
- b Safe, unadulterated and honestly presented.
- c Pure, wholesome and simple.
- d Honestly labeled, organic and free from genetically modified ingredients.

Student sheet – Activity 34



Background

The food service establishment where you work

You have recently become the general manager at Esperanza's, a long-established, family-run restaurant and takeout service in the business district of a city. The owner and head cook is Esperanza, who hopes to take a less active part in the operation in the near future. Some of her employees are also considering retirement within the next year or so.

Esperanza has asked you to make food safety your priority. Today you have decided to consider one of the most popular menu items – Esperanza's special chilli beef (chilli con carne), which is sold in the restaurant and as a carry out item Monday through Friday from 11:30 am to 2:30 pm.

The chilli beef recipe

The main ingredients include:

- ground beef
- onions
- tomatoes, either canned or fresh depending on season and supply
- red kidney beans, either dried or fully cooked and canned
- spices, such as chilli powder.

In simple terms, the recipe involves frying the onions, ground beef and chilli before adding the tomatoes, red kidney beans, water and seasoning. The ingredients are then simmered for about one hour.

On Mondays, canned red kidney beans are used. Every evening for the rest of the week, dried beans are soaked over night. The next day the soaked beans are boiled in fresh water before being drained and added to the other ingredients.

Purchasing, receipt and storage

The beef is delivered ground and chilled on Mondays and Wednesdays and is stored in multi-use refrigeration units. Onions and fresh tomatoes are delivered with other vegetables on Tuesdays and Fridays. The onions are placed in dry storage and the tomatoes are stored under refrigeration. The dried and canned red kidney beans and the spices are collected approximately once a month from a catering cash-and-carry depot and placed in dry storage.

There is adequate refrigeration: all units are multi-purpose. There is a small freezer, but it is not used in any part of the process for the chilli beef. Vegetables are kept in plastic-covered wire containers on one side of the cool, well-ventilated dry storage area.

Preparation, holding and service

Food preparation starts at 7:00 am. The chilli beef is one of many menu items prepared in advance. Once the beef is cooked to the cook's satisfaction, it is poured into shallow trays and cooled as rapidly as possible using various methods before being refrigerated. Small batches are then reheated in a microwave oven and held hot until sale. Portion control is effective, but any chilli beef that remains after 2:30 pm is cooled, refrigerated and sold the next day (or on Monday in the case of portions remaining on Friday).

Student sheet – Activity 34

Your observations

Temperature measuring devices are used to check the reheating temperature and, from time to time, the hot holding temperature. The devices are cleaned and sanitized between uses. The refrigerated food is labeled with a date. Employees say they would discard any chilli beef that was more than three days old. The temperatures of the food are not recorded.

Your task

- 1 Draw a simple food flow diagram of Esperanza's chilli beef.
- 2 Discuss the potential hazards involved, then list the critical control points (CCPs) in the process. (You may also show them on the diagram, if desired.) Note the reasons for your decision why these points are critical.
- 3 Select ONE example of a biological hazard from your list of CCPs. Describe how you would control the hazard, giving careful consideration to critical limits and corrective action.
- 4 Select another TWO examples from your list of CCPs. If possible, include at least one chemical or physical hazard. Describe, giving your reasons, the types of monitoring methods you would select for all THREE examples you have chosen.
- 5 List the types of documentation you would keep for the three examples as part of good practice and to help comply with legal requirements.
- 6 Give examples of the circumstances/times when you would review the HACCP plan for each of the three examples chosen.
- 7 Design a poster for food employees to remind them of the key safety issues involved in ONE of the examples you have chosen.

Hints and suggestions

- 1 Are all the batches of the chilli beef treated in the same way?
- 2 What is a critical control point? Would the decision tree help you reach your decisions? Do you wish to make a note of other food safety issues that concern you but are not CCPs? Have you considered all the stages in the process?
- 3 What are the most important actions that can be taken to safeguard the safety of the food sold?
- 4 Which types of monitoring would be most appropriate on a day-to-day basis in this type of food operation? Would other types of monitoring be suitable on a less frequent basis?
- 5 What sort of documentation would help a manager safeguard food safety on a day-to-day basis? Which records would help prove that management was doing everything possible to ensure that food is safe to eat?
- 6 Bear in mind that there may be changes in the workforce soon. Do you wish to change any part of the existing process to improve food safety?
- 7 What do employees tend to forget when they are busy?

Student sheet – Activity 34

Student sheet – Activity 35

 7 minutes

What does managing food safety involve?

List the activities involved in the effective management of food safety.

Student sheet a – Activity 36

 10 minutes

You are the new manager of the food establishment illustrated on student sheet 36b. The scene depicted is what you see when you walk into work on your first day.

What are the hazards to food safety and what would you do to prevent causing foodborne illness or a violation?

Hazards to food safety

Preventive action

🕒 10 minutes

Student sheet b – Activity 36

