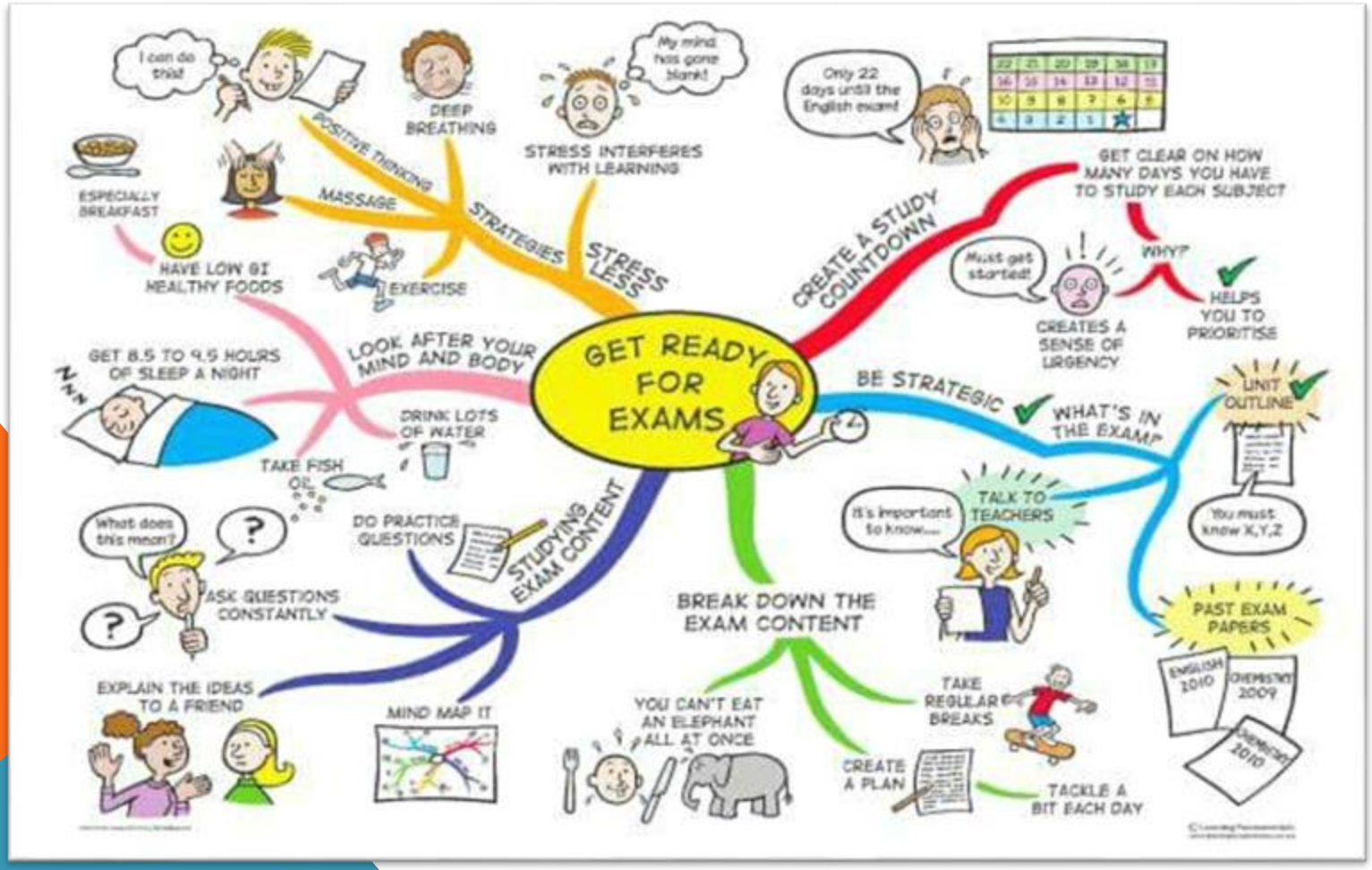
LEVEL 1 / 2 HOSPITALITY AND CATERING

LO4 KNOW HOW FOOD CAN CAUSE ILL HEALTH

TOP TIPS


GET READY FOR EXAMS
STRESS LESS
STRATEGIES
POSITIVE THINKING
MASSAGE
EXERCISE
DEEP BREATHING
STRESS INTERFERES WITH LEARNING
I can do this!
My mind has gone blank!
ESPECIALLY BREAKFAST
HAVE LOW GI HEALTHY FOODS
LOOK AFTER YOUR MIND AND BODY
GET 8.5 TO 9.5 HOURS OF SLEEP A NIGHT
DRINK LOTS OF WATER
TAKE FISH OIL
CREATE A STUDY COUNTDOWN
Only 22 days until the English exam!
GET CLEAR ON HOW MANY DAYS YOU HAVE TO STUDY EACH SUBJECT
WHY?
Must get started!
CREATES A SENSE OF URGENCY
HELPS YOU TO PRIORITISE
BE STRATEGIC
WHAT'S IN THE EXAM?
UNIT OUTLINE
You must know X,Y,Z
TALK TO TEACHERS
It's important to know....
PAST EXAM PAPERS
ENGLISH 2010
CHEMISTRY 2009
CHEMISTRY 2010
BREAK DOWN THE EXAM CONTENT
TAKE REGULAR BREAKS
CREATE A PLAN
TACKLE A BIT EACH DAY
YOU CAN'T EAT AN ELEPHANT ALL AT ONCE
STUDYING EXAM CONTENT
DO PRACTICE QUESTIONS
What does this mean?
ASK QUESTIONS CONSTANTLY
EXPLAIN THE IDEAS TO A FRIEND
MIND MAP IT

MAKE SURE YOU ARE EXAM READY

Questions are written in a range of ways. We are going to look at the specification content and then answer some exemplar questions.

AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

"Britt and Mike joined two friends at a favourite restaurant for dinner and shared a large pizza. While they had a great time, later that night was a different story. All four awoke with severe nausea, stomach cramps and vomiting – enough to send them to the emergency room. After running some tests, the ER doctor said they had a food-related illness. The culprit was a bacterium in the pizza.

Each year millions of people experience food-related illnesses. New outbreaks are reported daily. They come from sources such as E. coli in undercooked hamburger or bacteria-laden lettuce; salmonella from raw chicken, eggs, and green onions; or listeria bacteria from soft cheeses and lunch meats. Food-related illness is a serious problem. But you can protect yourself if you know the facts.

AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

The main causes of food related ill health are:

Bacteria

Microbes

Chemicals

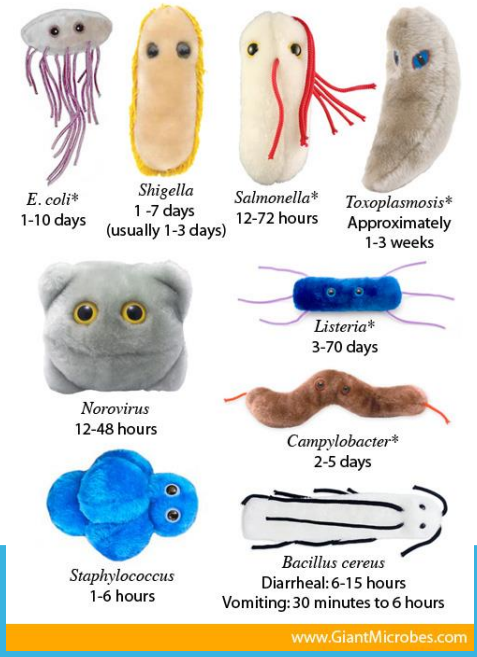
Metals

Poisonous plants

Allergies

Intolerances

We will look at each of these in detail.



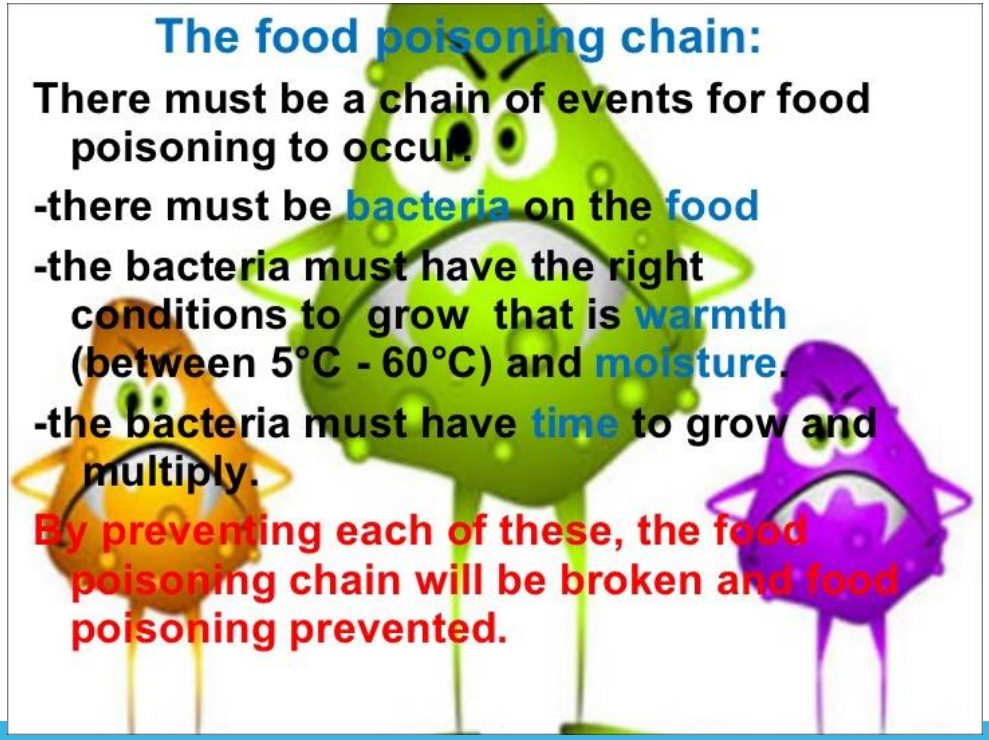
AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

Bacteria and microbes

Bacteria, also called germs, are microscopic organisms not visible with the naked eye. Bacteria are everywhere, both inside and outside of your body. Bacteria can live in a variety of environments, from hot water to ice. Some bacteria are good for you, while others can make you sick.

Bacteria are single-celled, or simple, organisms. Though small, bacteria are powerful and complex, and they can survive in extreme conditions.

Bacteria are sometimes referred to as microbes.



AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

Some bacteria have to be INSIDE your body to make you ill

Once inside you, the bacteria attack your body causing illness

Some produce a TOXIN (poison) on the food which makes you ill when you eat it

Bacterium reproduce rapidly by dividing in two this is known as

BINARY FISSION

Each bacterium only needs 10 – 20 minutes to multiply

1 bacterium = millions in a few hours

Bacteria needs four things to multiply

FOOD WARMTH MOISTURE TIME

AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

CHEMICALS AND METALS

Some chemicals and metals are poisonous to us

Metals like lead and mercury stay in our body for a long time and make us ill

Foods may taste or smell funny

Chemicals can be passed onto food by the use of pesticides that are sprayed on foods such as fruit and vegetables.

- They can also be passed onto food from worktops that have been cleaned and not wiped down afterwards.

Metals may come from opening tins or from factory machinery

AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

POISONOUS PLANTS

Poisonous food plants.

Many plants commonly used as food possess toxic parts that are toxic unless processed, or are toxic at certain stages of their lives. Some only pose a serious threat to certain animals (such as cats, dogs, or livestock) or certain types of people (such as infants, the elderly)

What foods can you think of that are poisonous?

Can you name the ones shown?

AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

ALLERIES AND INTOLERANCES

WHAT IS A FOOD ALLERGY?

A food allergy is a rapid reaction (from just a few minutes to a couple of hours) to a food that could be potentially life-threatening. Food allergies happen when the immune system mistakes an ingredient in food - usually a protein - as harmful and creates antibodies to attack it.

This causes your body to release chemicals which lead to an allergic reaction. Symptoms include wheezing, rashes, itching, nausea, vomiting and in serious cases, anaphylactic shock.

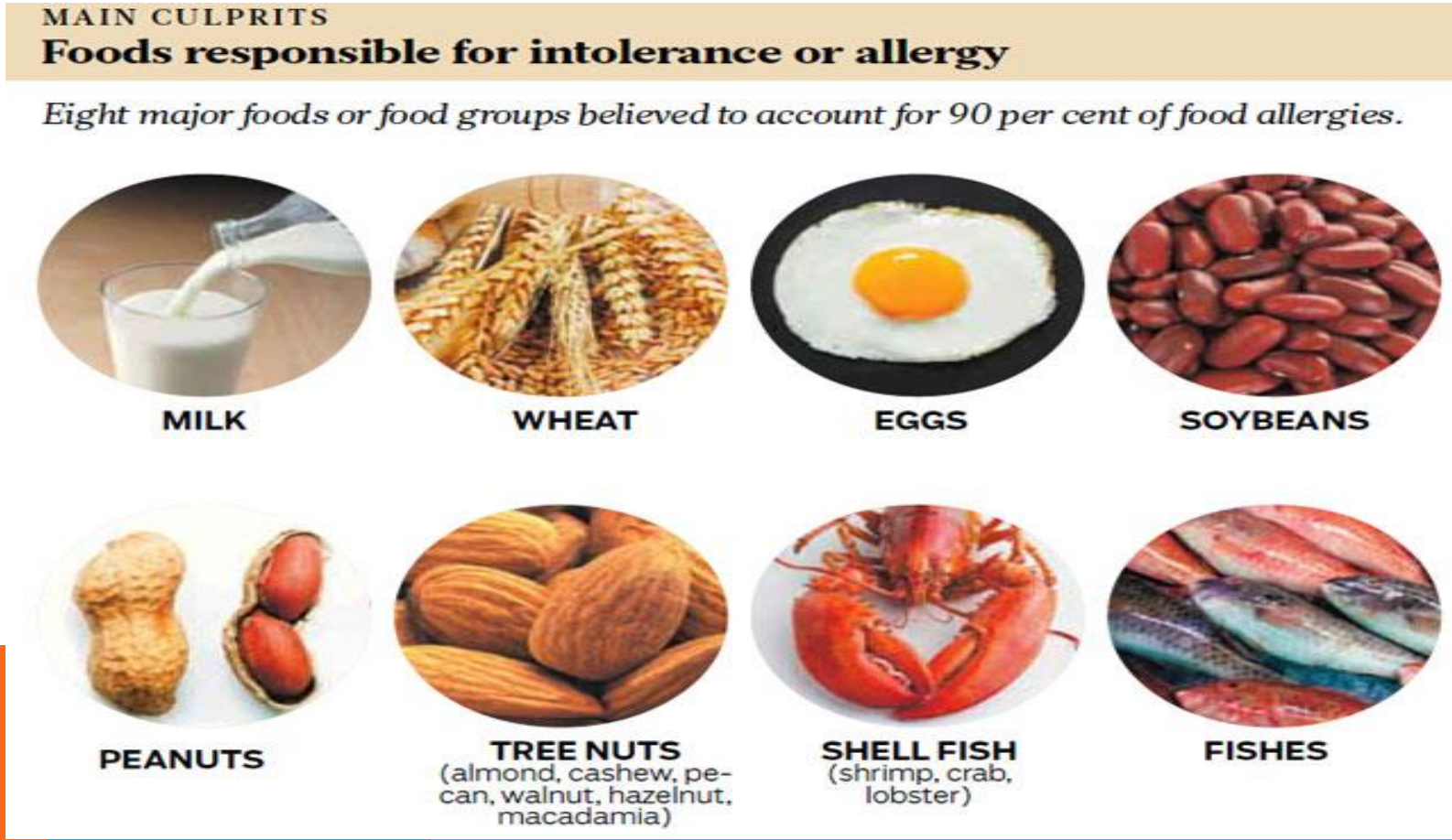
WHAT IS FOOD INTOLERANCE?

A food intolerance reaction can strike many hours after digesting a particular food. When a food irritates the digestive system or can't be properly broken down, that's when unpleasant symptoms like nausea, stomach pain, bloating, vomiting, heartburn, diarrhoea, and headaches kick in.

These foods are identified on menus with symbols such as wheat germ for gluten intolerance.

TASKS AND QUESTIONS

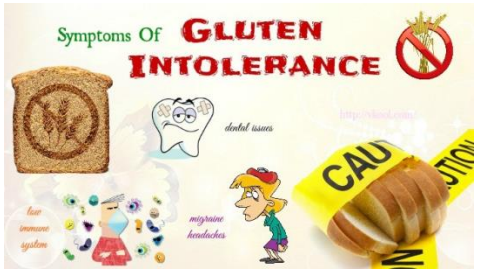
Common foods that people are allergic or intolerant to



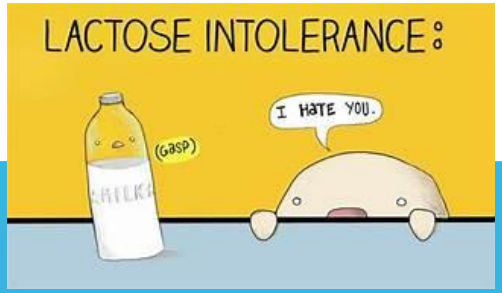
AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

The 3 most common intolerances are:

Gluten- This means not eating foods containing gluten. Gluten is a protein complex found in wheat (including kamut and spelt), barley, rye and triticale. Symptoms all include; depression (this will cause you to feel lethargic, sluggish and very low when consumed the substance), irritable bowel syndrome (which can lead to pain and discomfort and difficult in passing stools) and in serious cases of gluten allergies, it can increase the risk of tumours in the sufferers bowel.



Lactose - This is where you have the inability to digest products containing lactose which is a sugar found in milk which would cause many difficulties as lots of dairy products include the substance. If they do digest the lactose it can make them sick and give them diarrhoea. Symptoms include distress to all, and screaming babies will cause even more distress to their parents. Everybody can have different experiences of the symptoms and the strength of them. However, bloating and wind are major symptoms that probably all suffer.



AC 4.1 DESCRIBE FOOD RELATED CAUSES OF ILL HEALTH

Allergies

People who have allergies must not eat the food that they are allergic to, nor must they go near that food or eat any foods that have been prepared next to it. If you were to have somebody with an allergy attend your restaurant you would have to refrain from using the ingredient that they are allergic to in any of the dishes as to prevent a anaphylactic shock happening . The most common allergy is the nut allergy. People with nut allergies cannot eat any foods containing nuts or nut oils.

Making sure food is nut free.

Take care when you are not preparing your food:

When eating out, ask staff which foods contain nuts and the risk of contamination of other foods. If possible, speak to the chef, not the waiter or waitress.

Avoid eating foods at buffets or from delicatessens or bakeries where it is easy for food to be contaminated by touching other foods containing nuts.

Do not eat anything you are unsure about.

If friends or family prepare food for you, make sure they know what you can't eat.

If your child has an allergy to nuts then make sure that they do not share food with other children at parties and other group events. Take food for them.

TASKS AND QUESTIONS

TASK Research the 14 foods people are most allergic to and produce a poster that could be displayed in a restaurant.

What four things do bacteria need to multiply? (4 marks)

How are chemicals passed on to food? (1 mark)

How would a restaurant identify foods that may cause allergies on a menu? (1 mark)

14 ALLERGENS

MARK SCHEME

What four things do bacteria need to multiply? (4 marks)

Award one mark for each correct answer

Food

Warmth (do not accept heat)

Moisture (do not accept wet)

Time

How are chemicals passed on to food? (1 mark)

Award one mark for a correct answer

Pesticides

Cleaning materials

How would a restaurant identify foods that may cause allergies on a menu? (1 mark)

Award one mark for correct answer

With symbols on the menu.

Wheat germ

TASK

The question on the exam paper is:

Describe how a chef would ensure the food he produced was nut free. (3 marks)

Produce a model answer and mark scheme for this question.

Think about the following:

Preparing foods in a separate area of the kitchen

Checking ingredients lists

Using reputable suppliers

Avoiding cross contamination by using separate equipment

Avoid using plastic bowls as traces of nuts may still be in the small grooves.

Label dishes on menus

Inform wait staff of foods which may contain nuts

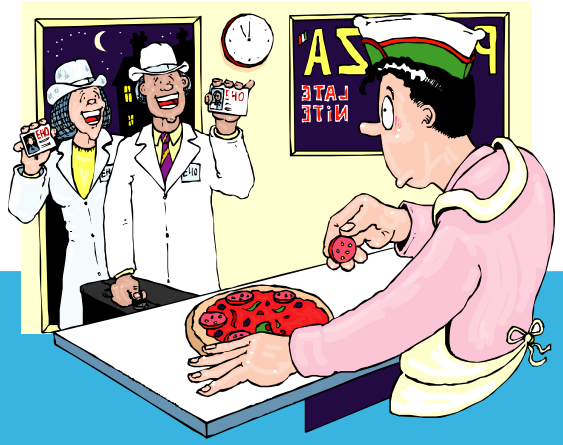
AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

SO WHO MONITORS THE FOOD INDUSTRY?

Environmental Health Officers.

All food preparation businesses must be registered with the local council.

Environmental Health Officers will monitor the premises on a regular basis



AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

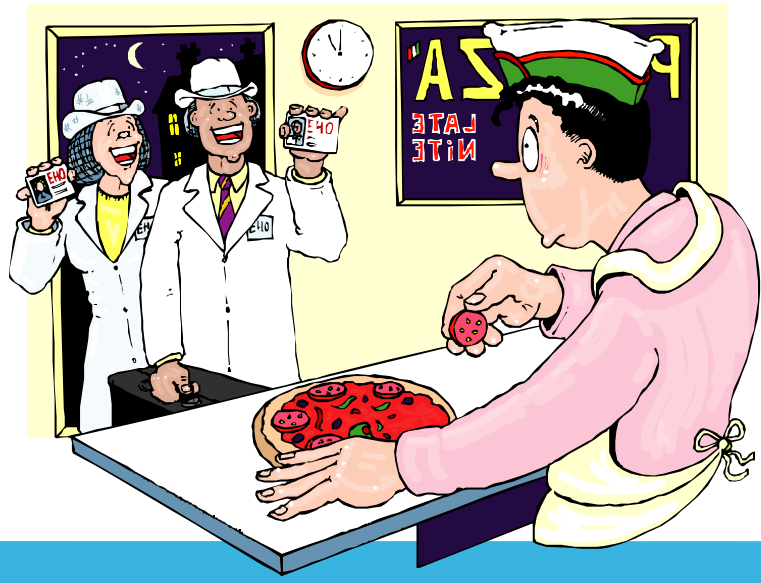
Purpose of inspection by an EHO

- Ensure operation is capable of producing safe food
- To identify foreseeable incidences of food poisoning
- Assess effectiveness of hazard analysis, especially in relation to critical control points (identify the risks)
- To check standards have been achieved (legal and industry guides)
- Identify training needs of staff (competency)
- To provide advice/make recommendations
- To respond to a complaint
- Revisit
- To continually improve food hygiene standards
- To ensure the business complies with the law

AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

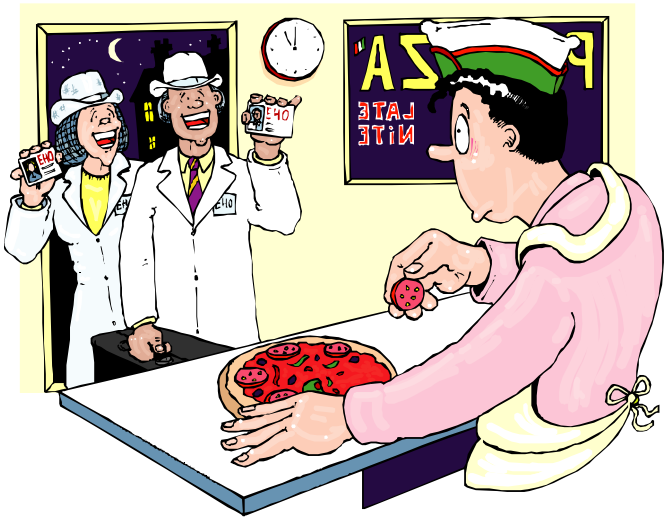
Environmental Health Officers

- Provide Food Safety advice
- Inspect food premises
- Enforce legislation covering food
- Investigate outbreaks of food-borne disease and possible offences



AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

What power does an EHO have?



Powers of entry at any reasonable time

Inspect food and premises

Power to seize and detain food

Serve notices

Power to close

Prosecute

AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

An E.H.O. ALSO HAS POWER TO ISSUE NOTICES

A Hygiene Improvement Notice is used to require food businesses to improve something sub-standard

A Hygiene Emergency Prohibition Notice can apply to:

- Premises (prohibiting use of premises)
- Part of premises
- Equipment
- A food business operator

AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

PENALTIES FOR NON-COMPLIANCE

- Prohibition from using part of business
- Fines and legal costs
- Prison sentence
- Closure of business
- Prohibition from running a food business
- Criminal record

AC 4.2 DESCRIBE THE ROLE AND RESPONSIBILITIES OF THE ENVIRONMENTAL HEALTH OFFICER(E.H.O)

DUE DILIGENCE

The principal of defence under The Food Safety Act 1990

A business must be able to demonstrate that it has done everything within its power to safeguard consumer health

Accurate records are useful in proving this defence; these may include:

HACCP

Monitoring records – storage/cooking/delivery

Pest control

Cleaning schedules

REVISION.

The King George Hotel has decided to refurbish the kitchen and dining room.

Describe the role of the EHO before, during and after the refurbishment.

6 marks

Use the information ON THE NEXT SLIDE to produce a mark scheme for the question.

Mark a peers answer and suggest ways to improve.

Remember to cover all stages

POINTS TO CONSIDER

Think about advice the EHO can give the owners before they start to redesign the kitchen.

Advice on where equipment should be placed. The triangle. Cookers, fridges, sinks.

During the refurbishment the EHO will visit to check on progress and offer advice on checks that will be made prior to opening.

Offer advice and training for new staff.

Check temperatures of fridges.

Check equipment is in working order

During the refurbishment the EHO will visit to check on progress and offer advice on checks that will be made prior to opening.

Offer advice and training for new staff.

Check temperatures of fridges.

Check equipment is in working order

Once the hotel is reopen the EHO will make regular unannounced visits to check on the kitchens and staff.

Remember what they can do if things are not right

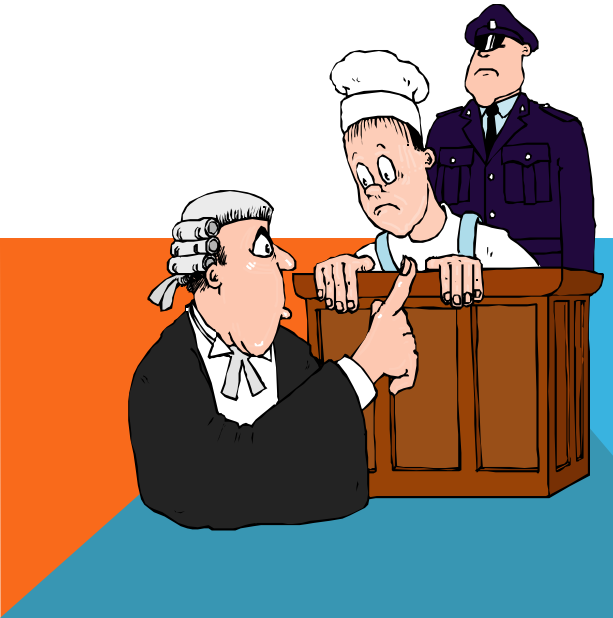
Use the information above to produce a mark scheme for the question.

Mark a peers answer and suggest ways to improve.

Remember to cover all stages

AC 4.3 DESCRIBE FOOD SAFETY LEGISLATION

Food Safety legislation is designed to protect consumers from illness and harm



AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

The Food Safety Act 1990

General Food Law Regulation (EC) 178/2002

Food Labelling Legislation

The legislation ensures that the appropriate level of public health protection is in place without placing unnecessary burdens on businesses.

Food businesses can apply the legislation flexibly and proportionately according to the nature of the business

AC 4.3 DESCRIBE FOOD SAFETY LEGISLATION

FOOD HANDLER – LEGAL REQUIREMENTS

Keep yourself clean

Keep your workplace clean

Protect food from contamination or anything that could cause harm

Follow good personal hygiene practices

Wear appropriate protective clothing

Tell your employer if you have suffered or are suffering from Diarrhoea and Sickness

AC 4.3 DESCRIBE FOOD SAFETY LEGISLATION

Legislation also states that food handlers must not:

Do anything that would expose food to contamination

Sell food that is unfit for human consumption

Sell food with an expired date mark

Work with food if they have symptoms of food poisoning or had diarrhoea and sickness in the last 48 hours.

AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

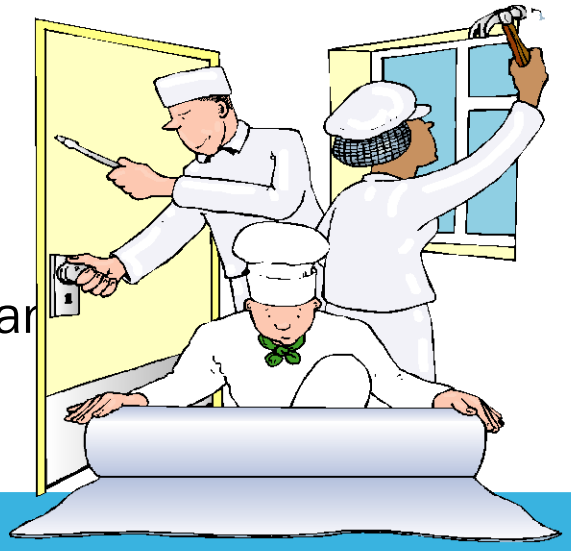
WHAT THE LAW REQUIRES

EC 852/2004 ON HYGIENE OF FOODSTUFFS

Premises must:

- Be registered with the local Council
- Be kept clean
- Be maintained in good repair
- Have a good design, layout and construction
- Have adequate facilities for washing equipment ar food
- Have satisfactory lighting and ventilation

Have adequate hand washing facilities



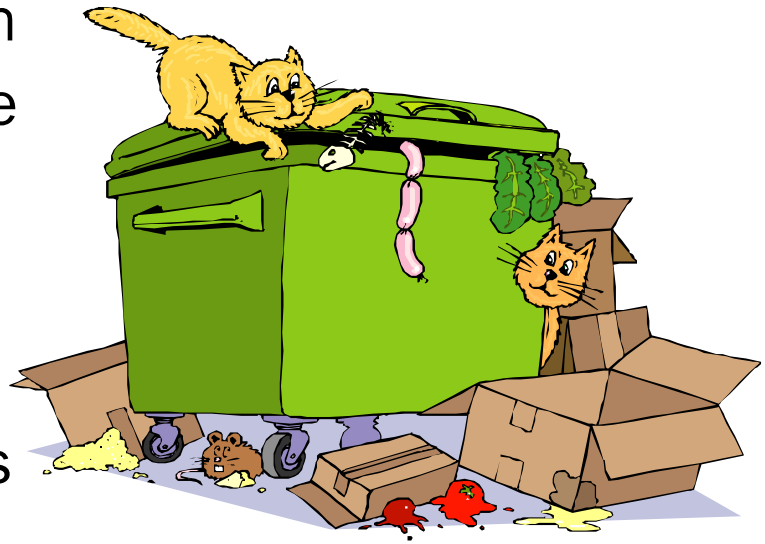
AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

Equipment must:

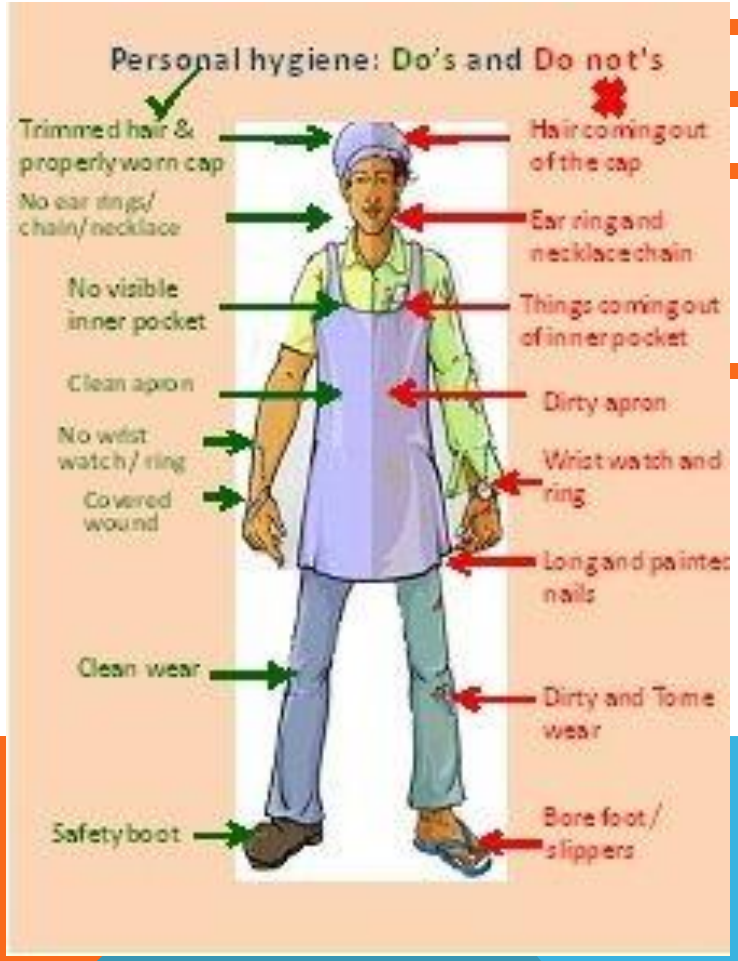
- Be kept clean and in good condition
- Be installed allowing cleaning in the surrounding area

Waste must:

- Not accumulate
- Be deposited in closable containers
- Prevent pest access



AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

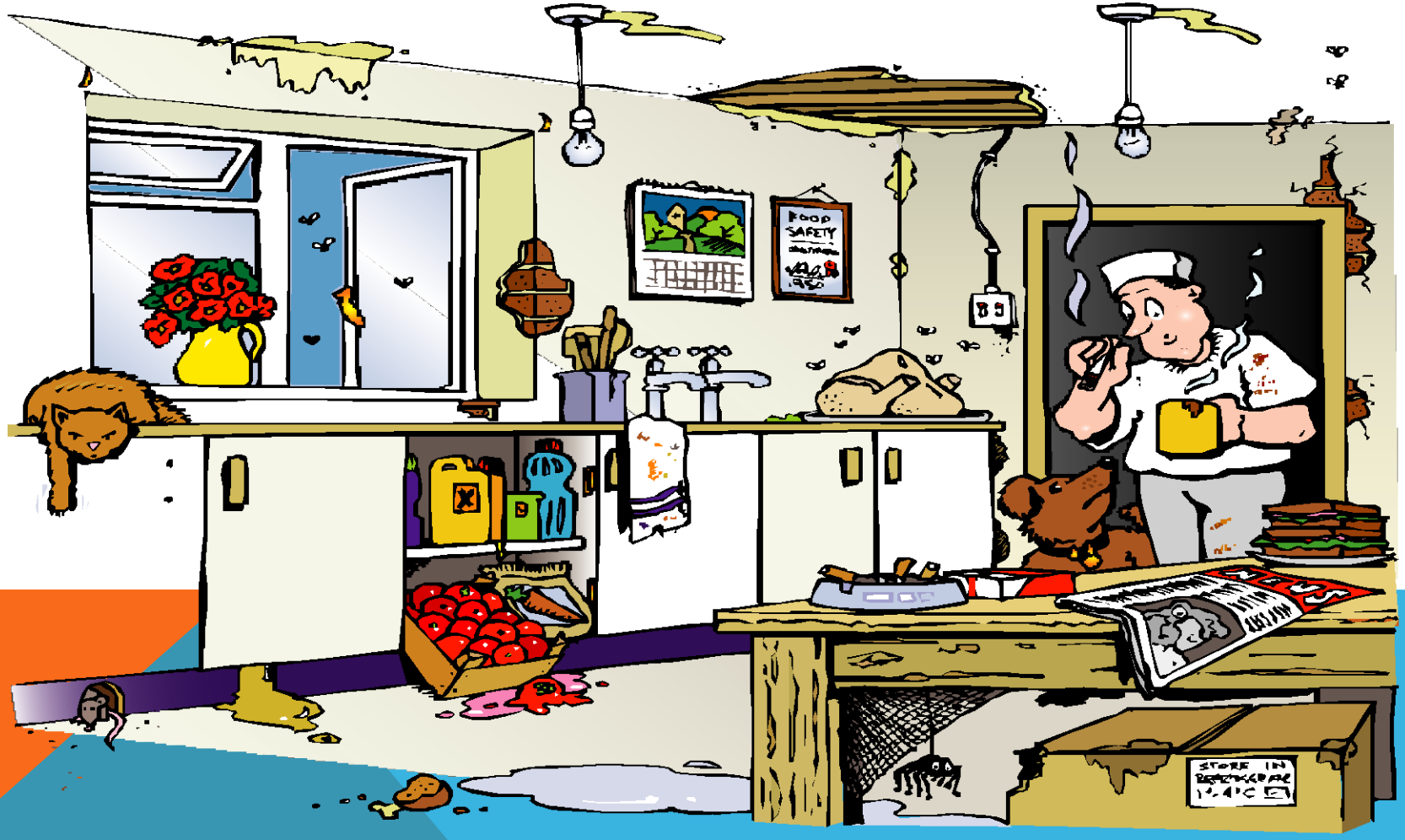


Personnel must:

- Have high standards of personal hygiene
- Wear clean protective clothing
- Report to the proprietor when suffering from illness or a condition that may contaminate food
- Be supervised and instructed and/or trained in food hygiene matters commensurate with their work activities

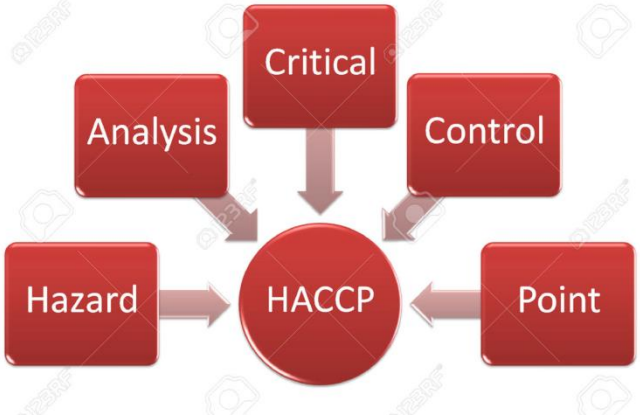
Complying with Food Safety Law?

What is wrong in this picture?



AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

Hazard Analysis (HACCP)



Hazard – anything that could cause harm to consumers

HACCP is designed to help food companies to minimise the risk from food hazards

AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

HACCP SYSTEM

Food companies need to:

- Analyse the hazards to food safety
- Assess the level of risk from each hazard
- Decide the most critical points that require controls
- Implement appropriate controls
- Establish a monitoring system
- Set up procedures to correct problems (corrective action)
- Review the system when operations change

AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

THE FOOD HYGIENE REGULATIONS 2006

Applies to high-risk foods

Cold foods- store below 5°C

Hot foods – store above 63°C

During service :-

Cold food max 4hrs at room temperature then discard or refrigerate

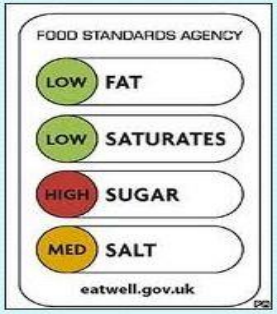
Hot food maximum 2 hrs

Buffet food 90mins at room temperature

AC4.3 DESCRIBE FOOD SAFETY LEGISLATION

General food labelling requirements

- Where should label statements be placed on containers and packages?
- Name of the food
- Ingredient list
- Net quantity of contents statements
- Nutritional
- Claims



TASKS AND QUESTIONS

What is the purpose of food safety legislation? (1 mark)

List three things that must be included on food labels. (3 marks)

What does H.A.C.C.P. mean? (1 mark)

List two points of the refrigerator rules. (2 marks)

Answer these questions and use the mark scheme provided to mark your own work.

How did you do? How could you improve?

MARK SCHEME

What is the purpose of food safety legislation? (1 mark)

To ensure food is safe to eat and protect customers from harm.

List three things that must be included on food labels. (3 marks)

Award one mark for each correct answer:

Name of product

Ingredients list

Nutritional content

Net quantity

Claims e.g. not suitable for vegetarians

MARK SCHEME

What does H.A.C.C.P. mean? (1 mark)

Hazard Analysis and Critical Control Point

List two points of the refrigerator rules. (2 marks)

Award one mark for each correct answer:

Applies to high-risk foods

Cold foods- store below 8°C

Hot foods – store above 63°C

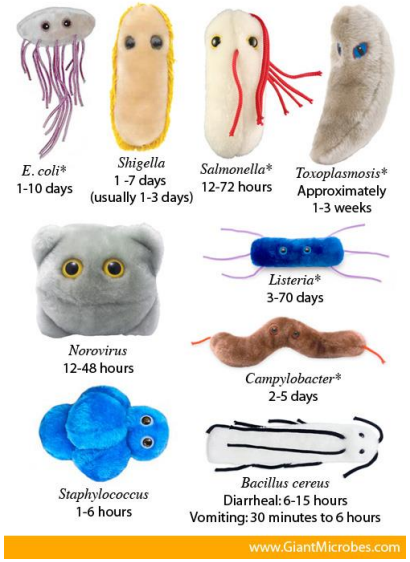
During service :-

Cold food max 4hrs at room temperature then discard or refrigerate

Hot food maximum 2 hrs

Buffet food 90mins at room temperature

AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH



The most6 common types of food poisoning are:

Campylobacter

Salmonella

E-Coli (0157)

Clostridium Perfringens

Listeria

Bacillus Cereus

Staphylococcus Aureus

We will look at each one in detail, where they are found, length of time until symptoms appear, visible symptoms, non-visible symptoms and duration of symptoms.

Take notes and complete the chart you have been given.

AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

Campylobacter

Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
• Raw poultry • Undercooked poultry • Meat • Unpasteurised milk • Contaminated water	• Fever • Diarrhoea (may be bloody) • Cramps	• Headache • Abdominal pain	2-5 days	2-10 days

AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

Salmonella

Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
• Raw poultry • Undercooked poultry • Raw Meat • Unwashed vegetables • Eggs	• Fever • Diarrhoea • Vomiting • Survives refrigeration • CAN BE FATAL	• Headache • Abdominal pain	Up to 48 hours	Up to 3 weeks!!


Salmonella Bacterium

OOH It looks like a bug with legs eeew!!

AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

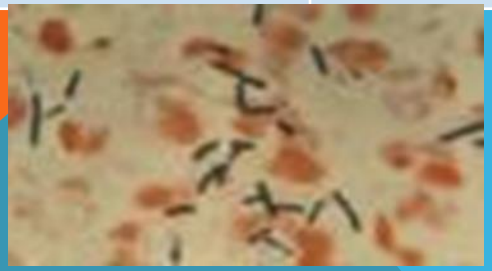
E-Coli (0157)

Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
Undercooked beef (especially burgers) Unpasteurised milk Raw fruits and vegetables Contaminated water Gut of animals and humans	Severe often bloody diarrhoea Vomiting Survives refrigeration and freezing CAN LEAD TO KIDNEY FAILURE More common in children under 4.	Little or no fever Abdominal pain	1-8 days	5-10 days

AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

Clostridium Perfringens

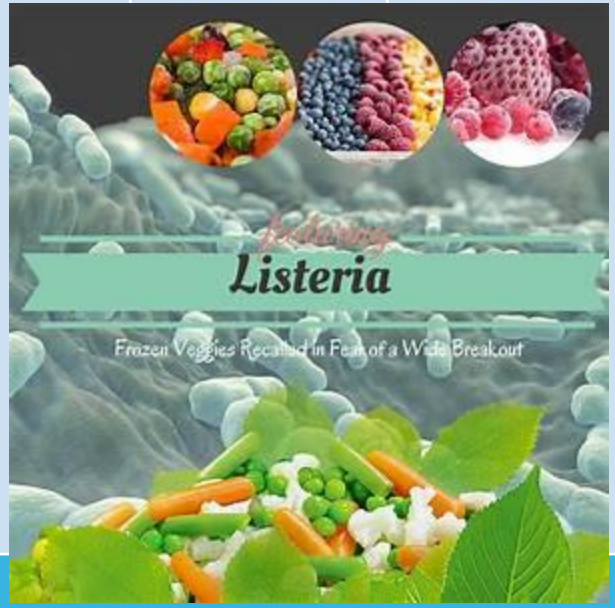
Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
• Animal faeces • Soil, manure, sewage • Raw meat • Raw poultry	• Intense abdominal cramps • Watery diarrhoea • Survives refrigeration • CAN BE FATAL	• Headache • Abdominal pain	8 – 16 hours	Usually 24 hours



AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

Listeria

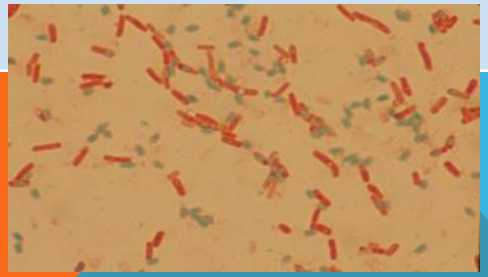
Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
• Ready-to-eat deli meats and hot dogs • Refrigerated pâtés or meat spreads • Unpasteurized (raw) milk and dairy products • Soft cheese made with unpasteurized milk, such as Feta, Brie, Camembert • Refrigerated smoked seafood • Raw sprout	• Fever/flu like symptoms • Stiff neck • Miscarriage • Diarrhoea • Can grow at low temperatures • CAN CAUSE MISCARRIAGE	• Weakness • Confusion	Several weeks	Days to weeks



AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

Bacillus Cereus

Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
• Meats • Stews • Gravies • Vanilla sauce • Soil and dust • Rice and pasta	• Diarrhoea • Vomiting after 1-5 hours • Survives refrigeration • CAN BE FATAL	• Abdominal pain after 8-18 hours	10-16 hours	24 -48 hours

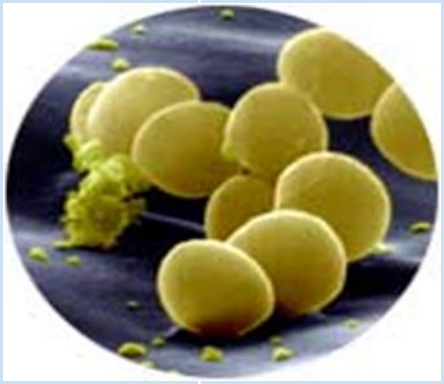


Bacillus cereus can be quite serious!!

AC 4.4 DESCRIBE COMMON TYPES OF FOOD POISONING
AC4.5 DESCRIBE THE SYMPTOMS OF FOOD INDUCED ILL HEALTH

Staphylococcus Aureus

Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
On your skin Cuts and boils Up your nose Foods that are made with hand contact and require no additional cooking	Mild fever Diarrhoea Vomiting Severe abdominal cramps Survives refrigeration Produces a toxin which mat survive cooking	Nausea Loss of appetite	1- 6 hours	24 -48 hours



TASKS AND QUESTIONS

Complete the chart showing the different types of food poisoning, sources and symptoms. Include onset and duration times to get more marks.

(see additional resources or following slide)

Complete the contaminants activity.

(see additional resources)

Use the fairground activities to answer the questions

TASKS AND QUESTIONS

Type of bacteria	Where found	Visible symptoms and signs	Non-visible symptoms	Onset time	Duration of symptoms
Campylobacter					
Salmonella					
E –Coli (0157)					
Clostridium perfringens					
Listeria					
Bacillus Cereus					
Staphylococcus Aureus					