

Screen 1



Design & layout of food premises & pest control

Screen description

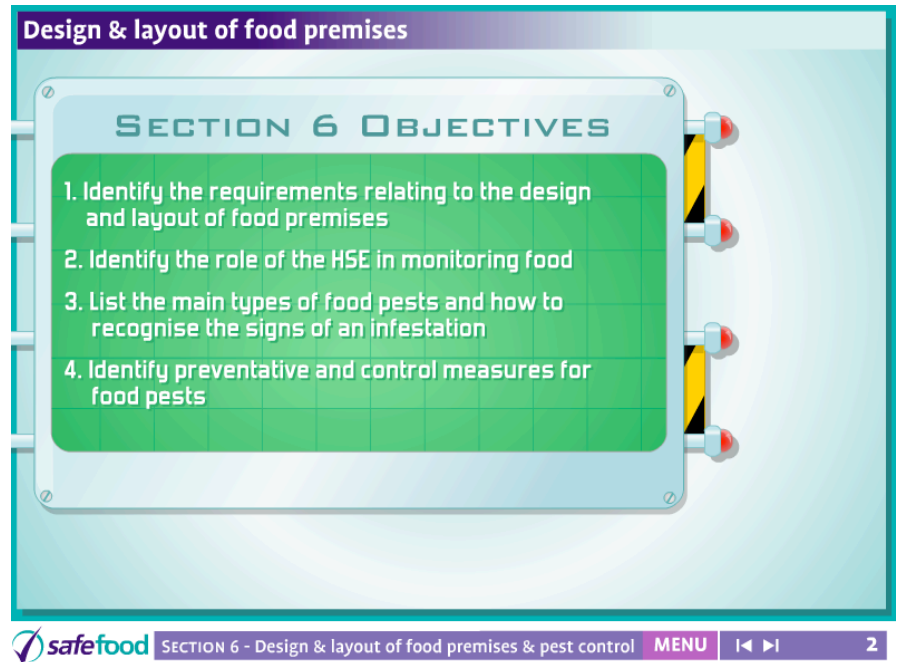
This screen shows a busy kitchen scene with a number of hazards to food safety. As a starting point students are encouraged to look at the screen and suggest things that might be potential hazards.

Teacher

Hazards include:

1. The kitchen seems badly laid out with everyone working on top of each other
2. Carrying uncovered rubbish through the kitchen
3. Insect killer broken and hanging off the wall
4. The kitchen should be pest proof
5. Toilet door opening directly into food preparation area
6. Food preparation areas don't seem to be zoned
7. Food packages not stored in dedicated areas

Screen 2



Design & layout of food premises

Screen description

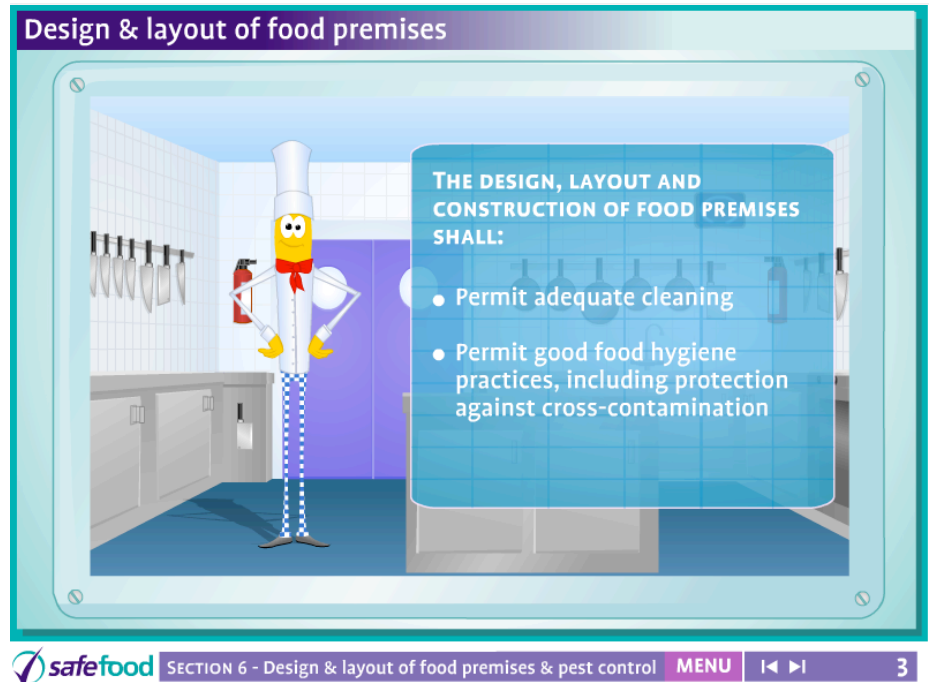
This screen lists the objectives of the chapter.

1. Identify the requirements relating to the design and layout of food premises
2. Identify the role of the HSE in monitoring food
3. List the main types of food pest and recognise the signs of an infestation
4. Identify preventative and control measures for food pests

Teacher

Outline the objectives of Session 6.

Screen 3



Design & layout of food premises & pest control

Screen description

This screen covers the design and layout of food premises.

Teacher

Ask the students to summarise the points in one sentence.

Answer: That the foodworker would be able to clean the premises and keep it clean.

Food hygiene legislation is concerned amongst other things with the structural conditions of all food premises and food stalls. The design, layout and construction of the food premises should:

1. Permit adequate cleaning and/or disinfection
2. Protect against the accumulation of dirt, toxic materials, food debris and the formation of condensation or mould on surfaces

3. Permit good food hygiene practices, including the protection against cross contamination between and during operations by foodstuffs, equipment, materials, water, air supply or personnel and external sources of contamination such as pests.

First aid equipment

Guides to good food safety practices recommends businesses have adequate and appropriate first aid equipment

In small businesses a person should be appointed to take charge of first aid kit and call an ambulance if required

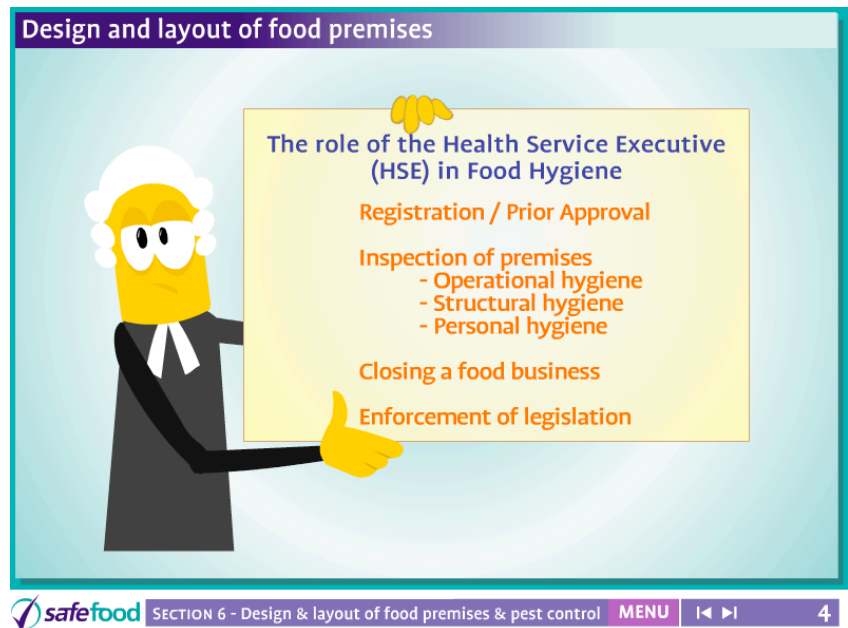
In large businesses a qualified first aider may be required

The first aid kit usually contains the following items:

- Guidance card on basic first aid

- Individually wrapped sterile, adhesive dressings- brightly coloured (blue) or with a thin metal strip
- Sterile eye pads
- Individually wrapped triangle bandages
- Individually wrapped sterile, unmedicated wound dressings
- Disposable gloves

Screen 4



The role of your Health Service Executive (HSE) in monitoring food hygiene

Screen description

This screen points out the role of the Health Service Executive

Food premises

Most food businesses need to register their premises before they open (or before starting to use new premises). From January 2006, this is required under EU regulations.

The premises for certain types of business need to be approved, rather than registered, including those producing the following foods:

- meat and meat products
- eggs
- milk and dairy products
- fish and fish products

Food business operators whose establishments require approval should approach the relevant HSE.

Where the food premises are mobile or temporary, or where a business is run from domestic premises, similar standards (to your normal premises) are expected; although in some circumstances suitable alternatives to normal requirements may be accepted.

Enforcement powers, actions and penalties

Environmental Health Officers (EHOs), within your HSE enforce food safety legislation.

When food hygiene laws are broken the EHO can take the following action

- Give advice
- Send a letter
- Serve a notice
- Prosecute
- Close down business
- Seize food

Who can be prosecuted:

- Owners
- Managers
- Supervisors
- Food handlers

What are the penalties?

- Fines
- Imprisonment
- Barred from working with food

Screen 5

Powers of Environmental Health Officers

	Enter and inspect food and premises
	Investigate outbreaks of foodborne disease and possible offences
	Remove suspect food and have it destroyed if it is considered to be unsafe to eat
	Serve improvement and prohibition notices
	Take food businesses to court for breaking food safety laws

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Powers of Environmental Health Officers

Screen Description

The screen lists the powers of EHOs.

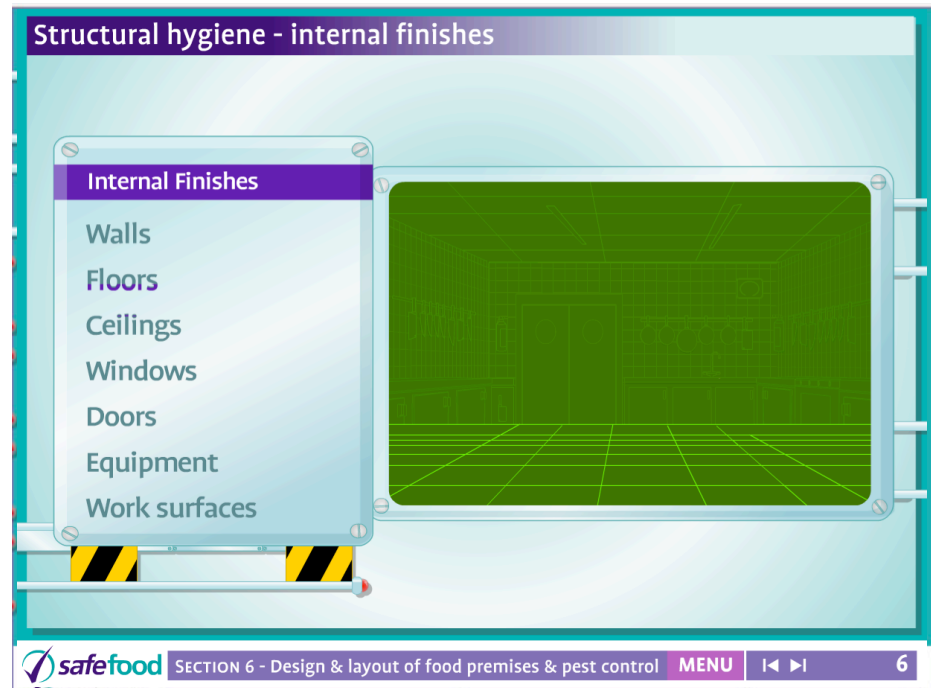
Teacher

Explain to the students that legal requirements can be enforced, and have serious implications for food businesses.

Powers of Environmental Health Officers

- Enter and inspect food and premises
- Investigate outbreaks of food borne disease and possible offences
- Remove suspect food and have it destroyed if it is considered to be unsafe to eat
- Serve improvement and prohibition notices
- Take food businesses to court for breaking food safety laws

screen 6



Structural hygiene – internal finishes

Screen description

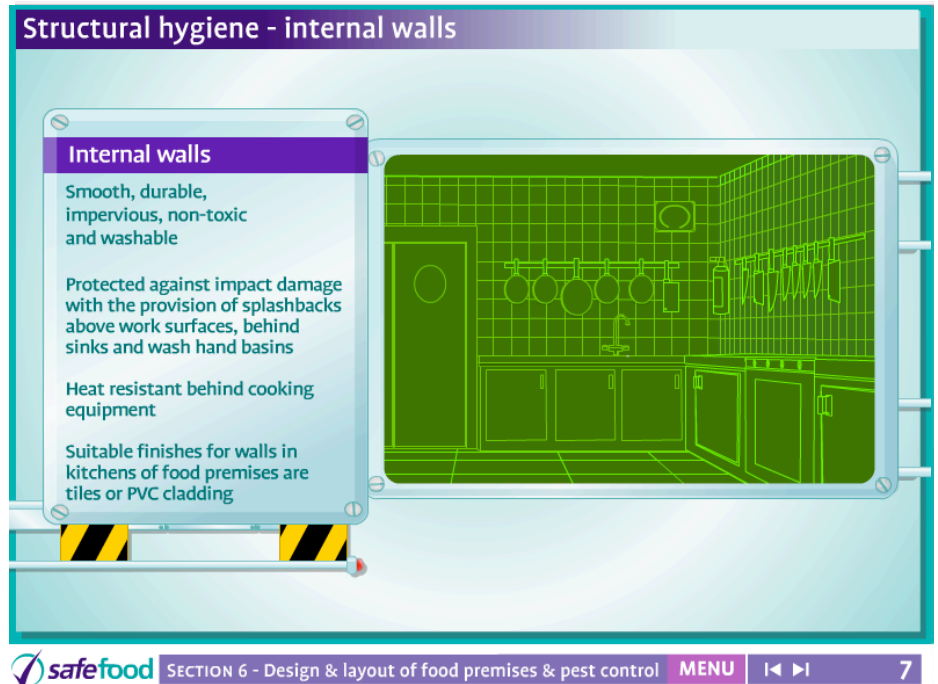
This screen acts as a heading screen for the next sections

Teacher

Explain the content. Ensure that the students understand the terms 'Patrons', and 'Internal Finishes'.

7

Screen



Internal walls

Screen description

This screen zooms in to the wall in the kitchen scene.

Teacher

Ask the students why the walls should be smooth. Check that the students understand the term 'impervious'.

Why should a wall be impervious and washable?

Why are splash backs important?

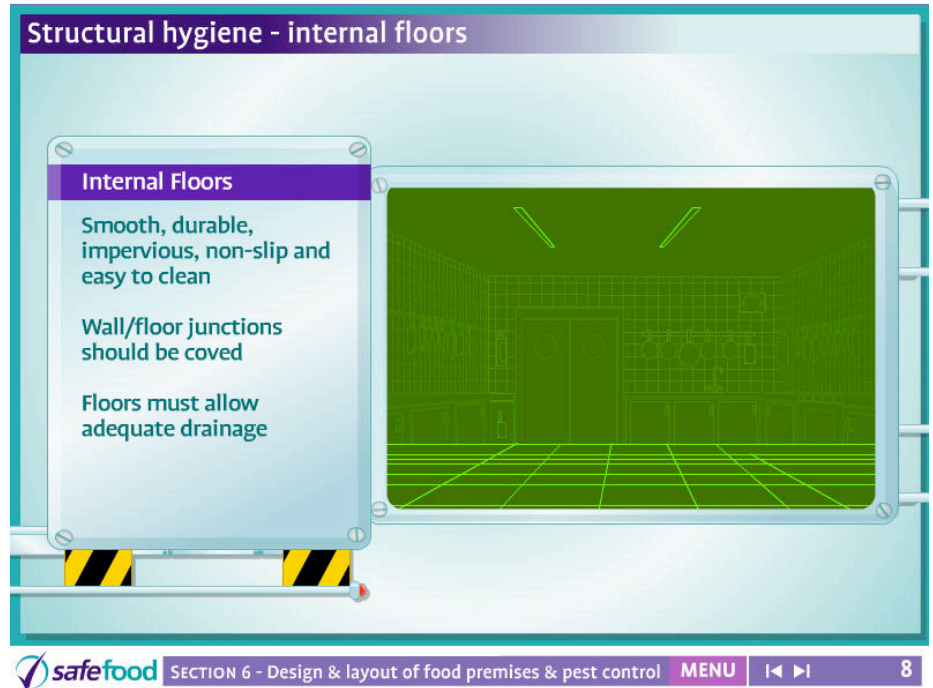
Answer:

Splash backs should be found behind the sinks in the Home Economics kitchens, Science Labs or in the student toilets.

Walls

1. Should be smooth, durable, impervious, non-toxic and washable.
2. Should be protected against impact damage with the provision of splash-backs extending 450mm above work surfaces, behind sinks and wash hand basins.
3. Should be heat resistant behind cooking equipment.
4. Suitable finishes for walls in kitchens of food premises should be tiles or PVC cladding.

8 screen



Structural hygiene – floors

Screen description

This screen zooms in to the floor in the kitchen scene.

Teacher

Ask the students why the floors must be smooth.

Examine the wall/floor junctions in the classroom to see if they are coved.

Ask the students what the benefits would be of having coved floor and wall junctions.

Answer:

They are easier to clean and dirt cannot lodge in the joins/grouting.

Floors:

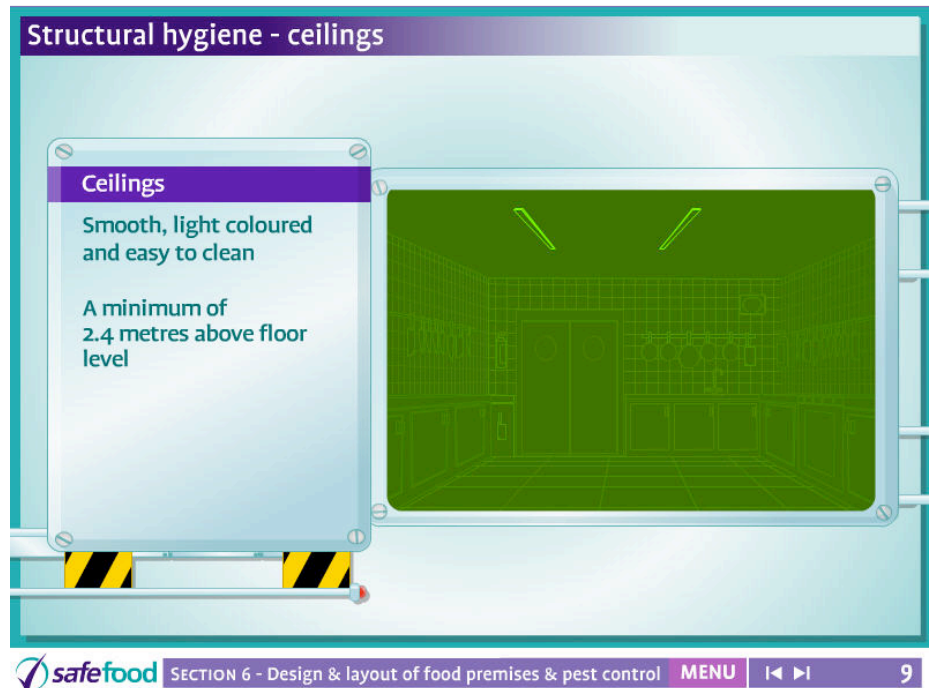
1. Should be smooth, durable, impervious, non-slip and easy to clean. Unnecessary slopes or steps should be avoided

2. Should be free from duckboards, mats and sawdust
3. Wall/floor junctions should be coved for ease of cleaning. Where appropriate, floors must allow adequate drainage.

Where duckboards and mats are used they should be easily cleanable and cleaned on a regular basis.

The use of sawdust is generally not recommended but if it is used it should be kept to a minimum.

Screen 9



Structural hygiene – ceilings

Screen description

This screen zooms in to the ceiling in the kitchen scene.

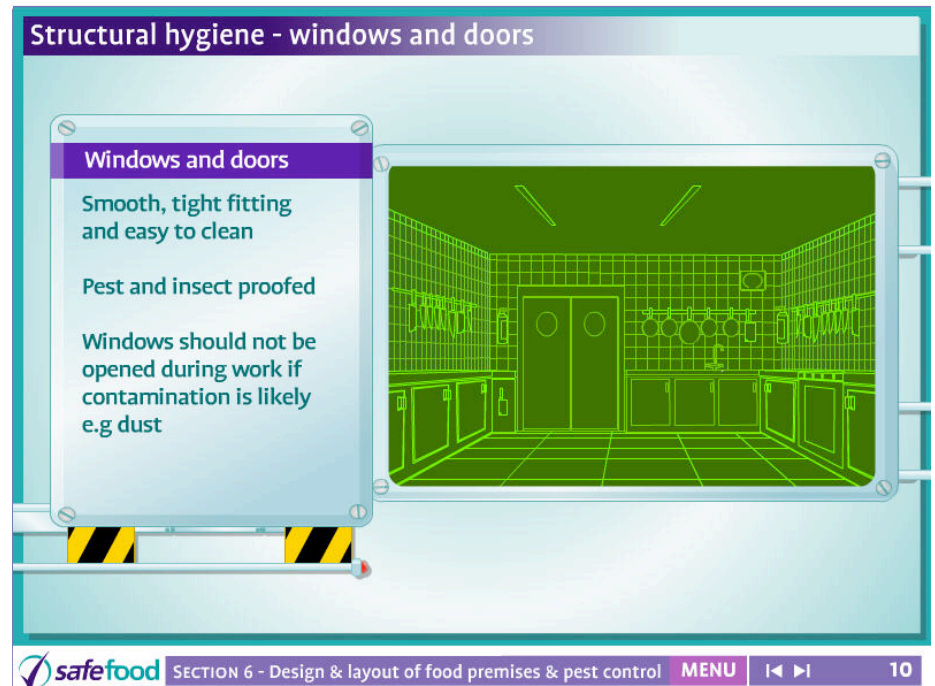
Teacher

Explain points.

Ceilings:

1. Should be smooth, light coloured and easy to clean
2. Ceilings and fixtures must be designed to prevent the accumulation of dirt, reduce condensation and minimise mould growth

Screen 10



Structural hygiene – windows & doors

Screen description

This screen shows a kitchen scene and zooms in to the doors.

Teacher

Ask the students what the alternative is if windows cannot be opened in hot weather.

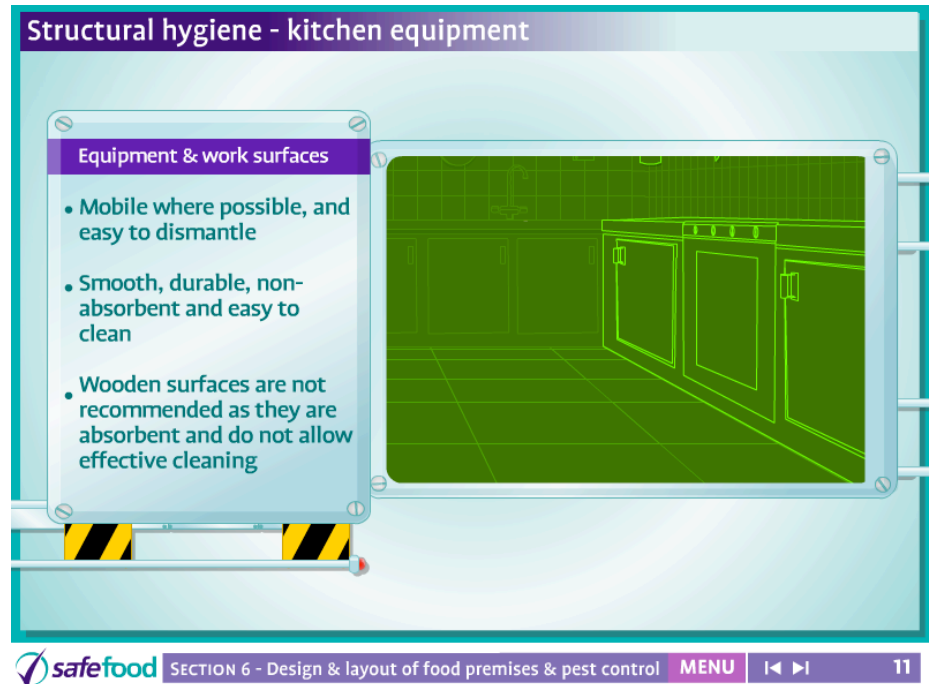
Answer:

Adequate mechanical ventilation (supply and extract) is provided.

Ask the students if they have ever seen a fly screen on doors or windows when they have been in catering establishments.

1. Doors must be smooth, tight fitting and easy to clean.
2. Opening windows should have insect-proof screens which can be easily removed for cleaning. If contamination is likely, windows should not be opened during work, e.g. building/road works taking place near the food premises, passing traffic etc.

Screen 11



Structural hygiene – kitchen equipment & work surfaces

Screen description

This screen shows a kitchen scene and zooms in on the equipment and work surfaces.

Teacher

Ask: Why it would be important to have mobile equipment.

Answer: In order not to take up space on the work top and so that they can be stored in a suitable location to prevent them getting dirty or greasy.

Ask: what types of worktop surfaces they have seen in use in catering establishments, in the kitchen, or in the food preparation section of a supermarket.

e.g. Stainless steel

Equipment and work surfaces

1. Where possible, equipment should be mobile and easy to dismantle to allow for easy cleaning
2. Equipment and work surfaces should be smooth, durable, non-absorbent and easy to clean
3. Wooden surfaces are not recommended as they are absorbent and do not allow effective cleaning

Washing facilities

Adequate numbers of wash-up sinks must be provided for cleaning and disinfecting.

- A sink unit with a pre-wash spray and a dishwasher is recommended for crockery and cutlery
- Deep sink units with hot and cold water should be provided for pot washing
- Adequate numbers of food preparation sinks with sufficient supplies of hot and cold water must be provided, to be used for food preparation only. Glass washers are recommended in bar areas.

Screen 12


Class activity


Evaluate the structure of this lab/class/kitchen

Divide into groups of three
Evaluate the following areas of the room - composition and structure, walls, floors, ceiling, windows and doors

For example, classroom windows could be evaluated under these headings:

1. Are they closing properly and easy to open?
2. Do they help prevent condensation?
3. Are they in good condition or are they rotten in places?
4. Is it easy to clean them and keep them clean?



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Class activity

Screen description

This screen outlines a class activity

Teacher

Evaluate the structure of the laboratory/kitchen you are presently in for class.

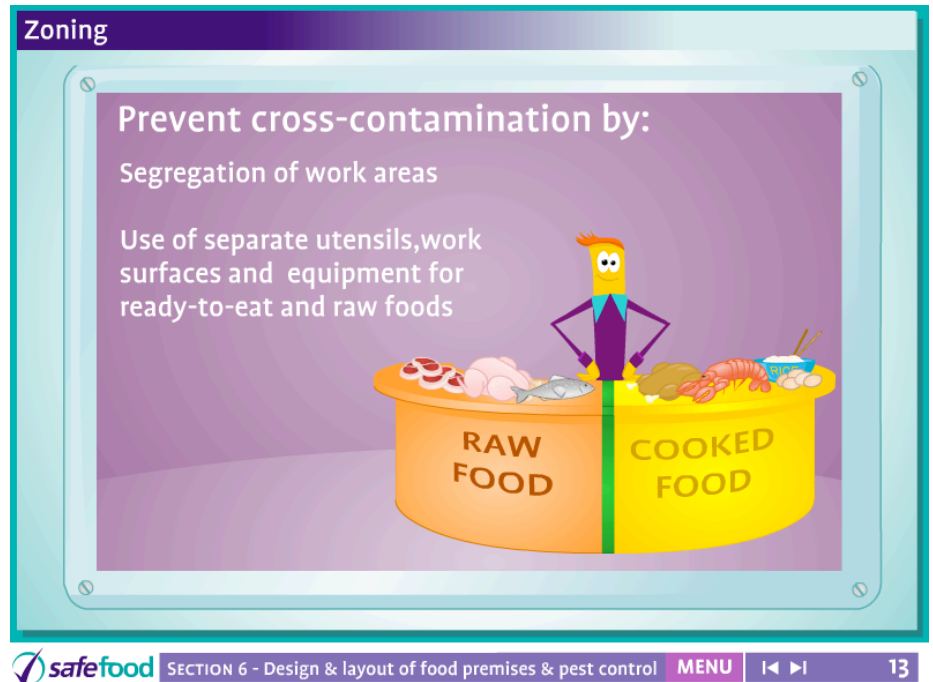
- Divide the class into groups of 2 or 3 students
- Ask the students to make a descriptive list of the composition and structure of the walls, floors, ceiling, windows and doors
- Ask each group to begin with a different area and then to rotate until they have covered each area of the room

The students should evaluate each area under the headings provided on the slide. The information in their student notes may also be useful.

Example:

1. Windows: Are they closing properly and easy to open?
2. Do they help prevent condensation?
3. Are they in good condition or are they rotten in places?
4. Is it easy to clean them and keep them clean ?

Screen 13



Zoning

Screen description

This screen shows points on zoning.

Teacher

Ask the students to suggest the different zones that are required in the kitchen. They should remember this from a previous session.

They may suggest different zones for raw meat, cooked meat, raw fish, cooked fish, dessert and pastry preparation, fruit and vegetable preparation, fruit and vegetable washing. Each food should have its correct storage area.

Under food hygiene legislation, measures must be put in place to protect against cross-contamination. By the introduction of zoning, which is the segregation of work areas/stations and equipment, the likelihood of cross-contamination can be greatly reduced or prevented.

Screen 14



Service requirements

Screen description

This is an interactive screen that shows information on each of the service requirements.

Teacher

Click on the '?' buttons to display full information on each of the points

Interactive exercise

Ask the students to evaluate the ventilation in the room they are presently in.

There should be windows and at least one door. There is also possibly an extractor fan if the students are in the kitchen or laboratory.

Turn the extractor fan on to show the students how it operates.

Ventilation

1. Comfort of staff

2. To prevent bacterial growth (high temperatures)

3. To reduce condensation

4. To eliminate odours

Food preparation areas may require mechanical ventilation as natural ventilation may not suffice.

Localised systems of extraction with grease filters should be positioned over cooking equipment and steam emitting appliances. Filters and other parts needing cleaning should be easily removable. Air intake points must also be provided to balance the system. Particular care has to be taken to ensure that air flows from clean to dirty areas, not the reverse.

Interactive exercise

Ask the students to distinguish between natural light and artificial light.

Answer:

Natural comes from the sun directly through a window. All other types of light are artificial.

Lighting

1. Safety (see what you are doing, prevent accidents)
2. Reading labels on packages
3. Assists cleaning
4. Assists detection of pests

Lights should be placed over equipment and preparation areas. Glare from unshaded lights or poor lighting can cause fatigue and damage to the eyes. It is preferable for light fittings to be flush with the ceiling to permit easy cleaning. In food preparation areas fluorescent lighting may be used and the tubes enclosed in shatter proof diffusers or sleeves.

Interactive exercise

Ask the students if they were ever asked not to drink the water from the upstairs of the house.

Do any of them know why they should not drink from the taps upstairs?

The water in the kitchen tap is the only one that must by law come from a rising mains.

Water supply

The water supply to the food premises must be potable, i.e. fit to drink. It can be from a public or private supply. If water is from a private supply it must be tested for bacterial contamination at least once a year and be fit for human consumption.

In the preparation areas in the kitchen, the cold water must come directly from the rising mains and not from the storage tank. The water supply to the ice machine, dishwasher, and glass washer must also come from the rising mains.

Drainage

Drainage facilities must be adequate for the nature and the extent of the food business. Drains must be connected either to the public sewer, a septic tank, effluent or treatment system which must be big enough for the demand.

Grease traps should be provided in the drainage system from the kitchen or the food

preparation areas to prevent blockage from grease and food waste.

There should be no open access to drainage systems in food rooms.

Interactive exercise

Ask the students if they have ever seen a grease trap. Describe it as being a square opening in the floor that is fully closable and flush with the surrounding floor.

Interactive exercise

Discuss the refuse storage and disposal system in the school.

At the end of the short discussion find out if the students realised that there was so much work involved in storing and disposing of rubbish.

Ask the students if they have any recommendations to cut down on the amount of rubbish in the school.

Suggestions could include recycling.

Refuse storage and disposal

Inside

Sealable containers should be provided in suitable locations within the premises for the collection of waste. These should be emptied or removed at least daily.

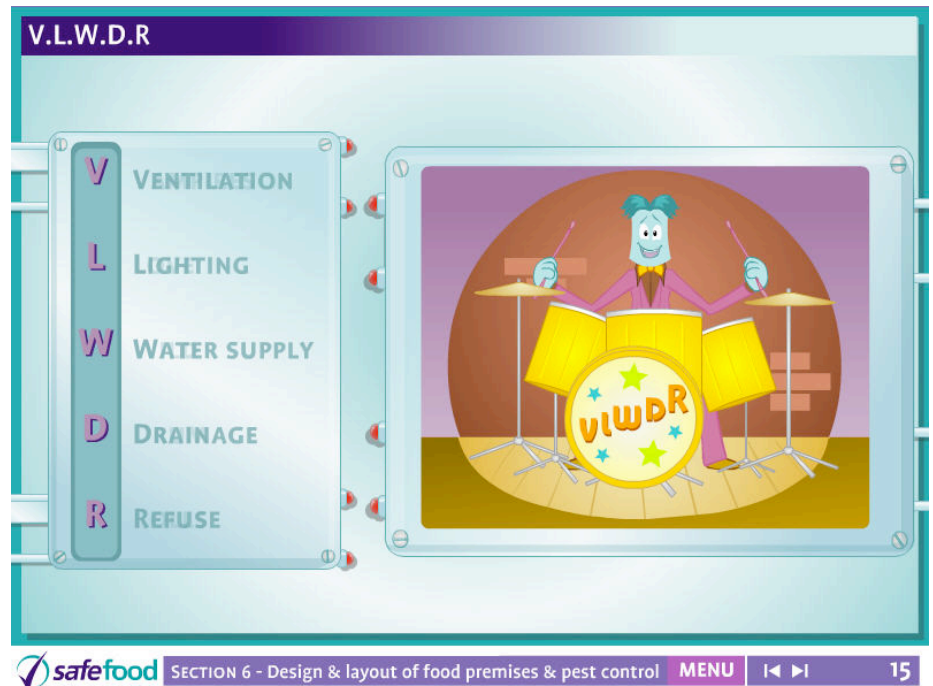
Outside

A properly constructed storage area, well ventilated with a hard concrete floor, for refuse is recommended. A tap and hose should be provided for washing bins, skips and the store. A connection to the drainage system must also be provided.

Refuse should be placed in hard bins with tight-fitting lids or in a covered skip. The refuse containers must be of sound construction, easy to clean and disinfect and they must also be rodent and insect proof.

Rubbish that is being left out for a refuse collection must be stored neatly. Swill collectors must be licensed by the Department of Agriculture and Food, if the swill is fed to animals entering the food chain. Swill is leftover scraps that are given to pigs as food.

Screen 15



V.L.W.D.R

Screen Description

The screen shows a fun way to remember the service requirements headings

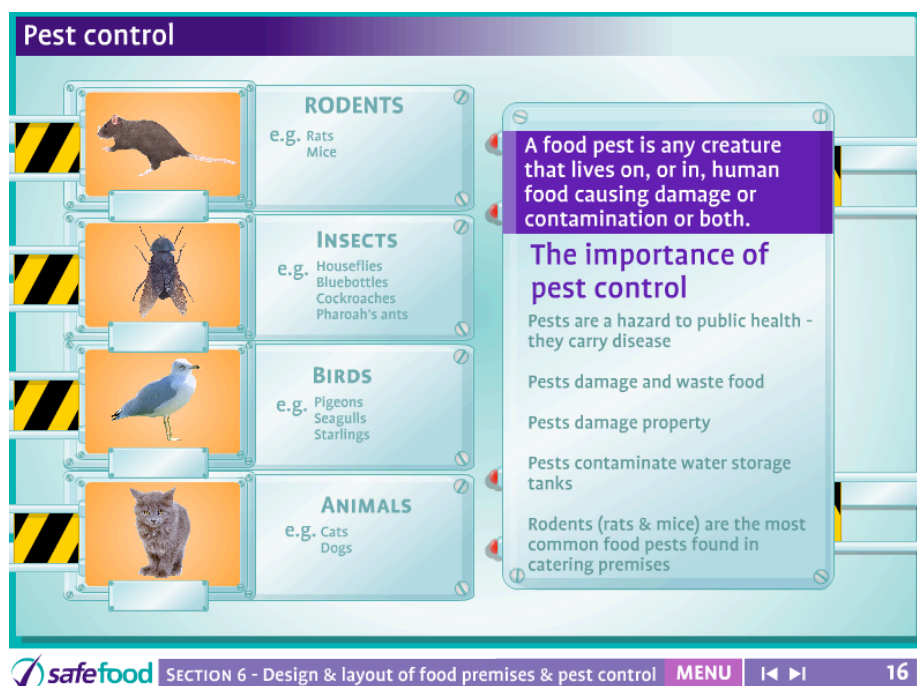
Teacher

Ask the students for their own suggestions

Vampires - Love - Wild - Drum - Rolls

Ventilation - Lighting - Water - Drainage -
Refuse

Screen 16



Pest control

Screen description

This screen depicts the importance of pest control and some common pests.

Teacher

Explain the most common pests as set out on the screen.

Ask individual students to place the list in alphabetical order and to repeat the list.

Why is pest control important in food premises?

1. Pests are a hazard to public health - they carry disease
2. Pests damage and waste food
3. Pests damage property
4. Pests can contaminate water storage tanks

Interactive Exercise:

Ask the students where their water storage tank is at home. They should know that it is in the attic. Ask the students if they are aware whether or not it is covered. Ask them if they could imagine what might happen if it is not covered. Suggest that they might check to see if it is covered at the next suitable opportunity.

Definition: A food pest

A food pest is any creature that lives on, or in, human food causing damage or contamination (or both) to that food. Pests are a source of food contamination.

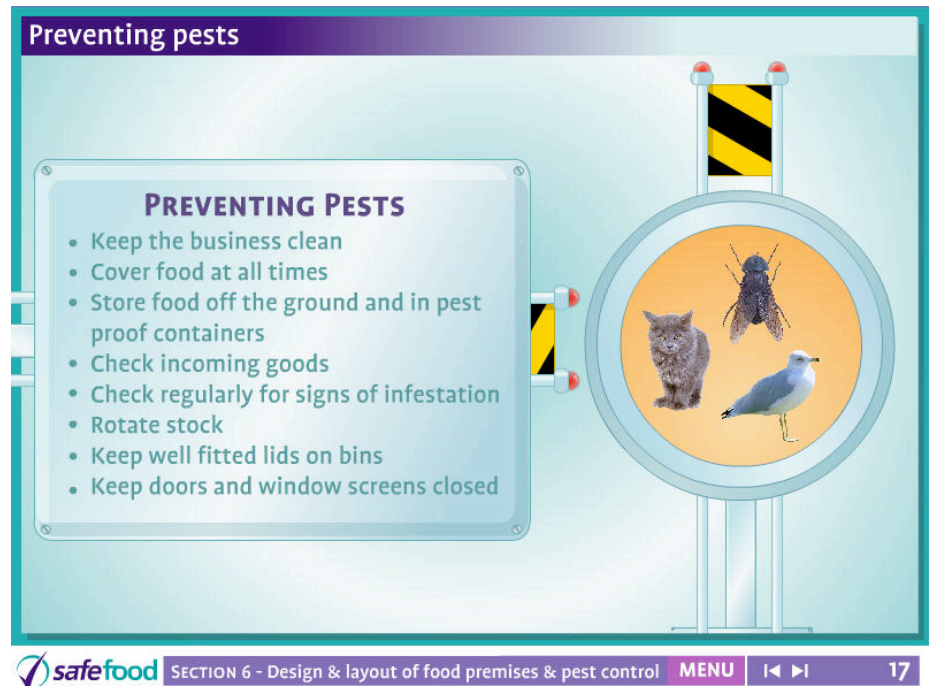
The most common food pests found in catering premises are:

Rodents, e.g. rats and mice

Other pests include:

- Insects, e.g. houseflies, bluebottles, cockroaches, pharaoh's ants
- Birds, e.g. pigeons and starlings
- Animals, e.g. cats and dogs

Screen 17



Preventing Pests

Screen Description

The screen lists ways to prevent pests.

Teacher

Ask the students for suggestions before showing them the points.


Preventing Pests

- Keep the business clean
- Cover food at all times
- Store food off the ground and in pest proof containers
- Check incoming goods
- Check regularly for signs of infestation
- Rotate stock
- Keep well fitted lids on bins

- Keep doors and window screens closed

Screen 18

Pest control - rodents



RATS	MICE
WEIGH APPROX. 300G	WEIGH APPROX. 20G
40CM LONG	8CM LONG
GAIN ENTRY THROUGH GAPS 12.5MM IN DIAMETER	GAIN ENTRY THROUGH GAPS 6MM IN DIAMETER
AFRAID OF NEW OBJECTS	MORE DIFFICULT TO CATCH
GOOD CLIMBERS AND SWIMMERS	PROLIFIC BREEDERS

SIGNS OF RODENT ACTIVITY

DROPPINGS, NIBBLED FOOD PACKAGES, GNAW MARKS AND HOLES, GREASY SMEARS ON PIPES, WALLS, ETC. PAW MARKS IN DUST, SHREDDED SCRAPS OF PAPER USED FOR NESTING	LIVE OR DEAD BODIES - RODENTS UNUSUAL SMELLS - RODENTS SPILLED FOOD - RODENTS FUR - RODENTS FEATHERS - BIRDS NESTING MATERIAL - RODENTS/BIRDS
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Pest control – rodents

Screen description

This screen shows information on rats and mice.

Teacher

Discuss screen with the students.

Ask the students if they have had any experience of rodents in the home.

Ask the students for suggestions of how to keep rodents out of homes or catering establishments.

To survive rats and mice need food, warmth and shelter. Their needs are similar to humans. Dirty premises, poor housekeeping and undisturbed shelter are ideal.

Rodents contaminate food (through urine, faeces etc.); they destroy property (electrical wiring, wooden structures etc.) by gnawing, and they spread disease (e.g. Weil's disease).

Rats

- Weigh approx. 300g
- 40cm long
- Gain entry through gaps 12.5mm in diameter

- Good climbers and swimmers
- Afraid of new objects

Mice

- Weigh approx. 20g
- 8cm long
- Gain entry through gaps 6mm in diameter
- Prolific breeders
- More difficult to catch

Signs of activity

- Droppings
- Nibbled food packages
- Gnaw marks and holes
- Greasy smears on pipes, walls etc.
- Paw marks in dust
- Shredded scraps of paper used for nesting
- Live or dead bodies - rodents
- Unusual smells - rodents
- Spilled food - rodents
- Fur - rodents
- Feathers - birds
- Nesting material – rodents/birds

Screen 19



Rodent controls

Screen description

Interactive suggestion screen.

Teacher

This screen allows the teacher to display suggestions from the students on screen. In the box on the right fill in the student's name, and their suggestion. When you click 'submit' the student's name and suggestion appear from the left.

Examine a mousetrap and demonstrate to the students how it is operated. Discuss with them the different types of bait that would be suitable.

Ask the students to suggest where mousetraps should be set for maximum effect.

Discuss the cost of the methods of control and indicate to the students that it is much more cost effective to prevent the introduction of pests rather than to deal with them, especially if there should be a serious outbreak of food poisoning resulting from the presence of the pests.

Eliminate shelter and food

- Proper storage of food
- Removal of waste and storage in sealed containers
- Good housekeeping, good ground maintenance

Rodent proof the building

- Fill all gaps and holes
- Fit metal kick plates to the base of external doors
- Keep all doors and windows closed
- Ensure that doors are tight fitting
- Cover drains and fit wire mesh to pipe ends
- Fill all gaps and holes and use mesh screens to prevent access to the building

Trap or lay bait

- Professional advice should be sought

Ensure the following are included in the controls for either rodents or insects or birds:

Electronic fly killers - insects

Monitors (bait removal/sticky surface) - rodents

Insecticide sprays - insects

Pesticide baits - rodents

Shoots (mainly bird pests)

Screen 20

Pest controls - insects


HOUSEFLIES & BLUEBOTTLES

They feed by vomiting on the food, stamping in it and sucking up the liquid

They feed on human and animal excreta

They carry harmful bacteria in their mouths and intestines and on their legs - rephrase

They lay eggs on food



COCKROACHES

Nocturnal - infestations may go undetected

Found in crevices in walls and floors, behind sinks and cookers, in boiler rooms, heating ducts etc.

Attracted to sweet and starchy food

Contaminate food utensils, worktops

Carriers of diseases and food poisoning bacteria




SIGNS OF INSECT ACTIVITY

MOULTED SKINS - COCKROACHES

LARVAE/EGGS - BLUEBOTTLES

WEBBINGS/FRASS - MITES & MOTHS

DROPPINGS - RATS & MICE

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Pest controls - insects

Screen description

The screen shows information on insects

Teacher

Ask the students how they keep flies from their own homes during the summer months. Evaluate with the students if this is a suitable way of dealing with insects in a catering establishment, for instance sprays should not be used as they may contaminate worktops, equipment and food.

Ensure the students understand the term 'nocturnal'.

Ask the students if they can distinguish between a cockroach and a bluebottle. Ensure that the class is aware of the differences. A cockroach is much bigger, bluebottles have a navy blue shiny colour.

Insects are capable of causing food poisoning.

Houseflies and bluebottles

- They feed by vomiting on the food, stamping it in and sucking up the liquid
- They feed on human and animal excreta
- They carry harmful bacteria in their mouths, intestines and on their legs
- They lay eggs on food (100-150 eggs), maggots emerge from the eggs which then burrow into the food, feeding until fully grown.

Cockroaches

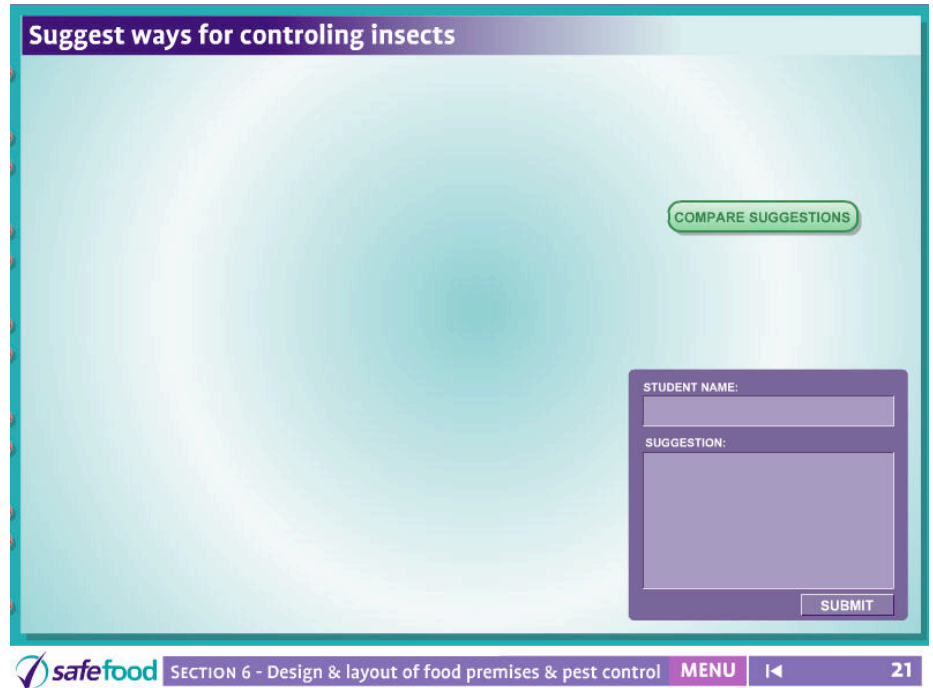
- German (steamy fly) and Oriental (black beetle) are found in Ireland
- They are nocturnal insects so infestations can go undetected for long periods
- They are found in crevices in walls and floors, behind sinks and cookers, in boiler rooms, heating ducts

- Attracted to sweet and starchy foods
- They contaminate food, utensils, worktops etc.
- They are carriers of diseases and food poisoning bacteria

Signs of activity

- Moulded skins - Cockroaches
- Larvae/eggs - Bluebottles
- Webbing/Frass - Mites & Moths
- Droppings - Rats & Mice

Screen 21



Insect control

Screen description

Interactive suggestion screen.

Teacher

This screen allows the teacher to display suggestions from the students on screen. In the box on the right fill in the student's name and their suggestion. When you click 'submit' the student's name and suggestion appear from the left.

Insect control

- Eliminate shelter
- Good food housekeeping
- Proper storage and cleaning of refuse bins
- Good ventilation
- Store foods in insect-proof containers
- Check all food deliveries
- Insect-proof the premises with flyscreens fitted on external doors and openable windows
- Repair cracks in floors and walls
- Use ultra violet insect killers. It is important that tubes are changed as required and that they are suitably sited, i.e. not above food or food preparation areas
- Seek professional advice if using insecticides