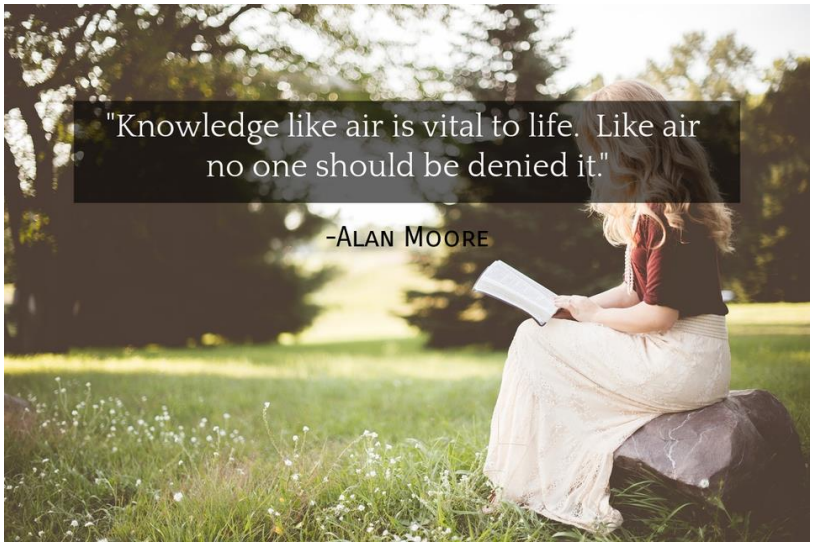
Dorset Studio School
CENTRE OF EXCELLENCE FOR ENVIRONMENTAL SCIENCES

Knowledge Organiser Booklet

Year 9 Summer Half Term 1



Name:_____ Tutor group:_____

Contents

Education Endowment Foundation

Research carried out by the Education Endowment Foundation proved that: Homework has a positive impact on average of + 5 months, particularly with pupils in secondary schools.

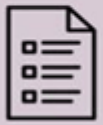
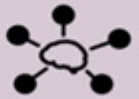
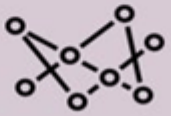
Home learning timetable

The table below details which days each subject will set home learning on each week. Students will have one week to complete home learning tasks for each subject.

Group	Monday	Tuesday	Wednesday	Thursday	Friday
9N	Chemistry Physics	English Biology	Animal Care	Maths Reading	Land based Humanities
9E	Biology Reading	Chemistry Physics	Land based English	Maths	Animal Care Humanities
9W	Reading	Chemistry Biology	Land Based English	Maths Physics	Animal Care Humanities

These knowledge organisers have been created by your teachers to support your learning both in class and for home learning. They are also a valuable revision tool for you to use independently when preparing for assessments. It is important that you make good use of your knowledge organisers by learning how to use them in different ways.

How to use a knowledge organiser – step by step guide

	Look, Cover, Write, Check	Definitions of Key Words	Flash Cards	Self Quizzing	Mind Maps	Paired Retrieval
Step 1	Look at and study a specific area of your KO. 	Write down the key words and definitions. 	Use your KO to condense and write down key facts or information onto flash cards. 	Use your KO to create a mini quiz. Write down your questions using your KO. 	Create a mind map with all the information you can remember from your KO. 	Ask a friend or family member to have the KO or flash cards in their hands. 
Step 2	Cover or flip the KO over and write down everything you can remember. 	Try not to use your KO to help you. 	Add pictures to help support. Then self-quiz using the flash cards. You could write questions on one side, and answers on the other! 	Answer the questions and remember to use full sentences. 	Check your KO to see if there are any mistakes on your mind map. 	They can test you by asking you questions on different sections of your KO. 
Step 3	Check what you have written down. Correct any mistakes in green pen and add anything you have missed. Repeat. 	Use your green pen to check your work. 	Ask a friend or family member to quiz you on the knowledge. 	Ask a friend or family member to quiz you using the questions. 	Try to make connections, linking the information together. 	Write down your answers, 

Pygmalion **Year 9 English: Summer 1**

5.1 Key Vocabulary

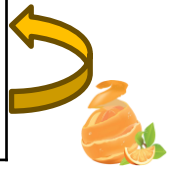
Stage Direction	An unusually long speech in which a character who is on stage alone expresses his or her thoughts aloud.
Aside	Words spoken by a character to the audience or to another character but that are not supposed to be overheard by the other characters onstage.
Dramatic irony	The audience or reader knows something important that a character in a play or story doesn't know.
Foil	A character who is used as a contrast to another; the writer sets off/intensifies the qualities of two characters this way.
Oxymoron	A combination of contradictory terms used to create a specific impact on the audience or reader.
Comic Relief	Humor added through a section of the main narrative that lessens the seriousness of the plot (often through a specific character or characters).
Tragic Flaw	(Also known as **hamartia**) a flaw in a character that brings about the downfall of the hero of a tragedy.
Catharsis	A purifying or purging that brings about spiritual renewal or release from tension.
Motif	A recurring thematic element, especially a dominant idea or central theme.

5.2 Key Quotations

Quotation	Meaning
"It's aw rawt: e's a genleman: look at his ba-oots."	Eliza judges those around her based on their clothing, wealth and speech. Shaw is saying this normal in society.
"A woman who utters such depressing and disgusting sounds has no right to be anywhere—no right to live."	Higgins, like many people at the time, judges Eliza based on her quality of speech, rather than on the content of her character. Shaw feels that this assumption about a person's value based on money and 'breeding' is unfair.
"I find that … a woman … becomes jealous, exacting, suspicious, and a damned nuisance."	Higgins is a symbol of misogynism (male dislike and judgement of women) and the male patriarchy (male-dominated society). He speaks the dominant view of men of the time in many of his speeches.
"The girl belongs to me."	Higgins fails to respect and appreciate Eliza as a person. He sees her as his.
"The new small talk. You do it so awfully well."	Freddy sees Eliza as something entertaining and amusing. His obsession means he misses reality.
"I'd like to kill you, you selfish brute."	Eliza tells Higgins how she feels about him following the experiment. Higgins fails to understand why she would be upset with him.

5.3 – Structuring Arguments

Point	Evidence	Explain	Link
The writer uses… The writer gives the impression that… We can clearly see…	We see this when… …in the line "___" When X says "___"…	This… suggests implies highlights illustrates portrays conveys the idea contrasts with	A Shakespearean audience might respond to this by… Jacobeans saw religion as…



Point **E**vidence **E**xplain **L**ink

PARAGRAPH STRUCTURE

5.4 Context / Cultural Capital

Social Class in Edwardian England

The Edwardian era, spanning roughly from 1901 to 1914, marked the reign of **King Edward VII** in Britain
In the early Twentieth Century when 'Pygmalion' is set, English society was structured into three distinct social classes.

The Upper Class

- The upper class were the **wealthiest members of society**
- Their **wealth was inherited**, i.e. passed down from generation to generation
- **Members of the upper class had titles** such as Lord, Lady, Baron, Baroness, Sir, Duke, and so on
- In 'Pygmalion' none of the major characters are upper class. They are used **as a way of showing how Edwardians measured social expectation and standards, since they are in the position to judge** the quality of Eliza's transformation (whether they choose to accept her or not)
- **THINK FORWARD TO YEAR 10…** In **'An Inspector Calls',** Lord and Lady Croft and their son Gerald represent the upper classes in Edwardian society. The Croft family symbolise the greed and selfishness of those with inherited wealth, judging others according to their circumstances of birth

The Middle Class

- The middle class was made up of people that **had wealth, but not good breeding**
- Their wealth could be inherited or they could be 'nouveau riche' (new rich) meaning that they had gained money through successful business endeavours
- In 'Pygmalion' **Professor Higgins, Colonel Pickering and Freddy Eynsford-Hill** would be considered upper-**middle class**, since they are wealthy and educated and from 'good families, but not titled or with substantial amounts of inherited wealth or stately homes
- **THINK FORWARD TO YEAR 10…** In **'An Inspector Calls',** the Birling family represents the middle classes in Edwardian society – Mr. Birling has made his money through ownership of a factory in the industrial revolution. The Birlings' refusal to take responsibility for their actions and abuse of power is a central theme in the play

The Working Class

- The working class were the **poorest and least educated members of society**
- They had **very little wealth and often lived hand to mouth** (making just enough money to feed themselves and gain shelter)
- In 'Pygmalion' **Eliza Doolittle and her father (Alfred Doolittle) are considered working class**, since they are poor and uneducated
- **THINK FORWARD TO YEAR 10…** In **'An Inspector Calls',** the working class are represented by Eva Smith/Daisy Renton and Edna (the Birling's maid). The way each member of the Birling family treats Eva (very badly) is the main content of the narrative through the passage of the play (though we never actually see Eva through the course of the play and Priestley gives her no lines)

Using Language Effectively

Metaphor	an image or idea used to represent something else
Simile	a comparison using 'like' or 'as
Personification	applying human qualities to something inanimate
Pathetic fallacy	using the weather to reflect mood / personification of the weather
Sensory imagery	descriptions involving, taste, touch, smell, sight or sound
Dialogue	speech between characters
Oxymoron	pairing two words together that are opposing and/or contradictory

SENTENCES TO IMPRESS

TWO ADJECTIVES Enraged and exasperated…	**ADVERB** Listlessly,… Stealthily,…	**PREPOSITIONS** Beyond the abyss… Towards the inferno…
SIMILE As silent as a whisper	**-ING SENTENCES** Pirouetting in the wind…	**LIST OF THREE** Tumbling, turning, twisting…
QUESTION WORDS What was my next move?	**SINGLE WORDS** Silence.	**REPETITION** Again and again and again…

Structure and organisation

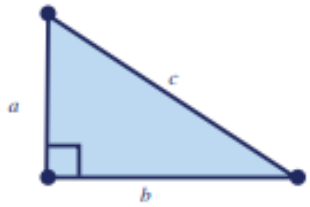
STRUCTURE:
All forms of writing must use paragraphs correctly.
One way to remember this is **'Tip Top'**.

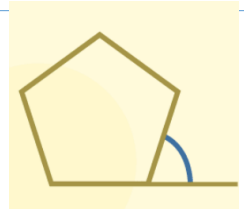
Juxtaposition	contrast for deliberate effect
Circular structure	The ending returns to an idea or image from the beginning
Analepsis	Flashback to a previous event

Spelling, Punctuation and Grammar

PUNCTUATION TO IMPRESS

COLON : Parapets, saps, dugouts: damage from the bombardment was everywhere.	**SEMI COLON ;** The boom resounded sonorously across the valley; we cowered against the wall.
ELLIPSIS … It was only a matter of time before…	**DASH -** The thunder – its ally – rumbled alongside.
QUESTION MARK ? Was it about to claim its next victim?	**QUOTATION MARKS** The sea shrieked, 'You are mine now. All mine.'

Key Term	Definition
Right-angled triangle	A triangle that contains a 90^0 angle
Hypotenuse	The longest side – opposite the right angle
Pythagoras' theorem	For any right-angled triangle, the area of the square of the longer length (the hypotenuse) is equal to the area of the squares of the shorter lengths added together. $c^2 = a^2 + b^2$ $a^2 = c^2 - b^2$ $b^2 = c^2 - a^2$ 

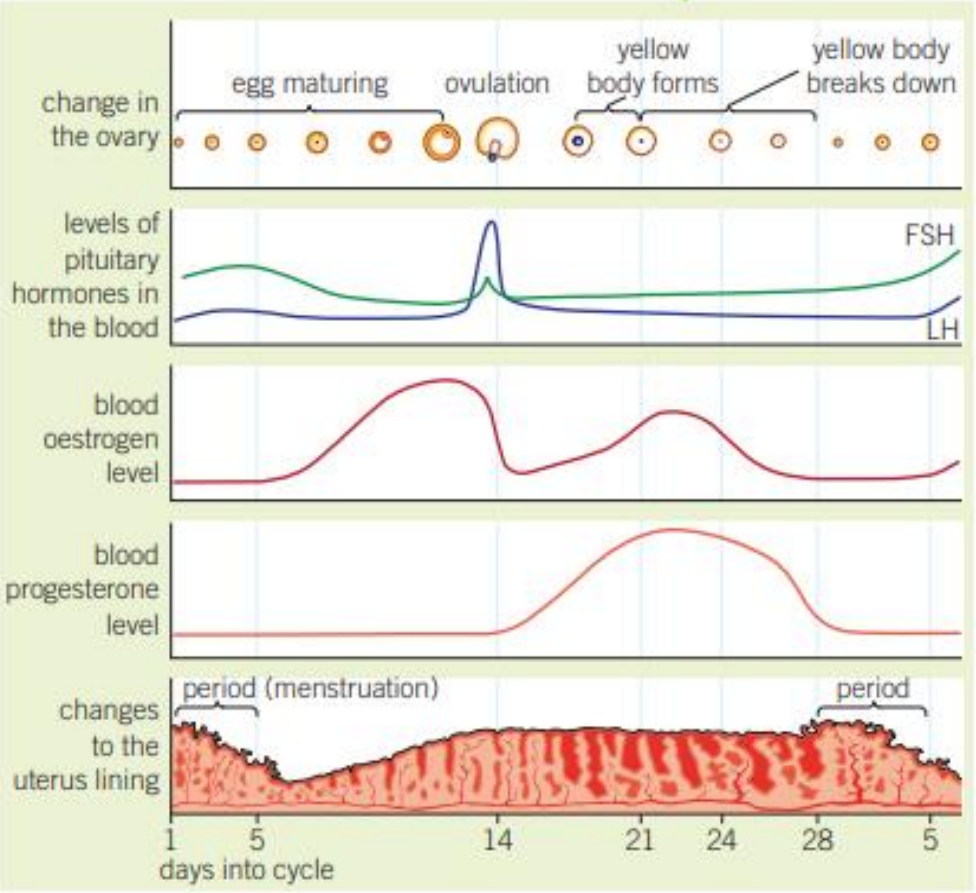
Key Term	Definition
Sum of all angles in Polygons	n is the number of sides. $(n-2) \times 180$
Internal angle in regular polygon	$\frac{(n-2) \times 180}{n}$
External angle	The angle between a side of a polygon and an extended adjacent side.
Exterior angle regular polygon	 $\frac{360}{n}$

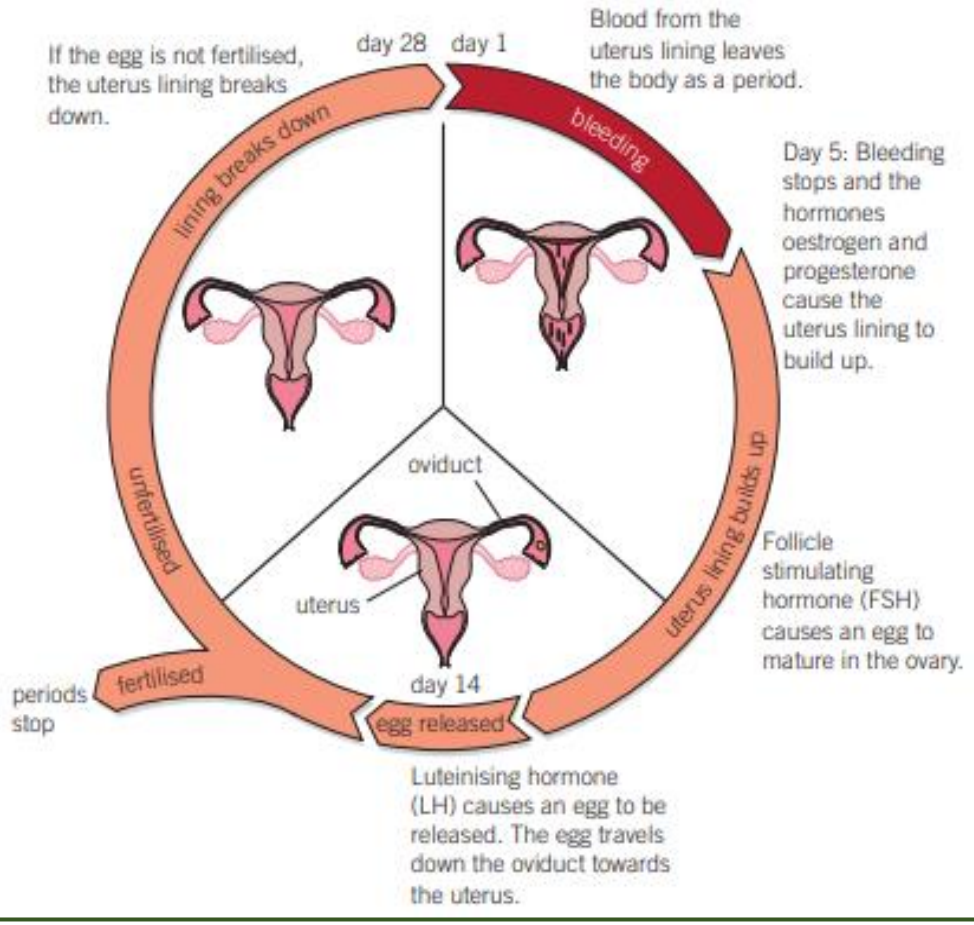
Key term	Definition
Translation	Translate means to move a shape. The shape does not change size or orientation.
Column Vector	In a column vector, the top number moves left (-) or right (+) and the bottom number moves up (+) or down (-)
Rotation	The size does not change, but the shape is turned around a point.
Reflection	The size does not change, but the shape is 'flipped' like in a mirror. Line is a vertical mirror line. Line is a horizontal mirror line. Line is a diagonal mirror line.
Enlargement	The shape will get bigger or smaller in relation to a centre of enlargement. Multiply each side by the scale factor.
Scale factor	The multiplier for the length of each side of a shape when carrying out an enlargement.
Centre	Used in rotations and enlargements as the centre for the transformation.

Key Term	Definition
Direct Proportion	If two quantities are in direct proportion, as one increases, the other increases by the same percentage.
Inverse Proportion	If two quantities are inversely proportional, as one increases, the other decreases by the same percentage.
Scale Factor	A factor by which a shape is enlarged
Ratio	Comparing the size of one part to another. The ratio of a to b is written as a:b.
Equivalent ratio	Equivalent ratios are found by multiplying/dividing all parts of the ratio by the same value.

The **endocrine system** is composed of glands that secrete chemicals called **hormones** into the **bloodstream**. The blood carries hormones to a target organ, where an effect is produced. Compared to the nervous system, the effects caused by the endocrine system are slower but act for longer.

During puberty, reproductive hormones cause the secondary sex characteristics to develop:
Oestrogen : main female reproductive hormone, produced in the ovary
Testosterone : main male reproductive hormone, produced by the testes, stimulates sperm production





Hormone	Released by	Function
follicle stimulating hormone (FSH)	pituitary gland	causes eggs to mature in the ovaries stimulates ovaries to produce oestrogen
luteinising hormone (LH)	pituitary gland	stimulates the release of mature eggs from the ovaries (ovulation)
oestrogen	ovaries	causes lining of uterus wall to thicken inhibits release of FSH stimulates release of LH
progesterone	ovaries	maintains thick uterus lining inhibits release of FSH and LH

Fertility can be controlled by a variety of hormonal and non-hormonal methods of contraception.

Hormonal contraception

- oral contraceptives – contain hormones to inhibit FSH production so no eggs mature
- injection, implant, skin patch, or intrauterine devices (IUD) – slowly release progesterone to inhibit maturation and release of eggs; can last months or years

Non-hormonal contraception

- barrier methods, for example, condoms and diaphragms – prevent sperm reaching the egg
- copper IUD – prevents the implantation of an embryo
- surgical methods of male and female sterilisation
- spermicidal agents – kill or disable sperm
- abstaining from intercourse when an egg may be in the oviduct

Treating infertility with hormones (HT only)

Hormones are used in modern reproductive technologies to treat **infertility.**
FSH and LH can be given as a drug to treat infertility, or **in vitro fertilization.**

IVF treatment

1 mother given FSH and LH to stimulate the maturation of several eggs
2 eggs collected from the mother and fertilised by sperm from the father in a laboratory
3 fertilised eggs develop into embryos
4 one or two embryos are inserted into the mother's uterus (womb) when the embryos are still tiny balls of cells

Individual organisms

Population
the total number of organisms of the same species that live in one specific geographical area

Community
group of two or more populations of different species living in one specific geographical area

Ecosystem
the interaction of a community of living organisms with the non-living parts of their environment

Interspecific competition is between organisms of different species and **intraspecific** competition is between organisms of the same species.

Abiotic factors are non-living factors in the ecosystem that can affect a community.

Too much or too little of the following abiotic factors can negatively affect the community in an ecosystem:

- carbon dioxide levels for plants
- light intensity
- moisture levels
- oxygen levels for animals that live in water
- soil pH and mineral content
- temperature
- wind intensity and direction.

Biotic factors are living factors in the ecosystem that can affect a community.

The following biotic factors would all negatively affect populations in a community:

- decreased availability of food
- new predators arriving
- new pathogens
- competition between species.

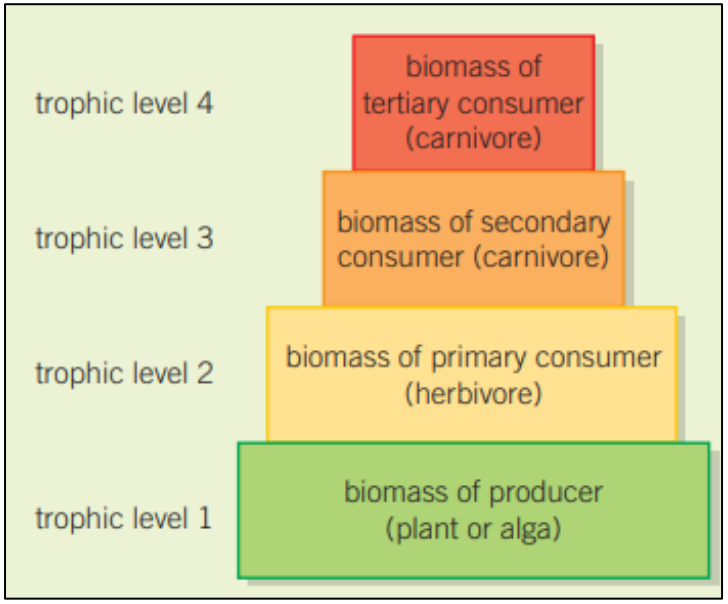
Organisms have features – **adaptations –** that enable them to survive in the conditions in which they live.

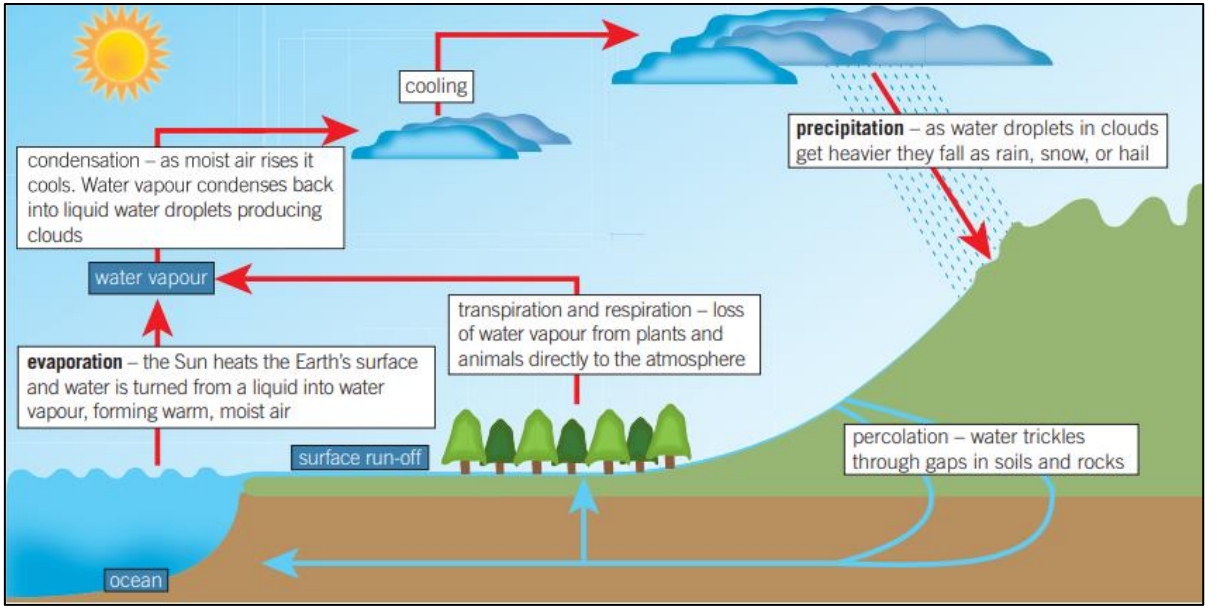
Structural adaptations
The physical features that allow an organism to successfully compete:
- sharp teeth to hunt prey
- colouring that may provide camouflage to hide from predators or hunt prey
- a large or small body-surface area-to-volume ratio.

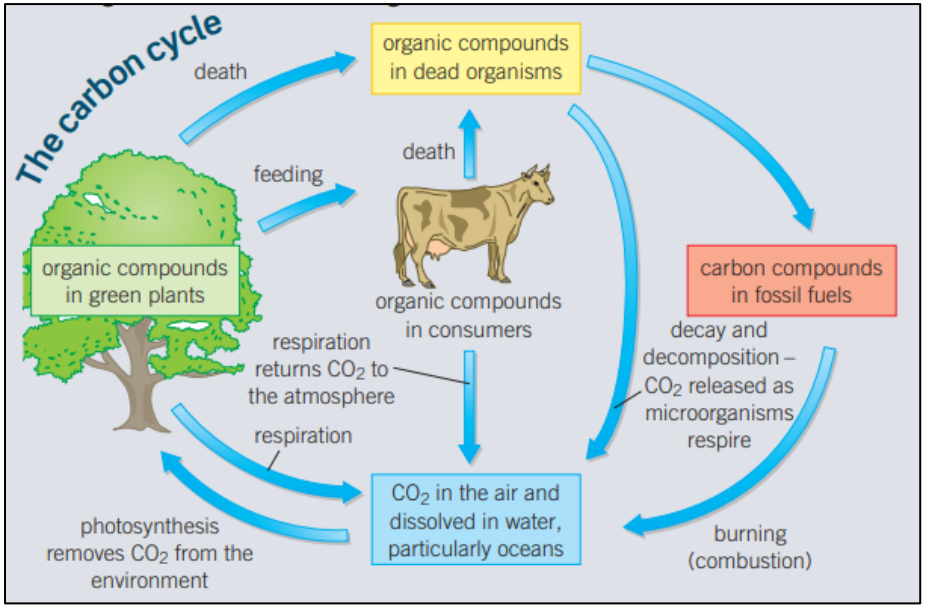
Behavioural adaptations
The behaviour of an organism that gives it an advantage:
- making nests to attract a mate
- courtship dances to attract a mate
- use of tools to obtain food
- working together in packs.

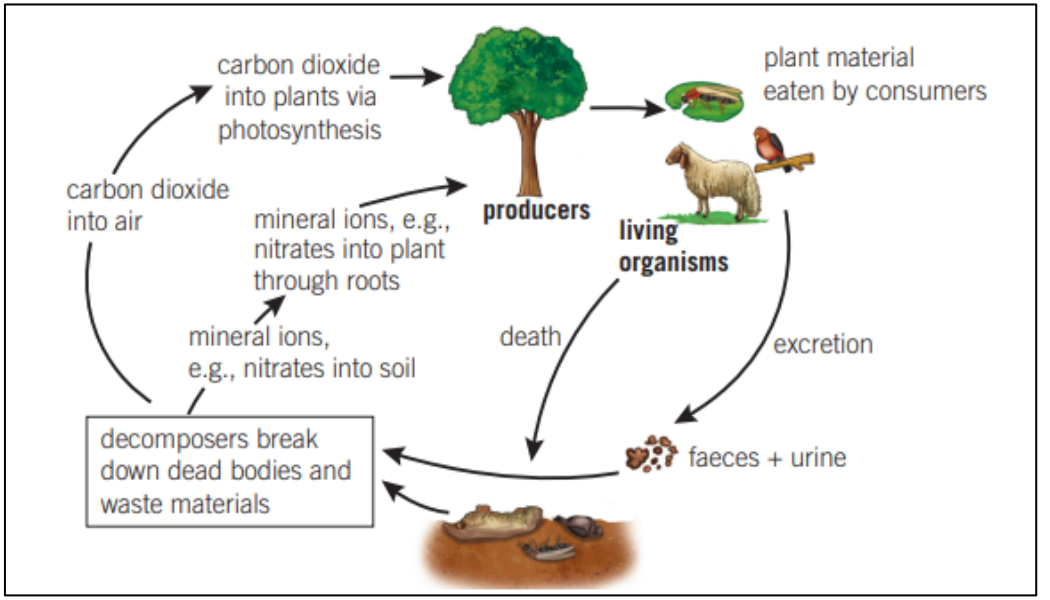
Functional adaptations
Adaptations related to processes that allow an organism to survive:
- photosynthesis in plants
- production of poisons or venom to deter predators and kill prey
- changes in reproduction timings.

Within a community each species interacts with many others and may depend on other species. If one species is removed it can affect the whole community – this is called **interdependence.**


trophic level 4
biomass of tertiary consumer (carnivore)
trophic level 3
biomass of secondary consumer (carnivore)
trophic level 2
biomass of primary consumer (herbivore)
trophic level 1
biomass of producer (plant or alga)


cooling
condensation – as moist air rises it cools. Water vapour condenses back into liquid water droplets producing clouds
precipitation – as water droplets in clouds get heavier they fall as rain, snow, or hail
water vapour
transpiration and respiration – loss of water vapour from plants and animals directly to the atmosphere
evaporation – the Sun heats the Earth's surface and water is turned from a liquid into water vapour, forming warm, moist air
surface run-off
percolation – water trickles through gaps in soils and rocks
ocean


The carbon cycle
death
organic compounds in dead organisms
feeding
death
organic compounds in green plants
organic compounds in consumers
carbon compounds in fossil fuels
respiration returns CO_2 to the atmosphere
decay and decomposition – CO_2 released as microorganisms respire
respiration
CO_2 in the air and dissolved in water, particularly oceans
photosynthesis removes CO_2 from the environment
burning (combustion)


carbon dioxide into plants via photosynthesis
plant material eaten by consumers
carbon dioxide into air
mineral ions, e.g., nitrates into plant through roots
producers
living organisms
mineral ions, e.g., nitrates into soil
death
excretion
decomposers break down dead bodies and waste materials
faeces + urine

In science, a **pure** substance contains a **single element or compound** that is not mixed with any other substance.
Pure substances **melt and boil** at **specific temperatures**.

Formulations are **mixtures**. They have many different components (substances that make them up) in very **specific proportions** (amounts compared to each other). Each component has a **specific purpose** in the mixture.

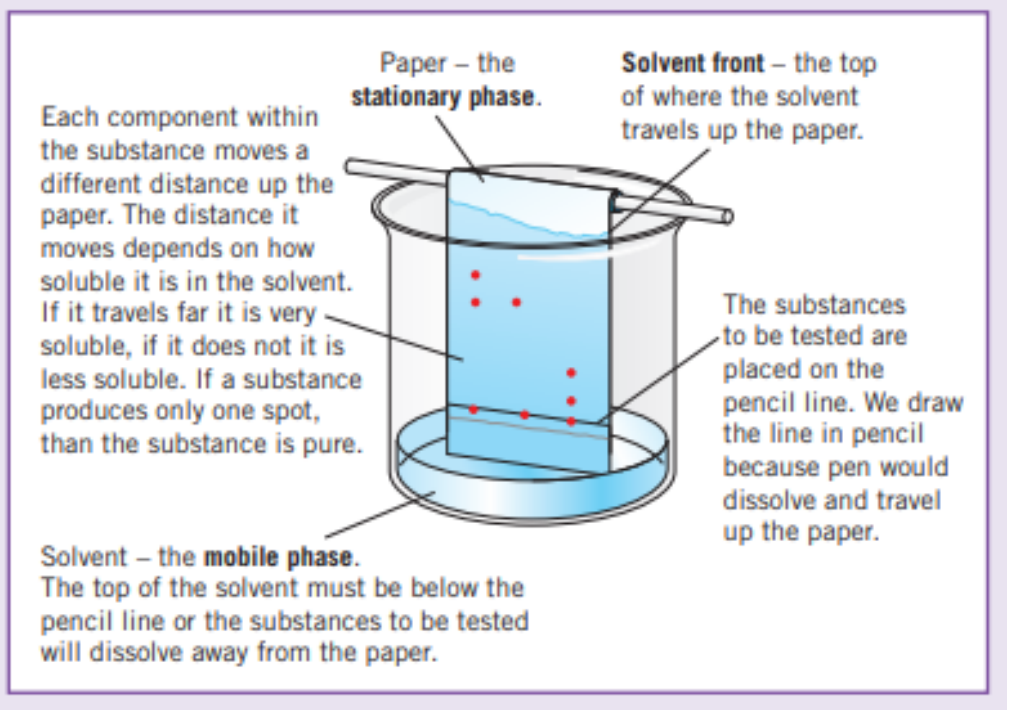
Chromatography is a method to separate different components in a mixture. It is set up with a piece of paper in a beaker containing a small amount of solvent.
The **Rf value** is a ratio of how far up the paper a certain spot moves compared to how far the solvent has travelled.

Rf = distance moved by substance ÷ distance moved by solvent

It will always be a number between 0 and 1. The Rf value depends on the solvent and the temperature, and different substances will have different Rf values. The Rf values for particular solvents can be used to identify a substance.

Tests for different gases.

Hydrogen	hold a lighted splint near the gas	hear a squeaky pop
Oxygen	hold a glowing splint near the gas	splint re-lights
Carbon dioxide	bubble the gas through limewater	the limewater turns milky (cloudy white)
Chlorine	hold a piece of damp litmus near the gas	bleaches the litmus white



Charge is a fundamental property of matter. Charge can be **positive** or **negative**. Charge is measured in **coulomb (C)**.

The symbol for **charge** is **Q**.

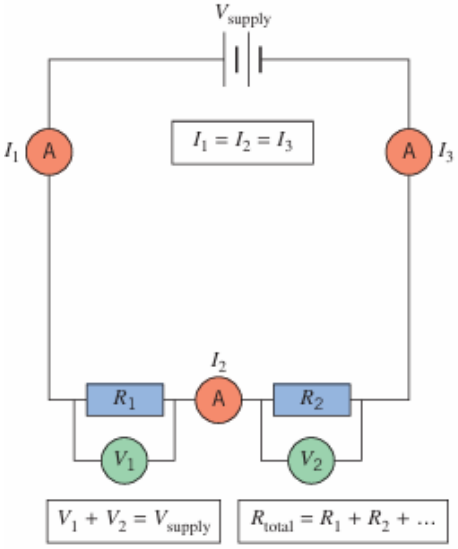
Electric current is the **rate of flow** of **charge**. Current is measured in **ampere (amp, A)**.

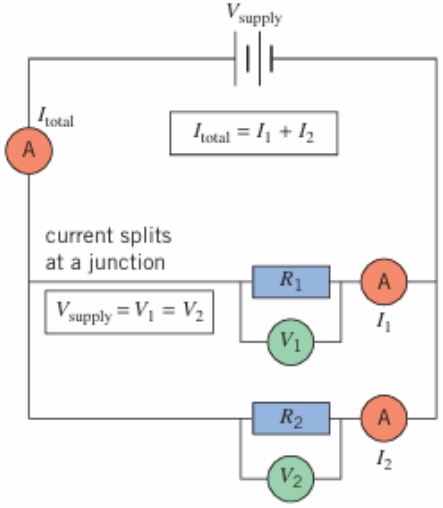
The symbol for **current** is **I**.

1 ampere = 1 coulomb of charge per second

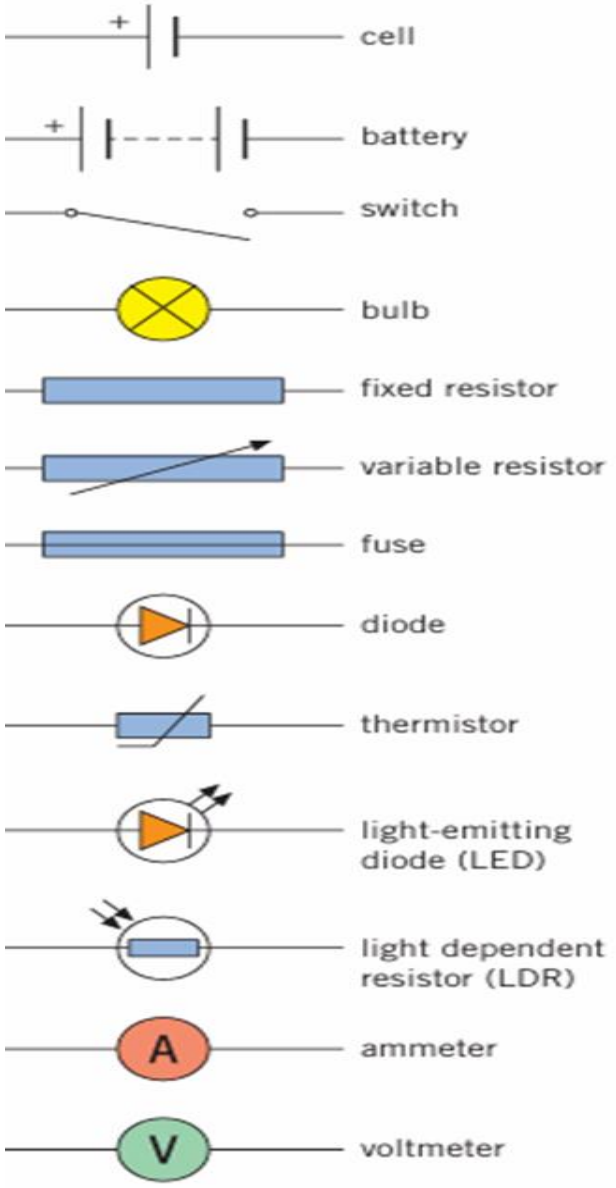
Charge = Current x Time

Current = Charge ÷ Time





Ammeters are placed in series. Voltmeters are placed in parallel with the component being measured.



A **cell** or a **battery** provides a **direct current (dc)**. The current only flows in one direction (positive to negative) and is produced by a direct potential difference.

Mains electricity provides an **alternating current (ac)**. The current repeatedly reverses direction and is produced by an alternating potential difference. The **frequency** of the mains electricity supply is **50 Hz** and its **potential difference** is **230 V**.

Ecosystems - Rainforests

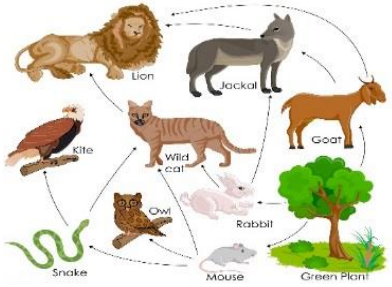
Year 9 Humanities: Summer 1

What is an Ecosystem?

An ecosystem is a system in which organisms interact with each other and with their environment.

Ecosystem's Components

Abiotic	These are **non-living**, such as air, water, heat and rock.	
Biotic	These are **living**, such as plants, insects, and animals.	
↳	**Flora**	**Plant life** occurring in a particular region or time.
	Fauna	**Animal life** of any particular region or time.



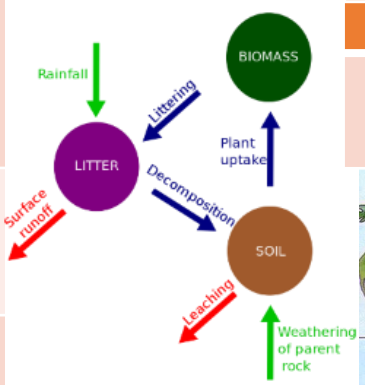
Food Web and Chains

Simple **food chains** are useful in explaining the basic principles behind ecosystems. They show only one species at a particular trophic level. **Food webs** however consists of a network of many food chains interconnected together.

Nutrient cycle

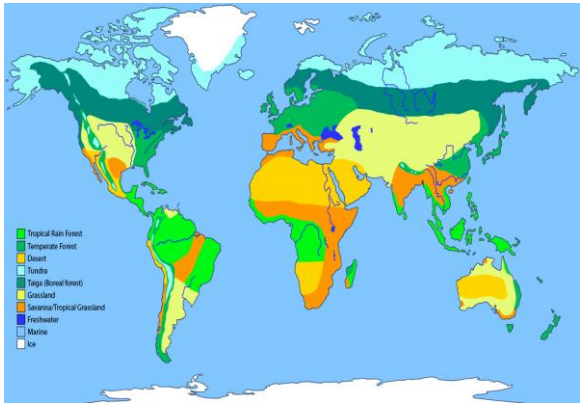
Plants take in **nutrients** to build into new organic matter. Nutrients are taken up when animals eat plants and then returned to the soil when animals die and the body is broken down by **decomposers**.

Litter	This is the **surface layer** of vegetation, which over time breaks down to become **humus**.
Biomass	The total **mass of living organisms** per unit area.



Biomes

A biome is a **large geographical area of distinctive plant and animal groups**, which are adapted to that particular environment. The climate and geography of a region determines what type of biome can exist in that region.



- Coniferous forest
- Deciduous forest
- Tropical rainforests
- Tundra
- Temperate grasslands
- Tropical grasslands
- Hot deserts.

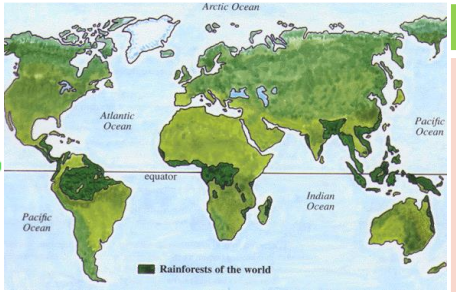
The **most productive biomes** – which have the greatest biomass- grow in climates that are **hot and wet**.

Tropical Rainforest Biome

Tropical rainforest cover about **2 per cent** of the Earth's surface yet they are home to **over half of the world's plant and animals**.

Interdependence in the rainforest

A rainforest works through **interdependence**. This is where the plants and animals **depend on each other** for survival. If one component changes, there can be **serious knock-up effects** for the entire ecosystem.



Distribution of Tropical Rainforests

Tropical rainforests are **centred along the Equator** between the Tropic of Cancer and Capricorn. Rainforests can be found in South America, central Africa and South-East Asia. **The Amazon** is the world's largest rainforest and takes up the majority of northern South America, encompassing countries such as Brazil and Peru.

Eco systems - Rainforests

Year 9 Humanities: Summer 1

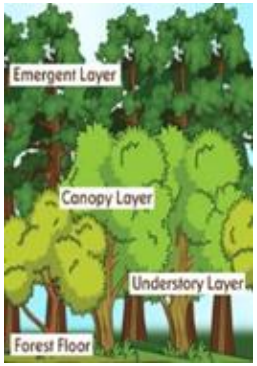
Biome climates and plants

Biome	Location	Temperature	Rainfall	Flora	Fauna
Tropical rainforest	Centred along the Equator.	Hot all year (25-30°C)	Very high (over 200mm/year)	Tall trees forming a canopy; wide variety of species.	Greatest range of different animal species. Most live in canopy layer
Tropical grasslands	Between latitudes 5°- 30° north & south of Equator.	Warm all year (20-30°C)	Wet + dry season (500-1500mm/year)	Grasslands with widely spaced trees.	Large hoofed herbivores and carnivores dominate.
Hot desert	Found along the tropics of Cancer and Capricorn.	Hot by day (over 30°C) Cold by night	Very low (below 300mm/year)	Lack of plants and few species; adapted to drought.	Many animals are small and nocturnal: except for the camel.
Temperate forest	Between latitudes 40°-60° north of Equator.	Warm summers + mild winters (5-20°C)	Variable rainfall (500-1500m /year)	Mainly deciduous trees; a variety of species.	Animals adapt to colder and warmer climates. Some migrate.
Tundra	Far Latitudes of 65° north and south of Equator	Cold winter + cool summers (below 10°C)	Low rainfall (below 500mm/ year)	Small plants grow close to the ground and only in summer.	Low number of species. Most animals found along coast.
Coral Reefs	Found within 30° north – south of Equator in tropical waters.	Warm water all year round with temperatures of 18°C	Wet + dry seasons. Rainfall varies greatly due to location.	Small range of plant life which includes algae and sea grasses that shelters reef animals.	Dominated by polyps and a diverse range of fish species.

Rainforest nutrient cycle

The **hot, damp conditions** on the forest floor allow for the **rapid decomposition** of dead plant material. This provides plentiful nutrients that are easily absorbed by plant roots. However, as these nutrients are in high demand from the many fast-growing plants, they do not remain in the soil for long and stay close to the surface. If vegetation is removed, the soils quickly become **infertile**.

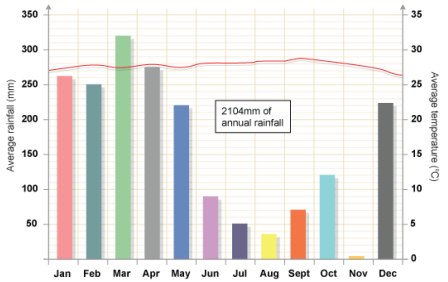
Layers of the Rainforest



Emergent	Highest layer with trees reaching **50 metres.**
Canopy	80% of life is found here as It receives **most of the sunlight and rainfall.**
U-Canopy	Consists of trees that reach **20 metres high.**
Shrub Layer	Lowest layer with **small trees** that have adapted to living in the **shade.**

Climate of Tropical Rainforests

- Evening temperatures rarely fall below **22°C.**
- Due to the **presence of clouds**, temperatures rarely rise above **32°C**.
- Most afternoons have heavy showers.
- At night with no clouds insulating, temperature drops.



CASE STUDY: UK Ecosystem: Epping Forest, Essex

This is a typical English lowland deciduous woodland. **70% of area** is designated as a **Site of Special Scientific Interest (SSI)** for its biological interest, with **66 %** designated as a **Special Area of Conservation (SAC).**

Components & Interrelationships		Management
Spring	**Flowering plants** (producers) such as bluebells store nutrients to be eaten by consumers later.	- Epping has been managed for centuries. - Currently now used for **recreation** and **conservation**. - Visitors **pick fruit** and berries, helping to **disperse seeds**. - Trees cut down to encourage **new growth for timber.**
Summer	Broad tree leaves grow quickly to **maximise photosynthesis**.	
Autumn	Trees shed leaves to **conserve energy** due to sunlight hours decreasing.	
Winter	Bacteria **decompose** the leaf litter, releasing the nutrients into the soil.	

Kick Sampling - How to monitor the health of a river.

What
Kick sampling is a method used to collect invertebrates living in rivers to identify and count them.

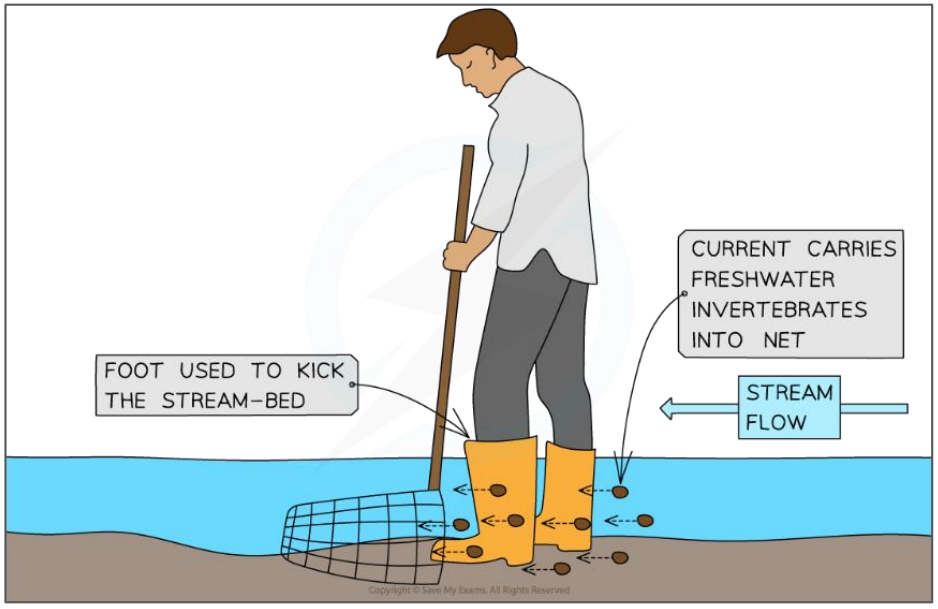
Why
Collecting invertebrates and identifying the types you find can tell you about the health of the river.

When
Twice a year.
Once in spring and once in autumn.

How

Equipment
- White sample tray
- ID guide
- Hand lens
- Plastic spoon or pipette

Watch how it's done using the QR code



What to look for in a healthy river


Caddis fly


Mayfly


Stonefly


Damselfly


Dragonfly

What to look for in an unhealthy river


Midge


Water louse


Leech

Animal Care

Learners will develop their practical skills in cleaning animal accommodation and equipment used for different animals using safe working practices.

Safe cleaning practices

Working safely

Animals like a routine

Why it is important for animals to have routines: – they like to eat, exercise and sleep at similar times and breaking the routine can unsettle them.

Cleaning routines

- Stick to a schedule
- Keep the same routine
- Get everything ready
- Move the animal to a safe location
- Start cleaning
- Clean bowls, enrichment, etc.
- Once the accommodation is dry, let the animal back in
- Clean and return equipment to its storage area

Safe working practices

Handling animals may involve risk of injury or illness. A number of regulations are in place governing the safe handling of animals:

Health and Safety at Work Act 1974
Management of Health and Safety Regulations 1999
Manual Handling Operations Regulations 1992
Control of Substances Hazardous to Health Regulations 2002

Removal or restraint of animals: Animals may be familiar with the process of removal or restraint. If they are not, they should be given time to become familiar with the process and people involved in the process.
Safe positioning of equipment: Staff to be trained in the safe positioning and use of equipment.
Correct body position when cleaning and safe lifting techniques: Injuries caused by the lifting of heavy animals are common. Avoid lifting heavy animals if possible. Training should include the principles of lifting heavy animals if this is essential. In the case of large animals, including livestock, mechanical hoists may be necessary. In the case of large dogs for instance, always keep the animal close to your body, bend from the knees to protect the back, and lift with the thigh muscles.
Safe use of equipment: Appropriate equipment should be used. People handling animals should be trained in using the equipment provided.
Use of personal protective equipment (PPE): Appropriate PPE should be available: gloves, face masks, foot protection and eye protection. This should be washed and disinfected after use. If disposable gowns, shoe covers, gloves and head covers are used, these should be disposed of before leaving the room.

The importance of cleaning

'hygiene' in an animal welfare context is the practice of keeping animals and animal accommodation clean in order to maintain health and prevent disease.

Good hygiene is important to keep animals free of disease and to maintain their feelings of wellbeing.

How to maintain a hygienic environment?
Clean animal's habitat regularly
Clean litter box every day
Wash hands after handling animals
Use animal-friendly cleaning products
Clean feeding and watering stations
Store animal feed appropriately
Check animal skin and coat regularly

It's important to wear appropriate PPE to avoid exposure to animal hair, secretions, excretions that may cause allergies or disease. In the case of large animals such as cattle and horse, appropriate footwear should be worn, i.e. no sandals or soft shoes. When dealing with birds and spiders, eye protection may be needed.

When cleaning animal accommodation it is important to:
Plan cleaning activities
Be aware of hygiene issues
Be familiar with safe cleaning practices

Animal Housing and Accommodation

BTEC Animal Care – Summer 1

Methods of cleaning animal accommodation

Tool and equipment selection
PPE to be used
Select appropriate cleaning liquid
Safe removal of animal to holding pen
Remove fixtures and fittings as appropriate
Removal of waste food, bedding etc, from accommodation
Apply the cleaning liquid
Rinse cleaning liquid from surfaces
Allow surfaces to dry
Return cleaned fixtures and fittings
Provide fresh food and water
Return of animal to clean accommodation.

Consequences of unclean accommodation and bedding

Barriers to hygeine

Not cleaning animal accommodation thoroughly
Not washing hands thoroughly
Not enough handwashing facilities
Not wearing appropriate clothing, e.g. gloves
Eating and drinking in animal contact areas
Having open wounds
Touching mouth with hands, licking fingers
No first aid kit

Cleaning and health and safety

Substances covered by COSHH include:
Chemicals
Fumes
Dusts
Vapours
Mists
Nanotechnology
Gases, asphyxiating gases and biological agents (germs).

COSHH

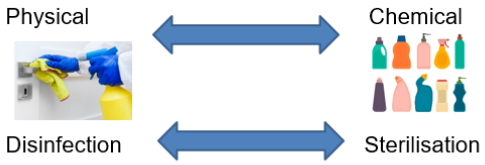
- What is COSHH?

COSHH is the law that requires employers to control substances that are hazardous to health.
If packaging includes any of the hazard symbols then it is classed as a hazardous substance.

- Why is it important?

COSHH is important because:
- It is a legal requirement
- Hazardous substances are dangerous to health.

Cleaning methods



Physical cleaning – use of brushes, mops and wipes.
Chemical cleaning – use of cleaning products, e.g. animal-safe disinfectant.
Disinfection – the process of cleaning in order to destroy bacteria.
Sterilisation – the process of making something free from all bacteria and other microorganisms.

Risk assessment

The five stages of risk assessment:

- Identify the hazards
- Identify who might be harmed and how
- Evaluate the risks and identify the precautions that can be taken to minimise the risks
- Record this on a risk assessment template
- Review and update where necessary

Hazard types:

- Chemical hazards. Cleaning substances may be harmful
- Physical hazards. Use of ladders, lifting of heavy items
- Environmental hazards. Dust, extreme weather conditions
- Facility hazards. Poorly maintained structure
- Animal hazards. Bites, kicks.

Risk: The likelihood, high or low, that the hazard will cause harm.

Good practice in cleaning animal accommodation

Full clean: everything is removed from the accommodation and cleaned before returning and the accommodation is given a thorough clean, and the bedding material is replaced with fresh.

Spot clean: dirty areas of bedding are removed, e.g. where there are droppings.

A full clean will take place before a new animal is introduced into the accommodation or when the accommodation is very dirty.

A spot clean may be less stressful for an animal as it involves less disruption.