

Revision Sheets

AQA GSCE Triple Biology Paper 2 Foundation

Name:

Class:

10 Minutes on....

Homeostasis

Key Term	Definition	Example
Homeostasis		
Receptor		
Stimuli		
Coordination Centres		
Effectors		

Identify examples of homeostasis.

Explain why homeostasis is important.

10 Minutes on....

Nervous System

Key Term	Definition
Nervous System	
Central Nervous System	
Sensory Neurone	
Synapse	
Relay Neurone	
Motor Neurone	

Draw a diagram in the space below to model the different parts of a reflex arc.

10 Minutes on....

Reaction Time

RP

Construct a method to investigate the effect of a factor on reaction time. Use the space below to draw a diagram of how equipment would be set up.

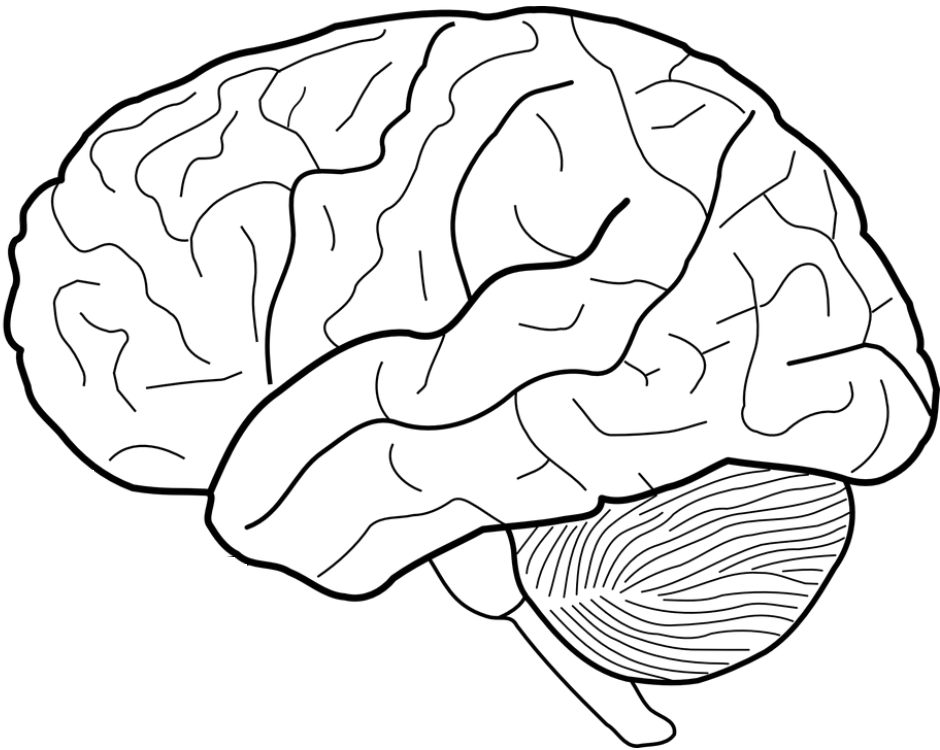
[illegible]

10 Minutes on....

The Brain

Key Term	Definition
Brain	
Cerebral Cortex	
Cerebellum	
Medulla	

Label the brain.

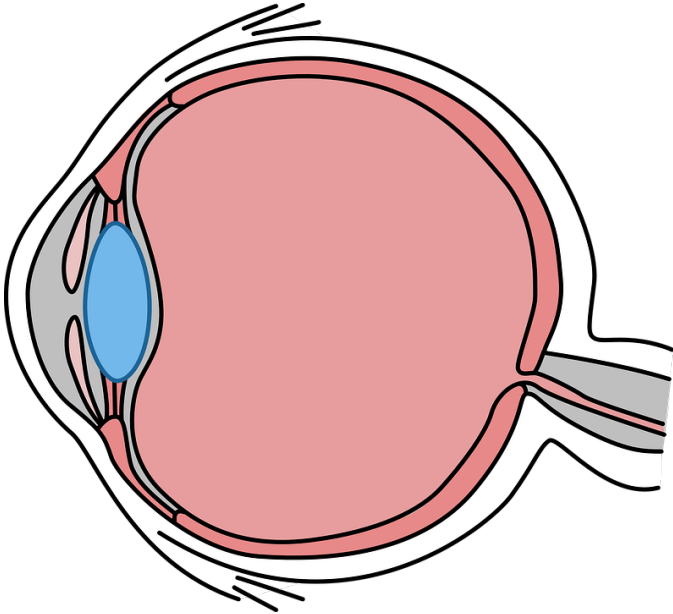


10 Minutes on....

The Eye

Key Term	Definition
Eye	
Retina	
Optic Nerve	
Sclera	
Cornea	
Iris	

Label the diagram of the eye.



10 Minutes on....

Focusing The
Eye

Key Term	Definition
Accommodation	
Myopia	
Hyperopia	

Describe how the eye focuses on a near object.

Describe how the eye focuses on a far object.

Describe how defects of the eye can be treated.

10 Minutes on....

Control of Body Temperature

Key Term	Definition
Thermoregulatory Centre	
Vasoconstriction	
Vasodilation	

Describe how the body responds when body temperature increases.

Describe how the body responds when body temperature decreases.

10 Minutes on....

Endocrine
System

Key Term	Definition
Endocrine System	
Master Gland	
Pituitary Gland	
Pancreas	
Thyroid	
Adrenal Gland	
Ovary	
Testes	

Describe how the endocrine system works.

10 Minutes on....

Control of Blood Glucose

Key Term	Definition
Pancreas	
Insulin	
Glycogen	

Describe what happens when blood glucose levels rise.

10 Minutes on....

Diabetes

Diabetes	Description	Treatment	Prevention
Type 1			
Type 2			

Identify risk factors of Type 2 diabetes.

Compare Type 1 and Type 2 diabetes.

10 Minutes on....

Water Balance

Identify ways that water is lost from the body.

Describe how the kidneys work.

Describe what happens during kidney dialysis.

10 Minutes on....

Controlling Water
Balance

Key Term	Definition
Kidney	
ADH	
Permeability	

10 Minutes on....

Human
Reproduction

Key Term	Definition
Menstrual Cycle	
Puberty	

Hormone	Where it is Produced	What it Does
Testosterone		
Oestrogen		
Progesterone		
FSH		
LH		

10 Minutes on....

Contraceptives

Contraceptive	Hormonal/ Non- Hormonal	What it Does	+	-
Oral				
Injection				
Barrier Method				
Intrauterine Device				
Spermicidal Agents				
Abstaining				
Surgical Methods				

10 Minutes on....

Plant
Hormones

Key Term	Definition
Phototropism	
Gravitropism	
Geotropism	
Auxin	
Gibberellins	
Ethene	

Construct a diagram to model how phototropism occurs.

10 Minutes on....

Plant Hormones 1 RP

Construct a method to investigate the effect of light on the growth of new seedlings. Use the space below to draw a diagram of how equipment would be set up.

10 Minutes on....

Plant Hormones 2 RP

Construct a method to investigate the effect of gravity on the growth of new seedlings. Use the space below to draw a diagram of how equipment would be set up.

10 Minutes on....

Reproduction

Key Term	Definition
Meiosis	
Mitosis	
Sperm Cell	
Egg Cell	
Pollen	
Sexual Reproduction	
Asexual Reproduction	
Clone	

Compare sexual and asexual reproduction

10 Minutes on....

Meiosis

Key Term	Definition
Meiosis	
Gamete	
Fertilisation	

Describe what happens when cells divide to form gametes.

Explain how fertilisation restores the number of chromosomes.

10 Minutes on....

Advantages and Disadvantages of Reproduction

Advantages of Sexual Reproduction		Disadvantages of Sexual Reproduction	

Advantages of Asexual Reproduction		Disadvantages of Asexual Reproduction	

Organism	When it Reproduces Asexually	When it Reproduces Sexually
Malarial Parasites		
Fungi		
Strawberries		

10 Minutes on....

DNA and the
Genome

Key Term	Definition
DNA	
Genome	
Gene	

Describe the structure of DNA.

Describe the advantages of studying the genome.

10 Minutes on....

DNA Structure

Key Term	Definition
DNA	
Nucleotides	
Amino Acid	

Describe the structure of DNA.

Describe the structure of a nucleotide.

10 Minutes on....

Genetic
Inheritance

Key Term	Definition
Gamete	
Chromosome	
Gene	
Allele	
Dominant Allele	
Recessive Allele	
Homozygous	
Heterozygous	
Genotype	
Phenotype	

Identify examples of characteristics controlled by a single gene.



10 Minutes on....

Inherited Disorders

Explain what polydactyly is and how it is inherited.

Explain what cystic fibrosis is and how it is inherited.

Arguments For Embryo Screening	Arguments Against Embryo Screening

10 Minutes on....

Sex
Determination

Explain how sex is determined.

Construct a genetic cross to model sex inheritance.

Father Mother	X	Y
X		
X		

10 Minutes on....

Variation

Key Term	Definition
Genome	
Phenotype	
Variation	
Mutation	

Identify causes of variation within a population.

Explain how a change in phenotype may occur.

10 Minutes on....

Evolution

Key Term	Definition
Evolution	
Natural Selection	
Species	

Describe the process of evolution.

Explain how to determine if a new species has formed.

10 Minutes on....

Selective
Breeding

Describe the process of selective breeding.

Identify examples of selective breeding.

Benefits of Selective Breeding.	Risks of Selective Breeding

10 Minutes on....

Genetic Engineering

Identify examples of genetic engineering.

Benefits of Genetic Engineering	Risks of Genetic Engineering

10 Minutes on....

Cloning

Cloning Method	Description
Tissue Culture	
Cuttings	
Embryo Transplants	
Adult Cell Cloning	

Benefits of Therapeutic Cloning	Risks of Therapeutic Cloning

10 Minutes on....

Theory of Evolution

Describe the process of natural selection.

Explain why the theory of evolution was only gradually accepted

Describe the theory suggested by Jean-Baptiste Lamarck

10 Minutes on....

Speciation

Describe the process of speciation.

Describe the work of Alfred Russel Wallace

Explain why the theory of speciation has developed over time.

10 Minutes on....

Understanding
of Genetics

Development of our Understanding of Genetics	Description of What Was Discovered (And How)
Mid 19 th Century (Gregor Mendel)	
Late 19 th Century	
Early 20 th Century	
Mid 20 th Century	

10 Minutes on....

Evidence for Evolution

Key Term	Definition
Evolution	
Fossils	
Antibiotic Resistance	

Explain why the theory of evolution is now widely accepted.

10 Minutes on....

Fossils

Explain how fossils may form.

Describe what we can learn from fossil evidence.

Explain why we can't be sure about how life began on Earth.

10 Minutes on....

Extinction

Key Term	Definition
Extinction	

Factor Which May Contribute Towards Extinction	Explanation
New Diseases	
New Predators	
New More Successful Competitors	
Climate Change	
Volcanic Eruptions	
Collision With an Asteroid	

10 Minutes on....

Resistant Bacteria

Key Term	Definition
Mutation	
Antibiotic Resistant	
MRSA	

Describe how antibiotic resistant bacteria strains may emerge.

10 Minutes on....

Classification

Key Term	Definition
Carl Linnaeus	
Linnaean System	
Archaea	
Bacteria	
Eukaryota	

Describe the Linnaean System.

Describe the Three Domain System

10 Minutes on....

Communities

Key Term	Definition
Ecosystem	
Interdependence	
Competition	
Biotic	
Abiotic	
Stable Community	

What Animals Compete For	What Plants Compete For

10 Minutes on....

Abiotic Factors

Abiotic Factor	How a Change Could Affect a Community
Light Intensity	
Temperature	
Moisture Levels	
Soil pH	
Soil Mineral Content	
Wind Direction & Intensity	
Carbon Dioxide Levels for Plants	
Oxygen Levels for Aquatic Animals	

10 Minutes on....

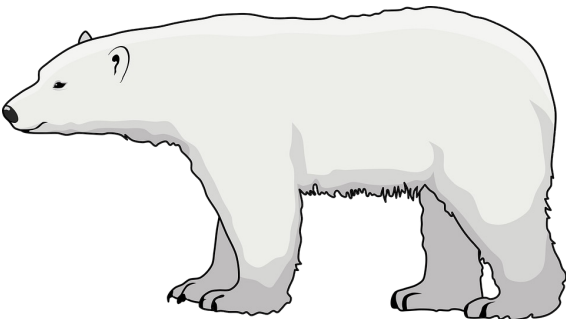
Biotic Factors

Biotic Factor	How a Change Could Affect a Community
Availability of Food	
New Predators Arriving	
New Pathogens	
One Species Out Competing Another	

10 Minutes on....

Animal Adaptations
Cold Climates

Add annotations to the image to identify the adaptations animals living in cold habitats may have.

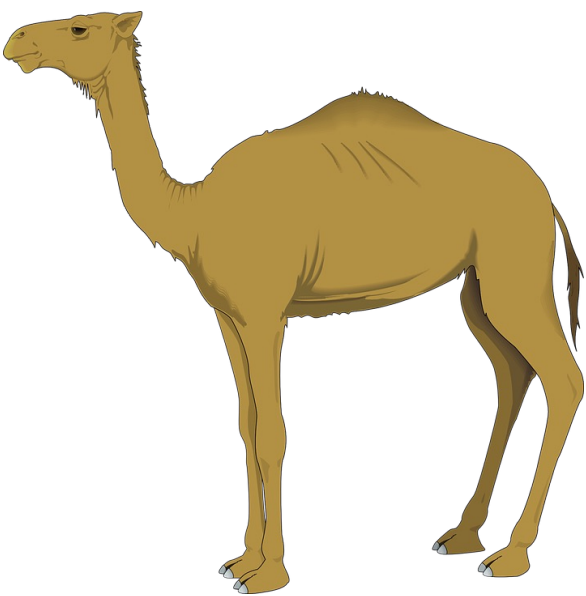


Adaptation for the Cold	How It Helps The Animal Survive

10 Minutes on....

Animal Adaptations
Hot Dry Climates

Add annotations to the image to identify the adaptations animals living in hot and dry habitats may have.

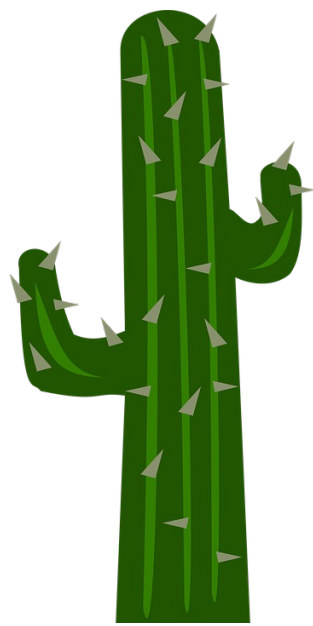


Adaptation for Survival in the Desert	How It Helps The Animal Survive

10 Minutes on....

Plant Adaptations
Hot Dry Climates

Add annotations to the image to identify the adaptations plants have for living in hot and dry habitats.



Adaptation for Survival in the Desert	How It Helps The Plant Survive

10 Minutes on....

Extremophiles

Key Term	Definition
Extremophile	
Deep Sea Vents	

Identify examples of extreme environments.

Describe what conditions around a deep-sea vent would be like.

Describe and explain what would happen to a normal cell if it were in very salty conditions.

10 Minutes on....

Levels of Organisation

Key Term	Definition
Biomass	
Photosynthetic Organisms	
Food Chain	
Producer	
Consumer	
Predator	
Prey	
Stable Community	

Construct a labelled food chain to model a feeding relationship you may find in a garden.



10 Minutes on....

Quadrat RP

Construct a method to approximate the number of dandelion that are in a field. Use the space below to draw a diagram of how equipment would be set up.

10 Minutes on....

Transect RP

Construct a method to investigate the effect of light on the distribution of dandelion in a field. Use the space below to draw a diagram of how equipment would be set up.

10 Minutes on....

Carbon Cycle

Key Term	Definition
Combustion	
Respiration	
Decay	
Photosynthesis	

Construct a diagram to model the carbon cycle.

Describe the role of microorganisms in the carbon cycle.

10 Minutes on....

Water Cycle

Key Term	Definition
Evaporation	
Condensation	
Precipitation	
Transpiration	

Construct a diagram to model the water cycle.

10 Minutes on....

Decay

Factor	Effect on Rate of Decay
Temperature	
Water	
Availability of Oxygen	

Describe how gardeners and farmers try to provide optimum conditions for decay..

Identify what anerobic decay can be used for.

10 Minutes on....

Decay RP

Construct a method to investigate the effect of temperature on the rate of decay of milk. Use the space below to draw a diagram of how equipment would be set up.

10 Minutes on....

Biodiversity

Key Term	Definition
Biodiversity	

Change on Earth	Effect on Biodiversity Explained
Deforestation	
Waste	
Global Warming	

Explain why biodiversity is important.



10 Minutes on....

Waste
Management

Key Term	Definition
Waste	

Pollution	Examples
Water	
Air	
Land	

Explain why the amount of waste on Earth is increasing.

10 Minutes on....

Land Use

Identify ways humans reduce land available for animals and plants.

Explain why the destruction of peat bogs is reducing biodiversity.

Arguments for the Destruction of Peat Bogs	Arguments Against The Destruction of Peat Bogs

10 Minutes on....

Deforestation

Explain why deforestation is occurring.

Advantages of Deforestation	Disadvantages of Deforestation

10 Minutes on....

Global Warming

Key Term	Definition
Global Warming	
Climate Change	

Biological Consequence of Global Warming	Effect on Biodiversity Explained
Glaciers and Polar Ice Melting	
Expansion of Seawater	
Extreme Weather	
Changes in Animal Migration Patterns	
Changes in Rainfall	
Loss and Extinction of Animals and Plants	
Habitats Changing	

10 Minutes on....

Maintaining Biodiversity

Way to Maintain Biodiversity	Description	+	-
Breeding Programmes			
Protection and Regeneration of Rare Habitats			
Reintroduction of Field Margins			
Reduction of Deforestation			
Reduction in Carbon Dioxide Emissions			
Recycling Resources			

10 Minutes on....

Trophic Levels

Key Term	Definition
Apex Predator	
Decomposers	

Trophic Level	Description
Level 1	
Level 2	
Level 3	
Level 4	

Construct a labelled diagram to model a pyramid of biomass.



10 Minutes on....

Transfer of Biomass

Explain why only 10% of biomass is transferred between each trophic level.

Explain why a shorter food chain would produce a greater proportion of biomass for food for humans.

10 Minutes on....

Food Security

Key Term	Definition
Food Security	

Biological Factor Affecting Food Security	Description
Increasing Birth Rate	
Changing Diets in Developed Countries	
New Pests and Pathogens	
Environmental Changes	
Cost of Agricultural Inputs	
Conflict	

10 Minutes on....

Farming
Techniques

Characteristic of Intensive Farming	How it Increases Efficiency
Movement of livestock is restricted	
Livestock are kept inside in a temperature-controlled environment.	

Advantages of Intensive Farming	Disadvantages of Intensive Farming

10 Minutes on....

Sustainable Fisheries

Explain why is it important that fish stock levels are protected.

Method of Conserving Fish Stocks	Explanation of How This Protects Fish Stock Levels
Control of Net Size	
Fishing Quotes	

Explain why fish stock levels are decreasing.

10 Minutes on....

Biotechnology

Key Term	Definition
Genetic Modification	
Mycoprotein	
GM Crops	

Describe how mycoprotein is made.

Advantages of GM Crops	Disadvantages of GM Crops

