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AQA Biology Paper 2

Topic 5 – Homeostasis and response
Topic 6 – Inheritance, variation and evolution
Topic 7 - Ecology

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Topic 5 - Homeostasis and Response

Topic 5 will be examined in AQA Biology Paper 2

1. Homeostasis
2. The nervous system
3. Reflex response
4. Reaction time (RP)
5. The endocrine system
6. Controlling blood glucose
7. Menstrual Cycle
8. Controlling Fertility
9. IVF
10. Adrenaline and Thyroxine

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Homeostasis

For AQA Combined and Separate Science

Watch all the videos for free and download handouts at www.gcserevisionmonkey.com

Homeostasis: maintaining a constant internal environment

Controlling:

-
-
-

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The nervous system

For AQA Combined and Separate Science

AQA Combined and Separate Biology – Topic 5: Homeostasis and Response **(Paper 2)**

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Reflex Response

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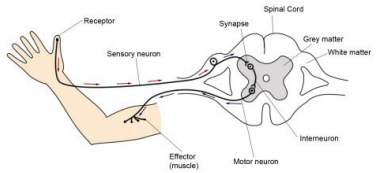
Reflex Response



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Reaction time (RP)

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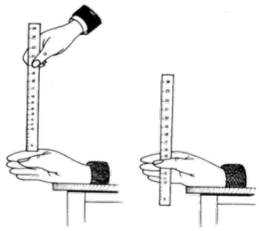
Required Practical



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The endocrine system

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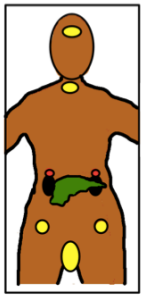
Endocrine system



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Controlling blood glucose

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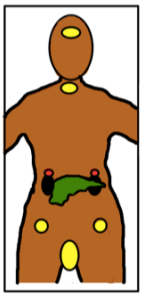
Controlling blood glucose



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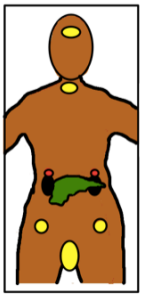
Controlling blood glucose



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Type 1 diabetes

Type 2 diabetes

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Menstrual Cycle

For AQA Combined and Separate Science

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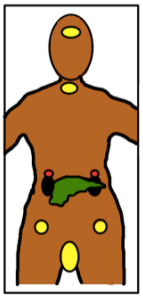
Hormones



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Controlling Fertility

For AQA Combined and Separate Science

Watch all the videos for free and download handouts at www.gcserevisionmonkey.com

Contraception

Watch all the videos for free and download handouts at www.gcserevisionmonkey.com

IVF

For AQA Combined and Separate Science

Watch all the videos for free and download handouts at www.gcserevisionmonkey.com

IVF

Watch all the videos for free and download handouts at www.gcserevisionmonkey.com

Hormones (adrenaline and thyroxine)

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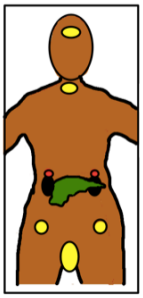
Adrenaline



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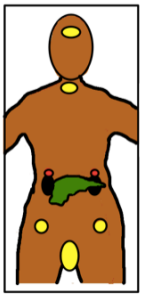
Thyroxine



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Topic 6 – Inheritance, variation and evolution

Topic 6 will be examined in AQA Biology Paper 2

1. DNA and Genes
2. Reproduction
3. Meiosis
4. Sex chromosomes
5. Genetic diagrams
6. Inherited disorders
7. Variation and evolution
8. Selective breeding
9. Genetic Engineering
10. Fossils
11. Antibiotic resistance
12. Classification

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DNA and Genes

For AQA Combined and Separate Science

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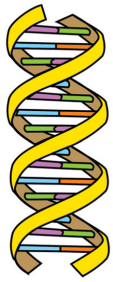
Deoxyribonucleic acid



The entire set of genetic information in an organism is called a ..

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Reproduction

For AQA Combined and Separate Science

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Sexual

Animals -

Plants -

After fertilisation, cells divide by mitosis to produce complete organisms.

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Asexual

Watch all the videos for free and download handouts at www.gcserevisionmonkey.com

Meiosis

For AQA Combined and Separate Science

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AQA Combined and Separate Biology – Topic 6: Inheritance, variation and evolution **(Paper 2)**

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Sex Chromosomes

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Genetic Diagrams

For AQA Combined and Separate Science

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Allele –

Dominant Allele –

Recessive Allele -

Phenotype –

Genotype -

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The ability to roll your tongue is caused by a dominant allele.

What is the probability that a woman who is homozygous recessive for tongue rolling has offspring that can roll their tongues if she has children with a man who is heterozygous for tongue rolling?

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Inherited disorders

For AQA Combined and Separate Science

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Polydactyly

Cystic Fibrosis

Embryo screening

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Variation and evolution

For AQA Combined and Separate Science

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Genetics…

Environment…

Both…

Mutations can lead to variation:

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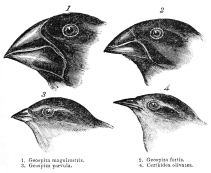
Evolution and Speciation



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Fossils

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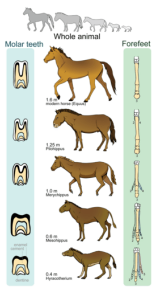

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Extinction

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Antibiotic Resistance

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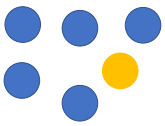

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Classification

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Linnaeus System:

K
P
C
O
F
G
S

Binomial Naming System:

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In 1990 Woese proposed the three-domain system:

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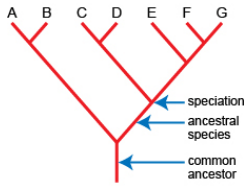
Evolutionary Trees



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Selective Breeding

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Reduces the gene pool

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Genetic Engineering

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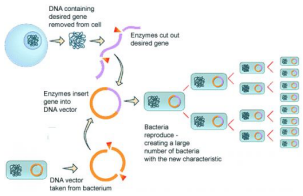

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Topic 7 – Ecology

Topic 7 will be examined in AQA Biology Paper 2

1. Competition
2. Abiotic and biotic factors
3. Adaptation
4. Food chains
5. Organism distribution (RP)
6. Transects
7. The water cycle
8. The carbon cycle
9. Human impact on Earth
10. Maintaining biodiversity

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Competition

For AQA Combined and Separate Science

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Keywords:

Population – all the organisms of one species living in a habitat

Community – the populations of different species living in a habitat

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Abiotic and Biotic factors

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Abiotic Factors

Biotic Factors

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Adaptation

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Structural

Behavioural

Functional

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Food chains

For AQA Combined and Separate Science

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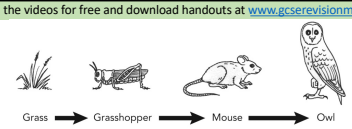

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Organism distribution (RP)

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Transects

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The water cycle

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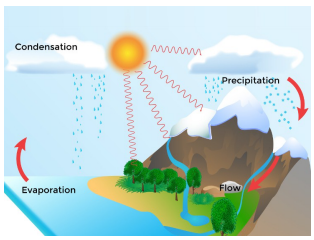

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The carbon cycle

For AQA Combined and Separate Science

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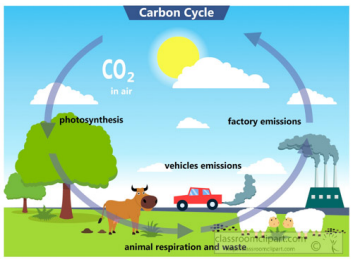

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Human impact on Earth

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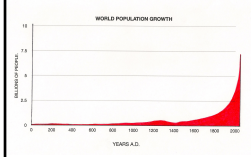

Water

Land

Air

The variety of different species of organisms on Earth, or within an ecosystem

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Deforestation

Peat Bogs

AQA Combined and Separate Biology – Topic 7: Ecology **(Paper 2)**

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Global Warming

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Consequences:

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Maintaining Biodiversity

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Programmes

Conflicting Pressures