ClickView

AQA GCSE Biology
Teaching and
Revision Essentials



AQA GCSE Biology Teaching and Revision Essentials

Titles contained within this booklet have been compiled to support the teaching and learning of the AQA GCSE Biology specification. The playlists can be accessed by teachers as well as students wishing to guide their exam revision.

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AQA GCSE Biology Cell biology



Essential viewing



Supplementary viewing



	Title	Series	Length	Description	Link
1	Types of Cells	In-Depth with Cells	8 min	This programme explores the similarities and differences between eukaryotic and prokaryotic cells.	http://clickv. ie/w/lvNp
?	Cells and Their Organelles	In-Depth with Cells	8 min	This programme explores the structure and function of the cell membrane, nucleus, cytoplasm, ribosomes, rough and smooth endoplasmic reticulum, Golgi complex, mitochondria, lysosomes, chloroplasts, cell walls, and vacuoles.	http://clickv. ie/w/mvNp
%	Introduction to Cells	Cell: Structure and Functions	3 min	This video introduces students to cells. Students will be able to explain that cells are the building blocks of all organisms and describe various shapes and sizes of cells.	https:// clickv.ie/w/ Qrxl
P	Cell Wall, Cell Membrane and Cytoplasm	Cell: Structure and Functions	7 min	Objective: To study the structure and function of the cell wall, the cell membrane and the cytoplasm. Learning outcomes: Students will be able to 1. Describe the structure and function of the cell wall. 2. Explain the structure and function of the plasma membrane. 3. State the structure and function of the cytoplasm.	http://clickv. ie/w/kEcp
***	Using a Microscope	Lab Skills	3 min	This clip demonstrates how to move about while holding a scalpel, how to use a microscope and how to prepare a dry mount microscope slide.	http://clickv. ie/w/ovNp
?	Mitosis and Meiosis	Heredity	10 min	This clip describes the cell cycle and two types of cell division: mitosis, which is important for growth and repair; and meiosis, the process of generating sex cells for sexual reproduction.	http://clickv. ie/w/pvNp
P	Stem Cells: The Ethical Issues		20 min	This programme comes to grips with the ethical issues raised by one of the most contentious areas of contemporary science: embryonic stem cell research.	http://clickv. ie/w/qvNp
?	Cell Membranes and Simple Transport	In-Depth with Cells	8 min	This programme explores the ways in which every individual cell, in both eukaryotes and prokaryotes, controls which materials pass in, and out, by the action of its selectively permeable cell membrane.	http://clickv. ie/w/rvNp



AQA GCSE Biology Cell biology

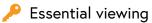
	Title	Series	Length	Description	Link
P	Diffusion and Osmosis	Modern Biology Series	16 min	Examines the process of cell osmosis and diffusion and the importance of the process for the cell's survival.	http://clickv. ie/w/svNp
مر	How Cells Work Together	Understanding Life Systems: Cells		In unicellular organisms, the single cell performs all life functions. In multicellular organisms, cells are organised into tissues, organs and organ systems. A group of similar cells that work together to perform a specific function is called tissue. An organ is made of different kinds of tissue that function together. The level of organisation in an organism increases in complexity, from cells to tissues, to organs, and finally to organ systems.	http://clickv. ie/w/jEcp

View the playlist for Cell biology at: https://clickv.ie/w/015p



AQA GCSE Biology Organisation





Supplementary viewing

	Title	Series	Length	Description	Link
,	The Role of Enzymes		28 min	Enzymes are proteins manufactured by the human body during protein synthesis. Enzymes are catalysts and drive every chemical reaction that takes place in the human body and enable our bodies to be built from proteins, carbohydrates, and fats.	http://clickv. ie/w/23Np
عر	09. The Cardiovascular System	Anatomy and Physiology: An Introduction	28 min	In this video resource, students will learn about Mitchell, a baby who is suffering from idiopathic cardiomyopathy, a heart condition with an unknown cause, which is likely to progress. The video reviews in detail the anatomy of blood vessels and preventable heart conditions, such as coronary artery disease, atherosclerotic plaques, and deep vein thrombosis.	http://clickv. ie/w/43Np
S	Diabetes: The Hidden Killer	Panorama	60 min	An investigation into a growing health epidemic in Britain. Contains some upsetting scenes.	http://clickv. ie/w/53Np
S	Types of Diabetes	Understanding Diabetes	6 min	The short clip introduces learners to diabetes. They will learn about the different types of diabetes, and how they occur.	http://clickv. ie/w/oEcp
5	Symptoms and Complications of Diabetes	Understanding Diabetes	7 min	The video looks at the symptoms of diabetes, such as tiredness, weight loss and more frequent urination. It also looks at the long-term complications that can arise from diabetes.	http://clickv. ie/w/pEcp
***	Management and Treatment of Diabetes	Understanding Diabetes	9 min	The video introduces learners to the importance of weight and exercise in the management of diabetes. They will also learn about how medicines, blood glucose control, and HbA1c are used to treat diabetes.	http://clickv. ie/w/qEcp
P	Blood	The New Living Body	19 min	This programme explores how the human body work, the advances in medicine which enable us to understand the human body better.	http://clickv. ie/w/73Np
*	The Immune Response		22 min	This programme explores the three levels of immune defence and the role of human intervention in the defence against disease.	http://clickv. ie/w/B3Np
***	Treating Cancer: Radiation Therapy	Disease and Treatment	10 min	This clip looks at cancer, the risk factors, and provides a detailed examination of how radiation works at the molecular level in cancer treatment.	http://clickv. ie/w/D3Np



AQA GCSE Biology Organisation

	Title	Series	Length	Description	Link
5	Epidemiology: Linking Smoking to Lung Cancer		12 min	Smoking's role in lung cancer is not a simple cause-and-effect relationship. Using lung cancer as an example, this clip explores the critical role epidemiology plays in establishing the cause of a disease.	http://clickv. ie/w/I3Np
<u> </u>	Transportation Systems in Plants		23 min	This programme explores why many multicellular plants have specialised internal transport systems, while looking at what a transport system is, how plants get their nutrition, and the structure and function of root hairs. Separate transport systems of the xylem and phloem are also discussed.	http://clickv. ie/w/K3Np
>	In Focus: Plants, Light and Water (Senior Version)		26 min	This programme looks at two naturally occurring phenomena that are essential to the survival of plants, light and water. It covers photosynthesis and cellular respiration, and compares the products and reactants, and other characteristics of each process.	http://clickv. ie/w/L3Np

View the playlist for Organisation at:

https://clickv.ie/w/hm5p



AQA GCSE Biology Infection and response



Essential viewing



Supplementary viewing



	Title	Series	Length	Description	Link
?	Pathogens and Infectious Disease		23 min	This programme explores the six main categories of pathogens: bacteria, viruses, fungi, protozoa, prions and macroparasites. Their structure, mode of transmission, and the changes they cause in the host are described.	http://clickv. ie/w/M3Np
1 /3	The Immune Response		22 min	This programme explores the three levels of immune defence and the role of human intervention in the defence against disease.	http://clickv. ie/w/B3Np
P	10. Blood, the Lymphatic System and Immunity	Anatomy and Physiology: An Introduction	28 min	In this video students will hear about how bat saliva has been studied for its anti-clotting qualities, and how desmoteplase, the specific enzyme, is being used to help stroke patients.	http://clickv. ie/w/N3Np
6	Antibiotic Apocalypse		29 min	This programme investigates the global advance of antibiotic-resistant superbugs and the threat they pose to modern medicine and millions of patients worldwide.	http://clickv. ie/w/O3Np
S	Series 2, Episode 02: Fleming	Absolute Genius with Dick and Dom	31 min	Dick and Dom reveal the genius of Alexander Fleming, the man who discovered penicillin. Inspired by Fleming's discovery, they come up with their own genius idea.	http://clickv. ie/w/P3Np
?	Infectious Diseases: Causes and Controls		30 min	This programme examines our knowledge of the causes and controls of infectious diseases, and the ongoing challenges we face in managing infectious diseases around the world.	http://clickv. ie/w/R3Np
5	Developing a Vaccine: Rotavirus	Disease and Treatment	12 min	This clip investigates the rotavirus and its impact, the development of vaccines, and the benefits of immunisation for individual and community.	http://clickv. ie/w/S3Np
6	The Polio Story: The Vaccine that Changed the World		44 min	A documentary about how Dr Jonas Salk and the 'march of dimes' came together to help conquer polio.	http://clickv. ie/w/V3Np
?	Causes of Malaria	Understanding Malaria	10 min	This video describes the natural and built conditions that can lead a buzzing mosquito to become a menacing killer. By first exploring how Plasmodium falciparum, a microscopic parasite, is carried by mosquitoes from one unfortunate human host to another, students will learn about the environments and climates that allow malaria's deadly cycle to thrive.	http://clickv. ie/w/vEcp



AQA GCSE Biology Infection and response

	Title	Series	Length	Description	Link
,	Impacts of Malaria	Understanding Malaria	6 min	Dr James Tibenderana, technical director of the Malaria Consortium, knows the impact of malaria better than most, having contracted the deadly parasitic disease as a child. In this video, James unpicks the effects malaria can have on an infected individual, their family and the community. Students will learn that malaria causes more than an intense fever, it can have serious economic ramifications too.	http://clickv. ie/w/wEcp
?	Strategies for Managing Malaria	Understanding Malaria	15 min	Including interviews with world-leading scientists and researchers, this video evaluates the many management strategies that have been employed in the fight against malaria. From physical barriers, to hazardous natural predators, controversial pesticides, and costly drugs and repellents, students will come to understand that no single measure is perfect on its own. However, spatial technologies, like MARA, and advances in genetic engineering, provide hope that malaria may become a disease of history.	http://clickv. ie/w/xEcp

View the playlist for Infection and response at: https://clickv.ie/w/Qm5p



AQA GCSE Biology Bioenergetics



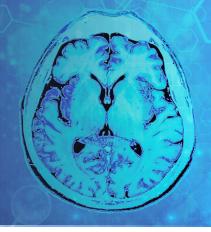
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	Title	Series	Length	Description	Link
P	Photosynthesis	Science in Action	19 min	Real-life examples putting photosynthesis into context.	https:// clickv. ie/w/2sxl
***	In Focus: Plants, Light and Water (Senior Version)		26 min	This programme looks at two naturally occurring phenomena that are essential to the survival of plants, light and water. It covers photosynthesis and cellular respiration, and compares the products and reactants, and other characteristics of each process.	https:// clickv. ie/w/0sxl
5	Acute Muscular Responses	Acute Responses to Exercise	10 min	This programme goes through some of these responses, including recruitment of slow and fast-twitch muscle fibres, arteriovenous oxygen difference, enzyme concentration and lactic acid build-up.	https:// clickv. ie/w/3sxl
***	Acute Respiratory Responses	Acute Responses to Exercise	10 min	As our presenter undertakes some high intensity exercise with her CrossFit coach and a trained athlete to assist, she takes a close look at how the respiratory system responds. During the session, a sports scientist explains key areas such as tidal volume, respiratory rate, ventilation, diffusion of gases in the lungs, oxygen deficit, VO2 max and EPOC.	https:// clickv. ie/w/4sxl
***	Acute Cardiovascular Responses	Acute Responses to Exercise	12 min	When the body exercises, acute responses occur in the cardiovascular system, and our presenter wants to know more as she does her workout. She explores how the muscles' demand for more oxygen is met by changes in the heart rate, stroke volume, cardiac output and blood pressure.	https:// clickv. ie/w/5sxl
***	Cellular Energy and Metabolism	Science Key Concepts: Biology	16 min	This programme examines photosynthesis, respiration, and enzymes in plants.	https:// clickv. ie/w/6sxl

View the playlist for Bioenergetics at: https://clickv.ie/w/W_8p



AQA GCSE Biology Homeostasis and response





Essential viewing



Supplementary viewing



	Title	Series	Length	Description	Link
<u> </u>	All episodes	Homeostasis	7 min/ episode	Homeostatic processes occur in a range of organisms, enabling them to withstand a wide range of changes in the external environment. Homeostasis series covers the basic facts about homeostasis with a focus on thermoregulation in the human body. An informative, curriculum-relevant series for senior secondary Biology students and above.	https:// clickv.ie/w/ ga9p
***	Multicellular Organisms and Their Nervous System		21 min	This programme explores the level of organisation for structure, and function of multicellular organisms including cells, tissues, organs and organ systems.	https:// clickv.ie/w/ Csxl
	06. The Nervous System	Anatomy and Physiology: An Introduction	28 min	This lesson provides a glimpse into the human neural network we call the nervous system.	https:// clickv.ie/w/ Dsxl
?	Brain	The New Living Body	19 min	How does the human body work? What advances have been made in medicine which enable us to understand the human body better? This programme provides a comprehensive answer to both questions.	https:// clickv.ie/w/ Fsxl
P	The Eye	Science Bank	5 min	This programme investigates how the eyes, nervous system and plant tropisms respond to stimuli.	https:// clickv.ie/w/ Gsxl
?	The Eye: From Light Comes Sight		24 min	This programme investigates how eyes use light information and transform it into a signal, the structures involved in this process, and what they do. Includes detailed footage of the dissection of the bovine eye.	https:// clickv.ie/w/ Hsxl
P	08. The Endocrine System	Anatomy and Physiology: An Introduction	28 min	This video explores the different disorders of the endocrine system. It covers Graves' disease, Hashimoto's disease, the pancreas and its processes, foods with a high glycaemic index, as well as hypoglycaemia and hyperglycaemia.	https:// clickv.ie/w/ lsxl
5	All episodes	Understanding Diabetes	5 min/ episode	This programme introduces learners to diabetes, looks at the symptoms of diabetes, such as tiredness, weight loss and more frequent urination. and importance of weight and exercise in the management of diabetes.	https:// clickv.ie/w/ ua9p



AQA GCSE Biology Homeostasis and response

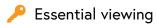
	Title	Series	Length	Description	Link
5	Diet Related Disorders - Type 2 Diabetes, Obesity and Coeliac Disease		16 min	This programme examines three diet-related disorders, looking in detail at the characteristics, causes, treatment and strategies for prevention.	https:// clickv.ie/w/ Msxl
٥	13. The Urinary System	Anatomy and Physiology: An Introduction	28 min	This programme looks at the effects of dehydration, the necessity of electrolytes, the production of rennin, the role of angiotensin in helping the body cope with a lack of fluids, and how the nervous system can be affected by too much or too little water.	https:// clickv.ie/w/ Nsxl
*	Human Reproduction and Childbirth		22 min	This programme explores the biological functions of the different parts of the male and female reproductive systems. It also describes the basics of menstruation, the different stages or trimesters of embryonic and fetal development, the effects of drugs and alcohol, and much more.	https:// clickv.ie/w/ Osxl

View the playlist for Homeostasis and response at: https://clickv.ie/w/c-8p



AQA GCSE Biology Inheritance, variation and evolution







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	Title	Series	Length	Description	Link
<i>></i>	Sexual and Asexual Reproduction		16 min	This programme looks at sexual and asexual reproduction, starting at the cellular level, with clear explanations of meiosis and mitosis. It explores various types of asexual reproduction, including fission, budding, fragmentation, spores, vegetative, and artificial propagation.	https:// clickv.ie/w/ Qsxl
>	Mitosis and Meiosis	Heredity	10 min	This clip describes the cell cycle and two types of cell division: mitosis, which is important for growth and repair; and meiosis, the process of generating sex cells for sexual reproduction.	https:// clickv.ie/w/ Trxl
>	DNA and Inheritance	Heredity	11 min	DNA, genes and chromosomes are the structures containing the genetic material of humans. This programme contains diagrams of the DNA molecule and processes such as cell division and the use of Punnett Squares to predict offspring ratios.	https:// clickv.ie/w/ Ssxl
P	Unlocking the Code	The Gene Code	58 min	Adam Rutherford shows how decoding the human genome has led us to begin to understand the very process by which our DNA makes each one of us on earth unique.	https:// clickv.ie/w/ Tsxl
P	Genetics	Short Circuit	20 min	Award-winning series encouraging discussion about major scientific issues. This episode focuses on the topic of genetics.	https:// clickv.ie/w/ Usxl
>	Evolution by Natural Selection	Evolutionary Biology Essentials	13 min	With fascinating examples like Darwin's finches, bacteria and the Tasmanian devil, this programme explores the connection between genes, adaptations, survival, natural selection, and evolution.	https:// clickv.ie/w/ Vsxl
>	The History of Evolution Theory		28 min	This programme reviews the history of the Theory of Evolution and explains the basic elements of the theory using excellent graphics. It explains what a scientific theory is, and why scientists argue that ID is not science.	https:// clickv.ie/w/ Ysxl
?	Genetic Engineering	Medical Ethics	20 min	This programme considers the possible benefits from detecting and preventing hereditary diseases in people, plants and animals to engineering resilient crops that improve plants in farming.	https:// clickv. ie/w/_sxl



AQA GCSE Biology Inheritance, variation and evolution

	Title	Series	Length	Description	Link
*//	Genes and Cloning		28 min	This programme looks at the way man has modified genomes of plants and animals used for food since the dawn of agriculture.	https:// clickv.ie/w/ Zsxl
70	Darwin's Adventures and Theories		8 min	This programme explains who Darwin was and why he became one of the most influential scientists in history. The unit provides a historical context to their learning around how animals have structural features that help them to survive in their environment.	http://clickv. ie/w/Y3Np
,0	Charles Darwin	Absolute Genius with Dick and Dom	29 min	The programme explores the great variety of bacteria and the many diverse habitats in which they grow and interact with other organisms.	https:// clickv.ie/w/ ctxl
<i>P</i>	The World of Bacteria		30 min	This programme discusses how the classification system is organised and how scientific names are arrived at. The dichotomous keys used by biologists to classify specimens and the five major groups of living things are explained.	https:// clickv.ie/w/ btxl
7	Classification Systems		22 min	The classification system is the arrangement of living things, categorised by their different characteristics - an organised understanding of the natural world we live in. Recently this system has been further refined using studies of DNA. In this programme, we discuss how the classification system is organised and how scientific names are arrived at. The dichotomous keys used by biologists to classify specimens are demonstrated and the five major groups of living things are explained.	https:// clickv.ie/w/ dtxl

View the playlist for Inheritance, variation and evolution at: https://clickv.ie/w/P-8p



AQA GCSE Biology Ecology



Essential viewing



Supplementary viewing



	Title	Series	Length	Description	Link
?	Ecosystems: Energy and Matter	Environmental Systems	7 min	This clip defines and looks at different types of ecosystems, and explores two critical processes that go on within them – energy flow and the cycling of matter.	http://clickv. ie/w/Z3Np
?	All Episodes	The Pond: Community Ecology in Action	5 mins/ clip	Ponds provide opportunities to see lentic ecosystems in action. This six-part series is filled with engaging footage and factual diagrams, leaving students with a clear understanding of community ecology. An essential resource for senior secondary biology students.	https:// clickv. ie/w/9u6p
5	The Tropical Rainforest Ecosystem	Tropical Rainforests	22 min	This video explores the tropical rainforest's distinct biotic and abiotic characteristics and the conditions that help create this biodiversity hotspot. Climate, soil profile, nutrient and water cycle, are all considered, as is their interdependence with flora and fauna.	http://clickv. ie/w/_3Np
S	Freshwater Ecosystems	Biomes of the World in Action Series	26 min	This video explores freshwater habitats and the biotic and abiotic factors that make up these ecosystems.	http://clickv. ie/w/a4Np
S	The Great Barrier Reef: A Natural Wonder	Ecosystems	17 min	This video explores the Great Barrier Reef's biotic and abiotic features, including coral formation and how changes in abiotic factors affect it; the food chain, nutrient cycle and carbon cycle; and the impact of human activity.	http://clickv. ie/w/c4Np
?	Biogeochemical Cycles	Environmental Systems	11 min	This clip provides an overview of vital biogeochemical cycles that occur across the lithosphere, biosphere, atmosphere, and hydrosphere; including the nitrogen, phosphorous, water, and carbon cycles.	http://clickv. ie/w/e4Np
P	Biodiversity: The Web of Life		27 min	This programme focuses on the incredible variety of life on our planet and explores the biological processes at work in communities and ecosystems throughout the globe.	http://clickv. ie/w/f4Np
P	Human Impact on Ecosystems	Environmental Systems	9 min	This clip examines some of the most dramatic and destructive ways in which people have impacted ecosystems – covering climate change, pollution, deforestation, and introduced species.	http://clickv. ie/w/g4Np
9	Farming: The Future		27 min	This film looks at the future of UK's farming. Experts take us through trends and issues in farming, including organic and precision farming, genetic modification, the EU's common agricultural policy, and strategies.	http://clickv. ie/w/i4Np



AQA GCSE Biology Ecology

	Title	Series	Length	Description	Link
G	Episode 1	Future of Food	59 min	George Alagiah reveals a global food crisis related to climate change and people's diets, including what the future holds for our food.	http://clickv. ie/w/j4Np
S	Episode 2	Future of Food	59 min	George heads out to India to discover how a changing diet in the developing world is putting pressure on the world's limited food resources.	http://clickv. ie/w/k4Np
G	Episode 3	Future of Food	59 min	This film sees George Alagiah travel the world in search of solutions to the growing global food crisis. He travels to Yorkshire and Havana, while hearing the arguments about genetically modified food and examining even more futuristic schemes to get the food on to our plates.	http://clickv. ie/w/l4Np

View the playlist for Ecology at: https://clickv.ie/w/kpnp



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