

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved							
	8.1.1 Levels of organisation		1	2	3	4	5	6	7	8
1	State what is meant by a tissue, an organ, and an organ system		1	2	3	4	5	6	7	8
2	State the sequence of the hierarchy of organisation in a multicellular organism		1	2	3	4	5	6	7	8
3	Use information provided to list the organs found in a given organ system, and state the function of that system		1	2	3	4	5	6	7	8
4	Define and state examples of tissues, organs, and organ systems		1	2	3	4	5	6	7	8
5	Explain the hierarchy of organisation in a multi-cellular organism		1	2	3	4	5	6	7	8
6	Interpret information provided to decide on the function of the individual organs and of the organ system		1	2	3	4	5	6	7	8
7	Explain in detail the hierarchy of organisation in a multi-cellular organism, using a range of examples		1	2	3	4	5	6	7	8
8	Explain how the different tissues in an organ, and the different organs in an organ system function together		1	2	3	4	5	6	7	8
9	Interpret information to explain the functions of several organ systems		1	2	3	4	5	6	7	8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.1.2 The skeleton		
1	Name the main parts in the skeleton		1 2 3 4 5 6 7 8
2	List the functions of the muscular skeletal system		1 2 3 4 5 6 7 8
3	Describe the structure of the skeleton		1 2 3 4 5 6 7 8
4	Describe the functions of the muscular skeletal system		1 2 3 4 5 6 7 8
5	Explain the relationship between the bones and joints in the skeleton		1 2 3 4 5 6 7 8
6	Explain the link between structure and functions in the muscular skeletal system		1 2 3 4 5 6 7 8
7	Predict the consequences of damage to a bone		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.1.3 Movement: joints		
1	State where joints are found in the body		1 2 3 4 5 6 7 8
2	State how a muscle exerts force during movement		1 2 3 4 5 6 7 8
3	Carry out an experiment to make simple observations		1 2 3 4 5 6 7 8
4	Describe the structure and function of joints		1 2 3 4 5 6 7 8
5	Explain how to measure the force exerted by different muscles		1 2 3 4 5 6 7 8
6	Carry out an experiment to make and record measurements of forces using the correct units		1 2 3 4 5 6 7 8
7	Explain how the parts of a joint allow it to function		1 2 3 4 5 6 7 8
8	Explain the relationship between the forces required to move different masses		1 2 3 4 5 6 7 8
9	Carry out an experiment to record measurements of forces in newtons, evaluating the accuracy and precision of the method chosen		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.1.4 Movement: muscles		
1	State the function of major muscle groups		1 2 3 4 5 6 7 8
2	State the definition of antagonistic muscles		1 2 3 4 5 6 7 8
3	Carry out an experiment to study the muscle system in a chicken wing		1 2 3 4 5 6 7 8
4	Explain the function of different muscles within the body		1 2 3 4 5 6 7 8
5	Explain how antagonistic muscles produce movement around a joint		1 2 3 4 5 6 7 8
6	Interpret observations in a chicken wing to describe how the muscles work together to cause movement		1 2 3 4 5 6 7 8
7	Use a diagram to predict the result of a muscle contraction or relaxation		1 2 3 4 5 6 7 8
8	Explain how the muscle groups interact with other tissues to cause movement		1 2 3 4 5 6 7 8
9	Explain why it is necessary to have both muscles in an antagonistic pair to cause movement		1 2 3 4 5 6 7 8
10	Interpret observations in a chicken wing to explain how the muscles work together to cause movement		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.2.1 Observing cells		
1	State what a cell is		1 2 3 4 5 6 7 8
2	Describe how to use a microscope to observe a cell		1 2 3 4 5 6 7 8
3	Use a microscope to observe a prepared slide, with assistance		1 2 3 4 5 6 7 8
4	Describe what a cell is		1 2 3 4 5 6 7 8
5	Explain how to use a microscope to observe a cell		1 2 3 4 5 6 7 8
6	Use a microscope to observe a prepared slide and state the magnification		1 2 3 4 5 6 7 8
7	Explain what all living organisms are made of		1 2 3 4 5 6 7 8
8	Explain what each part of the microscope does and how it is used		1 2 3 4 5 6 7 8
9	Use a microscope to observe a prepared slide calculating a range of magnifications		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.2.2 Plant and animal cells		
1	Identify one similarity and one difference between a plant and an animal cell		1 2 3 4 5 6 7 8
2	Match some components of a cell to their functions		1 2 3 4 5 6 7 8
3	With support, prepare and observe a microscope slide safely		1 2 3 4 5 6 7 8
4	Identify and compare the similarities and differences between plant and animal cells		1 2 3 4 5 6 7 8
5	Describe the functions of the components of a cell		1 2 3 4 5 6 7 8
6	Prepare and observe cells on a microscope slide safely		1 2 3 4 5 6 7 8
7	Explain the similarities and differences between plant and animal cells		1 2 3 4 5 6 7 8
8	Explain the functions of the components of a cell by linking them to life processes		1 2 3 4 5 6 7 8
9	Prepare and observe cells on a microscope slide safely, using scale and magnifications		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.2.3 Specialised cells		
1	Name some examples of specialised animal cells		1 2 3 4 5 6 7 8
2	Name some examples of specialised plant cells		1 2 3 4 5 6 7 8
3	State structural adaptations of plant and animal cells, summarising this in a table or as a model		1 2 3 4 5 6 7 8
4	Describe examples of specialised animal and plant cells		1 2 3 4 5 6 7 8
5	Suggest what kind of tissue or organism a cell is part of, based on its features		1 2 3 4 5 6 7 8
6	Describe structural adaptations of plant and animal cells, summarising this in a table or as a model		1 2 3 4 5 6 7 8
7	Describe examples of specialised animal cells, linking structure and function		1 2 3 4 5 6 7 8
8	Describe examples of specialised plant cells, linking structure and function		1 2 3 4 5 6 7 8
9	Compare and contrast structural adaptations of plant and animal cells, summarising this in a table or as a model		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.2.4 Movement of substances		
1	Identify substances that move into or out of cells		1 2 3 4 5 6 7 8
2	State simply what diffusion is		1 2 3 4 5 6 7 8
3	Make sets of observations or measurements of diffusion of coloured gel, identifying the ranges and intervals used		1 2 3 4 5 6 7 8
4	Describe the process of diffusion		1 2 3 4 5 6 7 8
5	Collect data of diffusion of coloured gel, choosing appropriate ranges, numbers, and values for measurements and observations		1 2 3 4 5 6 7 8
6	Explain why multi-cellular organisms need organ systems to keep their cells alive		1 2 3 4 5 6 7 8
7	Explain which substances move into and out of cells		1 2 3 4 5 6 7 8
8	Explain the process of diffusion		1 2 3 4 5 6 7 8
9	Choose and justify data collection methods of diffusion of coloured gel that minimise error, and produce precise and reliable data		1 2 3 4 5 6 7 8

Obj No	8 Organisms	Start (/) Complete (X)	Level Achieved
	8.2.5 Uni-cellular organisms		
1	Name an example of a uni-cellular organism		1 2 3 4 5 6 7 8
2	Identify some structures in an amoeba		1 2 3 4 5 6 7 8
3	Identify some structures in a euglena		1 2 3 4 5 6 7 8
4	Select the appropriate apparatus to observe an amoeba and a euglena cell		1 2 3 4 5 6 7 8
5	Describe what a uni-cellular organism is		1 2 3 4 5 6 7 8
6	Describe the structure of an amoeba and a euglena		1 2 3 4 5 6 7 8
7	Explain how uni-cellular organisms are adapted to carry out functions that, in multi-cellular organisms, are done by different types of cell		1 2 3 4 5 6 7 8
8	Select the appropriate magnification to observe an amoeba and a euglena cell through a microscope		1 2 3 4 5 6 7 8
9	Explain what a uni-cellular organism is and give detailed examples		1 2 3 4 5 6 7 8
10	Describe the structure and function of an amoeba		1 2 3 4 5 6 7 8
11	Describe the structure and function of a euglena		1 2 3 4 5 6 7 8
12	Give justifications for the choice of magnification when observing an amoeba and a euglena cell through a microscope		1 2 3 4 5 6 7 8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved
	9.1.1 Food chains and webs		
1	State the definition of a food chain		1 2 3 4 5 6 7 8
2	State the definition of a food web		1 2 3 4 5 6 7 8
3	Describe what food chains show		1 2 3 4 5 6 7 8
4	Describe what food webs show		1 2 3 4 5 6 7 8
5	Combine food chains to form a food web		1 2 3 4 5 6 7 8
6	Explain the link between food chains and energy		1 2 3 4 5 6 7 8
7	Explain why a food web gives a more accurate representation of feeding relationships than a food chain		1 2 3 4 5 6 7 8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved
	9.1.2 Disruptions to food chains and webs		
1	Explain why a food web gives a more accurate representation of feeding relationships than a food chain		1 2 3 4 5 6 7 8
2	State that toxic material can get into food chains		1 2 3 4 5 6 7 8
3	Present population data as a graph, and describe simple patterns shown		1 2 3 4 5 6 7 8
4	Describe the interdependence of organisms		1 2 3 4 5 6 7 8
5	Explain effects of toxic materials on a species' population		1 2 3 4 5 6 7 8
6	Present population data as a graph to describe trends and draw conclusions		1 2 3 4 5 6 7 8
7	Explain issues with human food supplies in terms of insect pollinators		1 2 3 4 5 6 7 8
8	Explain the interdependence of organisms		1 2 3 4 5 6 7 8
9	Explain how toxic materials can accumulate in human food sources		1 2 3 4 5 6 7 8
10	Present population data as a graph, explaining trends and drawing detailed conclusions from data provided		1 2 3 4 5 6 7 8
11	Use appropriately calibrated apparatus to obtain an accurate lung volume, evaluating the precision of instruments involved		1 2 3 4 5 6 7 8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved							
	9.1.3 Ecosystems									
1	State that different organisms can co-exist		1	2	3	4	5	6	7	8
2	State the definition of the term niche		1	2	3	4	5	6	7	8
3	Record data from sampling an ecosystem		1	2	3	4	5	6	7	8
4	Describe how different organisms co-exist within an ecosystem		1	2	3	4	5	6	7	8
5	Identify niches within an ecosystem		1	2	3	4	5	6	7	8
6	Use quadrats to take measurements in an ecosystem, describing trends observed		1	2	3	4	5	6	7	8
7	Explain why different organisms are needed in an ecosystem		1	2	3	4	5	6	7	8
8	Explain why different organisms within the same ecosystem have different niches		1	2	3	4	5	6	7	8
9	Use quadrats and transects to take unbiased measurements in an ecosystem, describing trends observed in data		1	2	3	4	5	6	7	8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved
	9.1.4 Competition		
1	State some resources that plants and animals compete for		1 2 3 4 5 6 7 8
2	Interpret secondary data to describe simple predator–prey relationships		1 2 3 4 5 6 7 8
3	Describe some resources that plants and animals compete for		1 2 3 4 5 6 7 8
4	Interpret secondary data to describe trends and draw conclusions about predator–prey relationships		1 2 3 4 5 6 7 8
5	Explain the effect of competition on the individual or the population		1 2 3 4 5 6 7 8
6	Make a deduction based on data about what caused a change in the population of a species		1 2 3 4 5 6 7 8
7	Suggest what might happen when an unfamiliar species is introduced into a food web		1 2 3 4 5 6 7 8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved
	9.2.1 Flowers and pollination		
1	Name the parts of a flower		1 2 3 4 5 6 7 8
2	State what is meant by pollination		1 2 3 4 5 6 7 8
3	Name two methods of pollination		1 2 3 4 5 6 7 8
4	Follow instructions to dissect a flower		1 2 3 4 5 6 7 8
5	Identify the main structures in a flower and link their structure to their function		1 2 3 4 5 6 7 8
6	Describe the process of pollination		1 2 3 4 5 6 7 8
7	Describe the differences between wind- and insect- pollinated plants		1 2 3 4 5 6 7 8
8	Use appropriate techniques to dissect a flower into its main parts		1 2 3 4 5 6 7 8
9	Explain how the structures of the flower are adapted to their function		1 2 3 4 5 6 7 8
10	Suggest how plant breeders use knowledge of pollination to carry out selective breeding		1 2 3 4 5 6 7 8
11	Explain the processes of wind and insect pollination, comparing the similarities and differences between the two		1 2 3 4 5 6 7 8
12	Record detailed observations from a flower dissection		1 2 3 4 5 6 7 8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved							
	9.2.2 Fertilisation and germination									
1	State what is meant by fertilisation in plants		1	2	3	4	5	6	7	8
2	State what seeds and fruit are		1	2	3	4	5	6	7	8
3	Make and record observations of germination		1	2	3	4	5	6	7	8
4	Describe the process of fertilisation in plants		1	2	3	4	5	6	7	8
5	Describe how seeds and fruits are formed		1	2	3	4	5	6	7	8
6	Make and record observations in a table with clear headings and units, using data to calculate percentage germination		1	2	3	4	5	6	7	8
7	Explain the process of fertilisation in plants, explaining the role of each of the parts involved in the process		1	2	3	4	5	6	7	8
8	Explain how the germination of seeds occurs		1	2	3	4	5	6	7	8
9	Make and record observations in a table, using data to calculate percentage germination, evaluating experimental procedure		1	2	3	4	5	6	7	8

Obj No	9 Ecosystems	Start (/) Complete (X)	Level Achieved
	9.2.3 Seed dispersal		
1	State what is meant by seed dispersal		1 2 3 4 5 6 7 8
2	Name the methods of seed dispersal		1 2 3 4 5 6 7 8
3	Plan a simple experiment, stating the variables, when given a hypothesis		1 2 3 4 5 6 7 8
4	Describe methods seed dispersal, and use the features of seeds and fruit to explain how they are adapted to their method		1 2 3 4 5 6 7 8
5	Explain why seed dispersal is important to survival of the parent plant and its offspring		1 2 3 4 5 6 7 8
6	Plan a simple experiment to test one hypothesis about seed dispersal, identifying a range of variables		1 2 3 4 5 6 7 8
7	Explain how the adaptations of seeds aid dispersal		1 2 3 4 5 6 7 8
8	Develop an argument why a particular plant structure increases the likelihood of successful production of offspring		1 2 3 4 5 6 7 8
9	Plan and design an experiment to test a hypothesis about seed dispersal, clearly explaining all the variables involved.		1 2 3 4 5 6 7 8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved							
	10.1.1 Variation									
1	State what is meant by the term variation		1	2	3	4	5	6	7	8
2	State that variation is caused by the environment or inheritance		1	2	3	4	5	6	7	8
3	Record observations of variations between different species of gull		1	2	3	4	5	6	7	8
4	Describe how variation in species occurs		1	2	3	4	5	6	7	8
5	Explain whether characteristics are inherited, environmental, or both		1	2	3	4	5	6	7	8
6	Record and categorise observations of variations between different species of gull		1	2	3	4	5	6	7	8
7	Explain how variation gives rise to different species		1	2	3	4	5	6	7	8
8	Critique a claim that a particular characteristic is inherited or environmental		1	2	3	4	5	6	7	8
9	Record and categorise observations of variations between different species of gull to suggest species boundaries		1	2	3	4	5	6	7	8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved
	10.1.2 Continuous and discontinuous		
1	State that there are two types of variation		1 2 3 4 5 6 7 8
2	State the two types of graphs that can be drawn when representing the two types of variation		1 2 3 4 5 6 7 8
3	Record results in a table and plot a graph on axes provided		1 2 3 4 5 6 7 8
4	Describe the difference between continuous and discontinuous variation		1 2 3 4 5 6 7 8
5	Use knowledge of continuous and discontinuous variation to explain whether characteristics are inherited, environmental, or both		1 2 3 4 5 6 7 8
6	Plot bar charts or line graphs to show discontinuous or continuous variation data		1 2 3 4 5 6 7 8
7	Record results in a table and plot a histogram		1 2 3 4 5 6 7 8
8	Explain the causes of continuous and discontinuous variation		1 2 3 4 5 6 7 8
9	Record results in a table, and identify and plot an appropriate graph to show variation within a species		1 2 3 4 5 6 7 8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved
	10.1.3 Adapting to change		
1	Name an environmental change		1 2 3 4 5 6 7 8
2	Give a possible reason for adaptation or extinction		1 2 3 4 5 6 7 8
3	Explain how organisms are adapted to their environments		1 2 3 4 5 6 7 8
4	Explain how variation helps a particular species in a changing environment		1 2 3 4 5 6 7 8
5	Describe how organisms are adapted to their environments		1 2 3 4 5 6 7 8
6	Explain how organisms are adapted to seasonal changes		1 2 3 4 5 6 7 8
7	Explain how competition or long-term environmental change can lead to evolutionary adaptation or extinction and the role variation plays in a species success		1 2 3 4 5 6 7 8
8	Predict implications of a change in the environment on a population		1 2 3 4 5 6 7 8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved							
	10.2.1 Adolescence									
1	State the definitions for adolescence and puberty		1	2	3	4	5	6	7	8
2	State changes to the bodies of boys and girls during puberty		1	2	3	4	5	6	7	8
3	Interpret observations given, as changes that occur in boys or in girls		1	2	3	4	5	6	7	8
4	State the difference between adolescence and puberty		1	2	3	4	5	6	7	8
5	Describe the main changes that take place during puberty		1	2	3	4	5	6	7	8
6	Interpret observations given, to categorise the changes during adolescence		1	2	3	4	5	6	7	8
7	Explain the difference between adolescence and puberty		1	2	3	4	5	6	7	8
8	Explain the main changes that take place during puberty		1	2	3	4	5	6	7	8
9	Interpret observations given, to categorise and explain physical and emotional changes during adolescence		1	2	3	4	5	6	7	8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved
	10.2.2 Reproductive systems		
1	Name the main structures of the male and female reproductive system, including gametes		1 2 3 4 5 6 7 8
2	State a function of the main structures of the male and female reproductive system		1 2 3 4 5 6 7 8
3	Extract information from text to state structures and functions of the key parts of the reproductive systems in a table		1 2 3 4 5 6 7 8
4	Describe the main structures in the male and female reproductive systems		1 2 3 4 5 6 7 8
5	Describe the function of the main structures in the male and female reproductive systems		1 2 3 4 5 6 7 8
6	Extract information from text to describe structures and functions of the key parts of the reproductive systems in a table		1 2 3 4 5 6 7 8
7	Explain how different parts of the male and female reproductive systems work together to achieve certain functions		1 2 3 4 5 6 7 8
8	Explain the adaptations of some of the main structures that help them function		1 2 3 4 5 6 7 8
9	Extract information from text to explain structures and functions of the key parts of the reproductive systems in a table		1 2 3 4 5 6 7 8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved
	10.2.3 Fertilisation and implantation		
1	State what is meant by a person being infertile		1 2 3 4 5 6 7 8
2	State what is meant by fertilisation		1 2 3 4 5 6 7 8
3	State that if an egg is fertilised it settles into the uterus lining		1 2 3 4 5 6 7 8
4	Describe some causes of infertility		1 2 3 4 5 6 7 8
5	Describe the process of fertilisation and where it occurs in the body		1 2 3 4 5 6 7 8
6	Use a diagram to show the main steps that take place from the production of sex cells to the formation of an embryo		1 2 3 4 5 6 7 8
7	Discuss some causes of infertility and how these may be treated		1 2 3 4 5 6 7 8
8	Explain the sequence of fertilisation and implantation		1 2 3 4 5 6 7 8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved
	10.2.4 Development of a fetus		
1	State the definition of gestation		1 2 3 4 5 6 7 8
2	State how long a pregnancy lasts		1 2 3 4 5 6 7 8
3	Describe what happens during gestation		1 2 3 4 5 6 7 8
4	Describe what happens during birth		1 2 3 4 5 6 7 8
5	Explain whether substances are passed from the mother to the fetus or not		1 2 3 4 5 6 7 8
6	Describe accurately the sequence of events during gestation		1 2 3 4 5 6 7 8
7	Explain in detail how contractions bring about birth		1 2 3 4 5 6 7 8
8	Predict the effect of cigarettes, alcohol, or drugs on the developing fetus		1 2 3 4 5 6 7 8

Obj No	KS3 Biology - Genes	Start (/) Complete (X)	Level Achieved
	10.2.5 The menstrual cycle		
1	State the length of the menstrual cycle		1 2 3 4 5 6 7 8
2	State the main stages in the menstrual cycle		1 2 3 4 5 6 7 8
3	Present key pieces of information in a sequence		1 2 3 4 5 6 7 8
4	State what the menstrual cycle is		1 2 3 4 5 6 7 8
5	Identify key events on a diagram of the menstrual cycle		1 2 3 4 5 6 7 8
6	Present information in the form of a graphical timeline		1 2 3 4 5 6 7 8
7	Explain why pregnancy is more or less likely at certain stages of the menstrual cycle		1 2 3 4 5 6 7 8
8	Make deductions about how contraception methods work		1 2 3 4 5 6 7 8
9	Present information in the form of a scaled timeline or pie chart		1 2 3 4 5 6 7 8