Science - Biology Target Related Expectation (TReE)

	Pathway 1 (Target Grade 1-3)								
	8.1.1 Levels of organisation	8.1.2 The skeleton	8.1.3 Movement: joints	8.1.4 Movement: muscles	8.2.1 Observing cells	8.2.2 Plant and animal cells	8.2.3 Specialised cells	8.2.4 Movement of substances	8.2.5 Uni-cellular organisms
8 Organisms	• State what is meant by a tissue, an organ, and an organ system.	• Name the main parts in the skeleton and the function of the skeleton.	• State where joints are found in the body.	• State the function of major muscle groups.	• State what a cell is and use a microscope to view it.	• Match some components of a plant and animal cell to their functions.	• State structural adaptations of plant and animal cells, summarising this in a table or as a model.	• State simply what diffusion is.	• Name an example of a uni-cellular organism.
	9.1.1 Food chains and webs	9.1.2 Disruptions to food chains and webs	9.1.3 Ecosystems	9.1.4 Competition	9.2.1 Flowers and pollination	9.2.2 Fertilisation and germination	9.2.3 Seed dispersal		
9 Ecosystems	• State the definition of a food web.	• State that toxic material can get into food chains.	• State that different organisms can co-exist.	• State some resources that plants and animals compete for.	• Follow instructions to dissect a flower and name the parts. Idenfity if the flower is wind or insect pollinated.	• State what is meant by fertilisation in plants.	• Name the methods of seed dispersal.		
	10.1.1 Variation	10.1.2 Continuous / discontinuous	10.1.3 Adapting to change	10.2.1 Adolescence	10.2.2 Reproductive systems	10.2.3 Fertilisation and implantation	10.2.4 Development of a fetus	10.2.5 The menstrual cycle	
10 Genes	• State the meaning of variation and that variation is caused by the environment or inheritance.	• State the two types of graphs that can be drawn when representing the two types of variation.	• Give a possible reason for adaptation or extinction eg environmental change.	• State changes to the bodies of boys and girls during puberty.	• Name and state a function of the main structures of the male and female reproductive system.	• State what is meant by fertilisation.	• State how long a pregnancy lasts.	• State the main stages in the menstrual cycle.	

	Pathway 2 (Target Grade 4-6)								
	8.1.1 Levels of organisation	8.1.2 The skeleton	8.1.3 Movement: joints	8.1.4 Movement: muscles	8.2.1 Observing cells	8.2.2 Plant and animal cells	8.2.3 Specialised cells	8.2.4 Movement of substances	8.2.5 Uni-cellular organisms
8 Organisms	• Define and state examples of tissues, organs, and organ systems.	• Describe the functions of the muscular skeletal system .	• Describe the structure and function of joints.	• Use a diagram to predict the result of a muscle contraction or relaxation of an antagonistic muscle pair.	• Explain how to use a microscope to observe a cell.	• Identify and compare the similarities and differences between plant and animal cells.	• Describe structural adaptations of plant and animal cells.	• Describe the process of diffusion.	• Describe the structure of an amoeba and a euglena.
	9.1.1 Food chains and webs	9.1.2 Disruptions to food chains and webs	9.1.3 Ecosystems	9.1.4 Competition	9.2.1 Flowers and pollination	9.2.2 Fertilisation and germination	9.2.3 Seed dispersal		
9 Ecosystems	• Combine food chains to form a food web.	• Describe the interdependence of organisms.	• Describe how different organisms co-exist within an ecosystem.	• Describe some resources that plants and animals compete for.	• Use appropriate techniques to dissect a flower into its main parts.	• Describe the process of fertilisation in plants.	• Describe methods seed dispersal, and use the features of seeds and fruit to explain how they are adapted to their method.		
	10.1.1 Variation	10.1.2 Continuous/ discontinuous	10.1.3 Adapting to change	10.2.1 Adolescence	10.2.2 Reproductive systems	10.2.3 Fertilisation and implantation	10.2.4 Development of a fetus	10.2.5 The menstrual cycle	
10 Genes	• Describe how variation in species occurs.	• Use knowledge of continuous and discontinuous variation to explain whether characteristics are inherited, environmental, or both.	• Explain how variation helps a particular species in a changing environment.	• Describe the main changes that take place during puberty.	• Describe the function of the main structures in the male and female reproductive systems.	• Describe the main steps that take place from the production of sex cells to the formation of an embryo.	• Describe what happens during gestation and birth.	• Identify key events of the menstrual cycle.	

	Pathway 3 (Target Grade 7-8)								
	8.1.1 Levels of organisation	8.1.2 The skeleton	8.1.3 Movement: joints	8.1.4 Movement: muscles	8.2.1 Observing cells	8.2.2 Plant and animal cells	8.2.3 Specialised cells	8.2.4 Movement of substances	8.2.5 Uni-cellular organisms
8 Organisms	• Explain how the different tissues in an organ, and the different organs in an organ system function together.	• Explain the link between structure and functions in the muscular skeletal system.	• Explain how the parts of a joint allow it to function.	• Explain why it is necessary to have both muscles in an antagonistic pair to cause movement.	• Use a microscope to observe a prepared slide calculating a range of magnifications.	• Explain the similarities and differences between plant and animal cells.	• Describe examples of specialised animal cells, linking structure and function.	• Explain which substances move into and out of cells.	• Explain what a uni-cellular organism is and give detailed examples.
	9.1.1 Food chains and webs	9.1.2 Disruptions to food chains and webs	9.1.3 Ecosystems	9.1.4 Competition	9.2.1 Flowers and pollination	9.2.2 Fertilisation and germination	9.2.3 Seed dispersal		
9 Ecosystems	• Explain why a food web gives a more accurate representation of feeding relationships than a food chain.	• Explain how toxic materials can accumulate in human food sources.	• Explain why different organisms are needed in an ecosystem in terms of biodiversity.	• Explain the effect of competition on the individual or the population.	• Explain how the structures of the flower are adapted to their function.	• Explain the process of fertilisation in plants, explaining the role each of the parts involved in the process.	• Develop an argument why a particular plant structure increases the likelihood of successful production of offspring.		
	10.1.1 Variation	10.1.2 Continuous/ discontinuous	10.1.3 Adapting to change	10.2.1 Adolescence	10.2.2 Reproductive systems	10.2.3 Fertilisation and implantation	10.2.4 Development of a fetus	10.2.5 The menstrual cycle	
10 Genes	• Explain how variation gives rise to different species.	• Explain the causes of continuous and discontinuous variation.	• Explain how competition or long-term environmental change can lead to evolutionary adaptation or extinction and the role variation plays in a species success.	• Explain the main changes that take place during puberty.	• Explain how different parts of the male and female reproductive systems work together to achieve certain functions.	• Explain the sequence of fertilisation and implantation.	• Describe accurately the sequence of events during gestation and birth. Predict the effect of cigarettes, alcohol, or drugs on the developing fetus.	• Make deductions about how hormonal and barrier contraception methods work.	