

Term	Week	Focus	Summary	Learning Outcomes	Learning skills
Term 1.1	1	Infection and Response	Introduction to microorganisms and pathogens that cause infectious diseases	Understanding the concept of pathogens and their impact on health	Reading comprehension, note-taking
		Infection and Response	White blood cells and the immune response to defend against pathogens	Exploring the role of white blood cells, antibodies, and antitoxins in immune response	Note-taking, critical thinking
		Infection and Response	Vaccination and the concept of immunity	Understanding how vaccines stimulate antibody production and confer immunity	Reading comprehension, critical evaluation
	2	Infection and Response	Antibiotics and the development of antibiotic resistance	Exploring the use of antibiotics, the challenge of treating viral pathogens, and the development of resistance	Note-taking, critical thinking
		Infection and Response	Antibiotics and the development of antibiotic resistance	Exploring the use of antibiotics, the challenge of treating viral pathogens, and the development of resistance	Note-taking, critical thinking
	3	Evaluate knowledge of all content from the cells topic and apply it to different retrieval tasks.	Critical thinking, Analysis, Recall, Mathematical skills	Retrieval practise	Application of knowledge gained throughout topic.
	4	Bioenergetics: Photosynthesis	Introduction to photosynthesis and its equation. Understanding the role of chlorophyll and the conversion of carbon dioxide and water into glucose and oxygen. Investigating the factors that can limit the rate of photosynthesis, such as temperature, carbon	Understand the process of photosynthesis and its chemical equation. Explore the role of chlorophyll and the by-products of photosynthesis. Learn about the factors that can limit the rate of photosynthesis. Relate the concept of limiting factors to the economics of enhancing conditions in greenhouses.	Critical thinking, Analytical skills, Data analysis, Problem-solving

			dioxide concentration, and light intensity. Understanding the concept of limiting factors and their impact on photosynthesis.		
	5	Bioenergetics: Use of Glucose Investigating Photosynthesis	Exploring the various uses of glucose produced in photosynthesis. Understanding how glucose can be used for respiration, converted into starch, fats, oils, cellulose, and proteins. Conducting a required practical to investigate how different variables affect the rate of photosynthesis. Collecting and analyzing data to draw conclusions about the relationship between variables and photosynthesis.	Understand the different ways in which glucose can be utilized by organisms. Explore the conversion of glucose into different substances for storage and growth. Apply experimental skills to investigate the factors influencing the rate of photosynthesis. Develop data interpretation and scientific communication abilities.	Scientific inquiry, Experimental design, Research skills, Scientific communication
	6	Exchange and Transport in Plants	Understanding the processes of gas exchange and transportation in flowering plants. Exploring how carbon dioxide enters leaves and water and mineral ions are absorbed by roots.	Learn about the mechanisms of gas exchange and transport in plants. Understand the role of stomata, roots, and specialized plant tissues (xylem and phloem) in these processes.	Teamwork, Collaboration
	7	Evaluate knowledge of all content from the cells topic and apply it to different retrieval tasks.	Critical thinking, Analysis, Recall, Mathematical skills	Retrieval practise	Application of knowledge gained throughout topic.

Term 1.2

	1	Inheritance and Genetic Variation	<p>Introduction to genetic information, genes, and inheritance. Understanding the concepts of sexual and asexual reproduction, genetic variation, chromosomes, alleles, and dominant/recessive alleles.</p> <p>Exploring the causes of variation in individuals, including genetic and environmental factors. Understanding the role of genes, chromosomes, alleles, and dominant/recessive alleles in inheritance.</p>	<p>Understand the role of genes in determining the characteristics of organisms. Explore the different forms of reproduction and the sources of genetic variation.</p> <p>Understand the sources of genetic variation and how genes control the development of characteristics. Learn about Mendelian inheritance, genetic diagrams, and terms such as homozygous, heterozygous, phenotype, and genotype.</p>	Information literacy, Data interpretation
	2	Inheritance: Genetic Disorders	Investigating inherited disorders such as polydactyly, cystic fibrosis, and sickle cell anemia. Interpreting data related to genetic disorders and understanding the impact of abnormal numbers of chromosomes on inherited conditions.	Explore different genetic disorders and their causes. Analyze data and understand the implications of abnormal chromosome numbers on inherited traits.	Critical analysis, Ethical reasoning
	3	Evaluate knowledge of all content from the cells topic and apply it to different retrieval tasks.	Critical thinking, Analysis, Recall, Mathematical skills	Retrieval practise	Application of knowledge gained throughout topic.
	4	Genetic Manipulation: Cloning Techniques	Understanding modern cloning techniques, including tissue culture, embryo transplants, and adult cell cloning. Exploring the applications and controversies surrounding genetic manipulation.	Learn about various cloning techniques used in genetic engineering. Discuss the implications, benefits, and ethical considerations associated with genetic manipulation.	Problem-solving, Ethical reasoning

	5	Genetic Manipulation: Genetically Modified Organisms	Exploring genetic engineering and the transfer of genes between organisms. Understanding the process of gene isolation, insertion into vectors, and transferring genes to host organisms.	Understand the principles and methods of genetic engineering. Discuss the applications of genetically modified organisms (GMOs) in agriculture, medicine, and industry.	Critical thinking, Scientific communication
	6	Genetic Manipulation: Ethical Considerations	Examining ethical issues and controversies surrounding genetic manipulation, including genetically modified crops, cloning, and gene editing technologies like CRISPR. Discussing the potential benefits and risks associated with genetic engineering.	Explore ethical considerations related to genetic manipulation. Analyze the potential benefits and risks of genetic engineering technologies. Engage in debates and articulate informed opinions.	Ethical reasoning, Debating
	7	Evaluate knowledge of all content from the cells topic and apply it to different retrieval tasks.	Critical thinking, Analysis, Recall, Mathematical skills	Retrieval practise	Application of knowledge gained throughout topic.