



Science Department Biology Curriculum and Assessment Map

	Half Term 1	Half-Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Year 8	Respiration	Movement and Health		Reproduction		All about Plants
Fundamental Knowledge	<ol style="list-style-type: none"> 1. State the word equation of aerobic respiration 2. Describe the role of mitochondria in aerobic respiration 3. Explain why aerobic respiration is necessary to life 4. State the word equation for anaerobic respiration in humans. 5. Compare the differences between aerobic and anaerobic respiration 6. Identify the parts of a fungi cell 7. Describe the functions of the parts of the fungi cell. 8. Compare the cell of a fungi to an animal cell 9. State the word equation for anaerobic respiration in fungi 10. Describe how anaerobic respiration in yeast is used to make bread and alcohol 	<ol style="list-style-type: none"> 1. Recall examples of major bones in the body 2. Describe the different functions of the skeleton 3. Measure the forces produced by different muscles. 4. Explain what is meant by antagonistic muscles, giving an example pair. 5. Recall the names of different joint types 6. Describe how the muscle and skeleton interact around a joint to produce movement 7. Define health 8. Explain the changes exercise has on the body 9. Describe the effects of alcohol on the body 10. Discuss the benefits and drawbacks from drinking alcohol 11. State the main chemicals found in cigarettes 12. Describe how gas exchange can be affected by smoking 		<ol style="list-style-type: none"> 1. Recall those involved in the discovery of DNA 2. Describe the structure of DNA and chromosomes 3. Explain how features can be inherited through genes 4. Recall the ways in which sperm and egg cells are specialised 5. Discuss the way that unique gametes lead to variation in offspring 6. Label the human reproductive organs 7. State how fertilisation occurs 8. Describe how gametes move through their respective organs. 9. Label examples of the changes that occur during puberty. 10. Suggest how these changes prepare a person for reproducing 11. Identify the key stages in the menstrual cycle 12. Interpret diagrams to describe how womb thickness changes throughout the cycle. 13. Recall the role of the placenta 	<ol style="list-style-type: none"> 1. Recall the roles of the vacuole, chloroplasts, and cell wall 2. Compare the features of a plant cell with those of an animal cell 3. Describe the adaptations of root hair cells 4. State how roots, leaves, and flowers benefit a plant 5. Define osmosis 6. Describe the role of the xylem 7. Separate the xylem from a plant stem 8. State the word equation for photosynthesis 9. Suggest ways that may increase photosynthesis 10. Interpret graphs on photosynthesis rates 11. Investigate the structure of a leaf 12. Explain how leaf adaptations help plants photosynthesise 13. Suggest reasons for different leaf shapes 14. Label the reproductive organs of a plant 	

		<p>13. Explain why respiration may be lower in a smoker</p> <p>14. Recall examples of asthmatic triggers</p> <p>15. Describe how asthma affects gas exchange</p> <p>16. Suggest how asthma may impact the ability to do exercise</p> <p>17. Identify examples of legal and illegal drugs</p> <p>18. Explain the social effects of drug misuse</p> <p>19. Justify why certain drugs are legal and others are not</p>	<p>14. Describe the main stages of gestation</p> <p>15. Suggest how a pregnant woman's lifestyle choices can impact the fetus</p>	<p>15. Describe the role of animals in plant reproduction</p> <p>16. Suggest the impact that the removal of these animals would have on food output</p>
Learning Checkpoint Tasks	<p>1. Aerobic Respiration</p> <p>2. Anaerobic Respiration</p>	<p>1. Movement</p> <p>2. Health</p>	<p>1. DNA, genes and gametes</p> <p>2. Reproduction</p>	<p>1. Plant cells</p> <p>2. Photosynthesis</p>
Common Assessment Task	Year 8: Common Assessment 1	Year 8: Common Assessment 2		
Mock Exam (if applicable)				
Interleaved Knowledge	<p>From KS2/3, most students should be able to:</p> <ul style="list-style-type: none"> recall how cells, tissues, organs and organ systems are related. describe how some cells are adapted for certain functions. Recall how respiration and movement are two of the seven life processes. 	<p>From KS2/3, most students should be able to:</p> <ul style="list-style-type: none"> recall how cells, tissues, organs and organ systems are related. describe how some cells are adapted for certain functions. identify that humans and some other animals have skeletons and muscles for support, protection and movement recognise the impact of diet, exercise, drugs and lifestyle on the way their bodies function. 	<p>From KS2/previous units most students will:</p> <ul style="list-style-type: none"> describe the life process of reproduction in some plants and animals describe the changes as humans develop to old age understand the concept of the cell recall that some cells are specialised 	<p>From KS2 most students will be able to:</p> <ul style="list-style-type: none"> describe the life process of reproduction in some plants and animals <p>From previous units, most students will have covered:</p> <ul style="list-style-type: none"> plant cells, tissues, organs and organ systems photosynthesis food as a store of energy