

Advanced Biology

Objectives

York Science Standards	Life Skills	Communication	Technology	Cultures/Careers	Problem Solving	Critical Thinking
Matter and Energy		<ul style="list-style-type: none"> develop comparisons of how energy travels through the process of cell respiration and photosynthesis. (12.3.3, 12.3.5) (12.3.6) 				
Patterns and Change		<ul style="list-style-type: none"> demonstrate an understanding of the process of metabolism and the role of enzymes in these reactions. (12.1.5) 				<ul style="list-style-type: none"> Discuss the principles of evolution (12.4.3, 12.4.4, 12.5.3)
Measure, Collect and Organize						
Cells and Diversity of Life		<ul style="list-style-type: none"> classify differences between eukaryotic and prokaryotic cell functions and structures. (12.4.1, 12.4.5) 	<ul style="list-style-type: none"> derive an understanding of the behavior of organisms through observations (12.4.6) 		<ul style="list-style-type: none"> interpret DNA structure and its importance in living organisms. (12.4.2, 12.6.1) 	
Force and Motion						
Systems and Interactions	<ul style="list-style-type: none"> examine and organize function, structure, and change in the anatomical and physiological systems of the human body. (12.1.1, 12.1.5, 12.4.6) 					
Atoms and Molecules					<ul style="list-style-type: none"> conduct labs regarding osmosis & diffusion and relate the results to these processes in the human body. (12.6.1) 	<ul style="list-style-type: none"> identify organic molecular structures and understand their role in the human body. (12.3.2, 12.3.3)
Advanced Topics	<ul style="list-style-type: none"> produce an extended research paper on genetic disease. (12.4.2, 12.7.1) assess and evaluate the ethical issues behind genetic current events and discoveries. (12.7.1, 12.8.2, 12.8.3) 	<ul style="list-style-type: none"> formulate questions and discussion to gain an understanding of the importance and significance of the Human Genome Project. (12.2.1, 12.6.1) 		<ul style="list-style-type: none"> examine different systems of medicine and the careers involved in this field of science. (12.6.2, 12.8.2) 		