



1 <sup>st</sup> Quarter (44 Days)			
<i>Resources:</i> STEMScopes			
Week	Unit/Lesson	Learning Objectives	Writing
1 <sup>st</sup> : Aug 8-9 (2 days)	Welcome to school	TW establish class routines and procedures	N/A
2 <sup>nd</sup> : Aug 12-16 (5 days)	<b>B.4A Prokaryotic and Eukaryotic Cells</b>	TSW Compare and contrast prokaryotic and eukaryotic cells, including their complexity, and compare and contrast scientific explanations for cellular complexity.	B.5B
3 <sup>rd</sup> : Aug 19-23 (3 days)	<b>B.9A Biomolecules</b>	TSW relate the functions of different types of biomolecules including carbohydrates, lipids, proteins, and nucleic acids to the structure and function of a cell TSW investigate and explain the role of enzymes in facilitating cellular processes	B.5A B.11B
4 <sup>th</sup> : Aug 26- Aug 30 (5 days)	<b>B.9A Biomolecules</b>	TSW relate the functions of different types of biomolecules including carbohydrates, lipids, proteins, and nucleic acids to the structure and function of a cell TSW investigate and explain the role of enzymes in facilitating cellular processes	B.5A B.11B
5 <sup>th</sup> : Sept 2-6 (4 days)	<b>Monday: Labor Day Holiday</b> <b>Homeostasis</b>	TSW investigate homeostasis through the cellular transport of molecules	B.5C
6 <sup>th</sup> : Sept 9-13 (5 days)	<b>Diseases</b>	TSW compare the structures of viruses to cells and explain how viruses spread and cause disease TSW relate disruptions of the cell cycle to how they lead to the development of diseases such as cancer	B.5D B.6C
7 <sup>th</sup> : Sept 16-20 (5 days)	<b>Diseases</b>	TSW compare the structures of viruses to cells and explain how viruses spread and cause disease TSW relate disruptions of the cell cycle to how they lead to the development of diseases such as cancer	B.5D B.6C
8 <sup>th</sup> : Sept 23-27 (4 days)	<b>Cell Cycle and Specialization</b> <b>Friday: Professional Development</b>	TSW explain the importance of the cell cycle to the growth of organisms, including an overview of stages of the cell cycle and deoxyribonucleic acid (DNA) replication models TSW explain the process of cell specialization through cell differentiation, including the role of environmental factors	B.6A B.6B



1 <sup>st</sup> Quarter (44 Days)			
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Week	Unit/Lesson	Learning Objectives	Writing
9 <sup>th</sup> : Sept 30 Oct 4 (5 days)	Cell Cycle and Specialization	TSW explain the importance of the cell cycle to the growth of organisms, including an overview of stages of the cell cycle and deoxyribonucleic acid (DNA) replication models TSW explain the process of cell specialization through cell differentiation, including the role of environmental factors	B.6A B.6B
10 <sup>th</sup> : Oct 7-11 (5 days)	Cellular Respiration and Photosynthesis	TSW explain how matter is conserved and energy is transferred during photosynthesis and cellular respiration using models, including the chemical equations for these processes	B.11A

2 <sup>nd</sup> Quarter (43 Days)			
<i>Resources:</i> STEMScopes			
Week	Unit/Lesson	Learning Objectives	Writing
1 <sup>st</sup> : Oct 14-18 (5 days)	Cellular Respiration and Photosynthesis	TSW explain how matter is conserved and energy is transferred during photosynthesis and cellular respiration using models, including the chemical equations for these processes	B.11A
2 <sup>nd</sup> : Oct 21-25 (5 days)	DNA	TSW identify components of DNA, explain how the nucleotide sequence specifies some traits of an organism, and examine scientific explanations for the origin of DNA	B.7A
3 <sup>rd</sup> : Oct 28- Nov 1 (4 days)	Friday: Parent/Teacher Conferences  Gene Expression	TSW describe the significance of gene expression and explain the process of protein synthesis using models of DNA and ribonucleic acid (RNA) TSW identify and illustrate changes in DNA and evaluate the significance of these changes	B.7B B.7C
4 <sup>th</sup> : Nov 4-8 (5 days)	Gene Expression	TSW describe the significance of gene expression and explain the process of protein synthesis using models of DNA and ribonucleic acid (RNA) TSW identify and illustrate changes in DNA and evaluate the significance of these changes	B.7B B.7C
5 <sup>th</sup> : Nov 11-15 (5 days)	DNA Technology	TSW discuss the importance of molecular technologies such as polymerase chain reaction (PCR), gel electrophoresis, and genetic	B.7D



2 <sup>nd</sup> Quarter (43 Days)			
<i>Resources:</i> STEMScopes			
Week	Unit/Lesson	Learning Objectives	Writing
		engineering that are applicable in current research and engineering practices	
6 <sup>th</sup> : Nov 18-22 (5 days)	Meiosis and Reproduction	TSW analyze the significance of chromosome reduction, independent assortment, and crossing-over during meiosis in increasing diversity in populations of organisms that reproduce sexually	B.8A
Nov 25-29	<b>Thanksgiving Holiday</b>		
8 <sup>th</sup> : Dec 2-6 (5 days)	Genetics and Inheritance	TSW predict possible outcomes of various genetic combinations using monohybrid and dihybrid crosses, including non-Mendelian traits of incomplete dominance, codominance, sex-linked traits, and multiple alleles	B.8B
9 <sup>th</sup> : Dec 9-13 (5 days)	Genetics and Inheritance	TSW predict possible outcomes of various genetic combinations using monohybrid and dihybrid crosses, including non-Mendelian traits of incomplete dominance, codominance, sex-linked traits, and multiple alleles	B.8B
10 <sup>th</sup> : Dec 16-20 (5 days)	Review & Assessment	Review and Assessment	Review and Assessment
<b>Winter Break Dec 23 - Jan 03</b>			

3 <sup>rd</sup> Quarter (44 Days)			
<i>Resources:</i> STEMScopes			
Week	Unit/Lesson	Learning Objectives	Writing
1 <sup>st</sup> : Jan 6-10 (5 days)	Monday: Professional Development Interactions in Body Systems	TSW analyze the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals	B.12A
2 <sup>nd</sup> : Jan 13-17 (5 days)	Interactions in Body Systems	TSW analyze the interactions that occur among systems that perform the functions of regulation, nutrient absorption, reproduction, and defense from injury or illness in animals	B.12A
3 <sup>rd</sup> : Jan 20-24 (4 days)	Monday: MLK Holiday Plant Structures	TSW explain how the interactions that occur among systems that perform functions of transport, reproduction, and response in plants are facilitated by their structures	B.12B



3 <sup>rd</sup> Quarter (44 Days)			
<i>Resources:</i> STEMScopes			
Week	Unit/Lesson	Learning Objectives	Writing
4 <sup>th</sup> : Jan 27-31 (5 days)	Plant Structures	TSW explain how the interactions that occur among systems that perform functions of transport, reproduction, and response in plants are facilitated by their structures	B.12B
5 <sup>th</sup> : Feb 3-7 (5 days)	Evidence for Evolution	TSW analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental TSW examine scientific explanations for varying rates of change such as gradualism, abrupt appearance, and stasis in the fossil record	B.9A B.9B
6 <sup>th</sup> : Feb 10-14 (5 days)	Friday: District Professional Development Evidence for Evolution	TSW analyze and evaluate how evidence of common ancestry among groups is provided by the fossil record, biogeography, and homologies, including anatomical, molecular, and developmental TSW examine scientific explanations for varying rates of change such as gradualism, abrupt appearance, and stasis in the fossil record	B.9A B.9B
7 <sup>th</sup> : Feb 17-21 (4 days)	Mechanisms of Natural Selection	TSW analyze and evaluate how natural selection produces change in populations and not in individuals TSW analyze and evaluate how the elements of natural selection, including inherited variation, the potential of a population to produce more offspring than can survive, and a finite supply of environmental resources, result in differential reproductive success	B.10A B.10B
8 <sup>th</sup> : Feb 24-28 (5 days)	Results of Evolution	TSW analyze and evaluate how natural selection may lead to speciation TSW analyze evolutionary mechanisms other than natural selection, including genetic drift, gene flow, mutation, and genetic recombination, and their effect on the gene pool of a population	B.10C B.10D
9 <sup>th</sup> : Mar 3-7 (5 days)	Results of Evolution	TSW analyze and evaluate how natural selection may lead to speciation TSW analyze evolutionary mechanisms other than natural selection, including genetic drift, gene flow, mutation, and genetic recombination, and their effect on the gene pool of a population	B.10C B.10D
March 10-14	<b>Spring Break</b>		



4 <sup>th</sup> Quarter (46 Days)			
<i>Resources:</i> StemScopes			
Week	Unit/Lesson	Learning Objectives	Writing
1 <sup>st</sup> : Mar 17- 21 (5 days)	Ecological Relationships	TSW investigate and evaluate how ecological relationships, including predation, parasitism, commensalism, mutualism, and competition, influence ecosystem stability TSW analyze how ecosystem stability is affected by disruptions to the cycling of matter and flow of energy through trophic levels using models	B.13A B.13B
<b>Ramadan &amp; Spring break Mar 24 - 31</b>			
2 <sup>nd</sup> : Apr 1-4 (4 days)	Carbon and Nitrogen Cycles	TSW explain the significance of the carbon and nitrogen cycles to ecosystem stability and analyze the consequences of disrupting these cycles	B.13C
3 <sup>rd</sup> : April 7-11 (5 days)	Changing Biodiversity	TSW explain how environmental change, including change due to human activity, affects biodiversity and analyze how changes in biodiversity impact ecosystem stability	B.13D
4 <sup>th</sup> : April 14- 18 (5 days)	STAAR REVIEW	STAAR REVIEW	STAAR REVIEW
5 <sup>th</sup> : Apr 21-25 (5 days)	STAAR REVIEW	STAAR REVIEW	STAAR REVIEW
6 <sup>th</sup> : Apr 28 -May 2 (5 days)	STAAR Testing	STAAR REVIEW	STAAR REVIEW
7 <sup>th</sup> : May 5- 9 (5 days)	STAAR Testing	STAAR REVIEW	STAAR REVIEW
8 <sup>th</sup> :May 12- 16 (5 days)	Scientific Process Standards	The student uses scientific practices and equipment during laboratory and field investigations	B.2(G) B.2(H)
9 <sup>th</sup> :May 19- 23 (5 days)	Scientific Process Standards Award Ceremonies / Graduation Ceremonies	The student uses critical thinking, scientific reasoning, and problem solving to make informed decisions within and outside the classroom	B.3(A)(B)(C)(D)(E)(F)
10 <sup>th</sup> :May 26-28	Graduation ceremonies & staff working days	N/A	N/A