Curriculum Map- Scope and Sequence:
High School Biology

Saddlebrook Preparatory School

Purpose of Planning	Unit One Introduction to Biology Q1, W1-2	Unit Two Cells Q1, W3-6	Unit Three Genetics Q1-Q2, W7-11	Unit Four Evolution Q2, W12-15	Unit Five Ecology Q2, W16-18
Unit Topic and Overview:	The study of life involves multiple science disciplines and themes repeated in biology (systems, structures and functions, homeostasis) and review of laboratory expectations.	The study of cells focuses on different types of cells, the structures and functions of different organelles, energy processes within the cell, and cell division.	The study of genetics relates the genetic makeup of an organism and how that DNA leads to genetic variation with future biotechnologies happening in today's science/medical world.	The study of evolution involves understanding the basic principles of evolution (Darwin) and natural selection, how these both lead to populations evolving, and ultimately how life on Earth has evolved.	The study of ecology relates the biotic and abiotic factors within an ecosystem, and how natural processes and humankind impact biomes.
Prerequisite Student Knowledge *What should students have previously mastered prior to this unit?	Students should have background knowledge of scientific thinking (scientific method), labs, and lab reports.	Students should have the background knowledge that plants and animals are different on the cellular level, and have worked with a microscope previously.	Students should have some background in mathematical probabilities and selection of traits in organisms, a few will have worked with Punnett squares before.	Students should have background from previous units on cells and genetics, most will know Darwin but not his work in much detail, and the geologic time scale should only be a review.	Students should know biotic and abiotic factors, food chains and webs, and major biomes of Earth.

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Essential Knowledge & Student Expectations *What are the anticipated learning outcomes for students?	Students will demonstrate knowledge of scientific thinking and relate the themes of biology, and they will complete an overview of their experiment. Essential Questions: 1. Connect the themes of Biology to your favorite area of study. 2. Generate a hypothesis to test an inference you have observed. Summarize your experimental findings.	Students will demonstrate knowledge of cells with hands-on and virtual labs/ WebQuests, student cell project shows mastery of organelles, and diagram labeling shows mastery of cell processes. Essential Questions: 1. Compare and contrast the organelles (structures and functions) that both plant and animal cells need to maintain homeostasis. 2. Explain the order of different energy processes within both plant and animal cells. 3. Sequence the steps of both mitosis and meiosis for cells.	Students will demonstrate knowledge of genetics with hands-on and virtual lab/ WebQuests, Punnett Squares and Pedigrees modeling examples, and replicating DNA codes to amino acids. Essential Questions: 1. Construct an amino acid given a strand of DNA then reconstruct the same amino acid exhibiting a mutation. 2. Using probabilities from Punnett squares for parental DNA, create a pedigree showing the family history for a specific disease. (ex. Colorblindness, cancer, Alzheimer's, etc.)	Students will demonstrate knowledge of evolution with hands-on and virtual lab/ WebQuests, and Darwin Project (cross curricular.) Essential Questions: 1. Distinguish Darwin's major scientific findings that have affected the study of biology. 2. Sequence the historic evolutionary patterns that lead to the rise of humankind. 3. Citing information you know, how one could explain a movie or series like "The Walking Dead" or "World War Z"? Could this happen, justify why or why not.	Students will demonstrate knowledge of ecology with hands-on and virtual lab/ WebQuests, and Ecological Footprint Reflection. Essential Questions: 1. Create a food chain for a tertiary predator, and then construct the food web based on that organism's biome. Explain possible threats (natural or manmade) of your chosen organism. 2. Invent a new species with evolutionary adaptations that resides in a new biome and explain how nature (genetics) and nurture (environment) have influenced your species.
Anchor Text and Supplemental Texts *Illustrate texts used, and how students' knowledge builds across units.	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Lab Handbook R2 Ch 1 Biology in the 21st Century (pg 2-31) Ch 2 Chemistry of Life (pg 32-60) Literary Texts: Informational Texts: From Library- will vary with student project topics	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 3 Cell Structure and Function (pg 64-91 Ch 4 Cells and Energy (pg92-123) Ch 5 Cell Growth and Division (pg124-152) Literary Texts: Informational Texts:	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 6 Meiosis and Mendel (pg156-185) Ch 7 Extending Mendelian Genetics (pg 186-209) Ch 8 From DNA to Proteins (pg 210-245) Ch 9 Frontiers of Biotechnology (pg 246-274) Literary Texts: *The Immortal Life of Henritta Locks* Informational Texts:	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 10 Principles of Evolution (pg 278-305) Ch 11 The Evolution of Populations (pg306-335) Ch 12 The History of Life (pg 336-366) Literary Texts: *Voyage of the Beagle* Informational Texts: BioZine Article: Drug-Resistant Bacteria	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 13 Principles of Ecology (pg 370-399) Ch 14 Interactions in Ecology (pg 400-425) Ch 15 The Biosphere (pg 426-451) Ch 16 Human Impact on Ecosystems (pg 452-480) Literary Texts: *A Sand County Almanac* Informational Texts:

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Multi-Media Links: *Videos, presentations, any and all supplemental online material.	-Discovery Education Video: Careers in Biology -Ch 1 WebQuest: Bioethics -Ch 2 Virtual Investigation: The Scientific Process -Destiny Quest to locate books in media center -Infotrac searches (wesl138374) *Student premium resources available for student help/scaffolding	-Discovery Education Video: Cells the Building Blocks of Life -Discovery Education Video: Elements of Biology: Matter and Energy: Organization in living Systems -Ch 3 WebQuest : Organelle Dysfunction -Ch 4 Virtual Lab: Carbon Transfer Through Snails and Elodea -Ch 5 Virtual Investigation: Phases of Mitosis *Student premium resources available for student help/scaffolding	-Discovery Education Video: Elements of Biology: Genetics: The Molecular Basis of Heridity -Discovery Education Video: Mechanisms of Evolution -Ch 6 Virtual Lab: Breeding Mutations in Fruit Flies -Ch 6 WebQuest: Selective Breeding -Ch 7 Virtual Investigation: Experiments and models of Heredity -Ch 8 Virtual Investigations: DNA,RNA, and Gene Expression and Gene Regulation *Student premium resources available for student help/scaffolding	-Discovery Education Video: Great Books: The Origin of Species -Ch 10 Virtual Investigation: Evolution by Natural Seclection -Ch 11 Virtual Investigation: Population Genetics -Ch 11 WebQuest: Speciation in Action or Starfish Marine biology game -Ch 12 Virtual Lab: Comparing Hominoid Skulls -Evolution WebQuest: Peppered Moth *Student premium resources available for student help/scaffolding	-Discovery Education Video: Elements of Biology: Ecosystems: organisms and their Environment -Discovery Education Video: Biomes: Our Earth's Major Life Zones -Ch 13 Virtual Lab: Estimating Population Size -Ch 13 QebQuest: Keystone Species -Ch 14 Virtual investigation: Population Niches and Competition -Ch 14 WebQuest: Environmental Stress -Ch 15 Virtual Investigation: Ecosystems and Energy Pyramids -Virtual Investigation: Carbon Dioxide and Global Warming -Ecology WebQuest: Everything -Footprint WebQuest: Calculators *Student premium resources available for student help/scaffolding

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Instructional Practices: * Various Instructional Modalities, including Technology used	-Bell work and discussion of Essential Questions -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Outlining student driven experiment/project -Scientific research methods on student laptops -WebQuest applies to science projects -Virtual Investigation with a written summary as a wrap up	-Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Cell Project to demonstrate organelle functions - WebQuest connects cells to genetics -Virtual Lab demonstrates cell processes -Virtual Investigation as resource to make Mitosis Flipbook	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptop -Focused reading of anchor text and vocabulary -Lab (pg 175) Using a Testcross -Virtual Lab simulates selective breeding techniques and shows trait outcomes -Virtual investigations relate concepts with checkpoints in comprehension along the way	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptop -Focused reading of anchor text and vocabulary -Lab (290) Line Graphs -Virtual investigations relate concepts with checkpoints in comprehension along the way -WebQuests have interactive simulations where students control variables of evolution	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Virtual labs and virtual investigations relate concepts with simulations or checkpoints in comprehension along the way -WebQuests allow for application of ecology concepts and personal reflection of our environmental impacts
Assessments: *Types and Measurements of Mastery	Informal Assessments: Bell work/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, weekly check points for student project, and labs. Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: BW/Exit slips daily, class lectures/discussions, checking focused reading answers/HW, flipbook, and diagram labeling. Formal Assessments: Pre-quiz, chapter quiz, unit test, cell project, and labs. Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: BW/Exit slips daily, class lectures/discussions, checking focused reading answers/HW, Punnett square and Pedigree examples. Formal Assessments: Pre-quiz, chapter quiz, unit test, and labs. Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: BW/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, labs, and Darwin project. Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: BW/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, labs, and Ecological Footprint project. *Semester 1 Final Exam Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.

Interdisciplinary Lessons & Projects: *State additional content areas and title all lesson(s) and project(s)	-Virtual Investigation, labs, and WebQuest (Science, LA/Writing, Technology, Math) -Student driven projects (Science, LA/Writing, Research Skills, Math, Technology)	-Virtual Investigation, labs, and WebQuest (Science, LA/Writing, Technology) -Cell project (Science, Humanities/ Art)	-Virtual Investigation, labs, and WebQuest (Science, Sociology, LA/Writing, Technology, Math) -Scientists (Science and History)	-Darwin Project cross-curricular with LA (Science, LA/Writing, History, Geography) -Virtual Investigation, labs, and WebQuest (LA/Writing, Geography, Technology, Math)	-Virtual Investigation, labs, and WebQuest (Science, Sociology, LA/Writing, Geography, Technology, math)
Honors Course Differentiation(s):	-E-mail proposals for Q1 scientist project -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-E-mail outline for Q1 scientist project -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-E-mail final paper for Q1 scientist project -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-E-mail proposals for Q2 Adopt-a-theory project -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-Adopt-a-theory informational fact sheets and advertisement due week 17. -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.
Integrated Common Core or NGSSS Standards (List): *See Below for Links	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.N.1.1-SC.912.N.1.7, SC.912.N.2.1-SC.912.N.2.5, SC.912.N.3.1-SC.912.N.3.5, SC.912.N.4.1-SC.912.N.4.2	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.14.1, SC.912.L.14.2, SC.913.L.14.3, SC.912.L.14.4, SC.913.L.14.5 , SC.912.L.18.7, SC.912.L.18.8, SC.912.L.18.9,	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.16.1, SC.912.L.16.2, SC.912.L.16.3, SC.912.L.16.4, SC.912.L.16.5, SC.912.L.16.6, SC.912.L.16.10, SC.912.L.16.11, SC.912.L.16.12, SC.912.L.16.14, SC.912.L.16.15, SC.912.L.16.17,	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.15.12, SC.912.L.15.13, SC.912.L.15.14, SC.912.L.15.15, SC.912.L.15.3, SC.912.L.15.8, SC.912.L.15.9	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.17.1- SC.912.L.17.20

Integrated CCSS <u>Writing Standards</u> (List): *See Below for Links	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9
Links to CCSS/NGSSS Curriculum Standards:	The following links will be used to incorpotae the CCSS and other applicable standards: • The Common Core State Standard expectations in grades 9-12. • The K-12 English LA and Content Area Writing Standards • The K-12 Reading Standards • The K-12 Mathematics Standards • The K-12 NGSSS Science & Social Studies Standards				
Purpose of Planning	**Unit Six** **Classification** **Q3, W19-21**	**Unit Seven** **Plants** **Q3, W22-24**	**Unit Eight** **Animals** **Q3-4, W25-30**	**Unit Nine** **Human Biology** **Q4 W31-36**	
Unit Topic and Overview:	The study of classification begins with methods scientists classify living things and then the diversity of groups of prokaryotes, viruses, protists, and fungi.	The study of plants focuses on the origins and diversity of plant life, in addition to the physiology, functions, and life cycles of plants.	The study of animals relates the common characteristics of animals, the diversity among invertebrates and vertebrates, and how behaviors affect animals.	The study of human biology involves the structures and functions of the major body systems and how these body systems work together to maintain homeostasis of the body.	
Prerequisite Student Knowledge *What should students have previously mastered prior to this unit?	Students should have background knowledge that all living organisms (plants or animals) are grouped based on characteristics.	Students should have background knowledge that plants contain different organelles and carry out different cellular processes than animals.	Students should have background knowledge that animals are vertebrates (with a backbone) or without invertebrates. Some students are familiar with animal groups from a younger age.	Students should have background knowledge of the main body systems, but have not studied the body system processes or homeostasis connection yet.	

Essential Knowledge & Student Expectations *What are the anticipated learning outcomes for students?	Students will demonstrate knowledge of classification by successfully grouping various prokaryotes or eukaryotes. Essential Question: 1. Compare and contrast the different classification systems used in science fields. 2. Summarize the benefits and harmful aspects of viruses, bacteria, protists, and fungi.	Students will demonstrate knowledge of plants physiology, functions, and life cycles by using the biological requirements to design a park (Xerioscape Park Design.) Essential Questions: 1. Explain how plants evolved to life on land. 2. Recommend a Xerioscape park design in your hometown. This blueprint design is to include the biome of your home, a description of the plants best suited for the environmental conditions and natural pests present, and a plan for the park to reduce humankinds' impacts too. 3. Speculate the impacts (environmentally and on humans) for GMO foods. Are there even non-GMO foods present in today's society? Explain why or why not.	Students will demonstrate knowledge of animals by being able to distinguish group characteristics and examples of each group, as animals have evolved over the history of time. Essential Questions: 1. Compare and contrast the characteristics of invertebrates (sponges, cnidarians, flatworms, mollusks, annelids, roundworms, echinoderms, arthropods, crustaceans, arachnids, and insects.) 2. Compare and contrast the characteristics of vertebrates (fishes, amphibians, and amniotes.) 3. Prioritize the importance of invertebrates and vertebrates; explain the "rules" you used to determine the order of priority within the animal kingdom.	Students will demonstrate knowledge of the human body by relating their understanding of major body systems (structures and functions) to how the human body can only successfully survive in a state of homeostasis. Essential Questions: 1. Explain how the themes of Biology are vital to the successful survival of human beings. 2. Relate how nutrition, relationships of body systems and performance as a student athlete are in homeostasis for a typical teen athlete's day. 3. Predict potential problems that can occur if the teen athlete's body is not in homeostasis.	

Anchor Text and Supplemental Texts *Illustrate texts used, and how students' knowledge builds across units.	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 17 The Tree of Life (pg 484-507) Ch 18 Viruses and Prokaryotes (pg 508-535) Ch 19 Protists and Fungi (pg 536-568) Literary Texts: Informational Texts:	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 20 Plant Diversity (pg572- 597) Ch 21 Plant Structure and Function (pg598-619) Ch 22 Plant Growth, Reproduction, and Response (pg 620-646) Literary Texts: *Silent Spring* by Rachael Carlson Informational Texts: BioZine Article: Genetically Modified Foods	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 23 Invertebrate Diversity (650-681) Ch 24 A Closer Look at Arthropods (pg 682-707) Ch 25 Vertebrate Diversity (pg 708-735) Ch 26 A Closer Look at Amniotes (pg736-763) Ch 27 Animal Behavior (pg764-791) Literary Texts: Y The Decent of Man by Steven Jones or The Sports Gene Informational Texts: BioZine Article: The Loss of Biodiversity	Anchor Texts: Nowicki, S. Biology. Orlando, Florida. Holt McDougal, 2012. Ch 28 Human Systems and Homeostasis (pg796-815) Ch 29 Nervous and Endocrine Systems (Pg 816-849) Ch 30 Respiratory and Circulatory Systems (pg850-877) Ch 31 Immune System and Disease (pg 878-907) Ch 32 Digestive and Excretory Systems (pg 908-933) Ch 33 Protection, Support, and Movement (pg 934-955) Ch 34 Reproduction and Development (pg956-982) Literary Texts: Informational Texts:	

Multi-Media Links: *Videos, presentations, any and all supplemental online material.	- Ch 17 Virtual Investigation: Using a Key to Classify -Ch 18 Virtual Lab: Testing Antibacterial Agents -Ch 18 WebQuest: Antibiotics in Agriculture -Discovery Education Video: Understanding Viruses -Discovery Education Video: Understanding Bacteria -Ch 19 Virtual Investigation: Comparing Protists -Ch 19 WebQuest: Sickening Protists *Student premium resources available for student help/scaffolding	-Discover Education Video: Life (Plant) -Ch 20 WebQuest: Endangered Plants -Ch 21 Virtual Lab: Plant Transpiration -Ch 22 Virtual Investigation: Plant Responses -Ch 22 Virtual Lab: Exploring Plant Responses -Xerioscape Park Design -The Science of Ice Cream Lab *Student premium resources available for student help/scaffolding	-Discovery Education Video: Those Amazing Arthropods -Discovery Education Video: Life (Birds, Primates, Fish, Insects, Reptiles) -Ch 24 Virtual Investigation: Respiration in Inverts -Ch 24 Virtual Lab: Insects and Crime Scene Analysis -Ch 24 That's Amazing: Zombie Ants -Ch 26 Virtual Investigation: Respiration in Verts -Ch 26 WebQuest: Sea Turtles -Ch27 Virtual Lab: Interpreting Bird Responses -Ch 27 That's Amazing: Sharks and Dolphins -Virtual Dissections *Student premium resources available for student help/scaffolding	-Discovery Education Video: The Ultimate Guide: Human Body (Grades 09-12) -Ch 28 WebQuest: Hypothermia -Ch 29 Virtual Investigation: Responses of the Human Nervous System -Ch 29 WebQuest: Drug Addiction -Ch 30 Virtual Lab: Blood Typing -Ch 30 WebQuest: Asthma -Ch 31 WebQuest: HIV and AIDS -Ch 32 WebQuest: Obesity -Ch 33 WebQuest: Muscular Dystrophy -Ch 34 WebQuest: Healthy Diet, Healthy Baby *Student premium resources available for student help/scaffolding	

Instructional Practices: * Various Instructional Modalities, including Technology used	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Lab (493) Cladograms -Lab Shape Island Handout -Virtual labs and virtual investigations relate concepts with simulations or checkpoints in comprehension along the way -WebQuests allow for practicing classification/naming	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Virtual labs and virtual investigations relate concepts with simulations or checkpoints in comprehension along the way -WebQuests allow for study of plant diversity -Xerioscape Park Design ties in ecology, Ag, GMO's -The Science of Ice Cream Lab researches GMO's in our lives	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Lab (543) Investigating Protists -Virtual labs and virtual investigations relate concepts with simulations or checkpoints in comprehension along the way -WebQuests allow for study of animal diversity	- Bell work and discussion of Essential Questions daily -Lecture with PowerPoint, students take notes on laptops -Focused reading of anchor text and vocabulary -Virtual labs and virtual investigations relate concepts with simulations or checkpoints in comprehension along the way -WebQuests allow for modeling of body system functions and topics one may experience in life	
Assessments: *Types and Measurements of Mastery	Informal Assessments: Bell work/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, and labs. Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: Bell work/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, labs, Xerioscape Park Design Project Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: Bell work/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, and labs. Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	Informal Assessments: Bell work/Exit slips daily, class lectures/discussions, checking focused reading answers/HW. Formal Assessments: Pre-quiz, chapter quiz, unit test, labs, and teen athlete day reflection. *Semester 2 Final Exam Objective: 80% of student athletes will be able to demonstrate mastery (mastery is defined as 80%+) on formal assessments at the completion of the unit.	

Interdisciplinary Lessons & Projects: *State additional content areas and title all lesson(s) and project(s)	-Virtual Investigation, labs, and WebQuest (Science, Sociology, LA/Writing, Geography, Technology, Math)	-Virtual Investigation, labs, and WebQuest (Science, Sociology, LA/Writing, Geography, Technology, Math) -Xerioscape Park Design Project (Science, LA/Writing, Geography, Technology, Math, Problem Solving Skills) -The Science of Ice Cream Lab (Science, LA/Writing, Nutrition, Culinary Arts)	-Virtual Investigation, labs, and WebQuest (Science, Sociology, LA/Writing, Geography, Technology, Math)	-Virtual Investigation, labs, and WebQuest (Science, Sociology, LA/Writing, , Technology, Math, Nutrition) -Teen athlete day reflection (Science, Sociology, LA/Writing, Nutrition, Anatomy)	
Honors Course Differentiation(s):	-E-mail proposal of research topic for Q3 Biology in Society Project -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-Persuasive PowerPoint and outline due week 24. -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-E-mail proposal for Q4 Career in Biology project. -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	-Persuasive presentation (magazine, video, PowerPoint) due week 35. -Additional test questions and extended response questions to demonstrate mastery. -Honors students required to accompany their projects to the school and district science fair.	
Integrated Common Core or NGSSS Standards (List): *See Below for Links	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.15.3, SC.912.L.15.4, SC.912.L.15.5, SC.912.L.15.6	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.14.53, SC.912.L.14.6, SC.912.L.14.7, SC.912.L.18.7-SC.912.L.18.9,SC.912.L.14.10,	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.15.6, SC.912.L.15.7, SC.912.L.15.8,	CCSS.ELA-Literacy.RST.9-10.1 CCSS.ELA-Literacy.RST.9-10.2 CCSS.ELA-Literacy.RST.9-10.3 CCSS.ELA-Literacy.RST.9-10.4 CCSS.ELA-Literacy.RST.9-10.5 CCSS.ELA-Literacy.RST.9-10.6 CCSS.ELA-Literacy.RST.9-10.7 CCSS.ELA-Literacy.RST.9-10.8 CCSS.ELA-Literacy.RST.9-10.9 CCSS.ELA-Literacy.RST.9-10.10 SC.912.L.16.13, SC.912.L.14.12-SC.912.L.14.52,	

Integrated CCSS Writing Standards (List): *See Below for Links	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	CCSS.ELA-Literacy.W.9-10.1 CCSS.ELA-Literacy.W.9-10.2 CCSS.ELA-Literacy.W.9-10.4 CCSS.ELA-Literacy.W.9-10.5 CCSS.ELA-Literacy.W.9-10.7 CCSS.ELA-Literacy.W.9-10.9	
Links to CCSS/NGSSS Curriculum Standards:	The following links will be used to incorpotae the CCSS and other applicable standards: • The Common Core State Standard expectations in grades 9-12. • The K-12 English LA and Content Area Writing Standards • The K-12 Reading Standards • The K-12 Mathematics Standards • The K-12 NGSSS Science & Social Studies Standards				