

The background of the page features a large, light gray, pixelated version of the Seal of the Commonwealth of Massachusetts. The seal depicts a Native American figure holding a bow and arrow, with a five-pointed star above his right shoulder, all enclosed within a circular border.

Curriculum Map
Biology #211/212
Saugus High School
Saugus, MA 01906

Week 1		Week 2	
<i>Performance Standards</i>		<i>Performance Standards</i>	
Unit/Topic./Lesson The Science of Life Themes of biology Characteristics of Life		Unit/Topic./Lesson The Science of Life Microscopes	
Objectives (Students Will...) List the six unifying themes of Biology List the six characteristics of life	Essential Question What is Biology?	Objectives (Students Will...) Define and give examples of observing, measuring, and organizing and analyzing data. Use and identify parts of the light microscope	Essential Question What is the scientific method and how do scientists use it to solve problems?
	Labs/Demonstrations/Handouts Lab: Lab Safety		Labs/Demonstrations/Handouts Lab: Using the Light microscope
Teacher Resources <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 1 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	Media Resources <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos 	Teacher Resources <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 1 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	Media Resources <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos - <i>CSI</i>
Assessment Activities Chapter 1 Vocabulary Chapter 1 Questions Quizzes	Completion date: Completed by: Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster	Assessment Activities Chapter 1 Test	Completion date: Completed by: Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 3		Week 4	
<p align="center">Performance Standards</p> <p>Biology 1.1: Recognize that biological organisms are composed primarily of very few elements. The six most common are C, H, N, O, P, and S</p> <p>Biology 1.2: Describe the basic molecular structures and primary functions of the four major categories of organic molecules (carbohydrates, lipids, proteins, nucleic acids).</p> <p>Biology 1.3: Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature that have an effect on enzymes.</p>		<p align="center">Performance Standards</p> <p>Biology 1.1: Recognize that biological organisms are composed primarily of very few elements. The six most common are C, H, N, O, P, and S</p> <p>Biology 1.2: Describe the basic molecular structures and primary functions of the four major categories of organic molecules (carbohydrates, lipids, proteins, nucleic acids).</p> <p>Biology 1.3: Explain the role of enzymes as catalysts that lower the activation energy of biochemical reactions. Identify factors, such as pH and temperature that have an effect on enzymes.</p>	
<p align="center">Unit/Topic./Lesson</p> <p>Biochemistry Water Carbon Compounds Molecules of Life</p>		<p align="center">Unit/Topic./Lesson</p> <p>Biochemistry Water Carbon Compounds Molecules of Life</p>	
<p align="center">Objectives (Students Will...)</p> <p>Define organic molecule and name the three elements often found in them. Define and describe the structure and functions of the four macromolecules of life: Carbohydrates, lipids, proteins, and nucleic acids.</p>	<p align="center">Essential Question</p> <p>What is the importance of carbohydrates, lipids, proteins, and nucleic acids to living things?</p>	<p align="center">Objectives (Students Will...)</p> <p>Define organic molecule and name the three elements often found in them. Define and describe the structure and functions of the four macromolecules of life: Carbohydrates, lipids, proteins, and nucleic acids.</p>	<p align="center">Essential Question</p> <p>What is the importance of carbohydrates, lipids, proteins, and nucleic acids to living things?</p>
	<p align="center">Labs/Demonstrations/Handouts</p>		<p align="center">Labs/Demonstrations/Handouts</p> <p>Lab: Carbohydrates</p>
<p align="center">Teacher Resources</p> <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 3 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<p align="center">Media Resources</p> <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos 	<p align="center">Teacher Resources</p> <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 3 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<p align="center">Media Resources</p> <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
<p align="center">Assessment Activities</p> <p>Chapter 3 Vocabulary Chapter 3 Questions Quizzes</p>	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>	<p align="center">Assessment Activities</p> <p>Chapter 3 Vocabulary Chapter 3 Questions Quizzes Test Chapter 3</p>	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 5	
Performance Standards	
<p>Biology 2.1: Relate organelles (plasma membrane, nuclear envelope, nucleus, nucleolus, cytoplasm, mitochondrion, endoplasmic reticulum, Golgi apparatus, lysosome, ribosome, vacuole, cell wall, chloroplast, cytoskeleton, centrioles, cilium, flagellum, pseudopods) to their functions.</p> <p>Biology 2.2: Compare and contrast, at the cellular level, the general structures and degrees of complexity of prokaryotes and eukaryotes.</p>	
Unit/Topic./Lesson	
Structure and Function of Cells Introduction to Cells	
<p>Objectives (Students Will...)</p> <p>Outline the discoveries that led to the development of the Cell Theory. State the Cell Theory Describe the relationship between cell shape and cell function. Distinguish between prokaryotes and Eukaryotes.</p>	<p style="text-align: center;">Essential Question</p> <p>What is the difference between Eukaryotic and Prokaryotic cells?</p> <hr/> <p style="text-align: center;">Labs/Demonstrations/Handouts</p> <p>Lab: Basic Unit of Life</p>
<p style="text-align: center;">Teacher Resources</p> <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 4 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<p style="text-align: center;">Media Resources</p> <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
<p style="text-align: center;">Assessment Activities</p> <p>Chapter 4 Vocabulary Chapter 4 Questions Quizzes</p>	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 6	
Performance Standards	
<p>Biology 2.1: Relate organelles (plasma membrane, nuclear envelope, nucleus, nucleolus, cytoplasm, mitochondrion, endoplasmic reticulum, Golgi apparatus, lysosome, ribosome, vacuole, cell wall, chloroplast, cytoskeleton, centrioles, cilium, flagellum, pseudopods) to their functions.</p> <p>Biology 2.2: Compare and contrast, at the cellular level, the general structures and degrees of complexity of prokaryotes and eukaryotes.</p>	
Unit/Topic./Lesson	
Structure and Function of Cells Parts of the Eukaryotic Cell	
<p>Objectives (Students Will...)</p> <p>Describe the function, composition, and function of the cell membrane. Name the major organelles found in a Eukaryotic cell, and describe their functions Describe the structure and function of the nucleus. Describe three structures characteristic of plant cells</p>	<p style="text-align: center;">Essential Question</p> <p>What are the major organelles in a Eukaryotic cell and what are their functions?</p> <hr/> <p style="text-align: center;">Labs/Demonstrations/Handouts</p>
<p style="text-align: center;">Teacher Resources</p> <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 4 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<p style="text-align: center;">Media Resources</p> <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
<p style="text-align: center;">Assessment Activities</p> <p>Cell city project Chapter 4 Vocabulary Chapter 4 Questions Quizzes</p>	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 7	
<i>Performance Standards</i>	
<p>Biology 2.1: Relate organelles (plasma membrane, nuclear envelope, nucleus, nucleolus, cytoplasm, mitochondrion, endoplasmic reticulum, Golgi apparatus, lysosome, ribosome, vacuole, cell wall, chloroplast, cytoskeleton, centrioles, cilium, flagellum, pseudopods) to their functions.</p> <p>Biology 2.2: Compare and contrast, at the cellular level, the general structures and degrees of complexity of prokaryotes and eukaryotes.</p>	
Unit/Topic./Lesson	
Structure and Function of Cells Multi-cellular Organization	
Objectives (Students Will...)	Essential Question
<p>Distinguish between tissues, organs, and organ systems</p> <p>Describe the features of a colonial organism</p>	How are cells organized into tissues, organs and organ systems?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 4 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>
Test Chapter 4	

Week 8	
<i>Performance Standards</i>	
<p>Biology 2.1: Explain the role of cell membranes as a highly selective barrier (diffusion, osmosis, facilitated diffusion, active transport).</p>	
Unit/Topic./Lesson	
Homeostasis and Transport Passive transport	
Objectives (Students Will...)	Essential Question
<p>Explain how equilibrium is established as a result of diffusion.</p> <p>Distinguish between diffusion and osmosis.</p> <p>Explain how substances cross the cell membrane through facilitated diffusion</p> <p>Explain how ion channels assist the diffusion of ions across the cell membrane</p>	How do cells transport substances across the cell membrane?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 5 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>
Chapter 5 Vocabulary Chapter 5 Questions Quizzes Test Chapter 5	

Week 9		Week 10	
<p align="center">Performance Standards</p> <p>Biology 2.1: Explain the role of cell membranes as a highly selective barrier (diffusion, osmosis, facilitated diffusion, active transport).</p>		<p align="center">Performance Standards</p> <p>Biology 2.4: Identify the reactants, products, and basic purposes of photosynthesis and cellular respiration. Explain the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.</p> <p>Biology 2.5: Explain the important role that ATP serves in metabolism.</p>	
<p align="center">Unit/Topic./Lesson</p> <p>Homeostasis and Transport Active transport</p>		<p align="center">Unit/Topic./Lesson</p> <p>Photosynthesis Capturing the energy in light</p>	
<p align="center">Objectives (Students Will...)</p> <p>Distinguish between passive and active transport. Compare and contrast endocytosis and exocytosis</p>	<p align="center">Essential Question</p> <p>Explain the difference between passive and active transport.</p> <p align="center">Labs/Demonstrations/Handouts</p>	<p align="center">Objectives (Students Will...)</p> <p>Explain the structure of a chloroplast relates to its function Summarize the main events of electron transport Describe what happens to a water molecule during photosynthesis. Explain how ATP is synthesized during the light reaction</p>	<p align="center">Essential Question</p> <p>What are the reactants and products of photosynthesis?</p> <p align="center">Labs/Demonstrations/Handouts</p> <p>Lab : Cell energy</p>
<p align="center">Teacher Resources</p> <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 5 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<p align="center">Media Resources</p> <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos 	<p align="center">Teacher Resources</p> <ul style="list-style-type: none"> • Modern Biology (2002) Chapter 6 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<p align="center">Media Resources</p> <ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
<p align="center">Assessment Activities</p> <p>Test Chapter 5</p>	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>	<p align="center">Assessment Activities</p> <p>Chapter 6 Vocabulary Chapter 6 Questions Quizzes</p>	<p>Completion date:</p> <p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 11	
Performance Standards	
<p>Biology 2.4: Identify the reactants, products, and basic purposes of photosynthesis and cellular respiration. Explain the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.</p> <p>Biology 2.5: Explain the important role that ATP serves in metabolism.</p>	
Unit/Topic./Lesson	
Photosynthesis The Calvin cycle	
Objectives (Students Will...)	Essential Question
<p>Summarize the main events of the Calvin cycle</p> <p>Describe what happens to the compounds made in the Calvin cycle</p>	How are the reactants and products of photosynthesis related to the animal kingdom?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 6 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 6 Vocabulary Chapter 6 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 12	
Performance Standards	
<p>Biology 2.4: Identify the reactants, products, and basic purposes of photosynthesis and cellular respiration. Explain the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.</p> <p>Biology 2.5: Explain the important role that ATP serves in metabolism.</p>	
Unit/Topic./Lesson	
Cellular respiration Glycolysis and Fermentation	
Objectives (Students Will...)	Essential Question
<p>Define cellular respiration.</p> <p>Describe the major events in glycolysis</p> <p>Compare lactic acid fermentation and alcohol fermentation</p>	What are the reactants and products of cellular respiration?
	Labs/Demonstrations/Handouts
	Lab: Human sex determination
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 7 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 8 Vocabulary Chapter 8 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 13	
Performance Standards	
<p>Biology 2.4: Identify the reactants, products, and basic purposes of photosynthesis and cellular respiration. Explain the interrelated nature of photosynthesis and cellular respiration in the cells of photosynthetic organisms.</p> <p>Biology 2.5: Explain the important role that ATP serves in metabolism.</p>	
Unit/Topic./Lesson	
Cellular respiration Aerobic Respiration	
Objectives (Students Will...)	Essential Question
<p>Summarize the events of the Krebs cycle</p> <p>Summarize the events of the electron transport chain</p> <p>Relate aerobic respiration to the structure of a mitochondrion.</p>	How are photosynthesis and cellular respiration related?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 7 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Test Chapters 6 & 7	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 14	
Performance Standards	
<p>Biology 2.6: Describe the cell cycle and the process of mitosis. Explain the role of mitosis in the formation of new cells, and its importance in maintaining chromosome number during asexual reproduction.</p> <p>Biology 2.7: Describe how the process of meiosis results in the formation of haploid cells. Explain the importance of this process in sexual reproduction, and how gametes form diploid zygotes in the process of fertilization.</p> <p>Biology 4.6: Recognize that the sexual reproductive system allows organisms to produce offspring that receive half of their genetic information from their mother and half from their father, and that sexually produced offspring resemble, but are not identical to, either of their parents.</p>	
Unit/Topic./Lesson	
Cell reproduction Chromosomes Cell division	
Objectives (Students Will...)	Essential Question
<p>Describe the function of a chromosome.</p> <p>Give examples of diploid and haploid cells.</p> <p>Describe each phase of the cell cycle.</p> <p>Describe the phases of mitosis.</p>	How do cells divide in order for organisms to grow?
	Labs/Demonstrations/Handouts
	Lab: Human sex determination
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 8 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 8 Vocabulary Chapter 8 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 15	
Performance Standards	
<p>Biology 2.6: Describe the cell cycle and the process of mitosis. Explain the role of mitosis in the formation of new cells, and its importance in maintaining chromosome number during asexual reproduction.</p> <p>Biology 2.7: Describe how the process of meiosis results in the formation of haploid cells. Explain the importance of this process in sexual reproduction, and how gametes form diploid zygotes in the process of fertilization.</p> <p>Biology 4.6: Recognize that the sexual reproductive system allows organisms to produce offspring that receive half of their genetic information from their mother and half from their father, and that sexually produced offspring resemble, but are not identical to, either of their parents.</p>	
Unit/Topic./Lesson	
Cell reproduction Meiosis	
Objectives (Students Will...)	Essential Question
<p>List and describe the phases of meiosis. Compare and contrast the end products of mitosis with meiosis. Explain crossing-over and how it contributes to the production of unique individuals.</p>	What is the main function of meiosis?
	Labs/Demonstrations/Handouts
	<p>Lab: Comparing mitosis and meiosis</p>
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 8 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Test Chapters 8	<p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 16	
Performance Standards	
<p>Biology 3.4: Distinguish among observed inheritance patterns caused by several types of genetic traits (dominant, recessive, co-dominant, sex-linked, polygenic, incomplete dominance, multiple alleles).</p> <p>Biology 3.5: Describe how Mendel's laws of segregation and independent assortment can be observed through patterns of inheritance (e.g., dihybrid crosses).</p> <p>Biology 3.6: Use a Punnett Square to determine the probabilities for genotype and phenotype</p>	
Unit/Topic./Lesson	
Fundamentals of Genetics Mendel's legacy	
Objectives (Students Will...)	Essential Question
<p>Describe the steps involved in Mendel's experiments on garden peas. Distinguish between dominant and recessive traits. State two laws of heredity that were developed from Mendel's work. Explain the difference between an allele and a gene.</p>	What are dominant and recessive genes?
	Labs/Demonstrations/Handouts
	<p>Lab: Human traits</p>
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 9 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 9 Vocabulary Chapter 9 Questions Quizzes	<p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 17	
Performance Standards	
<p>Biology 3.4: Distinguish among observed inheritance patterns caused by several types of genetic traits (dominant, recessive, co-dominant, sex-linked, polygenic, incomplete dominance, multiple alleles).</p> <p>Biology 3.5: Describe how Mendel's laws of segregation and independent assortment can be observed through patterns of inheritance (e.g., dihybrid crosses).</p> <p>Biology 3.6: Use a Punnett Square to determine the probabilities for genotype and phenotype</p>	
Unit/Topic./Lesson	
Fundamentals of Genetics Genetic crosses	
Objectives (Students Will...)	Essential Question
<p>Explain how probability is used to predict the results of genetic crosses. Use a Punnett square to predict the results of monohybrid and dihybrid genetic crosses.</p>	How would you go about determining the genotype of a purple flowering pea plant?
	Labs/Demonstrations/Handouts
	Lab: Finding genotypes and phenotypes for one trait
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 9 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 9 Vocabulary Chapter 9 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 18	
Performance Standards	
<p>Biology 3.4: Distinguish among observed inheritance patterns caused by several types of genetic traits (dominant, recessive, co-dominant, sex-linked, polygenic, incomplete dominance, multiple alleles).</p> <p>Biology 3.5: Describe how Mendel's laws of segregation and independent assortment can be observed through patterns of inheritance (e.g., dihybrid crosses).</p> <p>Biology 3.6: Use a Punnett Square to determine the probabilities for genotype and phenotype</p>	
Unit/Topic./Lesson	
Fundamentals of Genetics Genetic crosses	
Objectives (Students Will...)	Essential Question
<p>Explain how a testcross is used to show the genotype of an individual whose phenotype is dominant Differentiate a monohybrid cross from a dihybrid cross</p>	How are certain traits inherited by individuals from their parents?
	Labs/Demonstrations/Handouts
	Lab: Finding genotypes and phenotypes for two traits
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 9 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Test Chapters 9	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 19	
Performance Standards	
<p>Biology 3.1: Describe the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and describe its function in genetic inheritance.</p> <p>Biology 3.2: Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. Explain the basic processes of transcription and translation, and how they result in the expression of genes. Distinguish among the end products of replication, transcription, and translation.</p> <p>Biology 3.3: Explain how mutations in the DNA sequence of a gene may or may not result in phenotypic change in an organism. Explain how mutations in gametes may result in phenotypic changes in offspring.</p>	
Unit/Topic./Lesson	
Nucleic Acids and Protein synthesis DNA and RNA	
Objectives (Students Will...)	Essential Question
<p>Explain the main function of DNA.</p> <p>Describe the structure of DNA</p> <p>Summarize the main features of DNA replication.</p> <p>Explain the main functions of RNA</p> <p>Compare and contrast RNA and DNA</p>	What enables cells to have different forms and to perform different functions?
	Labs/Demonstrations/Handouts
	Lab: DNA and RNA
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 10 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 10 Vocabulary Chapter 10 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 20	
Performance Standards	
<p>Biology 3.1: Describe the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and describe its function in genetic inheritance.</p> <p>Biology 3.2: Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. Explain the basic processes of transcription and translation, and how they result in the expression of genes. Distinguish among the end products of replication, transcription, and translation.</p> <p>Biology 3.3: Explain how mutations in the DNA sequence of a gene may or may not result in phenotypic change in an organism. Explain how mutations in gametes may result in phenotypic changes in offspring.</p>	
Unit/Topic./Lesson	
Nucleic Acids and Protein synthesis Protein synthesis	
Objectives (Students Will...)	Essential Question
<p>Explain the main functions of RNA</p> <p>Compare and contrast RNA and DNA</p> <p>Describe the structure and function of each type of RNA.</p> <p>Summarize the process of Transcription.</p>	<p>Define Transcription. What are the major steps involved in this process?</p>
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 10 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 10 Vocabulary Chapter 10 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 21	
Performance Standards	
<p>Biology 3.1: Describe the basic structure (double helix, sugar/phosphate backbone, linked by complementary nucleotide pairs) of DNA, and describe its function in genetic inheritance.</p> <p>Biology 3.2: Describe the basic process of DNA replication and how it relates to the transmission and conservation of the genetic code. Explain the basic processes of transcription and translation, and how they result in the expression of genes. Distinguish among the end products of replication, transcription, and translation.</p> <p>Biology 3.3: Explain how mutations in the DNA sequence of a gene may or may not result in phenotypic change in an organism. Explain how mutations in gametes may result in phenotypic changes in offspring.</p>	
Unit/Topic./Lesson	
Nucleic Acids and Protein synthesis Protein synthesis	
Objectives (Students Will...)	Essential Question
<p>Describe the genetic code.</p> <p>Summarize the process of Translation.</p>	What is the genetic code and how is it used to make proteins?
	Labs/Demonstrations/Handouts
	Lab: tRNA and protein building
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 10 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 10 Test	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 22	
Performance Standards	
<p>Biology 5.1: Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection.</p> <p>Biology 5.3: Explain how evolution through natural selection can result in changes in biodiversity through the increase or decrease of genetic diversity within a population.</p>	
Unit/Topic./Lesson	
Evolution: Evidence and Theory The fossil record	
Objectives (Students Will...)	Essential Question
<p>Define fossil and describe how their role in evolution.</p> <p>Explain the law of superposition and its significance to evolutionary theory</p>	How does the law of superposition allow paleontologists to assign relative ages to fossils?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 15 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 23	
Performance Standards	
<p>Biology 5.1: Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection.</p> <p>Biology 5.3: Explain how evolution through natural selection can result in changes in biodiversity through the increase or decrease of genetic diversity within a population.</p>	
Unit/Topic./Lesson	
Evolution: Evidence and Theory Theories of Evolution	
Objectives (Students Will...)	Essential Question
<p>Define evolution</p> <p>Explain Lamarck's theory of evolution, and Describe how it was flawed</p> <p>List evidence of evolution that led to Darwin's idea of how species might change over time.</p> <p>Explain Darwin's two theories of Evolution.</p>	What is an acquired characteristic, and do they change the genotype of an individual?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 15 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 15 Vocabulary Chapter 15 Questions Quizzes	<p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 24	
Performance Standards	
<p>Biology 5.1: Explain how evolution is demonstrated by evidence from the fossil record, comparative anatomy, genetics, molecular biology, and examples of natural selection.</p> <p>Biology 5.3: Explain how evolution through natural selection can result in changes in biodiversity through the increase or decrease of genetic diversity within a population.</p>	
Unit/Topic./Lesson	
Evolution: Evidence and Theory Evolution in Process	
Objectives (Students Will...)	Essential Question
<p>Describe the differences between homologous, analogous, and vestigial structures.</p> <p>Explain the difference between co-evolution, and divergent and convergent evolution.</p>	What evidence led to the theory of Evolution?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 15 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 15 Test	<p>Completed by:</p> <p>Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster</p>

Week 25	
Performance Standards	
<p>Biology 5.2: Describe species as reproductively distinct groups of organisms. Recognize that species are further classified into a hierarchical taxonomic system (kingdom, phylum, class, order, family, genus, species) based on morphological, behavioral, and molecular similarities.</p> <p>Biology 2.3: Use cellular evidence (e.g., cell structure, cell number, cell reproduction) and modes of nutrition to describe the six kingdoms (Archaeobacteria, Eubacteria, Protista, Fungi, Plantae, Animalia).</p>	
Unit/Topic./Lesson	
Classification and kingdoms of life History of Taxonomy	
Objectives (Students Will...)	Essential Question
<p>Compare Aristotle's and Linnaeus' methods of classification.</p> <p>Explain Linnaeus's system of classification, and identify the main criterion he used to classify organisms</p> <p>Explain how to write a scientific name using binomial nomenclature.</p> <p>Summarize the categories used in taxonomy.</p>	What are the seven taxa used in the modern classification system (from broadest to most specific)?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 18 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 18 Vocabulary Chapter 18 Questions Quizzes	Completed by: Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 26	
Performance Standards	
<p>Biology 5.2: Describe species as reproductively distinct groups of organisms. Recognize that species are further classified into a hierarchical taxonomic system (kingdom, phylum, class, order, family, genus, species) based on morphological, behavioral, and molecular similarities.</p> <p>Biology 2.3: Use cellular evidence (e.g., cell structure, cell number, cell reproduction) and modes of nutrition to describe the six kingdoms (Archaeobacteria, Eubacteria, Protista, Fungi, Plantae, Animalia).</p>	
Unit/Topic./Lesson	
Classification and kingdoms of life Two modern systems of classification Six kingdoms of life	
Objectives (Students Will...)	Essential Question
<p>Compare major characteristics of the three domains.</p> <p>Differentiate among the six kingdoms.</p>	What are the defining characteristics for the six kingdoms of life?
	Labs/Demonstrations/Handouts
	Lab: Using a dichotomous key (shark lab)
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 18 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 18 Test	Completed by: Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 27	
Performance Standards	
<p>Biology 4.5: Explain how the muscular/skeletal system (skeletal, smooth and cardiac muscles, bones, cartilage, ligaments, tendons) works with other systems to support the body and allow for movement. Recognize that bones produce blood cells.</p>	
Unit/Topic./Lesson	
Skeletal and Muscular System Skeletal system Muscular system	
Objectives (Students Will...)	Essential Question
<p>Explain the function and structure of bone Distinguish between the three types of muscle tissues Explain how muscles contract Explain how muscles move bone</p>	How do the muscular and skeletal systems work together to move an individual?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 46 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 46 Vocabulary Chapter 46 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 28	
Performance Standards	
<p>Biology 4.2: Explain how the circulatory system (heart, arteries, veins, capillaries, red blood cells) transports nutrients and oxygen to cells and removes cell wastes. Describe how the kidneys and the liver are closely associated with the circulatory system as they perform the excretory function of removing waste from the blood. Recognize that kidneys remove nitrogenous wastes and the liver removes many toxic compounds from blood.</p> <p>Biology 4.3: Explain how the respiratory system (nose, pharynx, larynx, trachea, lungs, and alveoli) provides exchange of oxygen and carbon dioxide.</p>	
Unit/Topic./Lesson	
Circulatory and Respiratory systems Circulatory system Respiratory system	
Objectives (Students Will...)	Essential Question
<p>Describe the structure and function of the human heart Trace the flow of blood through the heart and body Distinguish between arteries, veins, and capillaries in terms of their structure and function Describe the function of the lymphatic system List the components of blood Distinguish between red blood cells, white blood cells, and platelets in terms of their structure and function Trace the passage of air from the environment to the bloodstream Describe how gases are exchanged in the lungs</p>	How are gases exchanged and transported throughout the human body?
	Labs/Demonstrations/Handouts
	Lab: Frog dissection
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 47 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 47 Vocabulary Chapter 47 Questions Quizzes	
	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 29	
Performance Standards	
Biology 4.1: Explain generally how the digestive system (mouth, pharynx, esophagus, stomach, small and large intestines, rectum) converts macromolecules from food into smaller molecules that can be used by cells for energy and for repair and growth.	
Unit/Topic./Lesson	
Digestive and Excretory system Digestive system Urinary system	
Objectives (Students Will...)	Essential Question
List the major organs of the digestive system Distinguish between mechanical and chemical digestion Relate the structure of each digestive organ to its function in mechanical digestion Identify the source and function of each major digestive enzyme Summarize the process of absorption in both the small and large intestine Define the term excretion, and list the functions of each major excretory organ Identify the major parts of the kidney	How is the food that we eat broken down in the body to be used for cellular work?
	Labs/Demonstrations/Handouts
	Lab: Earthworm dissection
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 49 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 49 Vocabulary Chapter 49 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 30	
Performance Standards	
Biology 4.4: Explain how the nervous system (brain, spinal cord, sensory neurons, motor neurons) mediates communication among different parts of the body and mediates the body's interactions with the environment. Identify the basic unit of the nervous system, the neuron, and explain generally how it works.	
Unit/Topic./Lesson	
Nervous System Central nervous system Peripheral nervous system Transmission of Nerve impulses	
Objectives (Students Will...)	Essential Question
Identify the two main organs of the central nervous system Summarize the functions of the cerebrum, brain stem, and cerebellum Describe how the central nervous system is protected from injury Describe the structure of the spinal cord Distinguish between sensory receptors, motor neurons, and interneurons Describe the structure of a neuron Describe the role of neurotransmitters in transmitting a signal across the synapse	How does the nervous system make the body respond to stimuli?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 50 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 50 Vocabulary Chapter 50 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 31	
Performance Standards	
<p>Biology 4.7: Recognize that communication among cells is required for coordination of body functions. The nerves communicate with electrochemical signals, hormones circulate through the blood, and some cells produce signals to communicate only with nearby cells.</p> <p>Biology 4.8: Recognize that the body's systems interact to maintain homeostasis. Describe the basic function of a physiological feedback loop.</p>	
Unit/Topic./Lesson	
Endocrine system Hormones Endocrine glands Feed back mechanisms	
Objectives (Students Will...)	Essential Question
<p>Compare exocrine glands with endocrine glands</p> <p>Describe two ways that hormones affect their target cells</p> <p>List the major endocrine glands and hormones found in the human body</p> <p>Discuss the relationship between the hypothalamus and the pituitary gland</p> <p>Explain the role of negative feedback mechanisms in maintaining homeostasis</p> <p>Give examples of negative feedback in the endocrine system</p>	How do cells communicate in order to coordinate the functions of the body?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 51 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 51 Vocabulary Chapter 51 Questions Quizzes	Completed by: Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 32	
Performance Standards	
<p>Biology 6.1: Explain how birth, death, immigration, and emigration influence population size.</p>	
Unit/Topic./Lesson	
Populations Understanding Populations Measuring Populations	
Objectives (Students Will...)	Essential Question
<p>Explain the differences between population size, density, and dispersion</p> <p>List three reasons that small populations are more vulnerable to extinction</p>	What effects the size of populations?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 20 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 20 Vocabulary Chapter 20 Questions Quizzes	Completed by: Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 33	
Performance Standards	
Biology 6.2: Analyze changes in population size and biodiversity (speciation and extinction) that result from the following: natural causes, changes in climate, human activity, and the introduction of invasive, non-native species.	
Unit/Topic./Lesson	
Community Ecology Species Interactions	
Objectives (Students Will...) Distinguish predation from parasitism Evaluate the importance of mimicry as a defense mechanism Explain how competition can effect community structure Contrast mutualism with commensalism, and give one example of each type of relationship	Essential Question How do organisms interact in a community?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 21 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 21 Vocabulary Chapter 21 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 34	
Performance Standards	
Biology 6.2: Analyze changes in population size and biodiversity (speciation and extinction) that result from the following: natural causes, changes in climate, human activity, and the introduction of invasive, non-native species.	
Unit/Topic./Lesson	
Community Ecology Properties of Communities	
Objectives (Students Will...) Explain the difference between species richness and species diversity Describe how species richness varies with latitude, and explain a hypothesis for this pattern Explain the cause and consequences of the species-area effect Explain the two main views of the relationship between species richness and stability	Essential Question What causes a species to change or go extinct?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 21 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 21 Vocabulary Chapter 21 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 35	
Performance Standards	
Biology 6.3: Use a food web to identify and distinguish producers, consumers, and decomposers, and Explain the transfer of energy through trophic levels. Describe how relationships among organisms (predation, parasitism, competition, commensalism, and mutualism) add to the complexity of biological communities.	
Unit/Topic./Lesson	
Ecosystems and the Biosphere Energy Transfer	
Objectives (Students Will...) Contrast producers with consumers Explain the important role of decomposers in an ecosystem Contrast a food web with a food chain Explain why ecosystems usually contain only a few trophic levels	Essential Question How is energy transferred throughout the trophic levels?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 22 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 22 Vocabulary Chapter 22 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster

Week 36	
Performance Standards	
Biology 6.4: Explain how water, carbon, and nitrogen cycle between abiotic resources and organic matter in an ecosystem, and how oxygen cycles through photosynthesis and respiration.	
Unit/Topic./Lesson	
Ecosystems and the Biosphere Ecosystem Recycling	
Objectives (Students Will...) Define biogeochemical cycle Trace the steps of the water cycle Summarize the major steps in the nitrogen cycle Describe the steps in the carbon cycle	Essential Question How are essential elements recycled on Earth?
	Labs/Demonstrations/Handouts
Teacher Resources	Media Resources
<ul style="list-style-type: none"> • Modern Biology (2002) Chapter 22 • Modern Biology Study Guide • Modern Biology Active Reading Guide • Modern Biology Quick Labs • Modern Biology Inquiry Skills Development • Modern Biology Laboratory Techniques and Experimental Design • Standardized Exam View Pro Test Generator CD-ROM 	<ul style="list-style-type: none"> • Power Point Presentations • Overhead projector Notes • Interactive Explorations on CD-ROM • Internet labs and resources • Videos
Assessment Activities	Completion date:
Chapter 22 Vocabulary Chapter 22 Questions Quizzes	Completed by:
	Comments: <i>Alternative Evaluation:</i> Paper, Project, Poster