

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 2- Macromolecules Week 3</p>	<p>Key summary HS-LS1-6- Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>	<p><u>Phenomenon</u> Slather your hand in butter and try to wash it off with water. It doesn't work. Why?</p> <p><u>Activities</u> Macromolecules in food lab Foldable on macromolecules Article and Questions</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Hydrocarbon ● Carbohydrate ● Amino acid ● Nucleic acid ● DNA ● ATP ● Lipid ● Fatty Acid ● Ingestion ● Rearrangement ● Stable ● Open System ● Enzyme 	<p>Lab: Macromolecules Test over macromolecules</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 2- Macromolecules Week 4	<p>Key summary</p> <p>HS-LS1-6- Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>	<p><u>Phenomenon</u> Slather your hand in butter and try to wash it off with water. It doesn't work. Why?</p> <p><u>Activities</u> pH lab Coloring macromolecules</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Hydrocarbon ● Carbohydrate ● Amino acid ● Nucleic acid ● DNA ● ATP ● Lipid ● Fatty Acid ● Ingestion ● Rearrangement ● Stable ● Open System ● Enzyme 	Lab: Macromolecules Test over macromolecule

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Unit 2- Macromolecules Week 5	<p>Key summary</p> <p>HS-LS1-6- Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.</p>	<p><u>Phenomenon</u> Slather your hand in butter and try to wash it off with water. It doesn't work. Why?</p> <p><u>Activities</u> Online enzyme activity Cut/paste color macromolecules for review</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Hydrocarbon ● Carbohydrate ● Amino acid ● Nucleic acid ● DNA ● ATP ● Lipid ● Fatty Acid ● Ingestion ● Rearrangement ● Stable ● Open System ● Enzyme 	Lab: Macromolecules Test over macromolecules

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 2- Macromolecules Week 6	Key summary HS-LS1-6- Construct and revise an explanation based on evidence for how carbon, hydrogen, and oxygen from sugar molecules may combine with other elements to form amino acids and/or other large carbon-based molecules.	<u>Phenomenon</u> Slather your hand in butter and try to wash it off with water. It doesn't work. Why? <u>Activities</u> Kahoot-Review Online simulation-Review Review worksheet <u>DCI (Disciplinary Core Ideas)</u> LS1.C: Organization for Matter and Energy Flow in Organisms <u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions <u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter	<ul style="list-style-type: none"> ● Hydrocarbon ● Carbohydrate ● Amino acid ● Nucleic acid ● DNA ● ATP ● Lipid ● Fatty Acid ● Ingestion ● Rearrangement ● Stable ● Open System ● Enzyme 	Lab: Macromolecules Lab: Enzymes Test over macromolecules

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 3- Finish macromolecules then start Cells</p> <p>Week 7 (second half of the week)</p>	<p>Key summary</p> <p>HS-LS1-1 Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells.</p> <p>HS-LS1- 3 Plan and conduct an investigation to provide evidence that feedback mechanisms maintain homeostasis</p>	<p><u>Phenomenon</u> Microscopic bacterial movement, thermoregulation/heartbeat monitoring,</p> <p><u>Activities</u> Notes on characteristics of life What is living sorting activity Design your own living thing Notes on Homeostasis Heartbeat monitoring lab Homeostasis Article Reading</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.6: Structure and Function CC.2: Systems and System Models CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Homeostasis ● Living ● Non-living ● Abiotic ● Biotic 	<p>Small quiz covering characteristics of life and homeostasis</p>

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Unit 3- Cells Week 8	<p>Key summary</p> <p>HS-LS1-2 Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>	<p><u>Phenomenon</u> Microscopic bacterial movement, coral cells</p> <p><u>Activities</u> Notes on prokaryotes and eukaryotes Prok vs. Euk Virtual lab expiration Coral Cell Exploration Compare and Contrast Card sort</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.6: Structure and Function</p>	<ul style="list-style-type: none"> ● Prokaryote ● Eukaryote ● Unicellular ● Multicellular 	Brief Quiz on Prokaryotes vs. Eukaryotes

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Unit 3- Cells Week 9	<p>Key summary</p> <p>HS-LS-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms.</p>	<p><u>Phenomenon</u> Microscopic bacterial movement, coral cells</p> <p><u>Activities</u> Notes: Coloring organelles as we do them Foldable cell organelles Bacteria collection lab Cell Specialization online activity Reading and questions Edpuzzle Kahoot!</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.4: Systems and System Models</p>	<ul style="list-style-type: none"> ● Circulatory ● Respiratory ● Digestive ● Excretory ● Nervous ● Immune ● Integumentary ● Skeletal ● Muscle ● Reproductive ● External Stimuli ● Cell ● Tissue ● Organ 	Lab Quiz Test Edpuzzle

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 2- Cell membrane</p> <p>Week 10</p>	<p>Key summary</p> <p>HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms</p> <p>HS-LS1-2. Develop and use a model to illustrate the hierarchical organization of interacting systems that provide specific functions within multicellular organisms</p>	<p><u>Phenomenon</u> Eggs in solutions lab prior to any notes OR Potato sticks in solutions prior to any notes.</p> <p><u>Activities</u> Notes on cell membrane/function and how our body regulates substances to stay at homeostasis Cell membrane foldable Cell Membrane coloring</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.6: Structure and Function</p>	<ul style="list-style-type: none"> ● Equilibrium ● Steady State ● Stimulus ● Receptor ● External Environment ● Internal Environment ● System ● Metabolism ● Fluctuation ● Maintenance ● Concentration 	<p>Lab</p> <p>Quiz</p>

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<p>Unit 2- Cell transport</p> <p>Week 11</p>	<p>Key summary</p> <p>HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p>	<p><u>Phenomenon</u> Eggs in solutions lab prior to any notes OR Potato sticks in solutions prior to any notes.</p> <p><u>Activities</u> Notes on cell transport (osmosis, diffusion) Virtual lab with iodine solution to connect to prior labs</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.6: Structure and Function</p>	<ul style="list-style-type: none"> ● Equilibrium ● Steady State ● Stimulus ● Receptor ● External Environment ● Internal Environment ● System ● Metabolism ● Fluctuation ● Maintenance ● Concentration 	<p>Lab(s)</p> <p>Quiz</p>

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Unit 3-Mitosis Week 12	<p>Key summary</p> <p>HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.</p>	<p><u>Phenomenon</u> Show video clip of elephants or pictures of a baby vs an adult as a huge NFL player.</p> <p><u>Activities</u> Notes on the steps of mitosis on a foldable Online activity Coloring mitosis</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS1.B: Growth and Development of Organisms</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Systems and System Models CC.6: Structure and Function</p>	<ul style="list-style-type: none"> ● Nucleus ● Chromosome ● Sister chromatids ● Gene ● Cellular division ● Cytoplasm ● Daughter cell ● Parent cell ● Somatic cell ● Cell cycle ● Homologous ● DNA 	Labs Quiz Test

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 3-Mitosis Week 13	Key summary HS-LS1-4. Use a model to illustrate the role of cellular division (mitosis) and differentiation in producing and maintaining complex organisms.	<p><u>Phenomenon</u> Show video clip of elephants or pictures of a baby vs an adult as a huge NFL player.</p> <p><u>Activities</u> Microscope lab using onion root tips going through mitosis (or use laminated paper copy version) Notes over cancer and relate to cell cycle</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Systems and System Models CC.6: Structure and Function</p>	<ul style="list-style-type: none"> ● Nucleus ● Chromosome ● Sister chromatids ● Gene ● Cellular division ● Cytoplasm ● Daughter cell ● Parent cell ● Somatic cell ● Cell cycle ● Homologous ● DNA 	Labs Quiz Test

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Unit 3-Mitosis Unit 4-DNA Week 14	<p>Key summary</p> <p>HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells</p> <p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>	<p><u>Phenomenon</u> Show video clip of elephants or pictures of a baby vs an adult as a huge NFL player.</p> <p><u>Activities</u> Mitosis wheel (cut, color, paste to review) Review Kahoot!</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.3: Planning and Carrying Out Investigations SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Systems and System Models CC.6: Structure and Function</p>	<ul style="list-style-type: none"> ● Nucleus ● Chromosome ● Sister chromatids ● Gene ● Cellular division ● Cytoplasm ● Daughter cell ● Parent cell ● Somatic cell ● Cell cycle ● Homologous ● DNA 	Labs Quiz Test

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<p>Unit 4-DNA</p> <p>Week 15</p>	<p>Key summary</p> <p>HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells</p> <p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p>	<p><u>Phenomenon</u> Show clip a genetic disorder caused by a mutation.</p> <p><u>Activities</u> Article and questions about DNA/Watson and Crick Notes over the structure of DNA Coloring structure of DNA Lab: Extract DNA from strawberries</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.A: Inheritance of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.1: Constructing Explanations and Designing Solutions SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.6: Structure and Function CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Genetic ● Molecule ● Protein ● DNA ● Nucleated cell ● Structure ● Function ● Transcription ● Double Helix ● Adenine, ● Guanine ● Cytosine ● Thymine ● Deoxyribose ● Phosphate ● Hydrogen bond ● RNA ● Nucleotide ● Base 	<p>Building a model of DNA</p> <p>Quiz</p> <p>Test</p>

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<p>Unit 4-DNA</p> <p>Week 16</p>	<p>Key summary</p> <p>HS-LS1-1. Construct an explanation based on evidence for how the structure of DNA determines the structure of proteins which carry out the essential functions of life through systems of specialized cells</p> <p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-2. Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p>	<p>Phenomenon Genetic disorder video clip (mutation)</p> <p>Activities Notes over replication Coloring replication Cartoon about DNA replication Notes over transcription and translation K'nex models and questions</p> <p>DCI (Disciplinary Core Ideas) LS1.A: Structure and Function LS3.A: Inheritance of Traits LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p>SEPS (Science and Engineering Practices) SEP.4: Analyzing and Interpreting Data SEP.6: Constructing Explanations and Designing Solutions</p> <p>CCC (Crosscutting Concepts) CC.6: Structure and Function CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Genetic ● Molecule ● Protein ● DNA ● Nucleated cell ● Structure ● Function ● Transcription ● Double Helix ● Adenine, ● Guanine ● Cytosine ● Thymine ● Deoxyribose ● Phosphate ● Hydrogen bond ● RNA ● Nucleotide ● Base 	<p>Building a model of DNA</p> <p>Quiz</p> <p>Unit Test</p>

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Unit 4-DNA Week 17	<p>Key summary</p> <p>HS-LS3-2. Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.</p>	<p><u>Phenomenon</u> Show clip a genetic disorder caused by a mutation.</p> <p><u>Activities</u> Review transcription and translation with Eduzzle or any video clips Kahoot! To review Genetic disorder notes and how they occur</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.A: Inheritance of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.1: Constructing Explanations and Designing Solutions SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.6: Structure and Function CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Genetic ● Molecule ● Protein ● DNA ● Nucleated cell ● Structure ● Function ● Transcription ● Double Helix ● Adenine, ● Guanine ● Cytosine ● Thymine ● Deoxyribose ● Phosphate ● Hydrogen bond ● RNA ● Nucleotide ● Base 	Building a model of DNA Quiz Unit Test

Template

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
Unit 5: Meiosis Week 1	HS-LS3-2. Make and defend a claim based on evidence that inheritable genetic variations may result from: (1) new genetic combinations through meiosis, (2) viable errors occurring during replication, and/or (3) mutations caused by environmental factors.	<p><u>Phenomenon</u> Show two karyotypes and see if they can spot differences (Down Syndrome vs Normal)</p> <p><u>Activities</u> Foldable notes Edpuzzle (or just a video clip in class) comparing mitosis and meiosis Coloring Worksheet over meiosis</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS3.B: Variation of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Amino acid ● DNA ● Enzyme ● Protein synthesis ● Chromosome ● Egg cell ● Sperm cell ● Dominant and recessive traits ● Recombination ● Sex cell ● Sex chromosome ● Sex-linked trait ● Meiosis ● Mutation ● Advantageous ● Gene expression ● Base pairs ● Genome ● UV Radiation ● Codon ● Insertion ● Deletion ● Frameshift ● Substitution ● Somatic ● Epigenetic 	Quiz Eduzzle

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<p>Unit 6: Mendelian Genetics</p> <p>Week 2</p>	<p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>	<p><u>Phenomenon</u> Show a segment of “Extreme Genes” (Belgium Blue cows segment)</p> <p><u>Activities</u> Notes: Basic terms and monohybrids Pom Pom Activity Traits activity (draw the dog or face or alien)</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.B: Variation of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Gene ● Allele ● Dominant ● Recessive ● Homozygous ● Heterozygous ● Phenotype ● Genotype ● P Generation ● F1/F2 generation ● Complete dominance ● Incomplete dominance ● Codominance ● Pedigree ● Carrier ● Fertilization ● Sex linked traits ● Gamete ● Mendelian genetics ● Zygote ● Haploid ● Diploid ● Epistasis 	<p>Punnett square worksheets Quizzes Test</p>

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<p>Unit 6: Mendelian Genetics</p> <p>Week 3</p>	<p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>	<p><u>Phenomenon</u> Show a segment of “Extreme Genes” (Belgium Blue cows segment)</p> <p><u>Activities</u> Notes: Exceptions to Mendel’s laws Superhero Activity</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.B: Variation of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Gene ● Allele ● Dominant ● Recessive ● Homozygous ● Heterozygous ● Phenotype ● Genotype ● P Generation ● F1/F2 generation ● Complete dominance ● Incomplete dominance ● Codominance ● Pedigree ● Carrier ● Fertilization ● Sex linked traits ● Gamete ● Mendelian genetics ● Zygote ● Haploid ● Diploid ● Epistasis 	<p>Punnett square worksheets Quizzes Test</p>

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<p>Unit 6: Mendelian Genetics- Review</p> <p>Week 4</p>	<p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>	<p>Phenomenon Show a segment of “Extreme Genes” (Belgium Blue cows segment)</p> <p>Activities Discuss pedigrees and how to interrupt them Practice various types of crosses (Monohybrid, Incomplete dominance, Codominance, Sex linked)</p> <p>DCI (Disciplinary Core Ideas) LS1.A: Structure and Function LS3.B: Variation of Traits</p> <p>SEPS (Science and Engineering Practices) SEP.2: Developing and Using Models SEP.4: Analyzing and Interpreting Data</p> <p>CCC (Crosscutting Concepts) CC.2: Cause and Effect CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Gene ● Allele ● Dominant ● Recessive ● Homozygous ● Heterozygous ● Phenotype ● Genotype ● P Generation ● F1/F2 generation ● Complete dominance ● Incomplete dominance ● Codominance ● Pedigree ● Carrier ● Fertilization ● Sex linked traits ● Gamete ● Mendelian genetics ● Zygote ● Haploid ● Diploid ● Epistasis 	<p>Punnett square worksheets Quizzes Test</p>

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<p>Unit 6: Mendelian Genetics</p> <p>Week 5</p>	<p>HS-LS3-1. Ask questions to clarify relationships about the role of DNA and chromosomes in coding the instructions for characteristic traits passed from parents to offspring.</p> <p>HS-LS3-3. Apply concepts of statistics and probability to explain the variation and distribution of expressed traits in a population.</p>	<p><u>Phenomenon</u> Show a segment of “Extreme Genes” (Belgium Blue cows segment)</p> <p><u>Activities</u> Discuss pedigrees and how to interrupt them Practice various types of crosses (Monohybrid, Incomplete dominance, Codominance, Sex linked)</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.B: Variation of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Gene ● Allele ● Dominant ● Recessive ● Homozygous ● Heterozygous ● Phenotype ● Genotype ● P Generation ● F1/F2 generation ● Complete dominance ● Incomplete dominance ● Codominance ● Pedigree ● Carrier ● Fertilization ● Sex linked traits ● Gamete ● Mendelian genetics ● Zygote ● Haploid ● Diploid ● Epistasis 	<p>Punnett square worksheets Quizzes Test</p>

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<p>Unit 7: Natural Selection</p> <p>Week 6</p>	<p>HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>	<p><u>Phenomenon</u> Have them measure their hands. Put results on the board. Where would larger be an advantage? Where would smaller be an advantage?</p> <p><u>Activities</u> Reading and questions (FAQs about evolution) Lab (Moth Activity, HHMI Pocket Mouse) Edpuzzle Notes Concept Map</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.B: Variation of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Beneficial change ● Detrimental change ● Distribution ● Gene frequency ● Gene ● Biotic ● Abiotic ● Advantageous ● Diverge ● Proliferation ● Sexual reproduction ● Bottleneck effect ● Island effect ● Geographic isolation ● Gene flow ● Genetic drift ● Founder effect ● Fitness ● Gene ● Allele ● Directional selection ● Disruptional selection ● Stabilizing selection ● Standard deviation ● Vestigial structure 	<p>Labs Quiz Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 7: Natural Selection</p> <p>Week 7</p>	<p>HS-LS4-2. Construct an explanation based on evidence that the process of evolution primarily results from four factors: (1) the potential for a species to increase in number, (2) the heritable genetic variation of individuals in a species due to mutation and sexual reproduction, (3) competition for limited resources, and (4) the proliferation of those organisms that are better able to survive and reproduce in the environment.</p> <p>HS-LS4-3. Apply concepts of statistics and probability to support explanations that organisms with an advantageous heritable trait tend to increase in proportion to organisms lacking this trait.</p> <p>HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>	<p><u>Phenomenon</u> Have them measure their hands. Put results on the board. Where would larger be an advantage? Where would smaller be an advantage?</p> <p><u>Activities</u> Reading and questions (FAQs about evolution) Lab (Moth Activity, HHMI Pocket Mouse) Edpuzzle Notes Concept Map</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.A: Structure and Function LS3.B: Variation of Traits</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models SEP.4: Analyzing and Interpreting Data</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Beneficial change ● Detrimental change ● Distribution ● Gene frequency ● Gene ● Biotic ● Abiotic ● Advantageous ● Diverge ● Proliferation ● Sexual reproduction ● Bottleneck effect ● Island effect ● Geographic isolation ● Gene flow ● Genetic drift ● Founder effect ● Fitness ● Gene ● Allele ● Directional selection ● Disruptional selection ● Stabilizing selection ● Standard deviation ● Vestigial structure 	<p>Labs Quiz Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 7: Natural Selection</p> <p>Week 8</p>	<p>HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>	<p><u>Phenomenon</u> Pass around fossils, rocks etc, and have them brainstorm ages, what it is, etc.</p> <p><u>Activities</u> Notes Online Activity to illustrate Cladograms Homologous and Analogous Structure coloring Rat Island Project</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS4.A: Evidence of Common Ancestry and Diversity LS4.C: Adaptation</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions SEP.8: Obtaining, Evaluating, and Communicating Information</p> <p><u>CCC (Crosscutting Concepts)</u> CC.1: Patterns CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Amino acid ● Cladogram ● Comparative anatomy ● DNA sequencing ● Electrophoresis ● Embryology ● Evolution ● Fossile record ● Gene flow ● Genetic drift ● Mutation ● Natural selection ● Nucleotides ● Sedimentary layers ● Species ● Descent with modification ● Homologous structures ● Evolutionary tree ● Analogous structures 	<p>Quiz Project Interpreting graphics Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 7: Natural Selection</p> <p>Week 9</p>	<p>HS-LS4-1. Communicate scientific information that common ancestry and biological evolution are supported by multiple lines of empirical evidence.</p> <p>HS-LS4-4. Construct an explanation based on evidence for how natural selection leads to adaptation of populations.</p>	<p><u>Phenomenon</u> Pass around fossils, rocks etc, and have them brainstorm ages, what it is, etc.</p> <p><u>Activities</u> Notes Online Activity to illustrate Cladograms Homologous and Analogous Structure coloring Rat Island Project</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS4.A: Evidence of Common Ancestry and Diversity</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.8: Obtaining, Evaluating, and Communicating Information</p> <p><u>CCC (Crosscutting Concepts)</u> CC.1: Patterns</p>	<ul style="list-style-type: none"> ● Amino acid ● Cladogram ● Comparative anatomy ● DNA sequencing ● Electrophoresis ● Embryology ● Evolution ● Fossile record ● Gene flow ● Genetic drift ● Mutation ● Natural selection ● Nucleotides ● Sedimentary layers ● Species ● Descent with modification ● Homologous structures ● Evolutionary tree ● Analogous structures 	<p>Quiz Project Interpreting graphics</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 7: Natural Selection</p> <p>Week 10</p>	<p>HS-LS4-5. Evaluate the evidence supporting claims that changes in environmental conditions may result in: (1) increases in the number of individuals of some species, (2) the emergence of new species over time, and (3) the extinction of other species.</p>	<p><u>Phenomenon</u> Video clip of founder effect with Lego people.</p> <p><u>Activities</u> Notes Video clip and questions Coloring sheet Webquest Speciation lab (Skittles)</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS4.C: Adaptation</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.2: Cause and Effect</p>	<ul style="list-style-type: none"> ● Beneficial change ● Detrimental change ● Emergence ● Gene frequency ● Gene ● Biotic ● Abiotic ● Advantageous ● Diverge ● Proliferation ● Bottleneck effect ● Island effect ● Geographic isolation ● Gene flow ● Genetic drift ● Founder effect ● Recombination ● Microevolution ● Hybrid 	<p>Quiz Project Interpreting graphics</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 8: Photosynthesis/ Cellular Respiration</p> <p>Week 11</p>	<p>HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.</p> <p>HS-LS1-7. Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p>	<p><u>Phenomenon</u> Breathe in and out and have flowers on the desk...how are these related? How are they different?</p> <p><u>Activities</u> Foldable Notes Lab</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Organic ● Hydrocarbon ● Net transfer ● Chloroplast ● Chlorophyll ● Cytoplasm ● Mitochondria ● Vacuole ● Nucleus ● Protein ● ATP ● Amino acid ● Autotroph(s) ● Heterotroph(s) ● Algae ● ATP ● Chemical Bonds ● Energy transfer ● Glycolysis ● Enzymes ● Mitochondria ● Cytosol ● Cytoplasm ● Nitrogen ● Adenine ● Phosphate ● Amino acid 	<p>Labs Quiz Edpuzzle</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 8: Photosynthesis/ Cellular Respiration</p> <p>Week 11</p>	<p>HS-LS1-5. Use a model to illustrate how photosynthesis transforms light energy into stored chemical energy.</p> <p>HS-LS1-7. Use a model to illustrate that cellular respiration is a chemical process whereby the bonds of food molecules and oxygen molecules are broken and the bonds in new compounds are formed resulting in a net transfer of energy.</p>	<p><u>Phenomenon</u> Breathe in and out and have flowers on the desk...how are these related? How are they different?</p> <p><u>Activities</u> Foldable Notes Lab</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS1.C: Organization for Matter and Energy Flow in Organisms</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.2: Developing and Using Models</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Organic ● Hydrocarbon ● Net transfer ● Chloroplast ● Chlorophyll ● Cytoplasm ● Mitochondria ● Vacuole ● Nucleus ● Protein ● ATP ● Amino acid ● Autotroph(s) ● Heterotroph(s) ● Algae ● ATP ● Chemical Bonds ● Energy transfer ● Glycolysis ● Enzymes ● Mitochondria ● Cytosol ● Cytoplasm ● Nitrogen ● Adenine ● Phosphate ● Amino acid 	<p>Labs Quiz Edpuzzle</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 12</p>	<p>HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions</p> <p>HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</p>	<p><u>Phenomenon</u> Read together (or alone) “There’s a Hair in My Dirt”</p> <p><u>Activities</u> Notes Web Activities on energy cycles Online lab (Predator-Prey) Coloring/labeling diagrams</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematical and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Organic compound synthesis ● Net transfer ● Biomass ● Carbon cycle ● Solar energy ● Interdependent ● Nutrient ● Hydrocarbon ● Transfer system ● Equilibrium of ecosystems ● Decomposer ● Producer ● ATP ● Solar energy ● Predator-prey relationship ● Trophic level 	<p>Reading interpreting various scenarios</p> <p>Quiz</p> <p>Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 13</p>	<p>HS-LS2-3. Construct and revise an explanation based on evidence for the cycling of matter and flow of energy in aerobic and anaerobic conditions</p> <p>HS-LS2-4. Use mathematical representations to support claims for the cycling of matter and flow of energy among organisms in an ecosystem.</p>	<p><u>Phenomenon</u> Read together (or alone) “There’s a Hair in My Dirt”</p> <p><u>Activities</u> Notes Web Activities on energy cycles Online lab (Predator-Prey) Coloring/labeling diagrams</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.B: Cycles of Matter and Energy Transfer in Ecosystems</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematical and Computational Thinking SEP.6: Constructing Explanations and Designing Solutions</p> <p><u>CCC (Crosscutting Concepts)</u> CC.5: Energy and Matter</p>	<ul style="list-style-type: none"> ● Organic compound synthesis ● Net transfer ● Biomass ● Carbon cycle ● Solar energy ● Interdependent ● Nutrient ● Hydrocarbon ● Transfer system ● Equilibrium of ecosystems ● Decomposer ● Producer ● ATP ● Solar energy ● Predator-prey relationship ● Trophic level 	<p>Reading interpreting various scenarios</p> <p>Quiz</p> <p>Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 14</p>	<p>HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</p> <p>HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</p>	<p><u>Phenomenon</u> Show the original “Lorax” cartoon</p> <p><u>Activities</u> Notes Web Activities (Example: HHMI Losing a Species) Interpreting graphs Lab (Biotic vs Abiotic and CC and/or Estimating Population Size) Graphic Organizers</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Predation ● Interdependent ● Disturbance ● Equilibrium of ecosystems ● Fluctuation ● Stable ● Urbanization ● Population ● Exponential ● Rebounding ● Limiting resources ● Competition ● Negative feedback ● Population control 	<p>Labs</p> <p>Reading and analyzing articles and data</p> <p>Quiz</p> <p>Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 15</p>	<p>HS-LS2-1. Use mathematical and/or computational representations to support explanations of factors that affect carrying capacity of ecosystems at different scales.</p> <p>HS-LS2-2. Use mathematical representations to support and revise explanations based on evidence about factors affecting biodiversity and populations in ecosystems of different scales.</p>	<p><u>Phenomenon</u> Show the original “Lorax” cartoon</p> <p><u>Activities</u> Notes Web Activities (Example: HHMI Losing a Species) Interpreting graphs Lab (Biotic vs Abiotic and CC and/or Estimating Population Size) Graphic Organizers</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.A: Interdependent Relationships in Ecosystems LS2.C: Ecosystem Dynamics, Functioning, and Resilience</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.5: Using Mathematics and Computational Thinking</p> <p><u>CCC (Crosscutting Concepts)</u> CC.3: Scale, Proportion, and Quantity</p>	<ul style="list-style-type: none"> ● Carrying capacity ● Anthropogenic changes ● Overexploitation ● Extinction ● Demographic ● Deforestation ● Habitat fragmentation ● Sustainable ● Symbiosis ● Niche ● Zero population growth ● Density ● Immigration ● Emigration ● Limiting factor ● Fluctuation ● Consistent ● Stable ● Equilibrium ● Species ● Emergence ● Extinction ● Native ● Non-native ● Invasive 	<p>Labs</p> <p>Reading and analyzing articles and data</p> <p>Quiz</p> <p>Test</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 16</p>	<p>HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>	<p><u>Phenomenon</u> Cane Toad video clip OR Emerald Ash Borer (Purdue has a good one) OR and Invasive species clip</p> <p><u>Activities</u> Bill Nye: Global Meltdown (Show in 4 segments via Edpuzzle)</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans ETS1.B: Developing Possible Solutions LS2.D: Social Interactions and Group Behavior</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Overgrazing ● Human impact ● Succession ● Primary succession ● Secondary succession ● Carrying capacity ● Competition ● Urbanization ● Conservation biology ● Endangered species ● Threatened species ● Introduced species ● Overharvesting ● Extinction ● Greenhouse effect ● Carbon footprint ● Behavioral ecology ● Cooperative behavior ● Competition ● Mutual protection ● Fluctuation ● Consistent ● Stable ● Equilibrium ● Species 	<p>Labs/Activities Edpuzzle Project: Given an ecology problem, design a solution</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 17</p>	<p>HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>	<p><u>Phenomenon</u> Cane Toad video clip OR Emerald Ash Borer (Purdue has a good one) OR and Invasive species clip</p> <p><u>Activities</u> Bill Nye: Global Meltdown (Show in 4 segments via Edpuzzle)</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans ETS1.B: Developing Possible Solutions LS2.D: Social Interactions and Group Behavior</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Emergence ● Extinction ● Native ● Non-native ● Invasive ● Overgrazing ● Human impact ● Succession ● Primary succession ● Secondary succession ● Carrying capacity ● Competition ● Urbanization ● Conservation biology ● Endangered species ● Threatened species ● Introduced species ● Overharvesting ● Extinction ● Greenhouse effect ● Carbon footprint ● Behavioral ecology ● Cooperative behavior 	<p>Labs/Activities Edpuzzle Project: Given an ecology problem, design a solution</p>

Period	Standards and Performance Expectations	Suggested Activities and Resources 3D Dimensions	Critical Vocabulary	Assessments
<p>Unit 9: Ecology</p> <p>Week 18</p>	<p>HS-LS2-6. Evaluate the claims, evidence, and reasoning that the complex interactions in ecosystems maintain relatively consistent numbers and types of organisms in stable conditions, but changing conditions may result in a new ecosystem.</p> <p>HS-LS2-7. Design, evaluate, and refine a solution for reducing the impacts of human activities on the environment and biodiversity.</p> <p>HS-LS2-8. Evaluate the evidence for the role of group behavior on individual and species' chances to survive and reproduce.</p>	<p><u>Phenomenon</u> Cane Toad video clip OR Emerald Ash Borer (Purdue has a good one) OR and Invasive species clip</p> <p><u>Activities</u> Bill Nye: Global Meltdown (Show in 4 segments via Edpuzzle)</p> <p><u>DCI (Disciplinary Core Ideas)</u> LS2.C: Ecosystem Dynamics, Functioning, and Resilience LS4.D: Biodiversity and Humans ETS1.B: Developing Possible Solutions LS2.D: Social Interactions and Group Behavior</p> <p><u>SEPS (Science and Engineering Practices)</u> SEP.6: Constructing Explanations and Designing Solutions SEP.7: Engaging in Argument from Evidence</p> <p><u>CCC (Crosscutting Concepts)</u> CC.7: Stability and Change</p>	<ul style="list-style-type: none"> ● Emergence ● Extinction ● Native ● Non-native ● Invasive ● Overgrazing ● Human impact ● Succession ● Primary succession ● Secondary succession ● Carrying capacity ● Competition ● Urbanization ● Conservation biology ● Endangered species ● Threatened species ● Introduced species ● Overharvesting ● Extinction ● Greenhouse effect ● Carbon footprint ● Behavioral ecology ● Cooperative behavior ● Competition ● Mutual protection 	<p>Labs/Activities Edpuzzle Project: Given an ecology problem, design a solution</p>