

	1 <sup>st</sup> 9 weeks	2 <sup>nd</sup> 9 weeks	3 <sup>rd</sup> 9 weeks	4 <sup>th</sup> 9 weeks
1	<ul style="list-style-type: none"> <li>Intro to course</li> <li>Lab Safety</li> </ul>	<u><b>Energy Transfer (SEV1b)</b></u> <ul style="list-style-type: none"> <li>Symbiosis</li> <li>Energy Pyramid</li> <li>Food Chains and Food Webs</li> </ul>	<u><b>Biodiversity (SEV2d)</b></u> <ul style="list-style-type: none"> <li>Keystone, Invasive/Exotic, Native, Endemic, Indicator, Umbrella, and Endangered Species</li> <li>Effects they have on environment</li> <li>Effects humans have on species</li> <li>Sustaining Species Efforts</li> </ul>	<u><b>Urban Land Use (SEV4a,b,c)</b></u> <i>Continue Urban Land Use</i> <ul style="list-style-type: none"> <li>“City Council” Land Use Group Project</li> <li>** Test</li> </ul>
2	<ul style="list-style-type: none"> <li>Scientific Method</li> <li>Parts of an Experiment</li> <li>**Test</li> </ul>	<u><b>Energy Transfer (SEV1b)</b></u> <ul style="list-style-type: none"> <li><i>Continue Food Chains and Food Webs with energy calculation</i></li> <li>Biomagnification and effects on ecosystem</li> <li>**Test</li> </ul>	<u><b>Biodiversity (SEV2d)</b></u> <i>Continue Biodiversity</i>	<u><b>Food and Agriculture (SEV4a,b,c)</b></u> <ul style="list-style-type: none"> <li>Agriculture (Farming practices)</li> <li>Green Revolution</li> <li>GMOs</li> <li>Soil Types and Desertification</li> <li>Erosion and Topsoil prevention practices</li> <li>Aquaculture</li> </ul>
3	<ul style="list-style-type: none"> <li>Vocabulary Building                             <ul style="list-style-type: none"> <li>Prefixes, Suffixes</li> </ul> </li> <li><u><b>Biosphere (SEV1a)</b></u></li> <li>Abiotic and Biotic Factors</li> <li>Biosphere Organization</li> <li>4 Spheres</li> </ul>	<u><b>Population Characteristics and Dynamics (SEV2c)</b></u> <ul style="list-style-type: none"> <li>Habitat and Niche</li> <li>Demography and Density</li> <li>Competition (Inter- and Intraspecific)</li> <li>Carrying Capacity and Lab</li> </ul>	<u><b>Biodiversity (SEV2d)</b></u> <i>Continue Biodiversity</i> **Test	<u><b>Food and Agriculture (SEV4a,b,c)</b></u> <i>Continue Food and Agriculture</i>
4	<u><b>Biogeochemical Cycles (SEV1c)</b></u> <ul style="list-style-type: none"> <li>Include Laws of Thermodynamics</li> <li>Water</li> <li>Carbon/Oxygen                             <ul style="list-style-type: none"> <li>Photosynthesis &amp; Cellular Respiration</li> <li>Greenhouse Effect mentioned</li> </ul> </li> <li>Phosphorus</li> <li>Nitrogen</li> </ul>	<u><b>Population Characteristics and Dynamics (SEV2c)</b></u> <i>Continue Population Characteristics and Dynamics</i> **Test	<u><b>Succession (SEV2c)</b></u> <ul style="list-style-type: none"> <li>Primary</li> <li>Secondary</li> </ul>	<u><b>Food and Agriculture (SEV4a,b,c)</b></u> <i>Continue Food and Agriculture</i> **Test
5	<u><b>Biogeochemical Cycles (SEV1c)</b></u> <i>Continue cycles</i> **Test	<u><b>Evolution creates Biodiversity (SEV2d)</b></u> <ul style="list-style-type: none"> <li>Charles Darwin voyage</li> <li>Natural and Artificial selection</li> <li>Variations and Adaptations</li> <li>Convergent, Divergent, and Coevolution</li> </ul>	<u><b>Succession (SEV2c)</b></u> <i>Continue Succession</i> **Test	<u><b>Energy (SEV3a,b,c,d)</b></u> <ul style="list-style-type: none"> <li>Renewable and Nonrenewable</li> <li>Sustainability</li> <li>Energy Plan Project</li> </ul>
6	<u><b>Terrestrial Biomes (SEV1a,d)</b></u> <ul style="list-style-type: none"> <li>Tropical Rainforest, Temperate Deciduous Forest, Tropical Grassland, Temperate Grassland, Desert, Alpine Tundra, Arctic Tundra, Taiga</li> <li>Organism adaptations to environments</li> <li>Individual Biome Projects</li> </ul>	<u><b>Evolution creates Biodiversity (SEV2d)</b></u> <ul style="list-style-type: none"> <li>Homologous, Analogous, and Vestigial structures</li> <li>Stabilizing, Directional, and Disruptive Evolution</li> </ul>	<u><b>Human Health and Toxicology (SEV5a,b,c)</b></u> <ul style="list-style-type: none"> <li>Risk Assessments</li> <li>Emergent Diseases</li> <li>Epidemic and Pandemic</li> <li>Antibiotic Resistance</li> <li>Viruses and Vaccinations</li> </ul>	<u><b>Air: Climate Change (SEV2a,b)</b></u> <ul style="list-style-type: none"> <li>Pollution                             <ul style="list-style-type: none"> <li>Primary and Secondary Pollutants</li> <li>Point and Nonpoint Source</li> </ul> </li> <li>Ozone Loss</li> </ul>

7	<p><b>Terrestrial Biomes (SEV1a,d)</b>  <i>Continue Terrestrial Biomes</i></p>	<p><b>Evolution creates Biodiversity (SEV2d)</b></p> <ul style="list-style-type: none"> <li>• Speciation through Isolation (Behavioral, Temporal, Geographic)</li> <li>• Mechanisms (Gene Flow, Genetic Drift, Founder Effect, Bottleneck Effect)</li> </ul>	<p><b>Human Health and Toxicology (SEV5a,b,c)</b></p> <ul style="list-style-type: none"> <li>• Individual Disease Report Projects                         <ul style="list-style-type: none"> <li>○ Include Human Impact and impact on environment</li> </ul> </li> </ul>	<p><b>Air: Climate Change (SEV2a,b)</b></p> <ul style="list-style-type: none"> <li>• Climate Change                         <ul style="list-style-type: none"> <li>• El Nino, Volcanism, Milankovitch, Air currents</li> <li>• Greenhouse Effect</li> </ul> </li> </ul> <p><b>**Test</b></p>
8	<p><b>Water: Aquatic Biomes (SEV1a,e)</b></p> <ul style="list-style-type: none"> <li>• Georgia Locations</li> <li>• Freshwater biomes                         <ul style="list-style-type: none"> <li>○ Rivers, Streams, Ponds, Lakes, Include Zones</li> </ul> </li> <li>• Marine Biomes                         <ul style="list-style-type: none"> <li>○ Oceans, Estuaries, Salt water Marshes, Include Zones</li> </ul> </li> </ul> <p><b>**Test</b></p>	<p><b>Evolution creates Biodiversity (SEV2d)</b>  <i>Finish Evolution unit if needed</i>  <i>Begin reviewing for Midterms</i></p>	<p><b>Human Health and Toxicology (SEV5a,b,c)</b></p> <ul style="list-style-type: none"> <li>• Pesticides (SEV4a, SEV5b)</li> </ul> <p><b>**Test</b></p>	<p><b>Human Impact Project (SEV5d)</b></p>
9	<p><b>Energy Transfer (SEV1b)</b></p> <ul style="list-style-type: none"> <li>• Autotrophs and Heterotrophs</li> <li>• Decomposers</li> <li>• Predator/Prey</li> </ul>	<p><i>Review First semester</i>  <b>Midterms</b></p>	<p><b>Land: Urban Land Use (SEV4a,b,c)</b></p> <ul style="list-style-type: none"> <li>• Urbanization</li> <li>• Land Use</li> <li>• Forestry</li> <li>• Ranching</li> <li>• Desertification</li> </ul>	<p><i>Review First and Second Semester</i>  <b>Finals</b></p>

Each nine weeks these CCGPS writing and Literacy standards will be used throughout the year:

**(Literacy):**

**L11-12RST3:** Follow precisely a complex multistep procedure when carrying out experiments, taking measurements, or performing technical tasks; analyze the specific results based on explanations in the text.

**L11-12RST4:** Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 11–12 texts and topics

**L11-12RST10:** By the end of grade 12, read and comprehend science/technical texts in the grades 11–12 text complexity band independently and proficiently.

**(Writing):**

**L11-12WHST2:** Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.

**L9-10WHST4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**L11-12WHST4:** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.

**L11-12WHST5:** Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach, focusing on addressing what is most significant for a specific purpose and audience.

**L11-12WHST6:** Use technology, including the Internet, to produce, publish, and update individual or shared writing products in response to ongoing feedback, including new arguments or information.

**L11-12WHST7:** Conduct short as well as more sustained research projects to answer a question (including a self-generated question) or solve a problem; narrow or broaden the inquiry when appropriate; synthesize multiple sources on the subject, demonstrating understanding of the subject under investigation.

**L11-12WHST10:** Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.