

# Coconino High School

## Weekly Learning Guide Biology

Course	Biology	Week Assigned	4-13 to 4-17
Lesson Title	Energy in Ecosystems		
Teacher(s), Email, & Other Contact Information	<a href="mailto:ksmith1@fUSD1.org">ksmith1@fUSD1.org</a> , <a href="mailto:dkrassner@fUSD1.org">dkrassner@fUSD1.org</a> , <a href="mailto:fenes@fUSD1.org">fenes@fUSD1.org</a> , <a href="mailto:aabel@fUSD1.org">aabel@fUSD1.org</a> , <a href="mailto:mfernandez@fUSD1.org">mfernandez@fUSD1.org</a> , <a href="mailto:klinck@fUSD1.org">klinck@fUSD1.org</a>		
Target Standards	<p><b>Essential HS.L2U1.19</b> Develop and use models that show how changes in the transfer of matter and energy within an ecosystem and interactions between species may affect organisms and their environment.</p> <p><b>Essential HS.L2U1.21</b> Obtain, evaluate, and communicate data showing the relationship of photosynthesis and cellular respiration; flow of energy and cycling of matter.</p>		
Learning Goal	<p><b>Success Criteria: (SWBAT)</b></p> <p>Define and give examples of primary producers.</p> <p>Describe how consumers obtain energy and nutrients.</p> <p>Trace the flow of energy through living systems.</p> <p>Identify the three types of models that show how energy flows through ecosystems.</p>		
Essential Questions	<p>What are primary producers?</p> <p>How do consumers obtain energy and nutrients?</p> <p>How does energy flow through ecosystems?</p> <p>What are different ways that energy flow in ecosystems can be modelled?</p>		
Learning Activity	<p><b>Students must do all three parts to earn Full Credit</b></p> <p><b>Part 1:</b> learn the essentials of how organisms obtain energy and how energy is transferred through ecosystems by using the PowerPoint included in google classroom. Students may also learn the required information by accessing online content (Khan Academy)- links provided in Google classroom. Students will then answer 10 questions relating to the information on the PowerPoint or Khan Academy. Questions are on a Google Doc.</p> <p><b>Part 2:</b> Online Interactive Food Web Activity (links provided)</p> <p><b>Part 3:</b> Quiz over this week's topics (on Google Classroom)</p>		
Resources	<p>Part 1: Khan Academy- Energy in Ecosystems and Trophic Levels  <a href="https://www.khanacademy.org/science/high-school-biology/hs-ecology/trophic-levels/v/flow-of-energy-and-matter-through-ecosystems">https://www.khanacademy.org/science/high-school-biology/hs-ecology/trophic-levels/v/flow-of-energy-and-matter-through-ecosystems</a> </p>		

	<p>Part 2: Online Food Web Resources (do at least 1 of them).</p> <p>Build a Antarctic Food Web:  <a href="https://az.pbslearningmedia.org/resource/lsp07.sci.life.eco.oceanfood/web/antarctic-food-web-game/#.Xo4NN9NKh-V">https://az.pbslearningmedia.org/resource/lsp07.sci.life.eco.oceanfood/web/antarctic-food-web-game/#.Xo4NN9NKh-V</a></p> <p>Food Chain Challenge: (several different ecosystem options)  <a href="https://www.bbc.co.uk/bitesize/topics/zbn9b9q/articles/zcgbjty">https://www.bbc.co.uk/bitesize/topics/zbn9b9q/articles/zcgbjty</a></p> <ul style="list-style-type: none"> <li>• If students are unable to access internet links, or want to do something different for Part 2, they can create their own food web using the organisms on the last slide of the PowerPoint, or even focusing on plants and animals found in Flagstaff. Show all the arrows correctly and also label each organism in the correct trophic level (ex. Primary producer, primary consumer, etc.). Take a photo of the completed food web and send to teacher for verification.</li> </ul>
Links to Printable Materials	<p><b>Assignment in PDF:</b>  <a href="https://drive.google.com/file/d/1zo_P1SDD6ruZ8LUU0LMpNTuqX5sUDm1Q/view?usp=sharing">https://drive.google.com/file/d/1zo_P1SDD6ruZ8LUU0LMpNTuqX5sUDm1Q/view?usp=sharing</a></p>
Extension & Enrichment	<p><b>Interesting website on chemosynthesis and hydrothermal vents:</b>  <a href="https://divediscover.whoi.edu/hydrothermal-vents/chemosynthesis-2/">https://divediscover.whoi.edu/hydrothermal-vents/chemosynthesis-2/</a></p>

## Coconino High School

### Weekly Learning Guide Biology

Course	Biology	Week Assigned	04/06 - 04/10/2020
Lesson Title	What is Ecology?		
Teacher(s), Email, & Other Contact Information	<a href="mailto:ksmith1@fUSD1.org">ksmith1@fUSD1.org</a> , <a href="mailto:dkrassner@fUSD1.org">dkrassner@fUSD1.org</a> , <a href="mailto:fenes@fUSD1.org">fenes@fUSD1.org</a> , <a href="mailto:aabel@fUSD1.org">aabel@fUSD1.org</a> , <a href="mailto:mfernandez@fUSD1.org">mfernandez@fUSD1.org</a> , <a href="mailto:klinck@fUSD1.org">klinck@fUSD1.org</a>		
Target Standards	<b>Essential HS.L2U3.18</b> Obtain, evaluate, and communicate about the positive and negative ethical, social, economic, and political implications of human activity on the biodiversity of an ecosystem.		
Learning Goal	<b>Success Criteria:</b> Summarize the biological sub discipline of ecology		

	<p>Describe the levels of organization that comprise the study of ecology</p> <p>Discuss key methods ecologists use to investigate ecological phenomenon</p> <p>Explain how biotic and abiotic factors influence organisms in their environment</p>
Essential Questions	<p><b>Big Idea:</b> Matter and Energy, Independence in Nature</p> <p><b>Essential Question:</b> How do Earth's living and nonliving components interact and affect the survival of organisms?</p>
Learning Activity	<p>Conduct a student-paced Nearpod Activity and "Time to Climb" quiz game to familiarize students with the study of ecology, ecological study techniques, and the impact of biotic and abiotic factors upon organisms. Students will access the Nearpod through Google Classroom.</p>
Resources	<p>Students will access the following websites:</p> <p><a href="#">Ecological levels: from individuals to ecosystems (article)</a></p> <p><a href="#">What is ecology? (article)   Ecology</a></p> <p><a href="#">Intro to Ecology.pdf</a></p>
Extension & Enrichment	<p><a href="#">What is Ecology 3.1 Lesson Review Workbook A</a></p>

Course	Biology	Week Assigned	May 4 - May 8
Lesson Title	Climate		
Teacher(s), Email, & Other Contact Information	<a href="mailto:ksmith1@fUSD1.org">ksmith1@fUSD1.org</a> , <a href="mailto:dkrassner@fUSD1.org">dkrassner@fUSD1.org</a> , <a href="mailto:fenes@fUSD1.org">fenes@fUSD1.org</a> , <a href="mailto:aabel@fUSD1.org">aabel@fUSD1.org</a> , <a href="mailto:mfernandez@fUSD1.org">mfernandez@fUSD1.org</a> , <a href="mailto:klinck@fUSD1.org">klinck@fUSD1.org</a>		
Target Standards	<p><b>Essential HS.L2U3.18</b> Obtain, evaluate, and communicate about the positive and negative ethical, social, economic, and political implications of human activity on the biodiversity of an ecosystem.</p>		
Learning Goal	<p><b>Success Criteria: Demonstrate and understanding of the factors affecting regional climates.</b></p>		
Essential Questions	<p><b>Big Idea:</b> Variations in Climate across the globe.</p> <p><b>Essential Question:</b> What are the factors affecting regional climates.</p>		
Learning Activity	<p>Student will view the google slideshow and explore the links embedded in the document while completing the questions.</p>		
Resources	<p><a href="https://docs.google.com/presentation/d/1qgArO665eJUf4WasCMxQIJM">https://docs.google.com/presentation/d/1qgArO665eJUf4WasCMxQIJM</a></p>		

	<a href="https://docs.google.com/presentation/d/1fSCEjFZ6KKwXxcT21w5w/edit?usp=sharing">fSCEjFZ6KKwXxcT21w5w/edit?usp=sharing</a> Google slideshow  <a href="https://docs.google.com/document/d/15drJ7DBVkuk-gppAqPhKHjKpP_eJ9hfkI0FVfrfJQVU/edit?usp=sharing">https://docs.google.com/document/d/15drJ7DBVkuk-gppAqPhKHjKpP_eJ9hfkI0FVfrfJQVU/edit?usp=sharing</a> Questions to google slideshow
Printable Materials	PDF version of presentation: <a href="https://drive.google.com/file/d/1XMpxlNiaJPKoqB3sMB2lxY1kAA5LNUsT/view?usp=sharing">https://drive.google.com/file/d/1XMpxlNiaJPKoqB3sMB2lxY1kAA5LNUsT/view?usp=sharing</a> PDF version of the worksheet: <a href="https://drive.google.com/file/d/1IUL3IUzXewO6OuREa5WVSB9o41plmHvV/view?usp=sharing">https://drive.google.com/file/d/1IUL3IUzXewO6OuREa5WVSB9o41plmHvV/view?usp=sharing</a> PDF version of the quiz: <a href="https://drive.google.com/file/d/15U3r7EISvmn-fWPTtu_msFv1UfDgBOTx/view?usp=sharing">https://drive.google.com/file/d/15U3r7EISvmn-fWPTtu_msFv1UfDgBOTx/view?usp=sharing</a>
Extension & Enrichment	<a href="https://www.sciencenewsforstudents.org/article/climate-change-drove-australian-wildfires-to-extremes">https://www.sciencenewsforstudents.org/article/climate-change-drove-australian-wildfires-to-extremes</a>