# Organisms, Ecosystems and Populations

Duration: 3-4 Weeks

## Essential Questions/Big Ideas

* What is a biome?
* What are the 6 major biomes?
* What are the characteristics of each biome?
* Which sort of animals are found in each biome?
* What is a food web?
* What are the differences between consumers/producers? Scavengers/decomposers?
* What kinds of natural disasters impact our world?
* What man-made disasters are influencing our world?

## Standards and Access Points

[SC.912.L.17.5](http://www.cpalms.org/Public/PreviewStandard/Preview/2033) Analyze how population size is determined by births, deaths, immigration, emigration, and limiting factors (biotic and abiotic) that determine carrying capacity.

* SC.912.L.17.In.2 Identify that living things in an ecosystem are affected by changes in the environment, such as changes to the food supply, climate change, or the introduction of predators.
* SC.912.L.17.Su.2 Recognize how animals and plants in an ecosystem may be affected by changes to the food supply or climate.
* SC.912.L.17.Pa.2 Recognize what happens to plants and animals when they don’t get enough food or water.

[SC.912.L.17.9](http://www.cpalms.org/Public/PreviewStandard/Preview/2037) Use a food web to identify and distinguish producers, consumers, and decomposers. Explain the pathway of energy transfer through trophic levels.

* SC.912.L.17.In.5 Identify the components of a food web, including sunlight, producers, consumers, and decomposers, and trace the flow of energy from the Sun.
* SC.912.L.17.Su.5 Identify producers, consumers, and decomposers in a simple food chain.
* SC.912.L.17.Pa.5 Recognize that animals (consumers) eat animals and plants for food.

[SC.912.L.17.20](http://www.cpalms.org/Public/PreviewStandard/Preview/2043) Predict the impact of individuals on environmental systems and examine how human lifestyles affect sustainability.

* SC.912.L.17.In.8 Describe ways the lifestyles of individuals and groups can help or hurt the environment.
* SC.912.L.17.Su.8 Identify ways individuals can help the environment.
* SC.912.L.17.Pa.7 Recognize a way to help the local environment.

## Key Vocabulary

| Biotic | community | biome | tundra | grasslands |
| --- | --- | --- | --- | --- |
| desert | tropical forest | taiga | deforestation | global warming |
| pollution | natural disaster | producers | consumers | decomposers |
| scavengers | predator | prey | food chain | food web |
| habitat | herbivore | carnivore | omnivore |  |

# Vocabulary, Biomes, Ecosystems

## Power Points

* Vocabulary [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/1._ecosystems_and_populations_vocab.pptx)
* Vocabulary videos [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/2._ecosystems_and_populations_vocab_websites.pptx)
* Biomes, Ecosystems and limiting factors
	1. Part 1 [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/3._biomes_ecosystems_and_populations_part_1.pptx)
	2. Part 2 [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/3._biomes_ecosystems_and_populations_part_2.pptx)
	3. Part 3 [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/3._biomes_ecosystems_and_populations_part_3.pptx)
	4. Part 4 [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/3._biomes_ecosystems_and_populations_part_4.pptx)

## Worksheets Videos and Resources

* Introduction to ecology video: [Click here](https://www.youtube.com/watch?v=h2CMUqkJTos)
* What is a biome article: [Click here](https://newsela.com/read/elem-sci-biomes/id/34227/)
* Biomes of the world [Click here](http://www.thewildclassroom.com/biomes/)
* Ask a biologist [Click here](https://askabiologist.asu.edu/explore/biomes)
* Biome [Click here](https://kidsgeo.com/geography-for-kids/biomes/)
* Taiga biome video: [Click here](https://www.youtube.com/watch?v=nLOo4HbLDAs)
* 10 interesting things about ecosystems article: [Click here](https://newsela.com/read/elem-sci-ecosystem-facts/id/28562/)
* Biomes video: [Click here](https://www.youtube.com/watch?v=0fb8143ndo8)
* What’s it like where you live? [Click here](http://www.mbgnet.net/index.html)
* What is an ecosystem video: [Click here](https://www.youtube.com/watch?v=JPHqUxxyLsY)
* Understanding Ecosystems for Kids: Producers, Consumers, Decomposers video: [Click here](https://www.youtube.com/watch?v=bJEToQ49Yjc)
* Finland wildlife - Wild Taiga forest video: [Click here](https://www.youtube.com/watch?v=avDmKGQPoFs)
* Deciduous Forest video: [Click here](https://www.youtube.com/watch?v=n_NTF4JCd8Y)
* The Forest "Fantastic Short Film" video: [Click here](https://www.youtube.com/watch?v=Kn_3TPsKsq4)
* Animals of the deciduous forest video: [Click here](https://www.youtube.com/watch?v=YyqExyyeePU)
* Desert Biome video: [Click here](https://www.youtube.com/watch?v=w9J4LFAGe5M)
* Desert Rap video: [Click here](https://www.youtube.com/watch?v=t0zIQjzmnT8)
* Grasslands video: [Click here](https://www.youtube.com/watch?v=HMwwE4v3Lt4)
* The Savana Biome video: [Click here](https://www.youtube.com/watch?v=nKnV_7QzpNo)
* Grassland biome video: [Click here](https://www.youtube.com/watch?v=dbWZ9JqcoiY)
* Rain Forest Animal List [Click here](https://www.activewild.com/rainforest-animals-list/)
* Rain Forest Facts and Articles [Click here](https://www.activewild.com/rainforest-facts-for-kids/)
* Rain Forest Plants List [Click here](https://www.activewild.com/tropical-rainforest-plants-list/)
* Rain Forest Free Worksheets [Click here](https://www.activewild.com/rainforest-worksheets/)
* Tropical rain forest video: [Click here](https://www.youtube.com/watch?v=FK_j4BtX3So)
* A trip to the Amazon video: [Click here](https://www.youtube.com/watch?v=JEsV5rqbVNQ)
* To save the Amazon, we must protect the water and the trees, scientists say article: [Click here](https://newsela.com/read/amazonbasin-conservation/id/13874/)
* Who lives in the desert? Tar Heel Reader: [Click here](https://tarheelreader.org/2018/05/22/who-lives-in-the-desert/)
* Climate Kids: Make an ecosystem desert (Activity) [Click here](https://climatekids.nasa.gov/ocean-ecosystem/)
* Animals of the rainforest, Tar Heel Book: [Click here](https://tarheelreader.org/2018/05/21/animals-of-the-rainforest-5/)
* The rainforest, Tar Heel Book: [Click here](https://tarheelreader.org/2011/03/31/the-rainforests/)
* Arctic Animal List [Click here](https://www.activewild.com/arctic-animals-list/)
* Alaska wildlife, Tar Heel Book: [Click here](https://tarheelreader.org/2009/06/01/alaskas-wildlife/)
* Extension activities on tundra [Click here](https://beyondpenguins.ehe.osu.edu/issue/tundra-life-in-the-polar-extremes/hands-on-lessons-and-activities-about-the-tundra-and-ecosystems)
* Types of ecosystems [Click here](https://sciencestruck.com/types-of-ecosystems-you-should-know-about)
* How abiotic and biotic factors make an ecosystem Video: [Click here](https://www.youtube.com/watch?v=MdlwPtKg-VI)
* Communities Video: [Click here](https://www.youtube.com/watch?time_continue=18&v=pOp-qLLTMso)
* Ecological relationships Video: [Click here](https://www.youtube.com/watch?v=rNjPI84sApQ)
* Ecosystems Pirate Game [Click here](https://www.math4childrenplus.com/ecosystems/)
* Biomes and Communities Definition Video: [Click here](https://www.youtube.com/watch?v=qtZcN4bzsrA)
* Carrying Capacity Video: [Click here](https://www.youtube.com/watch?v=XV2-2Ym3IIc)
* To the Limit, CPALMS Lesson: [Click here](http://www.cpalms.org/Public/PreviewResourceLesson/Preview/74297)
* Biological Carrying Capacity Video: [Click here](https://www.youtube.com/watch?feature=player_detailpage&v=QI2ixJeIxEU)
* Animal Needs Video: [Click here](https://www.youtube.com/watch?v=Pe9kSlVeEIM)
* Limitations to Population Growth [Click here](http://www.floridastudents.org/PreviewResource/StudentResource/169134)
* Organism, population and community, what is the difference? Video: [Click here](https://www.youtube.com/watch?v=ClLHcSXzRos)
* Habitats, Tar Heel Book: [Click here](https://tarheelreader.org/2010/05/19/habitats-7/)
* Limiting Factors Video [Click here](https://www.youtube.com/watch?v=pPw51fDTl68)
* Limiting Factors article [Click here](http://www.nhptv.org/Natureworks/nwep12a.htm)
* Surviving within a Niche [Click here](http://www.cpalms.org/Public/PreviewResourceUrl/Preview/76514)
	+ and direct [Click here](http://www.classzone.com/cz/books/bio_12_fl/resources/htmls/animated_biology/unit5/bio_ch14_0430_ab_survival.html)
* Population interactions [Click here](http://www.cpalms.org/Public/PreviewResourceStudentTutorial/Preview/119410)
* Global Warming News ELA: [Click here](https://newsela.com/read/animals-dinner-time-global-warming/id/42471/)
* Crossword Ecosystems and Populations [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/crossword_puzzle.pdf)
	+ Answer Key [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/crossword_puzzle_answers.pdf)
* Ecosystems Matching 1 [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/ecosystems_and_populations_matching_1.docx)
* Ecosystems Matching 2 [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/ecosystems_and_populations_matching_2.docx)
* Hurricanes Hurting Endangered Species Article [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/hurricanes_hurting_endangered_species_article.docx)
* What can a tree tell us about climate change? [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/what_can_a_tree_tell_us_about_climate_change_article.docx)
* Word Search Ecosystems & Populations [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/word_search.docx)

# Food Web

## Power Points

* PowerPoint [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/4._food_web.pptx)

## Worksheets Videos and Resources

* Untangling the food web [Click here](http://www.cpalms.org/Public/PreviewResourceStudentTutorial/Preview/113119)
* Food Web Video: [Click here](https://www.youtube.com/watch?v=Vtb3I8Vzlfg)
* Fabulous Food Chains Video: [Click here](https://www.youtube.com/watch?v=MuKs9o1s8h8)
* Producers, consumers and decomposers Video: [Click here](https://www.youtube.com/watch?v=MPZI2M1fDi8)
* Food Chain [Click here](https://www.nationalgeographic.org/encyclopedia/food-chain/)
* Energy Transfer Video: [Click here](https://www.youtube.com/watch?v=0glkXIj1DgE)
* Food Webs and Energy Pyramids: Bedrocks of Biodiversity Video: [Click here](https://www.youtube.com/watch?v=-oVavgmveyY)
* Food Chains for Kids: Food Webs, the Circle of Life, and the Flow of Energy Video: [Click here](https://www.youtube.com/watch?v=hLq2datPo5M&t=1s)
* Dead Stuff: The Secret Ingredient in Our Food Chain [Click here](https://ed.ted.com/lessons/dead-stuff-the-secret-ingredient-in-our-food-chain-john-c-moore#watch)
* Food Chains, Tar Heel Book: [Click here](https://tarheelreader.org/2009/10/25/food-chains/)
* Food and energy, Tar Heel Book: [Click here](https://tarheelreader.org/2011/04/06/food-and-energy/)
* Learning About Herbivores, Carnivores, and Omnivores Video: [Click here](https://www.youtube.com/watch?v=5DkbvA7uFZM)
* Energy Transfer and Trophic Levels [Click here](https://quizlet.com/72986609/energy-transfer-trophic-levels-flash-cards/)

# Human Impact on the Environment

## Power Points

* PowerPoint [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/5._human_impact_on_environment.pptx)

## Worksheets Videos and Resources

* 5 ways humans impact the environment Video: [Click here](https://www.youtube.com/watch?v=5eTCZ9L834s&vl=en)
* 10 ways humans impact the environment [Click here](https://interestingengineering.com/10-ways-humans-impact-the-environment)
* Pythons in the Everglades [Click here](https://www.cbsnews.com/news/python-problem-hunters-everglades/)
* A study in sustainability [Click here](http://www.floridastudents.org/PreviewResource/StudentResource/163500)
* Sustainability [Click here](http://www.floridastudents.org/PreviewResource/StudentResource/137754)
* Sustainability Video: [Click here](https://www.youtube.com/watch?v=_5r4loXPyx8)
* Population Ecology Video: [Click here](https://www.youtube.com/watch?v=s4Ty2Oo7MnI)
* Global warming Video: [Click here](https://www.youtube.com/watch?v=oJAbATJCugs)
* Deforestation Video: [Click here](https://www.youtube.com/watch?v=Ic-J6hcSKa8)
* Deforestation Creates a Habitat Preferred by Mosquito Vectors [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/deforestation_and_mosquito_vector.docx)
* Ozone Depletion Video: [Click here](https://www.youtube.com/watch?v=aU6pxSNDPhs)
* Air Pollution, News ELA: [Click here](https://newsela.com/read/lib-air-pollution/id/42356/quiz/0/)
* Environmental Consequences of Fishing [Click here](https://www.environmentalscience.org/environmental-consequences-fishing-practices)
* Overfishing Video: [Click here](https://www.youtube.com/watch?v=-V4D77N3bZc)
* Everglades Invasive Video: [Click here](https://www.youtube.com/watch?v=8CFL9gdcYAk)
* Natural Resources Video: [Click here](https://www.youtube.com/watch?v=Qw6uXh9yM54)
* Renewable vs Non-renewable Video: [Click here](https://www.youtube.com/watch?v=nKgeTvQWZaI)
* Red Tide is Spreading [Click here](https://www.cnn.com/2018/10/18/us/red-tide-florida-hurricane-michael-trnd/index.html)
* Is Gulf Oil Spill's Damage Over or Still Unfolding? [Click here](https://news.nationalgeographic.com/2015/04/150414-deepwater-oil-spill-birds-gulf-macondo-louisiana/)
* Birds and Climate Article [Click here](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/birds_and_climate_change_article.docx)

## Ecosystem and Population (Additional Resources)

[**Click here**](https://accesstoflsresources.weebly.com/uploads/2/3/7/3/23739164/ecosyst_popul_articles_projects_media.docx)