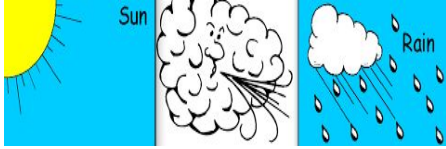
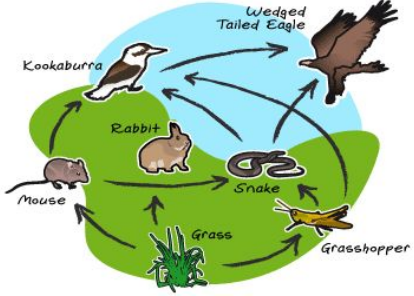
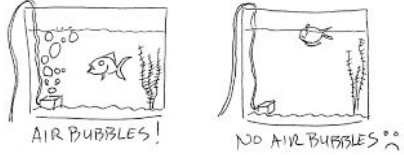




Ecosystems Unit


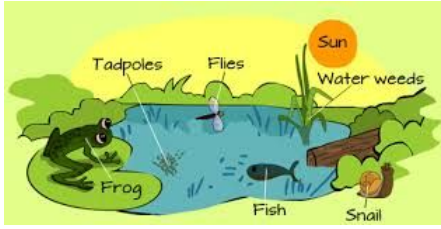

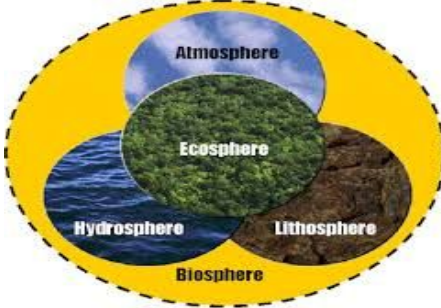

8.L.3

<p>Abiotic Factor (8.L.3.1)</p>	<p>Non-living parts of an ecosystem; Includes light, temperature, weather, soil, and water</p>	
<p>Biotic Factor (8.L.3.1)</p>	<p>Living parts of an ecosystem; Includes remains and waste</p>	
<p>Limiting Factor (8.L.3.1)</p>	<p>Biotic and Abiotic factors that prevent the continuous growth of a population</p>	

<p>Population Density (8.L.3.1)</p>	<p>Describes the number of individuals in a given area</p>	
<p>Population (8.L.3.1)</p>	<p>All organisms of a species that live in the same place at the same time</p>	






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<p>Biodiversity (8.L.3.1)</p>	<p>The variety of life in the world or in a particular habitat or ecosystem</p>	
<p>Ecosystem (8.L.3.1)</p>	<p>Includes all living and nonliving parts of the environment as well as the interactions among them.</p>	
<p>Community (8.L.3.1)</p>	<p>All of the populations that live in an area at the same time</p>	
<p>Biosphere (8.L.3.1)</p>	<p>Includes land, water, and the lower part of the atmosphere</p>	
<p>Symbiotic Relationship (8.L.3.2)</p>	<p>Close relationship between two different species of organisms living together</p>	

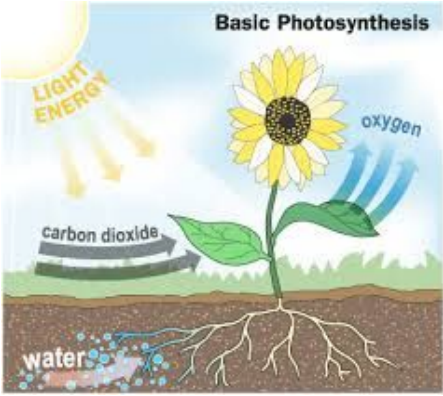




Ecosystems Unit

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<p>Mutualism (8.L.3.2)</p>	<p>Relationship in which both species benefit</p>	 A photograph of a butterfly with orange and black wings perched on a bright pink flower, illustrating mutualism.
<p>Parasitism (8.L.3.2)</p>	<p>Relationship between a parasite and its host</p>	 A close-up photograph of a tick attached to human skin, illustrating parasitism.
<p>Commensalism (8.L.3.2)</p>	<p>Relationship where one species benefits without benefiting or harming the other species</p>	 A photograph of a bird perched on the head of a crocodile, illustrating commensalism.
<p>Predation (8.L.3.2)</p>	<p>Relationship in which one animal hunts, kills, and eats another</p>	 A photograph of a lion attacking a zebra in a savanna, illustrating predation.
<p>Competition (8.L.3.2)</p>	<p>Occurs when organisms in an ecosystem try to get the same resources</p>	 A photograph of two cheetahs in a dry, open landscape, one appearing to be attacking or fighting the other, illustrating competition.

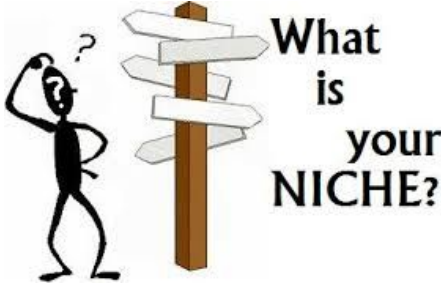

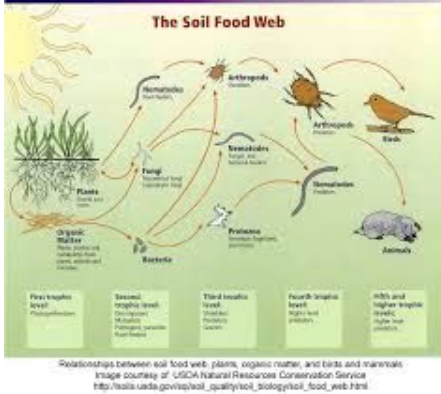
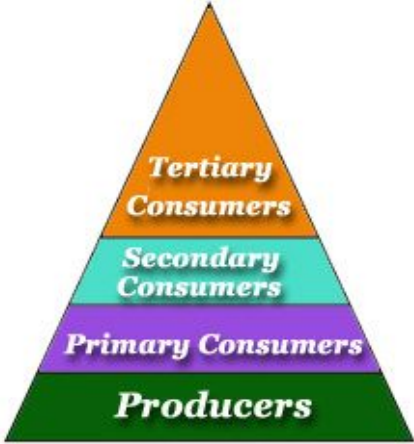
Ecosystems Unit

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<p>Producer (8.L.3.2)</p>	<p>Organism that produces its own food</p>	 <p>The diagram, titled "Basic Photosynthesis", shows a sunflower on a patch of green grass. A sun in the top left corner emits yellow arrows labeled "LIGHT ENERGY" towards the plant. A blue arrow labeled "oxygen" points upwards from the plant's leaves. A grey arrow labeled "carbon dioxide" points downwards from the atmosphere into the plant. At the bottom, blue arrows labeled "water" point upwards from the soil into the plant's roots.</p>
<p>Consumer (8.L.3.2)</p>	<p>Organism that cannot make their own food</p>	 <p>A photograph of several cows of various colors (black, white, brown) grazing in a lush green field. In the background, there are green trees under a clear sky.</p>
<p>Decomposer (8.L.3.2)</p>	<p>An organism that gets energy by breaking down the remains of dead organisms and the wastes of living organisms</p>	 <p>A close-up photograph of several earthworms in dark, moist soil. The worms are shown in various positions, some partially buried, illustrating their role as decomposers.</p>
<p>Predator (8.L.3.2)</p>	<p>Animals that kill and eat each other</p>	 <p>A cartoon illustration of a lion chasing a zebra across a savanna. The lion is on the right, running towards the zebra on the left. The background shows a blue sky with clouds and a large sun. The website "dreamstime.com" is visible in the bottom right corner.</p>
<p>Prey (8.L.3.2)</p>	<p>Animals that are killed and eaten</p>	 <p>A photograph of a brown wolf chasing a white rabbit across a snowy field. The wolf is in the foreground, running towards the right, while the rabbit is running away towards the right in the background.</p>

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<p>Niche (8.L.3.2)</p>	<p>How an organism acts in its ecosystem (the organisms role)</p>	
<p>Coexistence (8.L.3.2)</p>	<p>Organisms that live in the same habitat but rely on different resources</p>	
<p>Food Web (8.L.3.3)</p>	<p>A network of interconnected food chains in an ecosystem</p>	
<p>Trophic Level (8.L.3.3)</p>	<p>Each feeding level in an ecosystem</p>	

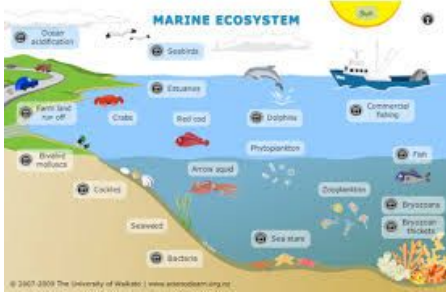
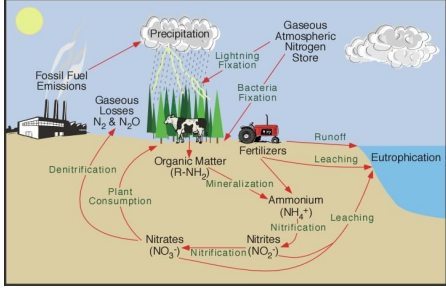
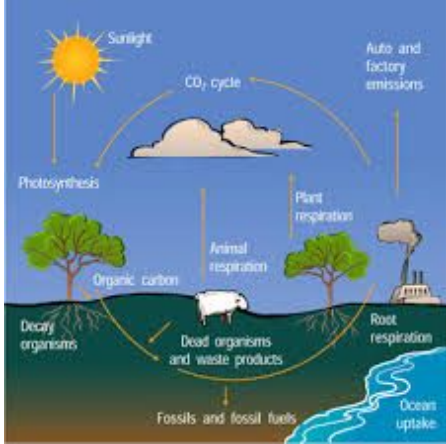
Ecosystems Unit

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<p>Energy Pyramid (8.L.3.3)</p>	<p>graphical representation of the trophic levels (nutritional) by which the incoming solar energy is transferred into an ecosystem</p>	<p>The diagram is an inverted pyramid with five horizontal levels. From bottom to top, the levels are: 1. Grass (10,000 kcal), 2. Grasshopper (1,000 kcal), 3. Frog (100 kcal), 4. Snake (10 kcal), and 5. Hawk (1 kcal). The pyramid is labeled 'Trophic Levels' on the left side. A copyright notice '© E.M. Collins 2001' is in the top right corner.</p>
<p>Autotrophs (8.L.3.3)</p>	<p>An organism that produces its own food; also called producers</p>	<p>The image shows a close-up of a green plant with long, narrow leaves. Overlaid on the image is the word 'AUTOTROPHS' in large, bold, white letters. Below the title is a numbered list: '1. Autotrophs are organism that make and produce their own food' and '2. Example: many plant use sun light to make their own food.'</p>
<p>Heterotrophs (8.L.3.3)</p>	<p>Organisms that cannot make their own food; also called consumers</p>	<p>A close-up photograph of a chipmunk's face as it holds a large ear of yellow corn. The chipmunk is looking towards the camera.</p>
<p>Terrestrial Ecosystem (8.L.3.3)</p>	<p>This ecosystem is found on land</p>	<p>The diagram shows a cross-section of a landscape with mountains, a river, and a forest. A legend on the right side of the diagram lists various carbon pools: 'Soil', 'Forest', 'Grassland', 'Wetland', 'Ocean', 'Atmosphere', 'Fossil Fuels', and 'Permafrost'. Below the diagram is the caption: 'Diagram of the terrestrial ecosystems and major carbon pools covered in the assessment.'</p>

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<p>Aquatic/Marine Ecosystem (8.L.3.3)</p>	<p>this ecosystem includes wherever there is salt water</p>	 <p>The diagram illustrates a cross-section of a marine ecosystem. On the surface, there are labels for 'Ocean stratification', 'Seabirds', 'Estuaries', 'Dolphins', and 'Commercial fishing'. Below the surface, various organisms are shown, including 'Crabs', 'Shell cod', 'Arrow squid', 'Dredgefishes', 'Bivalves', 'Scallop', 'Sea stars', and 'Bacteria'. Processes like 'Photosynthesis' and 'Prey-eaters' are also indicated. The bottom of the diagram shows 'Sediment' and 'Bacteria'.</p>
<p>Nitrogen Cycle (8.L.3.3)</p>	<p>The movement of nitrogen through the environment</p>	 <p>The diagram shows the nitrogen cycle starting with 'Precipitation' and 'Lightning Fixation' in the atmosphere. 'Gaseous Atmospheric Nitrogen Store' is also shown. On land, 'Fossil Fuel Emissions' and 'Gaseous Losses N₂ & N₂O' are shown. 'Bacteria Fixation' and 'Fertilizers' are also indicated. In the soil, 'Organic Matter (R-NH₂)' is shown, which can be converted to 'Ammonium (NH₄⁺)' through 'Nitrification' (via 'Nitrites (NO₂⁻)') and 'Nitrates (NO₃⁻)'. 'Denitrification' returns nitrogen to the atmosphere. 'Plant Consumption' and 'Mineralization' are also shown. 'Runoff' and 'Leaching' lead to 'Eutrophication' in the water.</p>
<p>Carbon Cycle (8.L.3.3)</p>	<p>Carbon moves among the air; the ground, and the plants/animals</p>	 <p>The diagram illustrates the carbon cycle. 'Sunlight' is shown at the top. 'CO₂ cycle' is shown in the atmosphere. 'Photosynthesis' is shown in a tree, and 'Plant respiration' is shown in a tree. 'Animal respiration' is shown in a cow. 'Root respiration' is shown in a tree. 'Decay organisms' and 'Dead organisms and waste products' are shown in the soil. 'Fossils and fossil fuels' are shown in the ground. 'Auto and factory emissions' are shown coming from a factory. 'Ocean uptake' is shown in the water.</p>