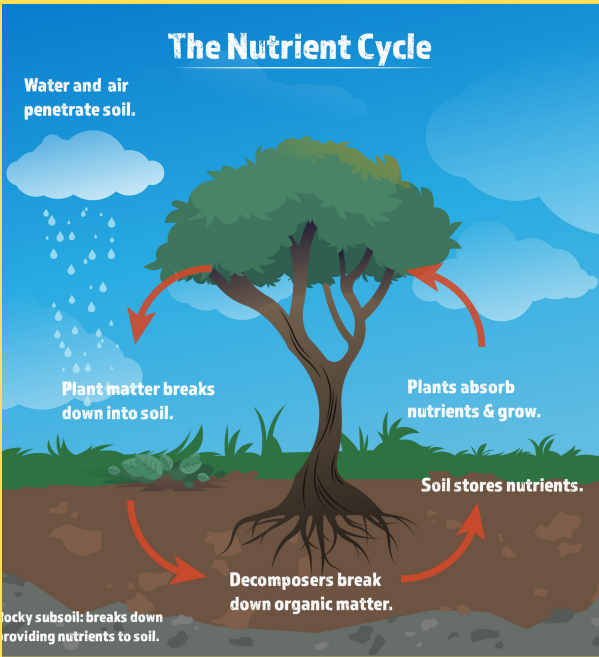




GAME CONTENT

- ## Ecosystems: Energy, Interactions and Dynamics
- Rainforest Ecosystems
 - Aquatic Animals
 - Terrestrial Animals Living Together
 - What Makes An Ecosystem
 - Types of Organisms
 - Relationships Among Organisms
 - Energy and Food Webs
 - Weather and Climate

UNIT 01



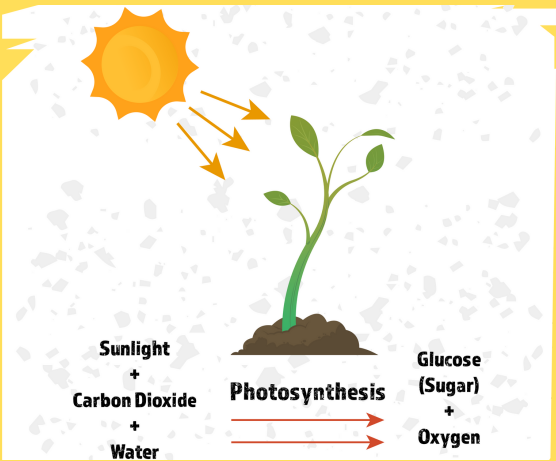
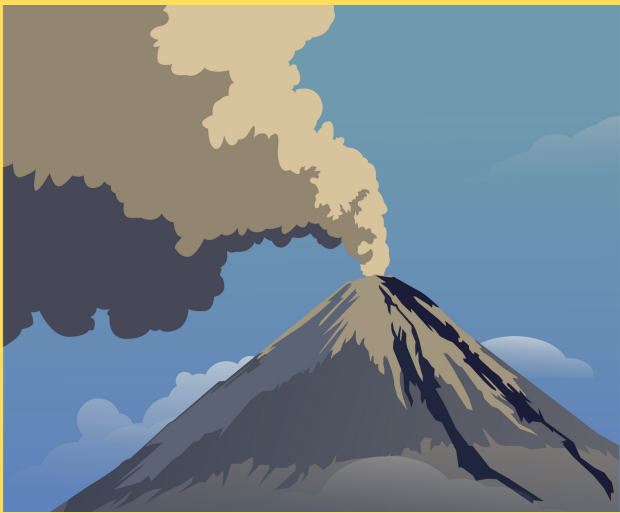
Activity, Structures, and Processes

- Water on Earth
- Water Quality
- Fragile Ecosystems
- Interdependence in Ecosystems
- Producers
- Consumers
- Decomposers
- Nutrients and Survival

Earth and Human Activity

- Water Pollution
- Soil Quality
- Causes of Land Pollution
- Types of Nutrients
- Air Pollution
- Healthy Ecosystems
- The Importance of Water Quality

UNIT 03



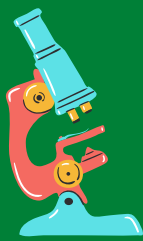
From Molecules to Organisms

- Photosynthesis
- Digestion and Respiration
- Food and Energy
- Causes of Water Pollution



National Standard Alignment

Next Generation Science Standards



5-PS3-1:

Energy: Use models to describe that energy in animals' food (used for body repair, growth, motion, and to maintain body warmth) was once energy from the sun.

5-LS1-1:

From Molecules to Organisms: Structures and Processes: Support an argument that plants get the materials they need for growth chiefly from air and water.

5-LS2-1:

Ecosystems: Interactions, Energy, and Dynamics: Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

5-ESS2-2:

Earth's Systems: Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.

5-ESS3-1:

Earth and Human Activity: Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

Common Core State Standards for English Language Arts



RI.5.2:

Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

RI.5.4:

Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

RI.5.5:

Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.

RI.5.7:

Draw on information from multiple print or digital sources, demonstrating the ability to locate an answer to a question quickly or to solve a problem efficiently.

RI.5.9:

Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

RI.5.10:

By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.



State Standard Alignment



State of North Carolina Essential Standards for Science



5.P.3:

Energy: Conversation and Transfer.

5.L.1:

Structures and Functions of Living Organisms.

5.L.2:

Ecosystems.

5.E.1:

Earth Systems, Structures and Processes.

State of Pennsylvania Academic Standards for Science



3.1.5.A2:

Describe how life on earth depends on energy from the sun.

3.1.6.A2:

Describe how energy derived from the sun is used by plants to produce sugars (photosynthesis) and is transferred within a food chain from producers (plants) to consumers to decomposers.

3.2.5.B2:

Examine how energy can be transferred from one form to another.



Glossary



- **Abiotic**
- **Absorb**
- **Acid rain**
- **Adaptation**
- **Air pollution**
- **Algae bloom**
- **Altitude**
- **Aquatic**
- **Atmosphere**
- **Autotroph**
- **Biodegradable**
- **Biodiversity**
- **Biome**
- **Biotic**
- **Canopy**
- **Carnivore**
- **Chlorophyll**
- **Chloroplast**
- **Closed system**
- **Community**
- **Compete**
- **Concentration**
- **Consumer**
- **Coral**
- **Coral reefs**
- **Decomposer/detritivore**
- **Decomposition**
- **Deforestation**
- **Digestion**
- **Ecology**
- **Ecosystem**
- **Element**
- **Elevation**
- **Energy**
- **Erosion**
- **Eutrophication**
- **Evergreen trees**
- **Fertilizer**
- **Food chain**
- **Freshwater**
- **Glaciers**
- **Glucose**
- **Groundwater**
- **Habitat**
- **Herbivore**
- **Heterotroph**
- **High acidity**
- **Humidity**

- **Interdependence**
- **Invertebrate**
- **Land pollution**
- **Nitrogen**
- **Nocturnal**
- **Nutrients**
- **Nutrient cycle**
- **Nymph**
- **Omnivore**
- **Organic waste**
- **Organism**
- **Pesticide**
- **Phosphorus**
- **Photochemical smog**
- **Photosynthesis**
- **Pollutants**
- **Population**
- **Predator**
- **Prey**
- **Producer**
- **Primary consumer/herbivore**
- **Primary pollutant**
- **Quaternary consumer**
- **Recycle**
- **Region**
- **Respiration**
- **Runoff**
- **Saltwater**
- **Savanna**
- **Scavenger**
- **Secondary consumer/carnivore**
- **Secondary pollutant**
- **Soil**
- **Solid waste**
- **Species**
- **Temperate rainforest**
- **Terrestrial**
- **Tertiary consumer**
- **Top predator**
- **Topsoil**
- **Toxic**
- **Trophic level**
- **Tropical rainforest**
- **Water pollution**
- **Weather**