Cycles

Duration: 4-6 weeks

Units:

- Water and Carbon Cycles
- Life in water
- Renewable & Nonrenewable Resources

Essential Questions/Big Ideas

- Describe the water cycle / The carbon cycle
- Understand that all living things need water
- Recognize living things that live in the ocean.
- Recognize bodies of water
- Identify renewable and nonrenewable resources
- What are fossil fuels?

Standards and Access Points

- SC.912. L.18.12 Discuss the special properties of water that contribute to Earth's suitability as an environment for life: cohesive behavior, ability to moderate temperature.
- SC.912. L.18.In.7 Identify that special properties of water, such as the ability to moderate temperature and dissolve substances, help to sustain living things on Earth.
- SC.912. L.18.Su.6 Identify the important role of water in sustaining life of plants and animals.
- SC.912. L.18.Pa.5 Recognize that plants and animals use water to live.

- SC.912.L.17.20 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.
- SC.912.E.7.1 Analyze the movement of matter and energy through the different biogeochemical cycles, including water and carbon.
- SC.912.E.7.In.1 Identify cycles that occur on Earth, such as the water and carbon cycles, and the role energy plays in them.
- SC.912.E.7.Su.1 Recognize the phases of the water cycle that occur on Earth and the role energy plays in the water cycle.
- SC.912.E.7.Pa.1 Recognize that clouds release rain (part of the water cycle).
- SC.912.L.17.2 Explain the general distribution of life in aquatic systems as a function of chemistry, geography, light, depth, salinity, and temperature.
- SC.912.L.17.In.1 Recognize that living things in oceans and fresh water are affected by the location, availability of light, depth of the water, and temperature.

- SC.912.L.17.11 Evaluate the costs and benefits of renewable and nonrenewable resources, such as water, energy, fossil fuels, wildlife, and forests.
- SC.912.L.17.In.7 Identify types of renewable and nonrenewable natural resources and explain the need for conservation.

Key Vocabulary

natural resources	atmosphere	evapotranspiration	biosphere	microscopic organisms
water cycle	carbon cycle	renewable resources	resource	evaporation
carbon	condensation	nonrenewable resources	precipitation	carbon dioxide
water vapor	nutrient cycle	geosphere	hydrosphere	cloud
runoff				

Cycles

Power Points

- **Cycles Vocabulary click here**
- **Cycles websites click here**

Water Cycle

Power Points

- **Water Cycle**
    a. **Part 1 click here**
    b. **Part 2 click here**

Worksheets

- Interactive water cycle diagram click here
- Blank water cycle worksheet click here
- Water cycle crossword click here
- Water cycle Quiz click here
- Water cycle writing activity click here
- The water cycle article click here
- Condensation activity click here
- Evaporation activity click here
- Water cycle activities click here
- Illustrate the water cycle click here

Videos and Resources

- Earth's Water cycle- NASA- click here

- Water cycle animation- click here
- Water cycle song- click here
- Water cycle explained by raindrop video- click here
- Water cycle dance video- click here
- Water cycle cartoon: click here
- Bill Nye: Water Cycle Video: click here
- Bill Nye Water Cycle Rap: click here
- Geosphere, biosphere, hydrosphere, atmosphere rap: click here
- Summary of the Water Cycle: click here
- Evapotranspiration: click here
- Condensation: click here
- Infiltration: click here
- Carbon cycle video: click here
- Carbon cycle 3D animation: click here

Life in Water

Power Points

- **Life in water** click here

Worksheets, Videos and Resources

- Vocab matching WS click here
    - Answer sheet click here
- Vocab word search click here
- Water Storage in the Ocean click here
- Springs click here
- Global Water Distribution click here
- Ground Water Storage click here
- Water Storage in the Atmosphere click here
- Why is the Ocean Important? click here
- Gallery of Oceans click here
- "Toxic Lake: The Untold Story of Lake Okeechobee" featuring Kait Parker of Weather.com click here
- Bodies of water video click here
- The most dangerous bodies of water- click here
- The most dangerous water in the world- click here
- Ocean animal games- click here
- Pond 2: Life in a Drop of Pond Water click here
- Water is water- 3 experiments click here
- Animals of the Sea- click here

Renewable, Nonrenewable & Fossil Fuels

Power Points

- **Renewable, Nonrenewable Resources & Fossil Fuels**
    a. **Part 1** click here
    b. **Part 2** click here

Worksheets, Videos and Resources

- Renewable and nonrenewable worksheet click here
    a. click here
- Fossil fuels WS click here
- Renewable energy jobs- click here
- The fossil fuels we can't touch click here
- California to ban straws-
    a. click here
    b. click here
- Renewable or nonrenewable activity-
    a. click here
    b. click here
- Additional lesson ideas at
    a. click here
    b. click here
- Renewable Resources Game Show – BRAIN ZAPPED | Science for Kids! | Battery POP click here
- Resources from Floridastudents.org, 4th grade level click here
- Activities related to energy resources click here
- What you need to know about energy click here
- Renewable vs non-renewable video click here
- Statistics on energy use in America
    a. click here
    b. click here
    c. click here
    d. click here
- What is acid rain? click here
- Global Warming click here
- Air Pollution
    a. click here
    b. click here
    c. click here
    d. click here