**Gibbon Conservation Center**

**H2O Cycle**

5th Grade

Post– Visit Activity

This lesson plan meets the NGSS in the areas indicated below if used as recommended. It is not however limited to these standards and can be modified as the instructor sees fit to include more or adjusted to meet the needs of other grade levels.

**Next Generation Science Standards (NGSS)**

*Matter and energy in organisms and ecosystems*

 Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

Emphasis is on the idea that matter that is not food is changed by plants into matter that is food examples of systems could include organism’s ecosystems and earth

*Earth systems*

Obtain and combine information about ways individual communities use science ideas to protect the earth’s resources and environment.

**Dimension #1 Scientific & Engineering Practices (SEP)**

*Developing & Using Models*

**Dimension #2 Crosscutting Concepts (CC**)

*Energy & Matter*

**Dimension #3 Disciplinary Core Ideas (DCI)**

*Life Sciences*

Plants and animals have structures for respiration, digestion, waste disposal, and transport of materials. As a basis for understanding this concept: a. Students know many multicellular organisms have specialized structures to support the transport of materials. b. Students know how blood circulates through the heart chambers, lungs, and body and how carbon dioxide (CO2) and oxygen (O2) are exchanged in the lungs and tissues. c. Students know the sequential steps of digestion and the roles of teeth and the mouth, esophagus, stomach, small intestine, large intestine, and colon in the function of the digestive system. d. Students know the role of the kidney in removing cellular waste from blood and converting it into urine, which is stored in the bladder. e. Students know how sugar, water, and minerals are transported in a vascular plant. f. Students know plants use carbon dioxide (CO2) and energy from sunlight to build molecules of sugar and release oxygen. g. Students know plant and animal cells break down sugar to obtain energy, a process resulting in carbon dioxide (CO2) and water (respiration).

**Materials**

Gibbon/Tree Diagrams

**REVIEW**

**First & Second Visit**

*What is CO2?*

*What is H2O?*

*What is O2?*

*What do all of the molecules we just discussed have in common?* Oxygen

*What do gibbons breath in?*

*What do gibbons breath out?*

*What do plants breath in?*

*What do plants breath out?*

*Where do gibbons get energy?*

*Where do plants get energy?*

*How are gibbons and plants symbiotic?*

**ACTIVITY**

Bring out Large Diagram from first visit

As well as the large system the students drew

It should include:

Water

Trees

Gibbons

Sun

Clouds

Factory

Any other animals or objects you may decide to include

The diagram should already have the CO2 & O2 Cycles drawn in if not draw them in now or review.

Draw arrows in color for Cycles

CO2 Cycle (environment) Orange

O2 Cycle (environment) Green

H2O Cycle (environment) Blue Introduce

**H2O Cycle**

Start by having the students folding ¼ of each side of the horizontal sheet of paper toward the center.

At this point the entire diagram should be covered.

Define the key words as a class. Have the students write on the folded over piece of paper.

Make sure to include:

Evaporation

Transpiration

Condensation

Precipitation

Infiltration

Percolation

Now that the students understand the different elements of the water cycle have them identify label them on the diagram with blue arrows.

Label the flow through plants and animals as well.

**Discussion**

*What is sustainability?*

*What are some things we use everyday?*

Discuss whether or not these things are sustainable and in what way

Exp. Toilet paper to cell phones

*How can we find out if a product is sustainably sourced?*

Is the class, school library or home equipped with any source of internet?

Guide the students with search tools and key words

\*Added Activity have students point out producers, consumers and decomposers

**Crossword puzzle of vocab words**

**Fill in the word**

**Word search**

**Old and new vocab**

Gibbon

Ecosystem

Rainforest

Canopy

Territory

Duet

Lungs

Heart

Photosynthesis

Digestion

Evaporation

Transpiration

Condensation

Precipitation

Infiltration

Percolation

Oxygen

Carbon

Hydrogen

Water

Trees

Sun

Clouds

Factory

Energy

Producer

Consumer

Decomposer

Digestion Gibbon Poster how to make for online upload black and white to color