**Gibbon Conservation Center**

**Rainforest Diagram**

Kindergarten

Pre – 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)**

*Interdependent Relationships in Ecosystems: Animals, Plants, & Their Environment*

Performance Expectations

Use a model to represent the relationship between the needs of different plants or animals & the places they live

(Example: Gibbons eat fruit. Fruit grows in the canopy; therefore, gibbons live in the canopy)

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

*Developing & Using Models*

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

*Energy and Matter:*

Flows, cycles, and conservation. Tracking fluxes of energy and matter into, out of, and within systems helps one understand the systems’ possibilities and limitations.

(Detail of Rainforest - Nutrient Cycle)

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

*Earth Sciences*

3.c. Students knowhow to identify resources from Earth that are used in everyday life and understand that many resources can be conserved.

(Trees as a resource)

**- Materials -**

Map (Large hard Education Map)

Felt Rainforest Poster Board

Foam Cut Outs with Velcro Backing

Gibbon Photo

The flow of questions should be guided by the students. Instructor should only help to keep the students on topic.

NOTE: This lesson has been set up for 24 students however it can be modified to accommodate a larger or smaller group. This can be a class activity by allowing each student to participate. Alternatively the instructor can place on the images while being guided by the students. We will be using a diagram of the rainforest made from poster board paper and foam cut outs. The GCC instructor will be using a reusable poster with Velcro. If you plan to repeat this project for the next year’s kindergarten it might be helpful to do the same. For older students, you can choose to have the students cut & color their own artwork to be placed on the poster.

**Discussion Questions**

* *Who can tell me what they know about the rainforest?*
* *Where can we find the rainforest?*
  + Refer to a Map / Globe
  + Point to all the continents with rainforest (all except Antarctica?)
* *What do we think lives in it?*
* *Where do the animals live? (What do they live on?)*
* *Can anyone tell me a Natural Resource? (unlimited & limited)*
* *Can you think of how we use these resources?*

**Building the Rainforest**

*Now we are all going to work together to make a picture of the rainforest.*

Instructor

Put on the sun before we start – describe the benefits of the sun as a resource

Put on a river through the center– describe the benefits of river as a resource

Put on a cloud & rain– describe the benefits of water as a resource

Hold up the first tree – describe the benefits of trees as a resource

1. Hand two student an emergent – describe an emergent

2. Hand the next student a tree from the canopy – describe the canopy

3. Hand the next student a tree/vine from the understory – describe the understory

4. Hand the next student single leaves/ twigs – describe the forest floor

Repeat steps 1-4 with two students having the class recall the details of each layer

Nutrient Cycle - poem

*First water falls from the sky*

*Splashing on birds as they fly*

*A little lower in the trees*

*The rain then hits the leaves*

*Meanwhile on the ground*

*At the base of a big tree root*

*A seed grows a little shoot*

*It has come from the poop*

*Of a gibbon eating fruit*

*While some rain hits the ground*

*And combines with seeds*

*And the decomposing leaves*

*Making food for the trees*

*But some water disappears*

*Right now it might not seem clear*

*The process of Evaporation*

*Later leads to Condensation*

Now begin adding animals & insects

5. Hand the next student a bird – describe where the bird lives have the students guess the layer (emergent/canopy)

6. Hand the next student an insect– describe where the insect lives have the students guess the layer (emergent/canopy/understory/forest floor)

7. Hand the next student an snake– describe where the snake lives have the students guess the layer (emergent/canopy/understory/forest floor)

8. Hand the next student a tiger/leopard– describe where the tiger/leopard lives have the students guess the layer (understory/forest floor)

Repeat steps 4-8 with two students having the class recall the details of each layer

Begin to describe a gibbon…

*Now I’m going to describe an animal to you.*

*I want you all to help guess what the animal is and where it lives in the forest.*

*This animal eats fruit, leaves, and insects*

*What layers can we find fruit, leaves, and insects?*

*This animal sings to mark its territory*

*If we want our voices heard should we be up high or down low?*

*Our voices carry farther up higher the forest is very dense down low*

*This animal has long arms for swing from tree to tree*

*Where would it be easiest to swing quickly?*

*There are no trees on the floor & there are not enough emergent trees*

*This animal has short legs and can walk along the branches*

*This animal lives in the Canopy*

*This animal lives with it’s family in the canopy*

*This animal has fur*

*This animal has long fingers*

*This animal’s feet can help it hold food while swinging*

*This animal does not have a tail*

*This animal is a Gibbon*

Show a photo of a gibbon

*This is a photo of a gibbon*.

Go back to the Rainforest Diagram

*Where should I put the gibbon in the rainforest?*

Review

*Why is the Rainforest good?*

*How do animals use forest?*

*How are animals like us?*

*Why is rainforest good for us?*

*How do we take care of the Rainforest?*

Vocabulary

Rainforest

Emergent

Canopy

Understory

Forest Floor

Bird

Insect

Snake

Tiger

Gibbon

Sun

River

Cloud

Rain

Resource

Recycle

Reduce

Reuse

Evaporation

Condensation