



## **Grade 4 Lesson Plan: Habitats, Communities and Planting Basil (75 minutes)**

### **CURRICULUM EXPECTATIONS**

Understanding Life Systems: Habitats and Communities

#### Overall Expectations

1. Analyze the effects of human activities on habitats and communities;
2. Investigate the interdependence of plants and animals within specific habitats and communities;
3. Demonstrate an understanding of habitats and communities and the relationships among the plants and animals that live in them.

#### Specific Expectations

- 1.2 Analyze the positive and negative impacts of human interactions with natural habitats and communities, taking different perspectives into account, and evaluate ways of minimizing the negative impacts.
- 2.5 Use appropriate science and technology vocabulary, including *habitat*, *population*, *community*, *adaptation* and *food chain* in oral communication.
- 3.1 Demonstrate an understanding of habitats as areas that provide plants and animals with the necessities of life (*e.g., food, water, air, space, and light*).
- 3.2 Identify factors that affect the ability of plants and animals to survive in a specific habitat.
- 3.4 Demonstrate an understanding of a community as a group of interacting species sharing a common habitat

### **MATERIALS**

For Web of Life Game:

1. Web of life character cards (ideas: mouse, deer, fox, snake, butterfly, bear, shrub, basil plants, humans, bacteria, sun, worm, bird, wolf, plants, pond)
2. String (for students to wear cards around their necks)
3. Ball of string

For planting:

1. Watering cans
2. Mulch
3. Basil plants for transplanting
4. Trowels
5. Popsicle sticks (for
6. Sharpies (for writing on the popsicle sticks)

For tasting:

1. Teapots
2. Basil leaves (for the tea)
3. Cups

4. Honey (to add into the tea for flavor)
5. Spoon (for stirring)

For consolidation:

1. Printed worksheets
2. Pencils

## AGENDA

### 1. WEB OF LIFE GAME (25 MINUTES)

Before: Three leaders arrange themselves in a human pyramid with the top person holding an umbrella over the other two. Ask,

- *What would happen if one of the holders' left?*
- *What would happen to the person being held?*
- *Would the top person be able to keep the sun off the one that stayed?*

*This is called, **interdependence: living things relying on each other for survival.***

- *What is the word for one kind of living thing (**species**)?*
- *When there are many of one species (**population**)?*
- *What is a habitat (**where species live**)?*
- *We are going to do an activity that is based on different species living in a habitat that are interdependent, called Web of Life. What is another word for a web of life in a habitat (**community**)?*

During: In a circle, distribute identity cards and ask the sun to hold on to the string and toss the ball to someone who depends on the sun, stating why they are passing it to that character as they do so. Continue until everyone is connected. Note the integrity/stability of the circle. Then give scenarios of environmental change; if that means there is too much of one identity, that person pulls on their string. If too little, the person drops their string.

Sample scenarios (for each ask, *how will our habitat be affected? Which populations in the community will be affected? How is our interdependence affected?*)

- A big rainstorm happens
- A drought happens
- A new housing development is built (*Should we build it? What about those who need it? How could we minimize the impact of creating homes?*)
- Wolf fur coat sales increase (*Should people wear fur? What could we wear instead? What about those who survive on hunting? How could they minimize the impact?*)

After: If anyone has to leave the circle due to human activity, note the way the web has lost integrity and there are fewer connections in the circle. Ask,

- *What kind of responsibility do we have as humans? (**Note that in the garden, we can control many aspects of habitat.**)*

### 2. PLANTING (CAN BE SUBSTITUTED WITH ANY PLANT IF NECESSARY) (20 MINUTES)

1. Give a trowel demonstration\* and get planting.
2. During planting, highlight the need for the plant roots to be in close contact with the nutrient rich soil.

3. Ask,
  - *What are some things you can do with basil? (pesto sauce, tea, garnish, good for headaches, anxiety and digestion)*
4. Water and mulch plants (to protect from squirrels)
5. Write the basil type on the Popsicle sticks with sharpies

### **3. TASTING (10 minutes)**

Allow the students to enjoy basil tea as you review important terminology with them.

### **4. CONSOLIDATION (20 MINUTES)**

Ask:

- *What is interdependence? (Living things relying on each other for survival)*
- *Using a situation from the web of life game or from nature, give an example of interdependence in a community.*

Students' understanding of interdependence can be assessed by doing the following activity:

- a. Divide students into groups of 4 – 5 and secretly assigning each group to a habitat (lake, rainforest, field or arctic).
- b. Give each group 5 minutes for individuals to choose their identity in their community, create an action to demonstrate it, and to decide how they are connected to each other.
- c. Let the students give mini presentations of their community while each member acts out their character. Then, ask the other students what habitat they think it is and how they creatures are interconnected.
- d. **START WITH A 3 MINUTE EXAMPLE** (ex. bear, bee, flower).

Distribute assessment sheets (attached) and give time to complete, or let them do so in class, asking teacher if you can pick up (or she can drop off) the completed papers for a formative assessment.

\* Trowel demonstration: show how point of trowel is plunged straight down into the soil, not shoveled. Show how to twist the trowel to gently remove soil, putting the soil right next to the hole.