# Third Grade Activities

## Bean Scheme

### Materials and Time:

* Bean seeds
* Soil
* Plastic cups
* Shade (a canvas or fabric of sorts).

### State Standard:

3-LS3-2. Use evidence to support the explanation that traits can be influenced by the environment. [Clarification Statement: Examples of the environment affecting a trait could include normally tall plants grown with insufficient water are stunted.]

### Objectives:

* Students will understand that organisms can be changed by the environment; including humans.

### Anticipatory Set/ Linking to Prior Knowledge:

* What is an environment? (All the external factors that influence the life and activities of people, animal, and plants).
* In what ways can an environment change?
* So just to review, what do plants require to survive? What about animals?
* Can a change in the environment change how plants and animals grow?
* Can you change an environment to make it better?
* What about people? Can people be influenced by their environment?

### Instructions:

Introduce that water, light, and soil are three things that all plants need. Ideally, the plant’s environment would be perfect and the plant would get everything it needs to grow and thrive successfully. However, environments are not perfect, or they change, even becoming competitive or difficult to live in. Ask students to think of an example. What about BioTrek? Have them guess, and then explain that in the rainforest, there is an excessive amount of plants. Thus, they have to compete for light, water, and space to grow. Some plants have certain advantages over one another, making them more competitive (refer back to BioTrek). For example, taller plants in the canopy block out the sunlight for the plants in the understory. Another example to mention is the plants with deeper roots have easier access to more water. However, what exactly happens to plants when they do not have enough of what they need? Our job is to figure out what happens when that is the case.

Divide the class into several groups, giving each group a plant. [Note: it is up to you if you want the students to grow the plants from seed or if you want to hand them the plants after growing them in a controlled environment yourself. The second option is most favorable, though it requires extra work on your behalf.] Have your students (as a class) come up with ways that the environment could change for the plant.

Next is a game of chance. The groups will draw lots in order to be assigned their environment, and they will then proceed to create the conditions assigned.

|  |  |
| --- | --- |
| **Has water & soil but no sun**  Your plant had the perfect environment, but a nearby tree fell and it is blocking all sunlight. | **Has water, soil, and sun**  Your plant was the lucky one. It has the perfect environment: soil, sun, and water. |
| **Has soil & sun but no water**  Your plant had the perfect environment, but all of a sudden, the entire country went into deep, deep, drought. | **Has soil, but no water or sun** Your plant had the perfect environment until a sudden deep, deep drought caused a nearby tree to fall and block all of the sunlight too. |
|  | |
| Have the students keep a record of their observations (i.e. creating science journals). After recording data for a week, ask the class the following question: **Does the environment affect the way things grow?** | |

# Third Grade Activities

## Switcheroo

### Materials and Time:

* + Research materials (books, internet, etc.)
  + Pencils/ colored pencils/crayons
  + Paper
  + 1 or 2 days

### State Standard:

3-LS2-1. Construct an argument with evidence supporting the idea that in a particular habitat some organisms can either survive successfully, survive mediocrely, or cannot survive at all. Examples of evidence could include the needs and characteristics of the organisms and habitats involved. The organisms and their habitat make up a system in which the parts depend on each other.

### Objectives:

* + Students will understand that organisms adapt to survive in their specific habitat. Placing them elsewhere often reduces their chances of survival. Although in some cases, as with invasive species, changing their habitat can help an animal thrive.

### Anticipatory Set/ Linking to Prior Knowledge:

* + What is the difference between an environment and a habitat?
  + What are some characteristics that could help an animal survive in its habitat?

(i.e. color, the type of teeth, claws, type of food, etc.)

* + If you switched an animal into a different habitat, do you think it could survive?

### Instructions:

Students will become experts on an animal from a specific habitat. They will be given a choice between Desert, Tropical Rainforest, Freshwater, or Savannah dwelling animals. To allow the activity to tie in with the trip to BioTrek, you can include the following options:

|  |  |  |  |
| --- | --- | --- | --- |
| **Desert** | **Tropical Rainforest** | **Freshwater** | **Savannah/ Grasslands** |
| Leopard Gecko | Green Iguana Tokay Gecko  Red-Eyed Tree Frog | Spectacled Caiman Red-Eared Slider | Blue Tongue Skink Ball Python |

Using their research materials, students will gather information regarding the animal’s notable features, its geographic location, the type of food it eats, what it can eat, how it protects itself from getting eaten, etc. Include a picture of the animal, as well as a picture of what their habitat looks like and have students compile it into an artistic and creative booklet/pamphlet. On the final page, have them choose a different habitat, listing the reasons why their animal could or could not survive there.