



Kindergarten: Into the Outdoors

Course Description: This module will introduce your students to the world of plants and animals and their environments. We will begin by explaining the difference between something that is living versus something that is nonliving and what characters they can use to assess the correct category. We will move on to discussing the basic needs of plants and the basic needs of animals and how, although they may be different, they have the same basic energy requirements. We will then introduce some of the different environments in which we can expect to find plants and animals and what makes them different and how the plants and animals that live in one particular environment are not likely to thrive or even survive in another one. The course will end with a reminder that humans are also animals and we will talk about the different ways that humans affect their environments and how we respond when the environment changes around us.

Day 1: This class will serve as a general introduction to the natural environment and how all living creatures require the same basic things. We will start by discussing the difference between living versus nonliving. We will go over how all living things require energy in order to survive and explain that it can be found in many different places depending on whether you are an animal, a plant, or a fungus. We will talk about how all living things interact with each other and with the nonliving aspects of their environment.

Demonstration: *We will show examples of items that are nonliving and we will bring a selection of living creatures (some that don't move much to make it more challenging, such as algae, coral, and lichen) and plants to exhibit some of the fundamental differences. We will then play a game where the children will have to decide which of an additional set are living and nonliving.*

Day 2: This week we will move on to talking about the specific environments that are needed for different plants and animals. We will first explain what an environment is – how it is all of the living and nonliving things that are all around us. We will talk about some different environments and the differences between them – the difference between seawater and freshwater, the difference between terrestrial and aquatic and we will explain how plants and animals that live in one place or another are not able to survive elsewhere. We will just touch on climate and differences in biome to explain how things living in one climate are not suited to living in another.

Demonstration: *Today the students will begin a four-part activity creating their own environments out of playdoh inside a plastic container. During this class, they will begin to think about how lands look different in different places and what is present in different environments. The students will begin adding their own hills, mountains, lakes, and rivers to their environments in whatever way they would like. We will continue to work on the playdoh environments in subsequent classes, so the students will have to hang on to them.*

Day 3: This class will focus on plants and what they require to survive. We will think back to what we learned about living versus nonliving things in our previous class and explain how plants are all living and, as such, will all require energy. Plants receive their energy in the form of sunlight

which, along with water, allows the plant to make its own food. We will discuss what might happen to a plant if it didn't have light or water.

Demonstration: Students will add plants to their playdoh environments using fake plastic trees and talk about how the plants will benefit their environment and why they planted them in the locations in which they did.

Day 4: This class will focus on animals and what they require to survive. Last week we discussed how plants use the energy from the sun to make their own food. This week we explain that animals are not able to do this but in fact need to eat something in order to have enough energy to survive. We will also explain how animals all require oxygen and water in addition to the energy they are able to consume and that if any one of these three items are missing then an animal is unlikely to survive.

Demonstration: We will bring in a number of different animals from the Insectarium to show to your students. We will describe how each of them has a different diet and how some of them only eat plants, some only eat other animals, and some will eat both. We will also allow the students to observe the animals feeding and show how the ones that eat plants need to eat much more than the ones that eat animals. Students will also add animals to their mini playdoh environments using fake plastic animal figures.

Day 5: This week we will talk about the different ways that plants and animals interact with each other and with their environments. We will discuss how there are relationships between plants and animals that are mutually beneficial and how some are not. We will go over how things change when the season changes in an environment and begin a discussion on how the plants and animals respond. Some animals hibernate over the winter, some lay eggs and the adults will die – we will discuss some of these different challenges and the different ways these challenges are handled by different species. Lastly, we will remind students that humans are animals too and that we also interact with plants and animals and our environment.

Demonstration: We will bring in a selection of animals and plants to exhibit the interactions that they have with each other and how they even change their environments. We will also continue work on the individual environments. In the last class we added animals to the playdoh environments, but a lot of what we see when we go outside is actually made by humans; there are roads, houses, and cities. Today, we are going to add roads and houses to our environment to see how the land is changed. Students can move (cutdown) trees and relocate animals to add the roads and houses. We will talk about how the changes may have impacted the environment and the plants and animals that live there.