Dinosaur Plant Classroom Kit Student Guide

Care Instructions and Dinosaur Plant Fun Facts

The Amazing Dinosaur Plant has existed since the time of the dinosaurs—that's more than 290 million years! The Dinosaur Plant prefers a minimum temperature of 40 degrees. It prefers to dry out several times a year and needs fresh water daily for the first few days. The Amazing Dinosaur Plant will survive in a dry state for up to 50 years, although it prefers to be re-hydrated every couple of years. This plant is native to Mexico and Texas, mainly around Big Bend National Park, in desert and semi-desert regions.

Individual and Group Experiments

Either every student can do every experiment, or students can break into groups of three and observe the other groups lessons.

1. **Is this seemingly-dead ball of foliage really alive?**
   Carefully soak the Dinosaur Plant in water. Fill the growing cup with water. Place the plant in the growing cup. Check on the plant every hour or so to view its progress. What happens? How quickly does the Dinosaur Plant react to the presence of water? Does rinsing the Dinosaur Plant and changing its water daily help it grow? Why? Where do you think the debris in the Dinosaur Plant came from?
2. **Can you make a colored Dinosaur Plant?**
   Place a food-coloring tablet in the growing cup, add water, and stir. Next add the Dinosaur Plant. Does the Dinosaur Plant absorb the color from the colored water? Let the plant dry out as the water evaporates. Is it colored when it's dry? Try putting the other two food-coloring tablets in other growing cups and then adding the Dinosaur Plants. Do they change color?
3. **How does the Dinosaur Plant react to different temperatures of water?**
   You will need two Dinosaur Plants and two growing cups for this experiment. Carefully soak the first Dinosaur Plant in hot water and place it in a growing cup that is full of hot water. Next, soak the second Dinosaur Plant in cold water and place it in a growing cup that is full of cold water. Observe for the next 3 or 4 hours. What happens? Does the Dinosaur Plant prefer hot or cold water?
4. **What happens if the Dinosaur Plant dries out?**
   Let the water evaporate from the Dinosaur Plant's growing cup. What happens to it? Is the Dinosaur Plant still alive?
5. **How does the Dinosaur Plant react to different levels of light?**
   You will need three Dinosaur Plants for this experiment. Place one Dinosaur Plant in a windowsill where it will get full sun. Place the second Dinosaur Plant in a dark closet where it will receive no light. Place the third Dinosaur Plant in a semi-shaded area in the classroom. Observe over the course of a week. (Make sure to keep adding water to all of the growing cups.) What happens? Which Dinosaur Plant is growing the fastest? How does the light affect the Dinosaur Plant? How does the darkness affect it?
6. **Does humidity have an affect on the Dinosaur Plant? (Terrarium is not included.)**
   Add water to two growing cups. Add a Dinosaur Plant to each growing cup. Put the first growing cup in a terrarium and place it on a sunny windowsill. Put the second growing cup on the windowsill beside the first, but do not put it in a terrarium. Observe the Dinosaur Plants over the course of a couple of days. Does one Dinosaur Plant open faster than the other? Is there condensation in the terrarium? How does humidity affect the Dinosaur Plant?
7. **Does fertilizer have an affect on the Dinosaur Plant? (Fertilizer is not included.)**
   Add a small amount of fertilizer to the water in a growing cup. Next, add the Dinosaur Plant and place it on a sunny windowsill. Add water, but no fertilizer to a second growing cup, add a Dinosaur Plant, and place it beside the first plant. Observe the growth over a week's time. Which one grows faster, the one with fertilizer or the one without? What is the purpose of fertilizer?
8. **How does the Dinosaur Plant respond to temperature changes?**
   Put a mature Dinosaur Plant in a warm area for about an hour. Touch the dinosaur plant to see how it reacts. Move the Dinosaur Plant to a very cold place (such as refrigerator) for about 15 minutes. Touch the Dinosaur Plant again and observe. Place the Dinosaur Plant back in the warm area for about 15 minutes, touch again, and observe. How did the cooler temperatures affect the plant's response to touch? How did it react after being returned to a warmer temperature?
9. **How does the Dinosaur Plant react to being in different growing mediums?**
   Fill a growing cup with dry planting soil. Bury the Dinosaur Plant's shallow roots so that the plant stands upright, and then moisten the soil. Fill a second growing cup with sand, repeat the planting process, and moisten the sand. Fill a third growing

cup with rocks and pebbles. Arrange them in a circle with a hole in the middle. Put the Dinosaur Plant's roots in the middle of the rocks so that it stands upright, and add some water. Fill a fourth growing cup with just water and add the Dinosaur Plant. Observe over the next few hours. Which Dinosaur Plant opens the fastest? Which medium does it seem to prefer? Why would the Dinosaur Plant do better in one medium as opposed to another?

Discussion Questions

What special uses could the Amazing Dinosaur Plant have? How could it be helpful to humans and our environment?

How much water does the Dinosaur Plant retains when it is dehydrated?

Dinosaur Plants are said to resemble mosses. Can you explain how they might be more advanced than the common moss? What is the difference between a vascular and nonvascular plant?

What is the difference between a dormant and an active plant? Is the Dinosaur Plant dormant or active? How is the Dinosaur Plant able to come back to life after it has been out of water for so long?

What adaptations have helped the Dinosaur Plant survive for so long?

Can you explain what natural selection and evolution are? How do these terms apply to the Dinosaur Plant?

Notes