

A Science It! Activity



THE AMAZING DINOSAUR PLANT

Kit Content

- Volcanic Lava Rock
- Bowl
- Dinosaur plant

**Dinosaur plants
have lived on Earth
for over
290 million years!**



Science

The Dinosaur Plant, also known as the *Selaginella lepidophylla*, is an ancient rosette-forming herb that is native to the Chihuahuan Desert and the Southwestern US. They belong to an ancient group of plants known as Club Mosses, or *Lycopodiophyta*.

Selaginella lepidophylla is a desert plant that has evolved to survive dry environments. They have done so by evolving the ability to completely dry up and recover. The Chihuahuan Desert used to be a part of a much larger and wetter expanse of land that was the perfect environment for plants that like humidity and wet- some of it was even an inland sea. However, as the sea dried up, the other plants which couldn't adapt died.

The shape of the plant is particularly interesting. When dried, the plants' inner fronds tend to curl tightly, whereas the outer fronds tend to curl much less tightly. As the plant grows in a rosette form, the outer fronds are the older fronds. As the fronds get older, they lignify, meaning they produce a woody matrix outside of their cells. This causes the fronds to be less pliable, and will make them less curly as well. When conditions are moist, and these plants are in the active state for long enough, they will reproduce by sporulation.

The dinosaur plant is one of the longest living plants in the world! Its ancestors looked down to see the first dinosaurs emerge. During the Carboniferous period they attained heights of 30 m+ and contributed to the coal deposits which were later formed.

When the ice age came, they had to mutate and get really small. They learned how to blow onto dry land and sleep, waiting for water.

Although they resemble mosses, they are considered to be more evolutionary advanced because they are vascular – they have specialised fluid-conducting tissues

These plants are native to Mexico and Texas. When dry it curls up into a tight ball so that the wind can easily roll it to a new location – hopefully closer to moisture.



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Activity:

- Place your Dinosaur Plant in the bowl with the volcanic lava rock.
- Pour some water on top of the plant and watch it spring back into life!
- It will be fully hydrated after 3 hours.
- If you forget to water your plant it will shrink back into its 'sleep' state – it can sleep for up to 50 years – this is why it is sometimes called the 'Resurrection Plant'!
- This plant likes to nap several times a year. Just let the water evaporate away. When you put it to bed it will fall asleep in one week – don't reawaken for at least 2 weeks
- when you bring it back to life change its water every day and rinse it every day for the first few weeks.