GROW DINOSAURS

A WVU Extension Service STEMCARE Lesson

Goal:
Understand how to record and interpret observations over time.

Introductory Activity
Read “Did a Dinosaur Drink This Water?”

Core Learning Activity: The Science Behind Grow Dinosaurs

Day 0: Place the dinosaur on paper, hold it down and trace around it closely with a pencil. Measure the length and height of your dinosaur tracing and record your results in the spot marked “Day 0.” Place the dinosaur in a cup of water and let it sit overnight.

Days 1 to 3: Each day, take out your dinosaur, dry it and trace as before. Measure the length and height of your tracing and record your results for Day 1 through Day 3. Each day, refill the cup with fresh water and place the dinosaur in the cup to sit overnight.

After three days, your dinosaur will be fully grown. Calculate the area of your dinosaur on each day by multiplying length by height. Graph your results and track the rate of growth on graph paper with the area on the Y scale and the day on the X scale.

Results
Day 0: __________________________  Day 2: __________________________
Day 1: __________________________  Day 3: __________________________

What’s Going on Here?
This dinosaur is made from two special polymers. A polymer is simply a very long chain of repeating molecules.
One of the polymers is a hydrophilic (water-loving) hydrogel. This super-absorbent polymer is responsible for the — continued —
water-absorbing action that causes the dinosaur to grow. The other polymer is hydrophobic (water-fearing). This polymer does not absorb water but helps to keep the original shape of the creature while it swells up with water.

Will the dinosaur shrink? Yes! Just leave the dinosaur out without water and allow the moisture inside to evaporate. It might take a week or more.

THINK ABOUT IT:
Can you think of a good use of this polymer material other than a dinosaur toy?

Resources

WVU STEMCARE Grow Dinosaurs Demonstration Video: https://youtu.be/ZSqQDpo1j5Q