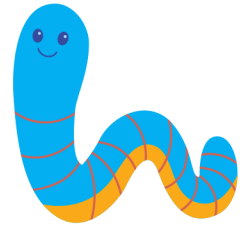




Oklahoma Medical Research Foundation Discovery Kit

Generously underwritten by Sarkeys Foundation

Synthetic Worms



- Safety first: Put on your gloves and safety glasses.
- Grab the blue OMRF measuring cup and measure 8oz of water.
- With your measuring spoon, scoop up 2 Tbsp of calcium chloride. Put this in your OMRF mixing bowl.



How would you describe the chemical and physical properties of calcium chloride?

- Add your water to the mixing bowl and stir with a stir stick. Notice the water is getting warm! This is an exothermic reaction.



What is an exothermic reaction?

- Put the calcium chloride mixture aside.
- Measure out another 8oz of water. Pour this into the bottle.
- Add a few drops of food coloring to the water. Swirl your water until the color is blended.
- Measure out 1 tsp of sodium alginate.



How would you describe the physical and chemical properties of sodium alginate?

- Add the sodium alginate into the bottle, close the cap and shake vigorously until it starts to thicken. This could take a couple of minutes. Keep shaking.
- Once your mixture turns syrupy, continuously squeeze the thickened mixture into the calcium chloride solution in the white OMRF bowl.
- After a few minutes, take out your creation. What do you see? Feel? How is it different from before?




Reflect on the substance's journey from powder to worm. What scientific process do you think turned a liquid into this solid-like form?

How has the transformation of natural materials into synthetic ones changed the way we live and work?

Compare your worm to those of your classmates. Are they all identical? What variables might have caused any differences?

If you were to repeat this experiment, what would you do differently to possibly change the outcome?

- Follow your teacher's clean-up instructions to leave your station spotless.

 Remember, scientists, observation is key! Each step of the way, write down what you see, think and wonder. Keep asking questions — that's how discoveries are made!