

# A STEM in the Park Take Home Activity

## STEM in the PARK

Science, Technology, Engineering, and Mathematics

# Mystical Fortune Teller Fish

## **What You Need**

- Fortune Teller Fish
- A flat surface
- Heat source (dry heat pack or heating pad)
- Paper towels
- Water
- Tablespoon



## **What To Do**

1. Hold the fish flat in the palm of your hand and observe what happens.
2. Next, place the fish on a flat, room temperature surface and observe what happens
3. Repeat this 1 or 2 more times.
4. Have a parent, brother or sister do the same thing.
5. Is there a difference in how the fish acted when somebody else was holding it than when you held it?
6. Why do you think the fish moves when you or somebody else holds it in their palm?

### **Notes:**

- Wait for the fish to flatten back out between each experiment on the back.
- Don't read the Learn section at the end until you have finished all of your experiments.

*Continued on back*

## ***Investigate...***

1. Plug in a heating pad or activate a dry heat pack. Make a hypothesis (a guess) about what you think will happen when you place the fish on the heat source.
2. Place the fish writing side up on top of the heat source for at least 30 seconds.
3. Observe what happens. Does the fish curl up at all or does it just “play dead”?
4. Next, take a paper towel and pour 1 tablespoon of **warm** water from the faucet in the center of the paper towel. Make a hypothesis (a guess) about what you think will happen to the fish when it sits on the paper towel.
5. Place the fish writing side up on wet spot.
6. Observe what happens. Does the fish curl up at all?
7. Now, try the paper towel experiment again with a new paper towel but this time use 1 tablespoon of **cold** water from the faucet. Make a hypothesis (a guess) about what you think will happen.
8. Did the fish act like you thought it would? After your experiments, what do you think makes the fish move? Can it really tell your fortune?

## ***Learn...***

The fish are made from the same polymer that disposable diapers use to absorb liquids, sodium polyacrylate. As the molecules of sodium polyacrylate come in contact with water molecules, they absorb the water and change shape. Why does the fish move in the palm of your hand? Because sodium polyacrylate absorbs the water found in the moisture on your hand. As the molecules change shape, so does the shape of the fish. Because some people’s hands might be sweatier or moister, the fish will tend to curl or move more in their hands.

***This activity is brought to you by the Northwest Ohio  
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