



Scientific Method:

Let's Do Some Science!

Doing science begins with curiosity! Take a moment to observe your surroundings. What do you notice, and what more do you want to know?

By following your curiosity, you're already engaging in science--no lab coat needed! But that's not where science ends. Once you make an observation, you can continue to explore, test ideas, and draw conclusions about those ideas through a process known as the **Scientific Method**.

The **Scientific Method** includes:

**Observing a phenomenon → Asking a question → Gathering information →
Forming a hypothesis → Testing your hypothesis → Recording your results.**

Time to try it yourself! The questions below will help you as you explore:

Use the template on the last page to help you gather your thoughts.

1 - Ask a Question -

“Can we make something that is neutrally buoyant like a fish using items we find around us?”

Materials - These items are only suggestions; use whatever you'd like!

- *Metal washers*
- *Paper clips*
- *Corks*
- *Nuts and bolts*
- *Plastic straws*
- *Pipe cleaners*
- *Ping pong balls*
- *Bobbie pins*

2 - Gather Information - Try putting some of your materials in water to collect some early data about which ones are buoyant and which ones sink.

3 - Form a Hypothesis - What combination of materials do you think will make a neutrally buoyant design? Try writing this as an **“If...then statement.”**

- **For example:** *“I predict that if I combine two wooden popsicle sticks with one metal washer then my design will be neutrally buoyant.”*

4 - Test your hypothesis - Time to test your design! Fill a container with water and gently place your design inside and observe what happens.

5 - Record your results -

(feel free to write or draw)

- What happened?
- Did your design float?
- Did it sink?
- Did you achieve neutral buoyancy?

Keep Going - Everytime you test your hypothesis whether or not you get the results you expected you are still learning!

Try some of the prompts below to keep thinking:

- Is it what you expected to happen?
- What would you change if you built a new neutrally buoyant object?
- Are there any new materials you would like to try?

NATURE LAB: Neutral Buoyancy

4 - Record Your Results:
(draw and/or describe what happened)

1 - Gather Information:

*Modify
and try
again!*

Driving Question:

Can we make something
that is neutrally buoyant
like a fish using items we
find around us?

3 - Test it!

2 - Form a Hypothesis:
(If..then Statement)

