

SAVING SAM



Sam's Backstory

Sam was exploring the nearby pond in his little plastic boat when out of nowhere a rogue wave caused the boat to capsize. This left Sam stranded on top and his life preserver stuck underneath the boat. Sam needs your help to get back into his life preserver and safely back into his boat without falling into the pond or drowning.

Purpose

Can you and your group come up with a plan to save Sam? You will need to put him safely back into his boat so he can row home before it turns dark. If you can't save him by dark he will vanish forever... (*by way of the crows or seagulls*).

General Guidelines for Saving Sam:

- Work in **groups of 2 or 3**.
- **READ** the entire lab activity **BEFORE** starting or touching any of the materials.
- You **may not touch** Sam, the boat, or the life preserver directly with your hands. **NO HANDS, NO TOUCH.**
- Each person may only use **1 paper clip at a time** using only **one hand**.
- You may **only use** the **paper clips** to move Sam, the boat, or the life preserver.
- Do not hurt Sam (so not poke, stab, annihilate, or otherwise harm him).
- If Sam **falls** into the water or you **use your hands** to touch anything other than the oars (**2 paper clips**) you need to start over.

Before you attempt to save Sam, complete the following items of the **Scientific Process** neatly in your **digital notebook** (see below):

1. **Problem or Challenge:** What is your group trying to do?
2. **Background Knowledge:** Sketch/draw/insert a picture of the current situation.
3. **Design a Rescue Plan:** Write down in 5 steps* or less how you plan to save Sam.
*(Include **pictures** and/or **labeled diagrams**)
4. **Place to Record Data:** Make a **data table** and insert onto your slide.

* You can modify/change the steps if you do not initially save him - and that is okay

Data/Results: Time each attempt you make to save Sam.

Data Table I: Time Required on Each Rescue Attempt

Trial #	Time (seconds)	Saved Sam? (YES/NO)
1		
2		
3		
4		
5		

- * If Sam falls into the water, you will need to **restart the timer and try again**. It is ok if it takes a few tries to save him, but **don't give up** on Sam, eat him, or let him touch the water or your fingers.
- * The life preserver should be in the **middle of Sam** to result in a successful rescue attempt.

What To Do After You Save Sam:

Conclusion: Analyze what you did and what worked or did not work by **addressing the bullets below:**

1. Discuss **what worked** and **what did not work** and **why**.
2. What was the **most challenging part** or **what was the biggest problem** you encountered?
3. **How did your team problem-solve** the most challenging part to save Sam or **what techniques worked best**?
4. What would you **do different next time**?
5. What **one extra tool** would you like to have had to help Sam live?
6. If you were going to **teach a 3rd grader** to be successful at completing this activity **what one piece of advice** would you give?

BONUS: Find the average time for all your attempts (you can do this in Google Sheets with the functions). Search how to do it if you do not know how to do this in Google Sheets or Excel.