

LITTLE BINS  
LITTLE HANDS

STEM

# SOAP POWERED BOAT



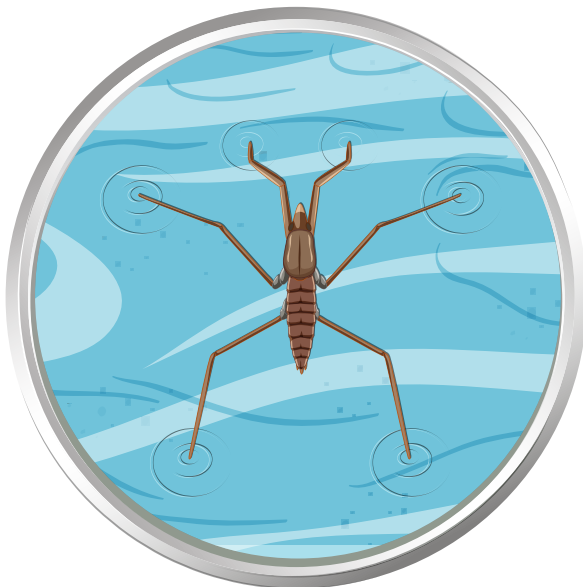


# WHAT IS SURFACE TENSION?

Surface tension is like a "skin" on the top of water that makes it act like a bouncy trampoline. It happens because the tiny particles in water like to stick together.

This special "skin" helps bugs like pond skaters walk on water without sinking. It also makes water droplets form round shapes.

Understanding surface tension helps scientists learn cool things about how liquids behave.



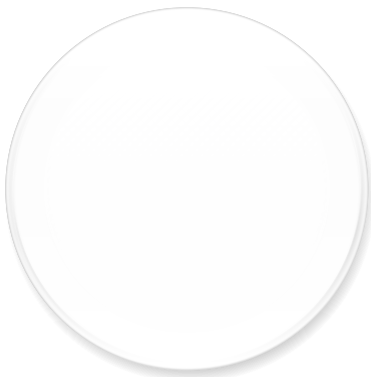
**pond skater**



# STEM

Let's learn about surface tension!

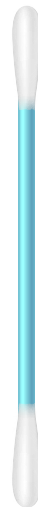
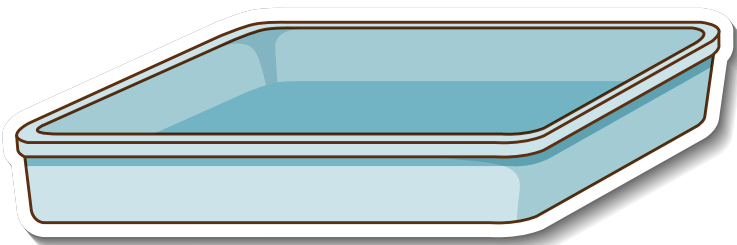
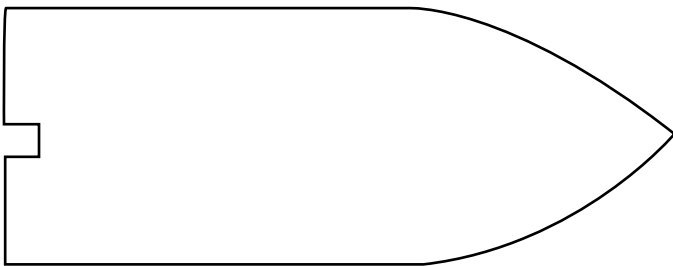
You'll need:



Boat template  
Styrofoam plate  
Scissors  
Dish soap  
Cotton swab

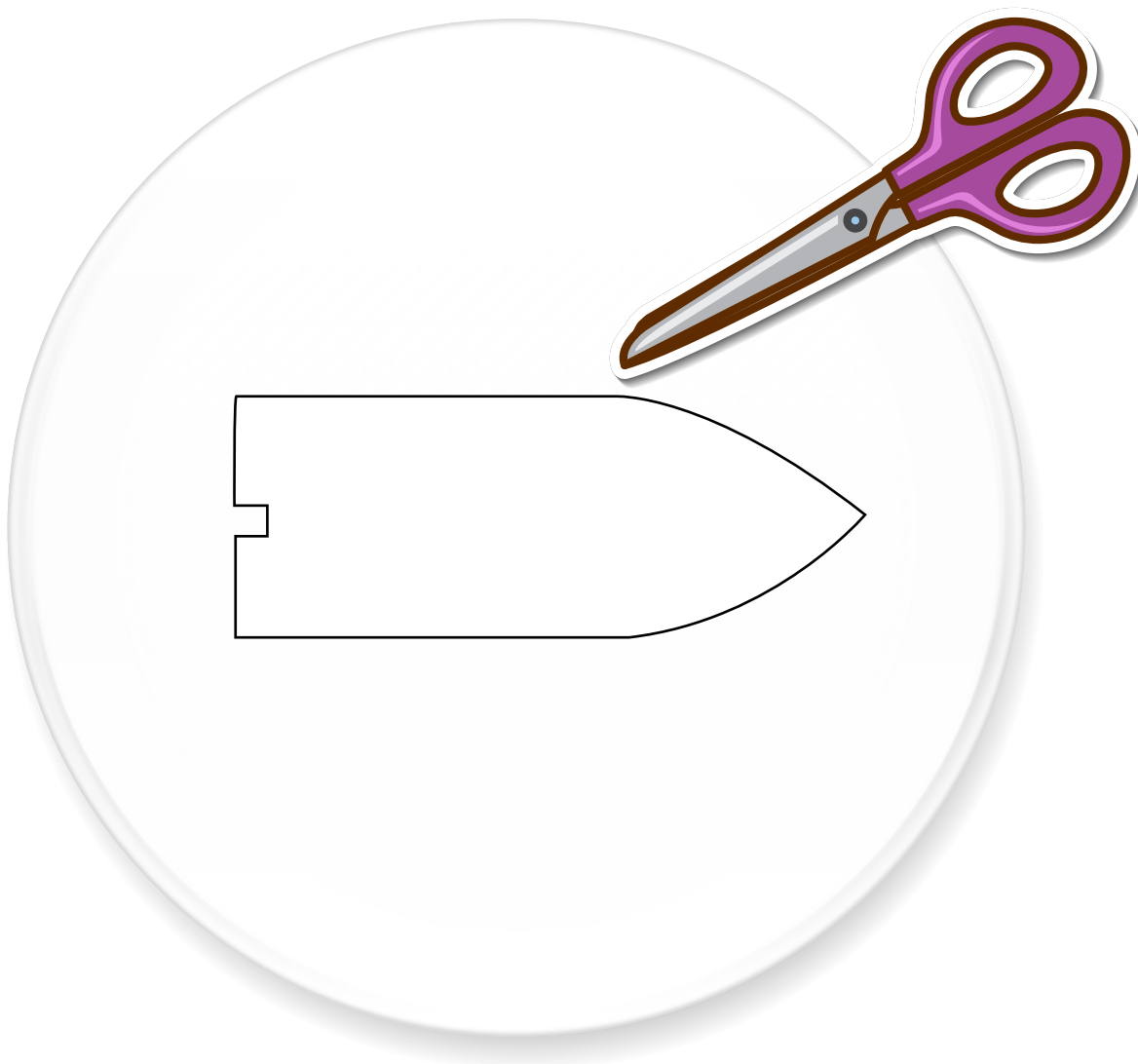


Bowl or tray of water



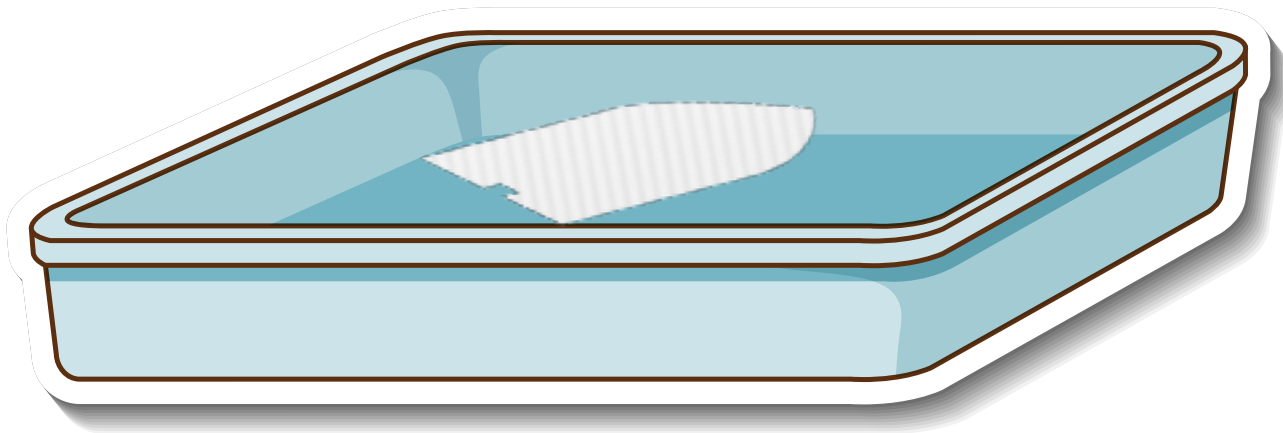
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**Cut out the boat shape from the styrofoam plate using the template provided.**



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**Place your boat into the tray of water.**



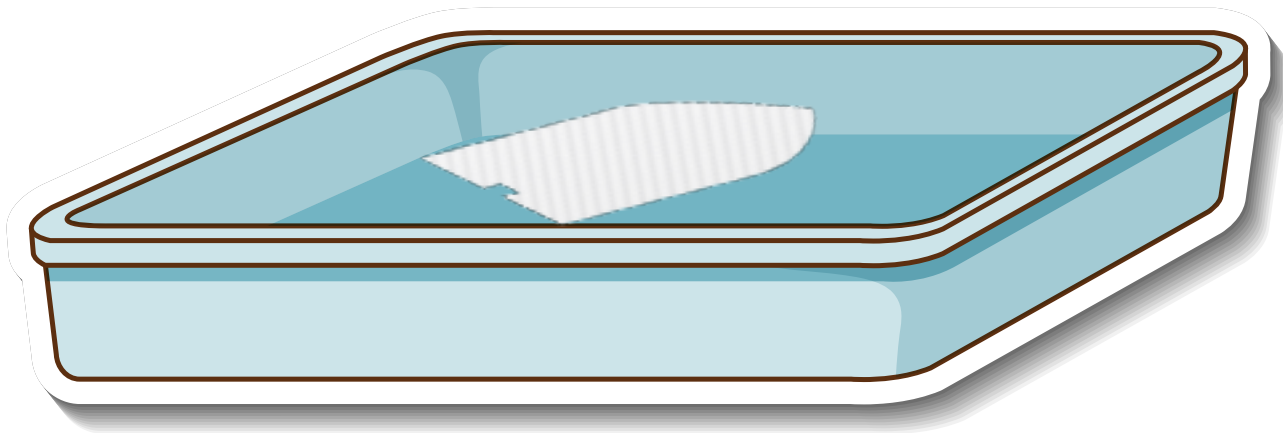
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**Use the cotton swab to add a drop of dish soap into the water at the back cutout of the boat.**



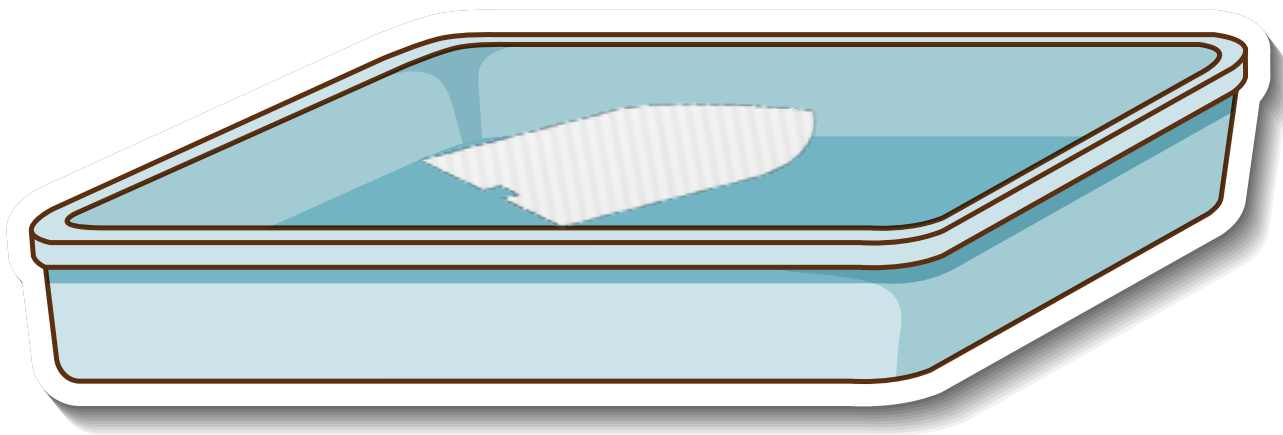
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**What did you observe?  
Why did it happen?**



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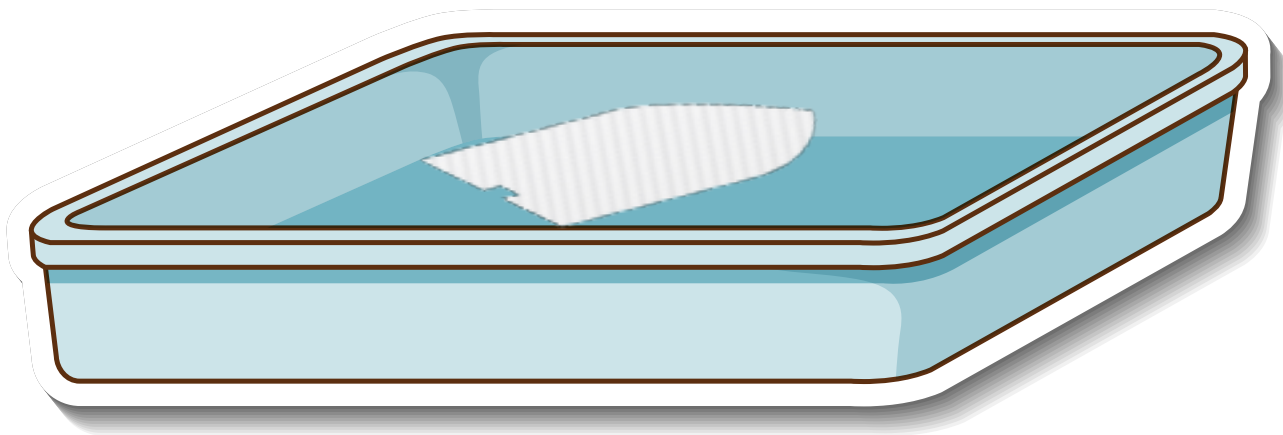
**When you placed the boat on the water, the boat just floats on the surface because of something called "surface tension." It's like a thin layer on top of the water that helps things float.**





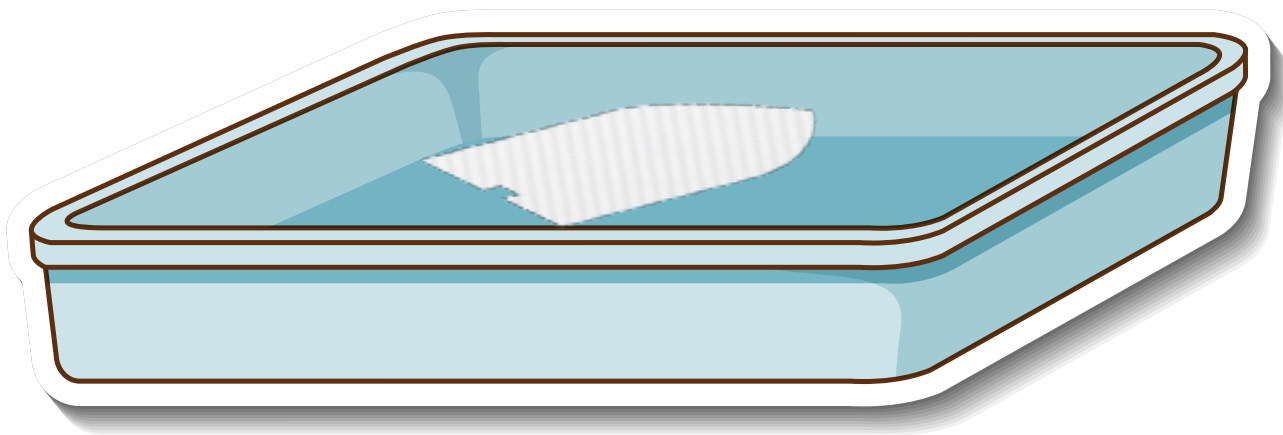
# STEM

**Adding Dish Soap: When you add a drop of dish soap to the water, something cool happens. The soap breaks the surface tension of the water.**



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**Boat Reaction: As the surface tension is broken, the boat is free to move around. It might seem like the boat is trying to get away from the soap, so you might see it moving away from where you dropped the soap.**





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## MY SCIENTIFIC JOURNAL

1 MY QUESTION:



## MY SCIENTIFIC JOURNAL

5 RECORD YOUR DATA:



RESEARCH NOTES: 2



## MY SCIENTIFIC JOURNAL

3 MAKE A HYPOTHESIS:

YOUR CONCLUSIONS 6

SUPPLIES:

SET UP YOUR EXPERIMENT 4

