

Name \_\_\_\_\_

**TEACHER NOTES FOR What Dissolves?**  
(you can learn about something by watching it behave....)

**Step 1 – Question – What do you want to know . . . .**

Do flour, salt, baking soda, and sugar all dissolve in water?

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**Step 2 – Prediction – What I think will happen . . .**

If flour, baking soda, sugar and salt have similar properties (characteristics)

refer to variable you will change

then I predict \_\_\_\_\_ they all will dissolve in water OR CAN PREDICT  
DIFFERENT THINGS FOR DIFFERENT SUBSTANCES....

refer to variable you will measure

**Variable I will change** \_\_\_\_\_ substance \_\_\_\_\_

**Variable I will measure** \_\_\_\_\_ does it dissolve or not \_\_\_\_\_

**Variables I will keep the same**

- \_\_\_\_\_ size cups, amount water, amount substance, amount stirring, time of stirring, temperature of water

**Step 3 – Materials – What I will use . . .**

- \_\_\_\_\_ cups \_\_\_\_\_
- \_\_\_\_\_ spoons \_\_\_\_\_
- \_\_\_\_\_ flour, salt, sugar, baking soda \_\_\_\_\_
- \_\_\_\_\_ timer \_\_\_\_\_
- \_\_\_\_\_ water \_\_\_\_\_

**Step 4 – Procedure – The steps I will take . . .**

1. fill 4 cups with equal amounts of water (fill at least 3/4 full)
2. add one level spoonful of sugar and salt to 2 cups
3. stir for a minute (each student stirs one cup)
4. observe if they dissolved, record results
5. repeat with baking soda and flour

**Step 5 – Data collection (my observations during the experiment):**

	Dissolves in water	Does not dissolve	Lots of bubbles produced?
sugar			
salt			
flour			
baking soda			

**Overall Results - What was observed using multiple trials from the class? Were the overall results consistent with your results?**

**Which substances dissolve in water:** \_\_\_\_\_

**Which substances do not dissolve in water:** \_\_\_\_\_

**Step 6 – Conclusion**

My prediction \_\_\_\_\_  
(state prediction)

was \_\_\_\_\_  
(Supported or not supported by the data)

**Concluding statement:** Because flour did not dissolve and the other substances did, flour must have different properties than sugar, salt, and baking soda. OR Because sugar, salt, and baking soda dissolved, they are more similar to each other than is flour, that did not dissolve in water. or something similar,....

*(include specific evidence in conclusion: Convince me!)*

**Future work:** What are some other substances you'd like to test? Can you think of other substances that you predict would dissolve in water? Some that wouldn't dissolve? What do you think would happen if the water temperature were hot?

NOTE: Table salt has anti-clumping substance added to it (read label) that does not dissolve. The water will appear cloudy. So it's best to use PURE salt for this experiment. Or at least note that "ah hah...there's an uncontrolled variable in the salt!"