

Name \_\_\_\_\_

## Scientific Investigation Worksheet: What dissolves in Vinegar?

*(you can learn about something by watching it behave....)*

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

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

If \_\_\_\_\_

refer to variable you will change

then I predict \_\_\_\_\_

refer to variable you will measure

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

Variable I will measure \_\_\_\_\_ whether it dissolves or not in vinegar \_\_\_\_\_

### 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 \_\_\_\_\_
- \_\_\_\_\_ vinegar \_\_\_\_\_

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

1. \_\_\_\_\_ fill 4 cups with equal amounts of vinegar (about 1/2 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 (new cups) \_\_\_\_\_

**Step 5 – Data collection: my observations during the experiment (the focus is on whether the substance dissolves or not, but if anything else interesting happens, note that down too!):**

	Dissolves in vinegar	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 vinegar:** \_\_\_\_\_

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

**Which substances produced lots of bubbles?** \_\_\_\_\_

**Step 6 – Conclusion**

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

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

**Concluding statement:** \_\_\_\_\_

\_\_\_\_\_

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

**Follow-up question:** How do your results from dissolving these substances in water compare to the results for vinegar? What was similar; what was different?