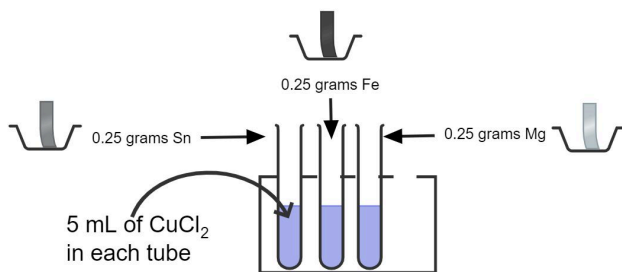


**Driving question: What makes the difference- mass or moles?**

Name: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 Date: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Pd: \_\_\_\_\_

**Directions:** Set up the following scenario. Add the metal pieces last.

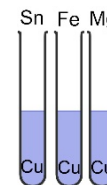


**Observations:**

	Sn	Fe	Mg
What did you observe during the reaction?			
Use colored pencils to color this box the color of the solution			
What do the solid pieces look	Before reaction:	Before reaction:	Before reaction:

like?	After reaction:	After reaction:	After reaction:
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**Analysis:** What do you think was in excess in each test tube? (circle one for each test tube):



**Calculations:** Calculate the number of moles of each solid below:

Sn	
Fe	
Cu	

**Diagram:** Use your calculations to create a particle diagram for the reaction of copper with each solid. Each test tube started with .005 mol of  $\text{CuCl}_2$ . Use your observations to make your best prediction about amounts that remained after the reaction. Use the key to create your diagram:

- = 0.001 mol Cu
- = 0.001 mol metal

	<b>Sn + Cu</b>	<b>Fe + Cu</b>	<b>Mg + Cu</b>
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<b>Before Reaction</b>			
<b>After Reaction</b>			

<i>comparisons between mass and moles to explain your claim)</i>	
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In the space below, use the CER framework to respond to the driving question.

<b>Claim:</b>	_____ makes the difference.
<b>Evidence:</b> <i>(Use your observations in combination with your calculations here)</i>	
<b>Reasoning:</b> <i>(You can reference your diagrams here. Also make</i>	