

Name: Class CopyPeriod:      Subject: Int Science

## Activity 4 - Making a Sentence Activity

- Put a circle with a check mark in the top left of each square in the table in your notebook where you predict a reaction will occur. Make a list of the metals in your notebook going from most reactive to least reactive. Which metal do you think we'll be the most reactive metal?
- Have one lab partner put each of the four solutions in a "column" of four wells. Put about 2 ml of the solution in each well.
- Have the other lab partner obtain four samples each of four different metals.
- Place the metal samples in the wells so that a given metal has one sample placed in each of the four nitrate solutions. Do this for each of the four metals.
- Observe the wells for five to ten minutes. Record your observations in your data table.

**Data:**

REACTIONS BETWEEN METALS AND SOLUTIONS				
	$\text{Cu}(\text{NO}_3)_2$	$\text{Mg}(\text{NO}_3)_2$	$\text{Pb}(\text{NO}_3)_2$	$\text{Zn}(\text{NO}_3)_2$
<b>Cu</b>				
<b>Mg</b>				
<b>Pb</b>				
<b>Zn</b>				

- How could you tell that any reactions were taking place? Were some metals more reactive than others? Which metal reacted with the most solutions? Which metal was the least reactive?
- Order the four metals by their reactivity from most to least reactive.
- Here are some metals listed in order by their reactivity: Potassium (most reactive), magnesium, aluminum, zinc, lead, copper, silver, platinum (least reactive). Did your activity series agree with this order? If not, propose an explanation for the difference in activities.
- Of what use could this information be in the world outside the chemistry lab? (Hint: Given what you observed during this lab, why do you think pipes used in plumbing have often been made out of lead or copper?) Why not use aluminum or magnesium pipes? Someone suggests making pipes out of silver or platinum; explain what the pluses and drawbacks are of such an idea.