TASK #1 - Silly putty – a polymer **TYPE OF REACTION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Silly putty is a “polymer.” What is a polymer? Yes – you can use your phone to look it up ☺
2. Polymers are made up of “repeating units” and “cross linkers.” What type of reaction did you observe?

Repeating Unit

Cross  
Linker

Repeating Unit

Cross  
Linker

**2**

Cross  
Linker

**+**

Repeating Unit

**3**

Repeating Unit

1. Was there an indication of a chemical reaction occurring? How were you able to tell?
2. If you could not observe a sign of a chemical reaction occurring, why do you think this was the case?

TASK #2 – Splitting water **TYPE OF REACTION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write out a balanced equation for the reaction that was observed.
2. How were you able to split the water? What did you use to break the molecule apart?

TASK #3 - Formation of a solid **TYPE OF REACTION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write out a balanced equation for the reaction that was observed.

1. “Soluble” means that a compound dissolves in water. “Insoluble” means that it will be a solid precipitate in water.   
   Using the solubility table in the classroom which product was the precipitate in your reaction?

TASK #4 - Copper to zinc penny **TYPE OF REACTION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write out a balanced equation for the reaction that was observed.
2. If we had replaced the copper penny with a gold coin, would you expect the reaction to still occur?
3. Rewrite your equation showing how to make a gold plated penny.

TASK #5 – Burning methane **TYPE OF REACTION: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Write out a balanced equation for the reaction that was observed.
2. A car engine burns octane (C8H18), would the products formed by burning octane in your car be   
   different from the products you made by burning methane (CH4) in this task? Why or why not?
3. Write a balanced equation for the combustion of octane.