Name Period Date

**Chemical Reactions Un-Notes**

Iodine Clock Reaction: Qualitative Observations

Rocket Engine: Qualitative Observations

Elephant’s Toothpaste: Qualitative Observations

Scientists use patterns in evidence to create models that can be used to make predictions. Some of these patterns can be seen in identifying if a reaction is a chemical reaction. All of the reactions that you just witnessed are chemical reactions. What patterns did you notice in your qualitative observations that might be signs that would indicate a chemical reaction is occurring?

Consider a pot of boiling water and the chemical reactions you saw today. Create a Venn Diagram describing the similarities and differences between the changes that occur during these reactions. Consider properties, energy, and what is happening to the molecules!

Water Boiling

Today’s Reactions

Water boiling is considered a physical reaction while the reactions observed today are chemical reactions. Even though they are two different types of reactions, the Venn Diagram above shows that there are “overlaps” in the changes that occurred in both. Therefore, patterns can be used to make predictions, but are not always scientific law. **After considering the patterns that you identified today, what is the most important difference between a chemical reaction and a physical reaction?**