Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Pd: \_\_\_ Ast: \_\_\_\_\_

**Candy Classification Activity**

***Your group will receive a bin full of candy & snacks listed below. DO NOT OPEN OR EAT ANYTHING UNTIL MR. HANNA INSTRUCTS YOU TO DO SO.***

* Caramel
* Chocolate
* Cookie
* Fudge Stripe Cookie
* Kit-Kat
* Riesen
* Starburst
* Twix
* Wafer (*ignore cream*)

1. **SORTING THE SNACKS**
2. Sort the candy/snacks into groups. Your group can decide: how many groups, what criteria to use, how to justify your groupings. Describe your groups in the space below.

***THERE IS NO WRONG ANSWER AS LONG AS YOU CAN JUSTIFY YOUR GROUPING.***

1. Explain your groups. What criteria/rationale did you use to sort the snacks into these groups?

***THERE IS NO WRONG ANSWER AS LONG AS YOU CAN JUSTIFY YOUR GROUPING.***

1. **RE-SORTING THE SNACKS**
2. Follow Mr. Hanna’s directions to sort the snacks into two groups. Describe those groups in the space below.

***Group 1 – single ingredients – caramel, chocolate, cookie, starburst, wafer***

***Group 2 – multiple ingredients combined – fudge stripes, kit-kat, riesen, twix***

1. What does the first group represent (or model)? ***ELEMENTS***
   1. Explain ***Elements are made of a single type of atom; these candies are one substance throughout***
2. What does the second group represent (or model)? ***COMPOUNDS***
   1. Explain ***Compounds consist of multiple elements chemically combined; these candies are multiple substances combined to make one new candy***
3. When all of the snacks are together in the bin, what do they represent (or model)? ***MIXTURE***
   1. Explain ***All of the candies are together in the same place but are not combined***
4. On the back of this paper, draw a Venn diagram to show how elements, mixtures, and compounds are related.
5. **NATURE OF SCIENCE CONNECTION**
6. What science process skills did you use to sort your snacks into the groups described above?

***Observe – 5 senses to gather information, Infer – use prior knowledge about candies to know contents, Classify – group things based on characteristics, Communicate – discuss and show ideas visually***

1. Explain how using the candy/snacks as a model in this way can be beneficial to us.

***It allowed us to use something familiar to us (candy) to help us understand an unfamiliar concept. It allowed us to visualize the idea better.***

1. Explain at least one limitation, or drawback, to using the candy/snacks as a model for this concept.

***We used real-life compounds as a model of elements and real-life mixtures as a model of compounds, so it could cause misconceptions if someone did not understand the analogy we were making.***