Measuring Mass of Crayons

Benchmark(s):

SC.4.N.1.3: Explain that science does not always follow a rigidly defined method ("the scientific method") but that science does involve the use of observations and empirical evidence.

SC.4.N.1.7 Recognize and explain that scientists base their explanations on evidence.

SC.4.P.8.3 Explore the Law of Conservation of Mass by demonstrating that the mass of a whole object is always the same as the sum of the masses of its parts

Testable Question: How can scientists use observations and empirical evidence to explain a scientific law?

NOTE: Watch "Simple Law of Conservation" video prior to the aligned investigation - http://stem-kids.blogspot.com/2015/05/the-law-of-conservation-of-mass.html.

Materials: (Per group)

- Balance and gram set
- Hershey bar (teacher)
- Small box of unused 8 count pack crayons (one per group)

Procedures:

1. Teacher Demonstration with Hershey bar *(See Teacher Guide)*.
2. Distribute materials to groups.
3. Students will measure the mass of the items listed in the table below and record the data in the table below.
4. Students will take turns within the group so everyone has an opportunity to use the balance.
5. Each student should record his/her data in the chart.

Data:

Student name	Mass of full box of crayons	Mass of empty box	Mass of red crayon	Mass of black crayon	Mass of blue crayon	Mass of green crayon	Mass of orange crayon	Mass of yellow crayon	Mass of brown crayon	Mass of white crayon

Analyzing Data:

What is the mass of the entire box of crayons? Why is it important to know the mass of the entire box of crayons?

Does the data that you collected in this investigation support what you know about measuring mass? Explain.

Did all your group members get the same mass for the different items? If not, explain.

Summary:

After analyzing the data it was determined that the hypothesis was _____

(Supported *OR* Not Supported) by the data because _____

_____

_____

To conclude from this lab, I learned that _____

_____

_____

_____

A question I still have is _____

_____