Lesson Plan Title: Gumdrop Molecules

Concept / Topic to Teach: Chemical Formulas and Chemical Properties.

Standards Addressed:

D.8.3 Understand how chemical interactions and behaviors lead to new substances with different properties
D.8.4 While conducting investigations, use the science themes to develop explanations of physical and chemical interactions and energy exchanges

Learning Outcomes

Students will identify elements and the amounts of atoms for each molecule in a compound.

Students will use the table to identify their mystery compound through counting their total atoms and atoms of each element.

Students will identify the chemical formula of their mystery compound.

Required Materials:

Plastic bags.
Gumdrops
Toothpicks
Models of the compounds (optional)
Modified and copied worksheet to match the colors of gumdrops.

Anticipatory Set (Lead-In):
What is an element? What is the number next to the element’s symbol on the periodic table? Can elements be put together? What happens when elements come together and share atoms?

Procedures:

1. To start off the lesson, review the previous two days of instruction on counting atoms in molecules and also the effect of combining multiple elements and multiple compounds and what they can do when combined. Review how they completed the first half of the activity on the top of the page in the previous class.
2. Explain how the students will take the bottom box on the worksheet and fill it in the same way they filled the top part in the previous class.
3. Next the instructor will take the demo bag of gumdrop compounds and model creating a compound on the projector or table in front of the whole class allowing all the students to see.

4. Fill in the atom count on the demo sheet and “guess” the chemical formula based on the key listed above. Following that, create the gumdrop molecule by using the demo gumdrops.

5. Finally, have the students pair off either by desk partners or their own group of two, no more. Once the partners are paired off, have the groups come up and blindly pick their mystery element bag out of a larger bag.

6. Remind the students that their gumdrops will be used in the next class in the day so they are not to destroy or eat the gumdrops. Gumdrops will be offered after the lab is completed.

Plan for Independent Practice:

This activity can be done as individual or in groups, but based on the number of supplies, the activity will be done in groups. Each partner will fill out their own identification box on the bottom of their worksheet. Each student will then take note on similarities between their compound and other compounds listed on the key.

Closure (Reflect Anticipatory Set):

Have the students complete a gallery walk through the classroom looking at all the other students’ compounds. During the walk have the students not only show what the compound, but also share the name of the compound, number of molecules of each element, and finally have them explain the chemical formula of the mystery compound.

Assessment Based on Learning Outcomes:

During the gallery walk, the students are going to explain what elements are in their mystery compound. The students will also be explaining how many atoms of their elements are to be used to create the mystery compound. Finally during the gallery walk, the students will explain the chemical formula that their compound has become.

Possible Connections to Other Subjects:

Art