**Skills and Processes of Scientists: Mystery Bag Lab Investigation**

**Bellwork/Pre-Lab Question:** What are the skills and processes that scientists use (Ch 1 and 2)? Make a list (minimum 4).

**Background Info:**

Write an example **observation** for a strawberry  
  
Write an example **inference** for this observation: ex. I smell something strong and smoky.

**Lab Procedures: Scientific Method and Steps:  
1. Form a question.** Write down a question that will attempt to answer something about the mystery bag, such as the number of objects, sizes and shapes of objects, composition (make-up) of objects, etc.

**2. Collect Information**: Use your senses to make observations about the mystery box. Use all of your senses, EXCEPT you cannot use your eyes. A good observation contains no bias or opinion.   
Do not write what you think the objects are. Just write your observations about the objects, like how many, sizes of them, etc.  
 **Write at least 10 observations**

**Make 5 inferences based on your observations:**

**3. Form a hypothesis**. Using only your observations, make an educated guess to answer your question.

**4.** A new discovery was made! You may now test your hypothesis by opening the bag.

**5. Record and analyze (study) data.** What observations can you now make?

**Everyone in the group must answer these questions on their own sheet of paper! This is your own individual work.**

**Concluding Questions:**  
6. Conclusion: Was your hypothesis correct? Why or why not?   
7. Were your inferences correct? Why or why not?  
8. Why is this lab considered an investigation and not an experiment?  
9. How is this lab similar to how scientists make discoveries?  
10. What science skills and processes did you use in this activity?  
11. Come up with a real-life investigation where you might use the same or similar skills that you used in this activity. Explain.  
12. How could you turn a similar activity like this into an experiment?