

Happy Atoms Lab

L.O.U.

Name : _____

Hour _____

Question: How can we determine which elements might react with one another?

Knowledge Probe. Read the information about electrons and chemical bonding.

What makes an atom "happy"?

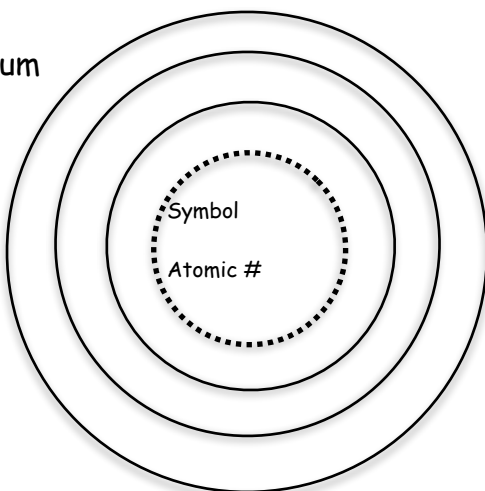
Investigation Plan

1. Find the atomic number for the element; this will give you the number of electrons for the atom.
2. Make a model with the milk caps of the element. Make sure you only use enough electrons to match the atomic number.
3. On your paper, write the chemical symbol for the element in the nucleus (center) of the atom.
4. Write down the atomic number above the chemical symbol.
5. Transfer your information from the model to your paper by drawing in the electrons on the correct energy levels.
6. Record if the atom is happy or not happy, if it would gain or lose electrons and the number of electron that it would gain (-#) or lose (+#).

Observations: Record the following observations in the space provided.

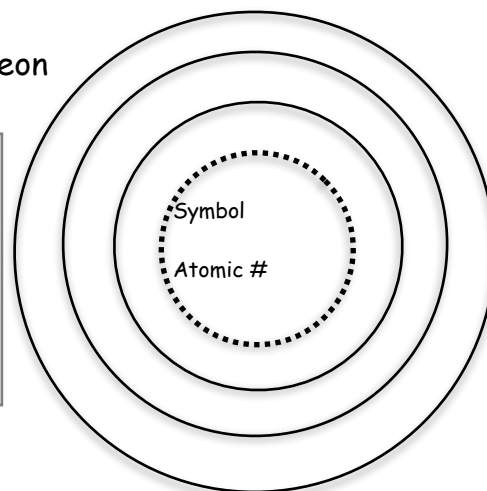
Sodium

Happy / Not Happy
Gain / Lose



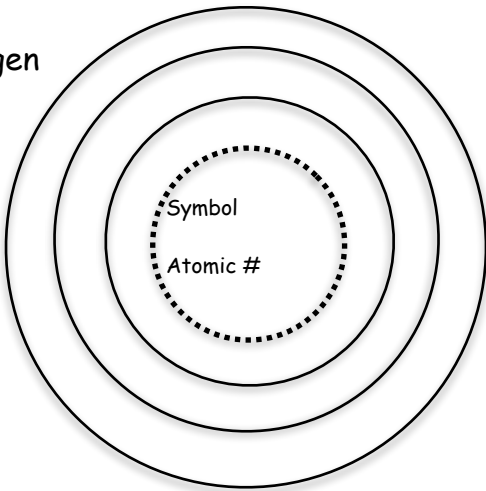
Neon

Happy / Not Happy
Gain / Lose



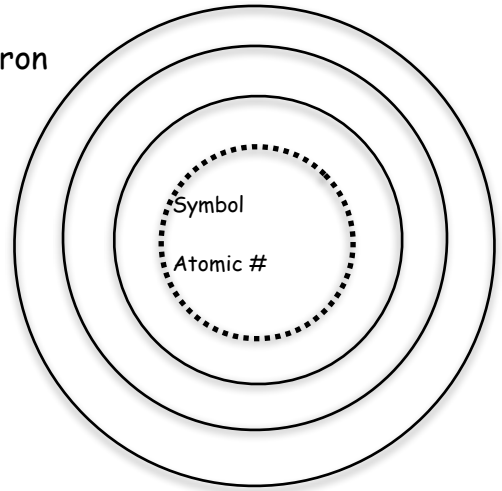
Oxygen

Happy / Not Happy
Gain / Lose



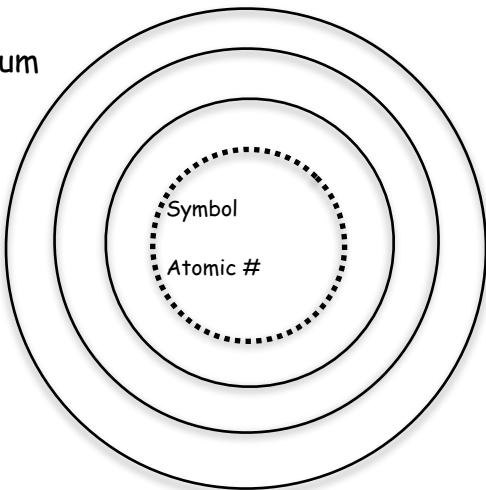
Boron

Happy / Not Happy
Gain / Lose



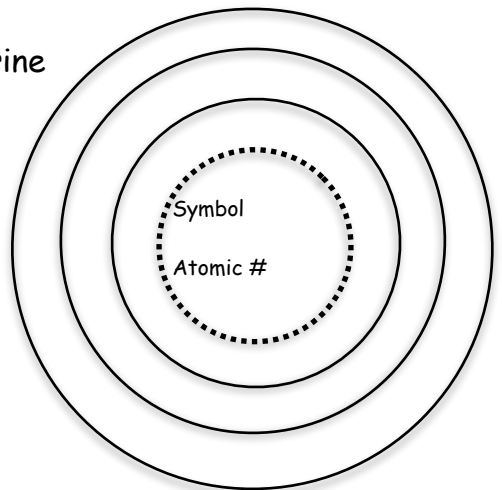
Beryllium

Happy / Not Happy
Gain / Lose



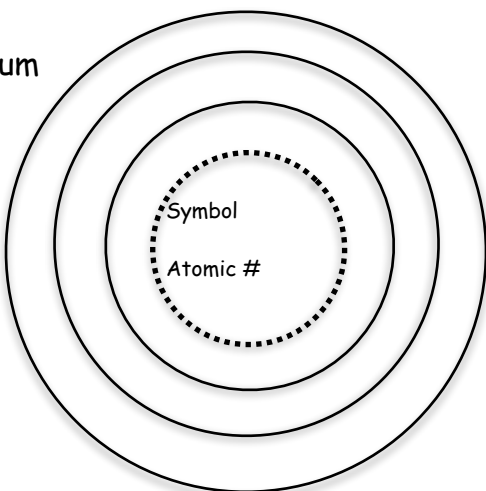
Fluorine

Happy / Not Happy
Gain / Lose



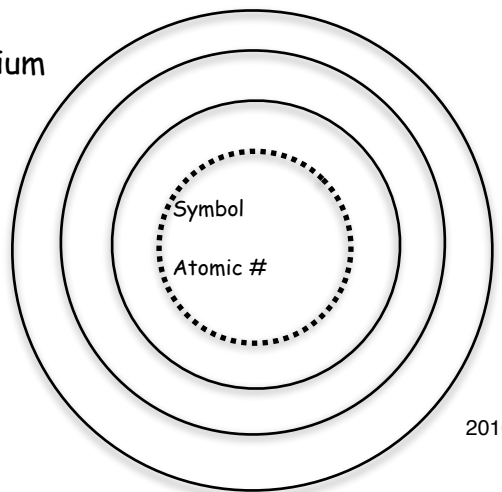
Magnesium

Happy / Not Happy
Gain / Lose



Helium

Happy / Not Happy
Gain / Lose



Explanation: Answer the following in complete sentences.

Claim: Which elements would most likely react with each other? Which are least likely to react with anything?

Explain why certain atoms will react using information from the Student Reading Chapter 4.

Compare your data to the Periodic Table. What patterns do they have in common?
