Ionic Bonding Interactive

Go to the website: https://www.learner.org/interactives/periodic/bonding/ to play the game and complete the questions below. You will need to reference your ion sheet (on the back of the orange periodic table) to see the names of the ions.

1. The first step is to click on a cation. What is a cation (what do they have in common)? What types of elements make up cations?
2. The second step is to click on an anion. What is an anion (what do they have in common)? What types of elements make up anion?
3. What compound did you make? Write its chemical formula and its common name.
4. You are asked to make sodium oxide next. What happens when the charges (the positive and the negative) are not equal? Look at the compound to see what you created to answer the question.
5. For the 3rd compound, you are asked to create sodium hydroxide. Write the formula and draw the compound you created.
6. For the 4th compound, you are asked to create aluminum phosphate. Write the formula and draw the compound you created.
7. For the 5th compound, you are asked to create aluminum oxide. Write the formula and draw the compound you created.
8. For the 6th compound, you are asked to create iron (II) oxide. What do you think the (II) means? Write the formula and draw the compound you created.
9. For the 7th compound, you are asked to create iron (III) oxide. What do you think the (III) means? Write the formula and draw the compound you created.
10. For the 8th compound, you are asked to create water. Write the formula and draw the compound you created.

Go to the website: <http://www.chem4kids.com/files/atom_compounds.html> and answer the following questions:

1. What is a molecule? What is a compound? How are they different?
2. The two main types of bonds are (and give a brief description):
   1. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. What is a physical change? Give an example.

1. What is a chemical change? Give an example.

On Your Own:

1. Search for rules for naming binary compounds. Record what you find.