

Name \_\_\_\_\_

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1. Compare the properties of metals and non-metals.
2. What are valence electrons?
3. Describe the relationship between valence electrons in metals, and non-metals and their reactivity.
4. Using the theory that electrons are found in orbitals around the nucleus, draw the Bohr diagram of sodium, nitrogen, the oxygen ion and the calcium ion.

5. Explain why francium is much more reactive than lithium even though both elements have one valence electron.

6. Describe the properties of the Alkali and Alkaline Earth Metals.

7. Describe the Halogens.

8. Explain why the noble gases are not reactive in terms of their valence shell and electrons.

9. Both hydrogen and helium are gaseous non-metals. Why are they placed on opposite sides of the periodic table?

10. What is the most reactive halogen? Provide an explanation.