1. What is metallic bonding? Draw a picture as part of your explanation.
2. What is meant by sea of electrons/delocalized electrons?
3. How do metallic bonds achieve the octet rule?
4. How does electronegativity affect metallic bonds?
5. What properties do metals have?
6. Why are metals malleable and ductile?
7. Both ionic compounds and metals have crystalline structures, but ionic compounds are brittle not malleable. Explain why.
8. Why are metals shiny?
9. Why are metals good conductors of heat? Why are they good conductors of electricity?
10. Label the following properties as being that of ionic or metallic compounds. Some properties may apply to both types of compound.
    1. shiny \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    2. brittle \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    3. high melting point \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    4. generally soluble in water \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    5. conducts electricity by itself \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
11. Fill in the following Venn diagram comparing ionic and metallic bonds.

Ionic Metallic