

# Immunity Challenge

## Chem Time

What do you remember from our chemistry unit?

Team Members: \_\_\_\_\_ Color: \_\_\_\_\_

1. Complete the information in the chart.

| Element  | Atomic Number | Atomic Mass | # of Protons | # of Neutrons | # of Electrons | Charge |
|----------|---------------|-------------|--------------|---------------|----------------|--------|
| Chlorine |               |             |              |               |                |        |
| Lithium  |               |             |              |               |                |        |
| Silicon  |               |             |              |               |                |        |
| Oxygen   |               |             |              |               |                |        |
| Tin      |               |             |              |               |                |        |

2. Complete the information for each element and then draw the Bohr diagrams and Lewis structures.



Al

Atomic # = \_\_\_\_

Mass # = \_\_\_\_

# of P = \_\_\_\_

# of N = \_\_\_\_

# of E = \_\_\_\_

Family \_\_\_\_\_

Normal Phase \_\_\_\_\_



F

Atomic # = \_\_\_\_

Mass # = \_\_\_\_

# of P = \_\_\_\_

# of N = \_\_\_\_

# of E = \_\_\_\_

Family \_\_\_\_\_

Normal Phase \_\_\_\_\_



Ne

Atomic # = \_\_\_\_

Mass # = \_\_\_\_

# of P = \_\_\_\_

# of N = \_\_\_\_

# of E = \_\_\_\_

Family \_\_\_\_\_

Normal Phase \_\_\_\_\_

3. List the symbol and name for each element in the compounds listed and then calculate the # of atoms.



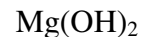
\_\_\_\_ = \_\_\_\_\_ = \_\_\_\_

\_\_\_\_ = \_\_\_\_\_ = \_\_\_\_



\_\_\_\_ = \_\_\_\_\_ = \_\_\_\_

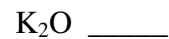
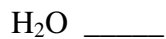
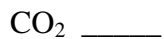
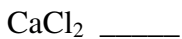
\_\_\_\_ = \_\_\_\_\_ = \_\_\_\_



\_\_\_\_ = \_\_\_\_\_ = \_\_\_\_

\_\_\_\_ = \_\_\_\_\_ = \_\_\_\_

4. Determine the type of bond for each compound using I for an IONIC bond and C for a COVALENT bond.



5. Give the formula for each of these compounds.

Water \_\_\_\_\_

Table Salt \_\_\_\_\_

Ice \_\_\_\_\_

Hydrochloric Acid \_\_\_\_\_

Acetic Acid \_\_\_\_\_

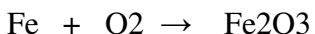
Sodium Hydroxide \_\_\_\_\_

Calcium Carbonate \_\_\_\_\_

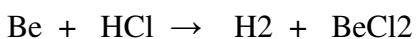
Magnesium Chloride \_\_\_\_\_

Carbon Dioxide \_\_\_\_\_

6. Balance each equation, and then identify using S for synthesis, D for decomposition, SR for single replacement, and DR for double replacement. **SHOW ALL YOUR WORK!**



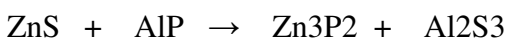
Type of Equation: \_\_\_\_



Type of Equation: \_\_\_\_



Type of Equation: \_\_\_\_



Type of Equation: \_\_\_\_

Tie Breaker: \_\_\_\_\_