WINTER BREAK ASSIGNMENT
Balancing Chemical Equations Art Project

Objective: Working alone , students will create a mini-poster that visually illustrates the process of balancing a chemical equation. Choose **one** equations below.

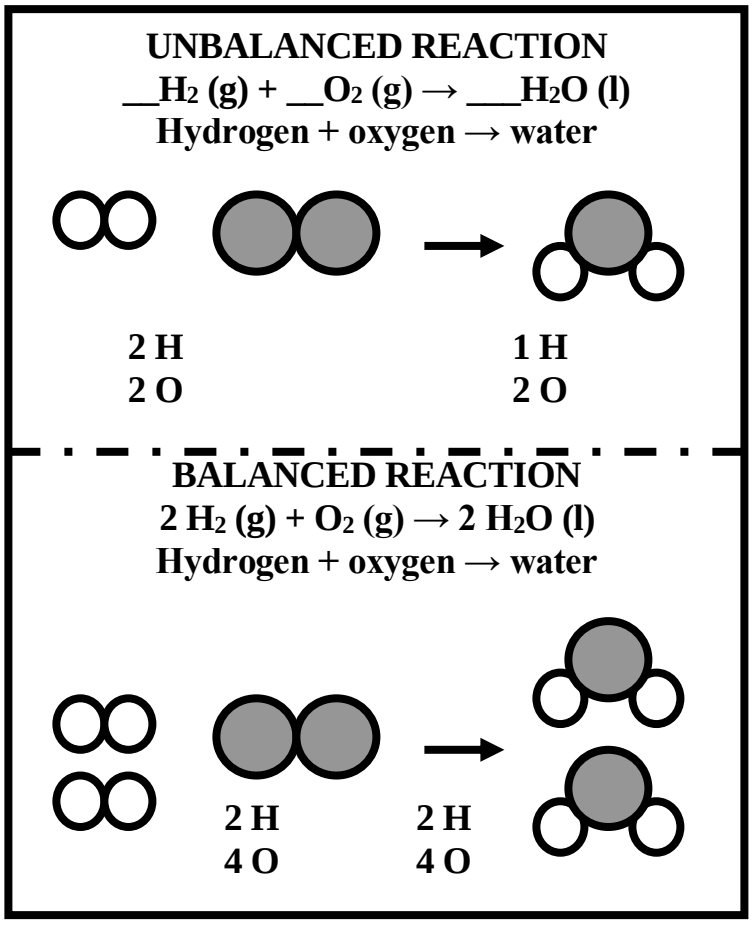
1. **In the top half of the poster, for the unbalanced chemical equation:**
   - In large letters, write the unbalanced chemical equation using the formulas of the substances.
   - In large letters, write the unbalanced chemical equation in words, using their knowledge of naming compounds.
   - Represent the number of atoms of each element with a different symbol or image.
   - Show an inventory of the atoms on the reactant side and the product side.
2. **In the bottom half of the poster, for the balanced chemical equation:**
   - In large letters, write the balanced chemical equation using the formulas of the substances (including physical state).
   - In large letters, write the balanced chemical equation in words, using their knowledge of naming compounds.
   - Represent the number of atoms of each element with a different symbol or image.
   - Show an inventory of the atoms on the reactant side and the product side.

3. **Writing Prompt #1 – In CLAIM, EVIDENCE, REASONING FORMAT explain whether your balanced equation supports or violates the law of conservation of mass. Use data from your "tallies" or inventory as evidence to support your claim.** This should be about 1 paragraph in length.

4. **Writing Prompt #2- In CLAIM, EVIDENCE, REASONING FORMAT explain the type of chemical reaction that has occurred?** Use evidence from your reactants and products to support your claim. (synthesis, decomposition, single replacement, double replacement, or combustion.)

GRADE: BASED ON ACCURACY followed by aesthetics, completed on time, work, and following instructions. Final drawing must be in ink, marker, or crayon so it visible from 2 feet away. The writing prompt can be neatly handwritten on notebook paper or typed.

Example Image ***Do NOT forget to attach your writing prompts!***



1. __ $Al(NO_3)_3$ + __ H_2SO_4 → __ $Al_2(SO_4)_3$ + __ HNO_3
2. __$CaCO_2$ → __CaO + __CO_2
3. __$Al_2(SO_4)_3$ + __$CaCl_2$ → __$AlCl_3$ + __$CaSO_4$
4. __ Na_2SO_3 + __ HCl → __ NaCl + __ H_2O + __ SO_2
5. __$CaCO_3$ + __HCl → __CO_2 + __$CaCl_2$ + __H_2O
6. __ $KClO_3$ → __ KCl + __ O_2
7. __ Cu + __ $AgNO_3$ → __ $Cu(NO_3)_2$ + __ Ag
8. __ Al + __ $Pb(NO_3)_2$ → __ $Al(NO_3)_3$ + __ Pb
9. __ K + __ H_2O → __ KOH + __ H_2
10. __ PbO_2 → __ PbO + __ O_2
11. __$Al_2(SO_4)_3$ + __$BaCl_2$ → __$AlCl_2$ + __$BaSO_4$
12. __ $Ca(OH)_2$ + __ HCl → __ $CaCl_2$ + __ H_2O
13. __ KOH + __ H_3PO_4 → __ K_3PO_4 + __ H_2O
14. __ $Pb(NO_3)_2$ + __ K_2S → __ PbS + __ KNO_3
15. __ Na_2O + __ H_2O → __ NaOH
16. __ CaO + __ HCl → __ $CaCl_2$ + __ H_2O
17. __ K_3PO_4 + __$BaCl_2$ → __KCl + __ $Ba_3(PO_4)_2$
18. __ NH_4I + __Cl_2 → __NH_4Cl + I_2
19. __ $CrCl_3$ + __ $AgNO_3$ → __$Cr(NO_3)_3$ + __AgCl

20. __Ag + __HCl → __AgCl + __H_2