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Creating a counting atoms worksheet involves providing chemical formulas and asking students to count the number of atoms of each element present in the compounds. Here's a simple example worksheet:

Counting Atoms Worksheet

Instructions: Count the number of atoms for each element in the given chemical formulas.

1. H_2O
   - Hydrogen (H): _____
   - Oxygen (O): _____

2. CH_4
   - Carbon (C): _____
   - Hydrogen (H): _____

3. 2NaCl
   - Sodium (Na): _____
   - Chlorine (Cl): _____

4. $C_6H_{12}O_6$
   - Carbon (C): _____
   - Hydrogen (H): _____
   - Oxygen (O): _____

5. $Al_2(SO_4)_3$
   - Aluminum (Al): _____
   - Sulfur (S): _____
   - Oxygen (O): _____

6. $3Mg(NO_3)_2$

- Magnesium (Mg): _____
- Nitrogen (N): _____
- Oxygen (O): _____

7. Fe_2O_3

- Iron (Fe): _____
- Oxygen (O): _____

8. $C_{10}H_8O_4$

- Carbon (C): _____
- Hydrogen (H): _____
- Oxygen (O): _____

9. K_2CO_3

- Potassium (K): _____
- Carbon (C): _____
- Oxygen (O): _____

10. N_2

- Nitrogen (N): _____

Answers:

1. H_2O
   - Hydrogen (H): 2
   - Oxygen (O): 1

2. CH_4
   - Carbon (C): 1
   - Hydrogen (H): 4

3. 2NaCl
   - Sodium (Na): 2
   - Chlorine (Cl): 2

4. $C_6H_{12}O_6$
   - Carbon (C): 6
   - Hydrogen (H): 12
   - Oxygen (O): 6

5. $Al_2(SO_4)_3$
   - Aluminum (Al): 2
   - Sulfur (S): 3
   - Oxygen (O): 12

6. $3Mg(NO_3)_2$
   - Magnesium (Mg): 3
   - Nitrogen (N): 6
   - Oxygen (O): 18

7. Fe_2O_3

- Iron (Fe): 2
- Oxygen (O): 3

8. $C_{10}H_8O_4$

- Carbon (C): 10
- Hydrogen (H): 8
- Oxygen (O): 4

9. K_2CO_3

- Potassium (K): 2
- Carbon (C): 1
- Oxygen (O): 3

10. N_2

- Nitrogen (N): 2

Feel free to customize the worksheet by adding more compounds or adjusting the complexity of the formulas based on the level of the students you're creating it for.