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## Guided Notes:

1. Define percent composition.
2. What is the general equation used to solve for percent composition?
3. What do the percentages of the elements in a compound need to add up to?
4. Find the percent by mass of each element in $\mathrm{NaNO}_{3}$ using the equation in \#2. SHOW YOUR WORK!!!

Complete the following percent composition practice problems. Show all of your work!

1. Determine the percent composition of calcium in calcium chloride $\left(\mathrm{CaCl}_{2}\right)$.
2. Calculate the percent composition of sodium sulfate $\left(\mathrm{Na}_{2} \mathrm{SO}_{4}\right)$.
3. Which has the larger percent by mass of sulfur, $\mathrm{H}_{2} \mathrm{SO}_{3}$ or $\mathrm{H}_{2} \mathrm{~S}_{2} \mathrm{O}_{8}$ ?
4. Which has the higher percent hydrogen- phosphoric acid $\left(\mathrm{H}_{3} \mathrm{PO}_{4}\right)$ or hydrochloric acid $(\mathrm{HCl})$ ?

## Mole Conversion Practice:

5. How many grams are in 8.23 moles of sodium carbonate?
6. How many grams are in $7.23 \times 10^{24}$ molecules of carbon dioxide?
7. How many moles are in 45.8 grams of copper?
8. How many moles are in $7.8 \times 10^{23}$ ions of $\mathrm{Ca}^{2+}$ ?
9. How many grams are in $2.3 \times 10^{23}$ formula units of $\mathrm{Al}_{2}\left(\mathrm{CO}_{3}\right)_{3}$ ?
10. How many ions are in 50.1 grams of $\mathrm{NH}_{4}{ }^{+}$?
