

# Chemistry Across the Spectrum: Application and Exploration of Chemistry and Light in CMS Chemistry Standards

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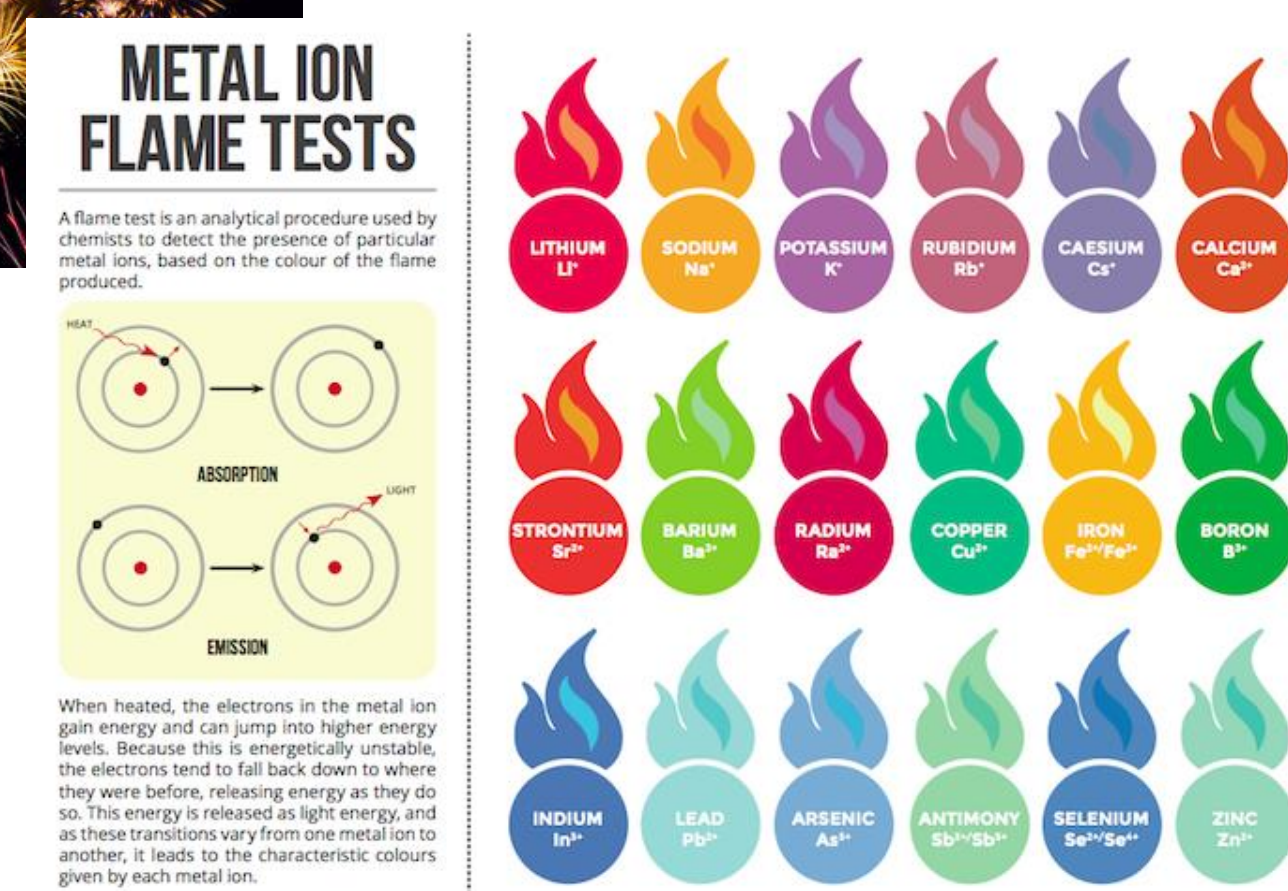


## Overview

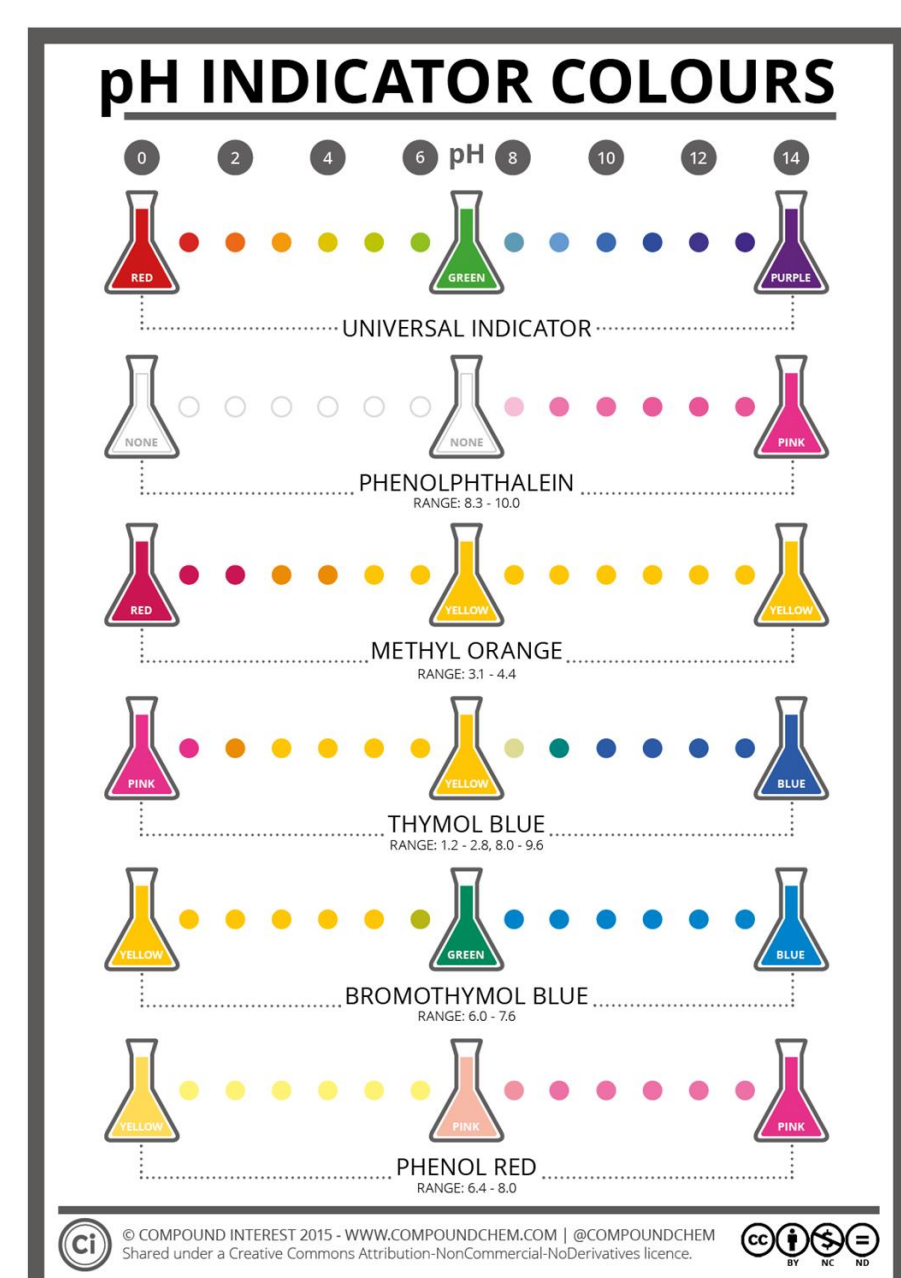
Chemistry is a class that is enjoyable to teach because there are so many ways to incorporate real world applications, labs, demonstrations, and other projects that allow students to become active participants in their own learning. Using active learning teaching strategies, students become more engaged with the content and develop into more self-sufficient learners. Please see my curriculum unit for more information regarding each of the following activities.

## Activity: Flame tests

What are fireworks composed of? The short answer is metals. Each metal gives off a different color when provided enough energy. *In this activity students determine the composition of an unknown based on comparing it to known metal compounds.*

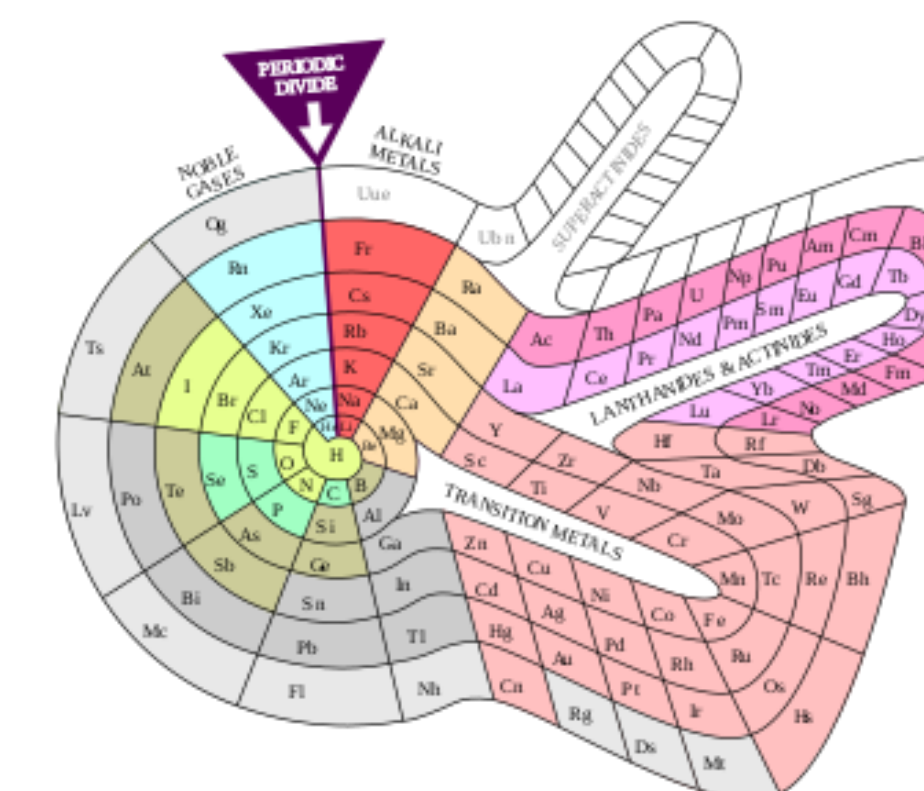
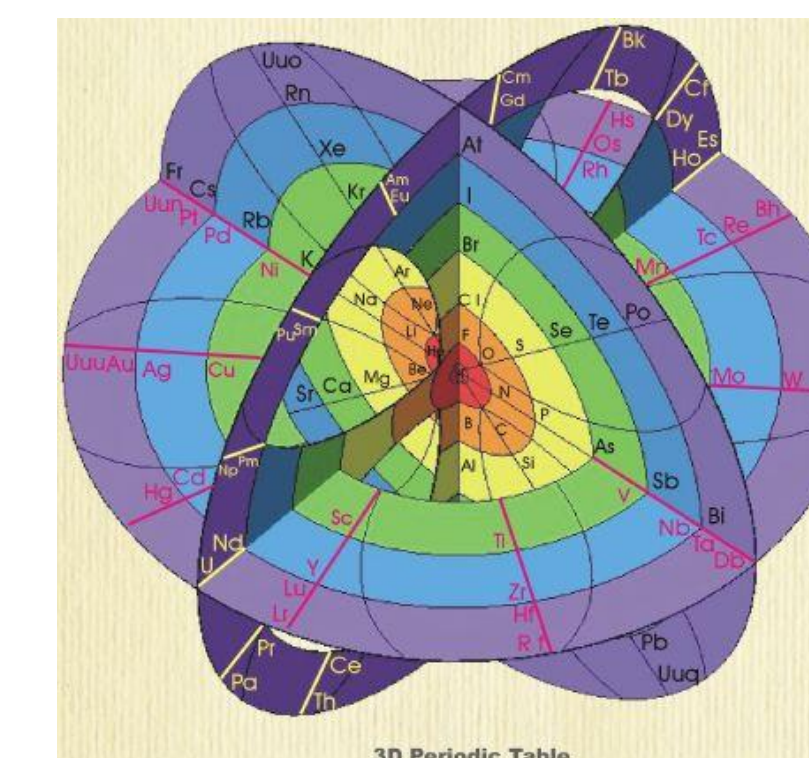
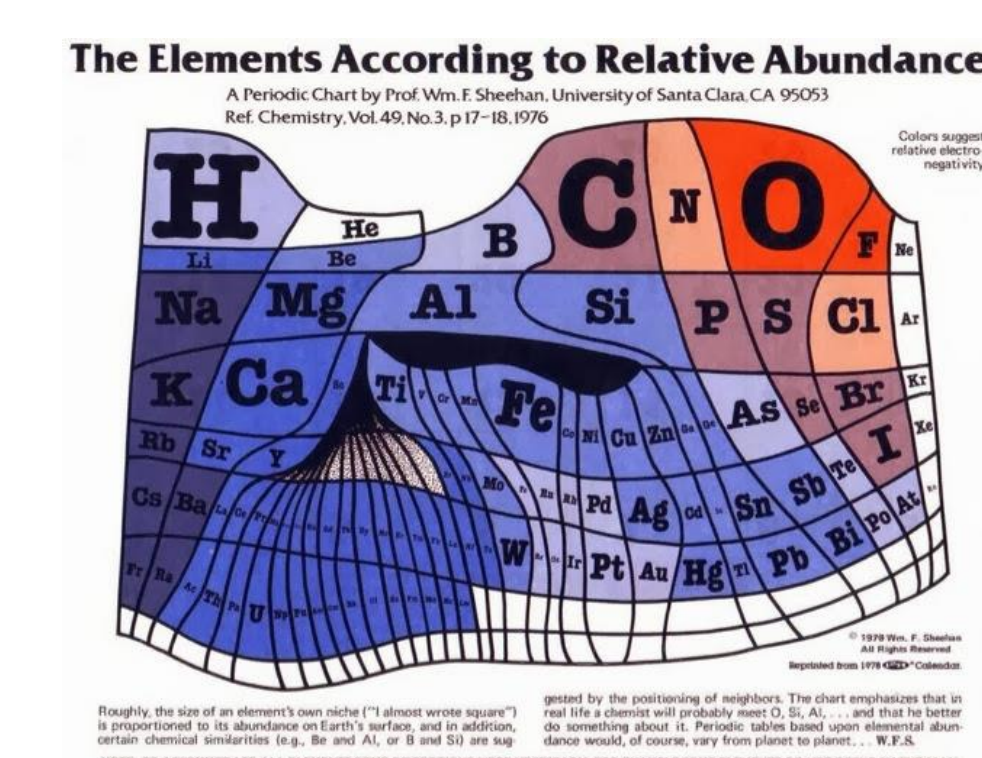
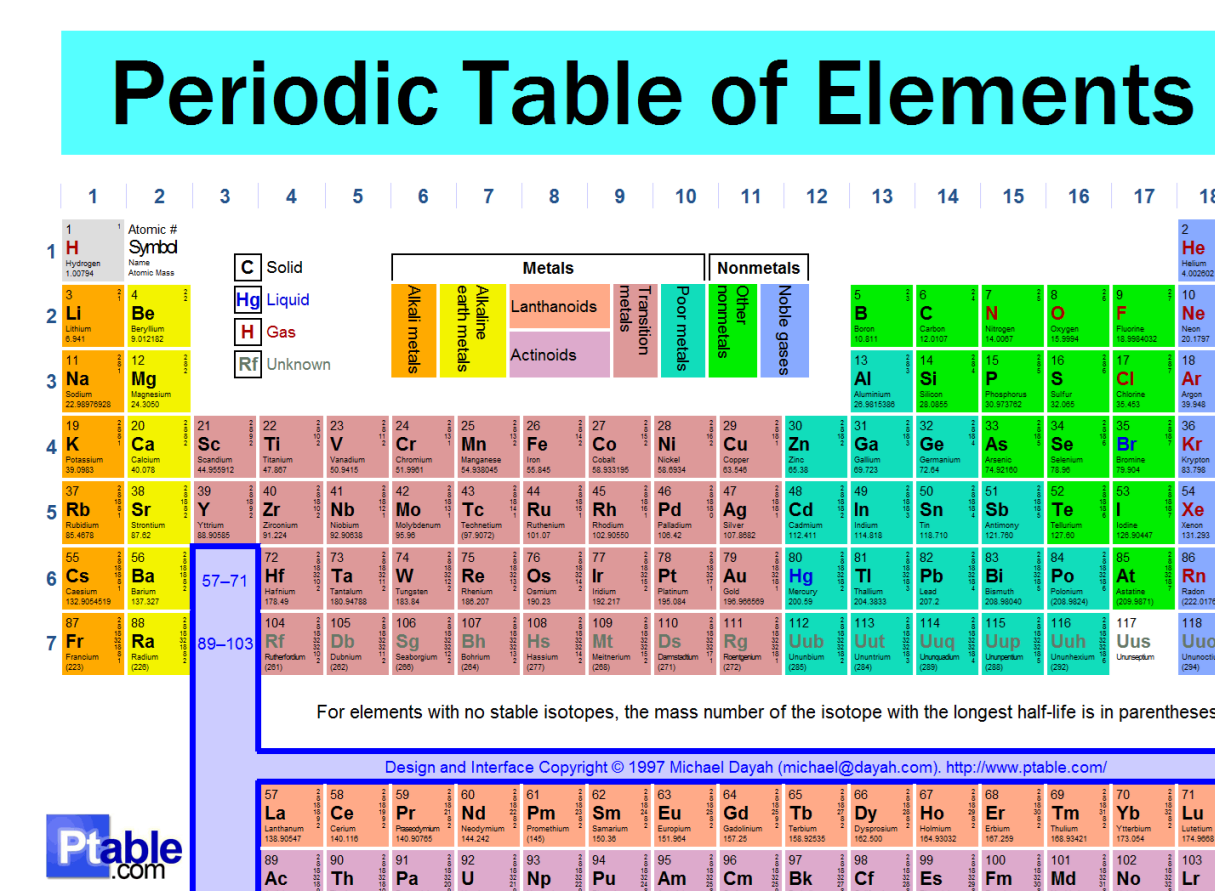


## Activity: Color changing with acids and bases



Indicators are chemicals that change color based on the pH (acidity) of a solution. This idea can be used to tell you exact amounts of acid in a solution or a general range depending on your need. *In this activity, students will calculate the amount of acid in a solution using a phenolphthalein indicator.*

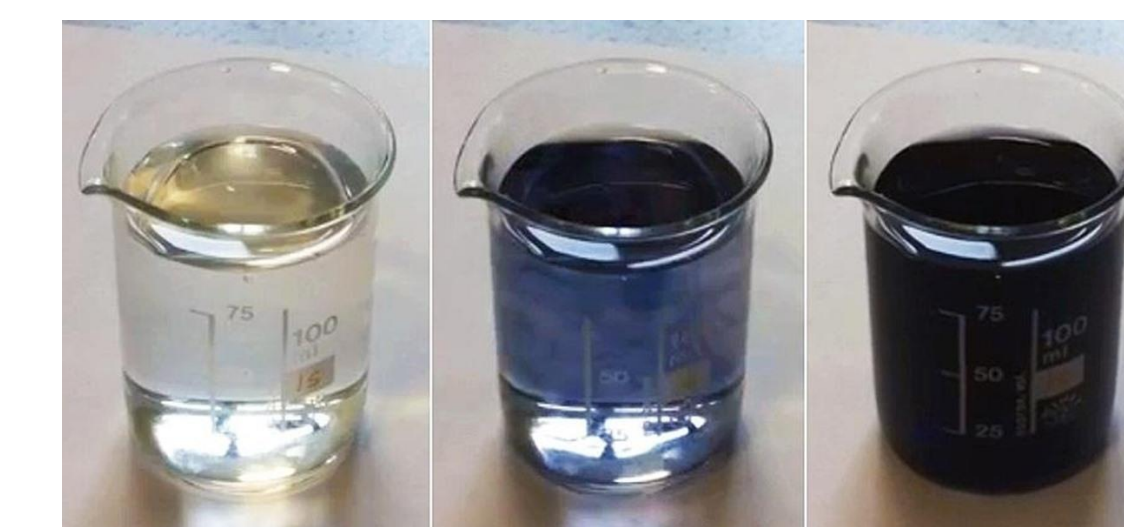
## Activity: Periodic table puzzles



All of the above are trying to convey the same information, but how do the artists try and organize a huge amount of information succinctly yet make it relatively easy to understand? *In this activity students will analyze various representations of the periodic table, to determine how the table is organized and how color was used to aid organization.*

## Activity: Iodine clock reaction

Clock reactions are delayed reactions that change color after they have been mixed. They generally are mixed to show a colorless solution, then will drastically change colors based on several factors that influence the speed of a reaction. *In this activity students use their generated data to predict how quickly a prepared solution will turn from colorless to deep blue (shown to the right).*



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