

## Project Background and Vision

Fifteen years ago I had the opportunity to move from industry into education.

I loved seeing the lights go on when I had a chance to tutor and seeing the first set of students I worked with advance from a local to a state academic tournament.

Creating a periodic table for my students has been a dream for a number of years. Shaper made this possible. The table that inspired me- built by author Theo Gray, needed a set of router templates, setup, and time I did not have. With Shaper Studio I was able in a short order to create each individual tile and in short order transfer the tiles the blocks of wood in front of me.

The more I can give my students a chance to explore the world and have a sense of the materials that make it up, the more I can give them imagination to dream of new possibilities and new things they could do. Shaper made that possible!

Not only did constructing the table open up carpentry and artistic avenues, but the table itself is a rich repository of history, linguistic, mythology, and astronomical exploration. There is even a section of the table dedicated to the legendary Greek Titans whose consequences of providing divine secrets to man bound them each to eternities in cruel and unusual punishments.

In front and center, I integrated a library with books created in my chemistry class to invite others into that world. Students work is so often a source of inspiration. My classes have made superhero books, adventure stories, biographies and alphabet books on all things elements.

The library wraps around to the side where I display books and stories that have inspired me.

Above, in the boxes themselves, the stories come alive as the lid of each box is listed.

Sulfur- burns with a nearly invisible flame and then leaves barely a trace behind.

Bismuth- come across in a well-known pink stomach medication with a similar name, "Pepto-Bismol". Bismuth exhibits fascinating properties- it melts at stovetop temperatures, it forms a wide variety of crystals- purples, pinks, blues, greens, grays, and golds.

Mercury- fascinating properties and history- from its intrigue among alchemists to its reputation to treat smallpox during the colonial days (it didn't), to its attempt at creating an elixir conferring immortality. Red mercury, it turned out, was the key to discovering alchemy and discovering all new properties of the periodic table.

Gallium- the metal that was predicted to exist before it was ever found can melt at room temperature and was used as a practical joke by \_\_\_ scientists who provided guests gallium spoons who soon were astonished to see their spoons melt into their soups.

Cobalt, a common metal to alloy for wear resistant tools and a potent ingredient turning glass blue comes from the old German word 'kobold' meaning green goblin because of its bluish color.

Gold- which shielded astronaut visors from the dangerous UV rays of space and, when put into solution at a nano level is smaller than the wavelength of light and reflects a reddish color.

The noble gases- While these elements don't want to react with anything, they exhibit a kind of beauty when connected to an electrical source by fluorescing. To simulate this I extracted different highlighter colors and used them in conjunction with a blacklight. When I have found a good source for it, I plan to put the actual noble gas in the box in a glass tube and have a battery powered power supply underneath that can illuminate each noble gas.