

Science Is Elemental: Update #3

09/18/22

Progress and another idea

Science is Elemental has progressed from an idea that too many kids were not getting the science education they need to actual partnerships with other nonprofits to put ideas into action. I credit all the support from those I have spoken with and readers of this newsletter. Thank you for believing in the need for better science education.

As I mentioned before, I am partnering with Chemists Without
Borders
to bring the two clearinghouses into fruition, starting as pilot projects. Once piloted, both clearinghouses will expand to cover more education opportunities online and more states' science education decision-making, respectively.

The other new partnership is with a local, progressive private school near where I live. SIE will design the curriculum for two 2023 summer camps, relating them to the science curriculum at the school. More about this partnership on the next page.

My new idea: There are plenty of science books for young kids. However, there are few books about what scientists do. Most 5-year-olds can tell you what a doctor or teacher does, but scientists and their labs/field work are largely hidden. I hope to create a new series of children's books. More in another newsletter.

I am always welcome to more ideas from all, and of course, contributed content. If you have additional ideas, or comments on any of the updates, please email me at ann.miller@scienceiselemental.org Also, please check out the new Science is Elemental blog at scienceiselemental.blog

Mission: Change science education to encourage more understanding of and trust in the scientific process by all high school graduates, through starting science education in the early grades



Current nonprofit status

SIE exists!

As of this writing, Science is Elemental, Inc. exists. The articles of incorporation have been submitted.

Next steps are to get an Employer Identification Number, and then submit a 1023 form to apply for nonprofit status.

SIE has a board, and I have recruited an amazing slate of experts as an advisory board.

Now the hard part. In advance of becoming a 501(c)3 nonprofit, I need to at least lay the groundwork for fundraising and writing grants.



Designing summer camps

As I described in my last newsletter, and illustrated in the figure to the right, one way to engage students in science is to bring science to them, in the activities they already do.

Through the auspices of a good friend, I connected with the founder and principal of a local progressive private school. She was looking for some way to connect the curriculum she uses during the school year to the summer camps the school hosts.

This fit well with my ideas. We decided to develop two camps: Music and Vibration, and The Science of Soccer. What follows are the ideas I have so far, but I am sure they will change somewhat over time.

In the music camp, students will learn about vibration through fun, engaging activities. They will put these ideas into practice by building their own string instrument and experimenting with the design of that build. I am currently developing prototypes for the instruments to ensure that it is a) doable by children, and b) affordable.

In the soccer camp, students will learn about speed, velocity, vectors, and acceleration through drills that will also improve their game. In the afternoons, they will put these ideas into practice as they play full soccer games.

Drama: Psychology/neurobiology of perception, made for free at coggle. biology of facial and body expression

Debate/model government: neurobiology and psychology of perception and persuasion

Music: physics/math of harmonics, concept of pressure, biology of hearing, physics of sound

Pet/animal care: biology of dogs/cats/infection

Swimming: Fluid mechanics; biology of hearing/air and water pressure; Physics of motion/forces

Football: Elastic and inelastic collisions; physics of motion, balance, principles of flight

Soccer/tennis/pingpong: Physics of vector; motion.

Dance/martial arts/circus arts: physics of motion; biology of balance

Cooking/baking: Concepts of chemical change: oxidation and reduction; chemical formulas; gas law; chemistry of flavor-aromatics

Junior achievement/business: Psychology of sales

Knitting and other needlework: Concepts of tension and friction

Horseback riding: biology of horses/infection; physics/biology of balance, psychology of human animal interactions

> Visual arts: Chemistry of color; physics/physics of photography; Chemistry of paints/viscosity, biology of sight, neurobiology of sight/perception

Sculpture of any kind: Physics of balance, chemistry of ceramics; history of ceramics





Humanitarian needs

Climate change affects lives

Climate change is here and now. We saw it in scorching hot temperatures this summer, in prolonged drought, and in severe and sustained flooding. Much of my work is inspired by the need to have a citizenry that recognizes climate change as a crisis that needs immediate action to mitigate and to adapt our world.

Even more immediate action, though, is needed to help those affected by disasters caused, in part, by climate change and related weather events. The organizations mentioned below are doing just that for the flooding in Kentucky, and Missouri. If you can, please donate to one of these worthy causes.

American Red Cross:

https://www.redcross.org/about-us/our-work/disaster-relief/flood-relief.html

Appalachian Region Healthcare Foundation Flood Relief Fund

https://www.arh.org/floods

Aspire Appalachia

https://www.aspireappalachia.org/?fbclid=IwAR20jZ 6BflavlfU4RMkjQ9rNoXXBVwxJgu6hC9aWY8u6v8-SYndqXnP7VCE



