

Design Challenge: Mastering Fear

In this design challenge we explore the intersections of time, biology, emotion, and courage by creating an emotion hourglass.

Design Challenge: Lewis Structure Spelling Bee

In this design challenge, we introduce atomic symbols, quantities, and bonds in physics, chemistry, and biology.

The Long Tail of Life

When a bowl of eggs are more than a bowl of eggs! Automated robotic coops and the long tail of life. The future of food.

The Manure That Infected Mars

#ProjectMartian really worked well. Especially during the COVID19 isolation. Last year every bit of manure and green and brown for compost went through the #Bioreactor. I was mocked

for using it. I was chastised for calling it that. But it did work. This year I used compost from the bioreactor in all of my 24 garden beds. But in eight of them I got cocky and amended the beds with horse manure. That was a good idea in theory except for one important fact; there was life in the manure. Bugs and weeds to be exact. I placed a layer of diatomaceous earth on every bed as a last step. In the outside manure beds, the life came from below the layer of diatomaceous earth. The system worked perfectly when I used "Eden's Ghost" and just compost from the bioreactor. I was stunned to find all these weeds beneath the burlap today.

This is the design cycle in action. This is a failure that is going to drastically curtail my productivity. Along with the weeds came a whole class of pill bug and centipede that LOVE rich, wet, dark, organic environments. And now I have to sterilize the top 6cm of the infected beds. But I learned a valuable lesson; on Mars you have to use what you have. Had I stayed true to that mission I would not have discovered this flaw in my system. Lesson learned. Cook all manure before you add it to a #ProjectMartian bed. I am glad I learned this here and not on Mars.

The Rule of Sustainability – 3 and 5 Strategy

Sustainability is an important topic right now. We need more of it, and better metrics to define what "it" is.

Spring 2021 at Mezzacello

Well it's nearly Easter in this year after COVID19. My enclosed sustainable ecosystem is readying itself to come back to life. I decided this cold sunny day was the perfect day to record Mezzacello.

This is right before it goes through it's next big expansion. So here is a little slideshow from April 1, 2021. Let me know if you have any questions. There is some bit of trivia or an active experiment going on in everyone of these photos.

Lesson: Creating Perfect Fertilizer

Students will explore the molecular nature of fertilizer and its relationship to NHCOPS, the water cycle and the sun.

Lesson: Food From Waste and Ash

Students will learn to make soap from waste products and ash as well as fire starter kits from lint, wax and soap.

Lesson: Animal Babies and Health

Students will learn the basics of vet tech, like treating wounds, medicated feed, and identifying illness in small animals.

Lesson: NHCOPS and the Ladder of Life

Students will become familiar with both the periodic table of the elements, periodicity, and the DNA composition of life.