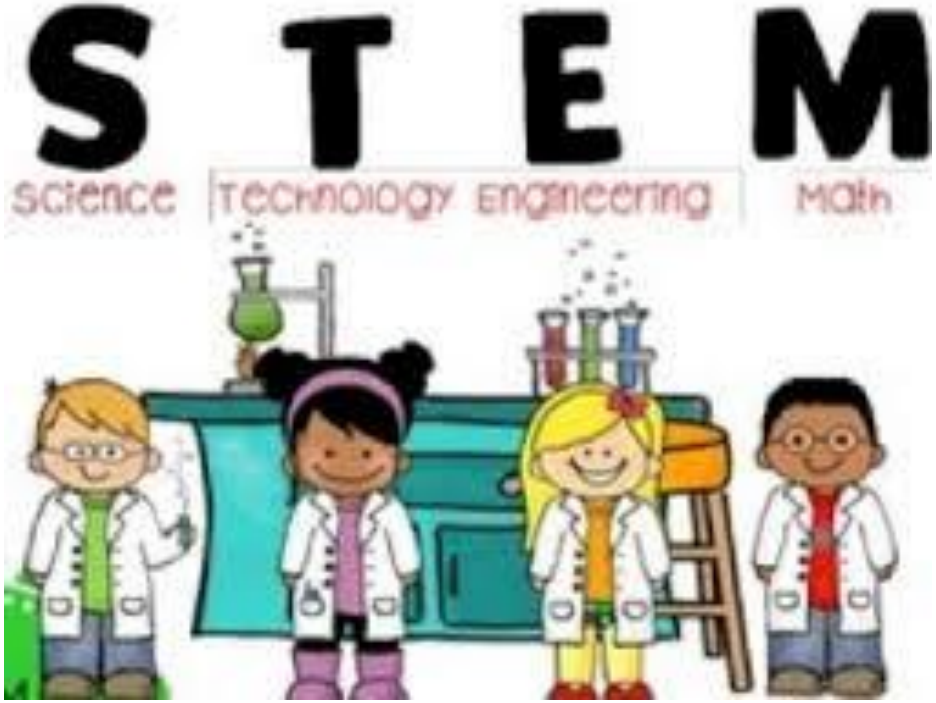


At Saklan

By: Vickie Obenchain- science teacher!

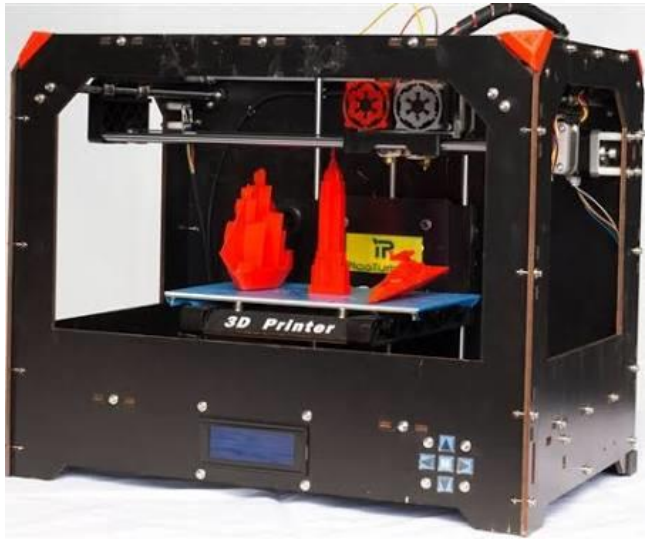
STEM has always been a part of Saklan's Science Program

- Learning key science concepts with a hands on approach
- Integrating technology and materials for the student to learn with
- Engineering different projects to allow for creative and critical thinking
- Integration of plotting, graphing, equations into labs, as well as interpreting data on past experiments to make hypothesizes/conclusions

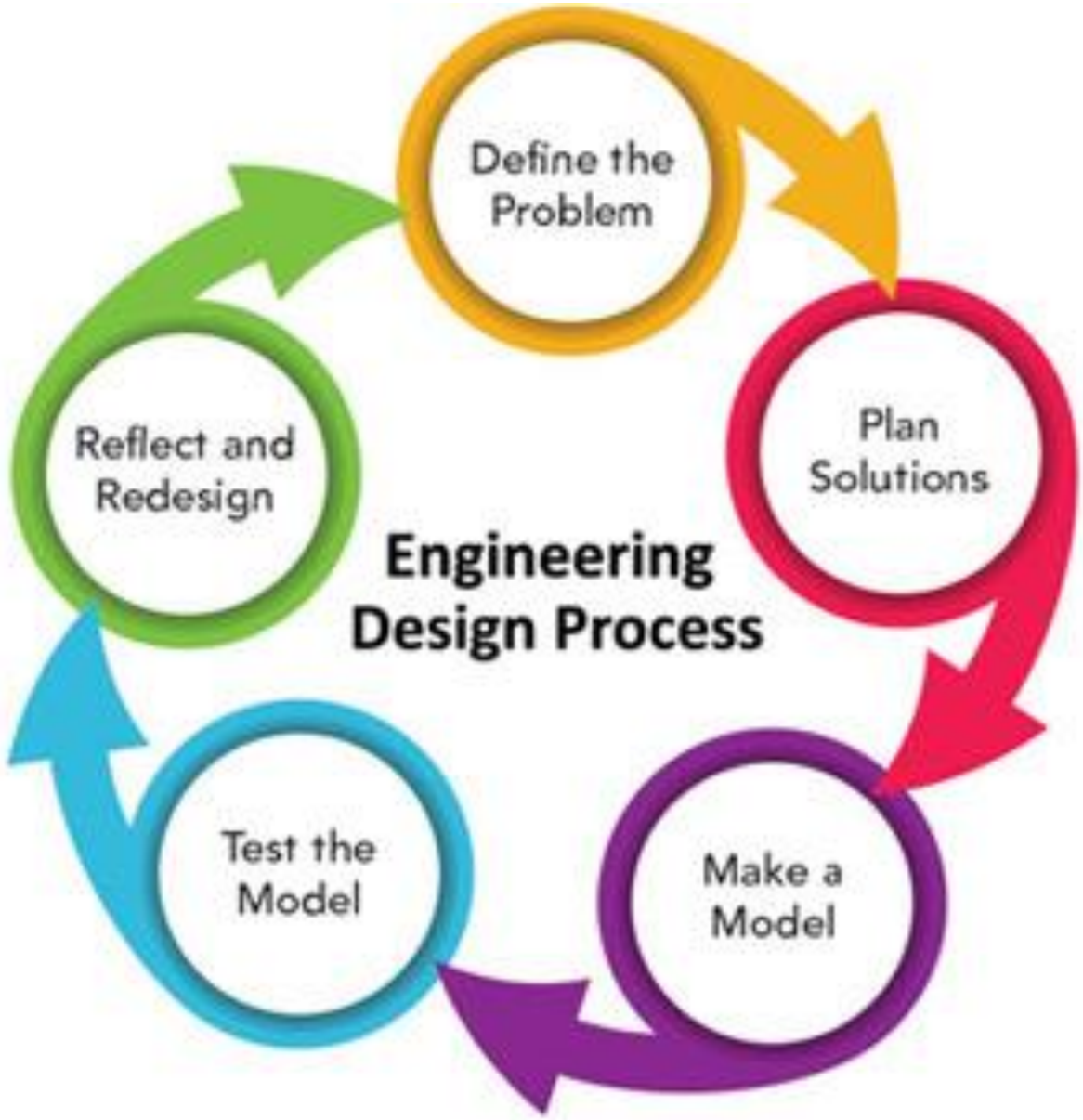
MAJOR Enhancements were made this year to the science lab…

And MAJOR enhancements were made to the science program…

Technology



Engineering


Define the Problem
Plan Solutions
Make a Model
Test the Model
Reflect and Redesign
Engineering Design Process

Engineering

Updates made per grade

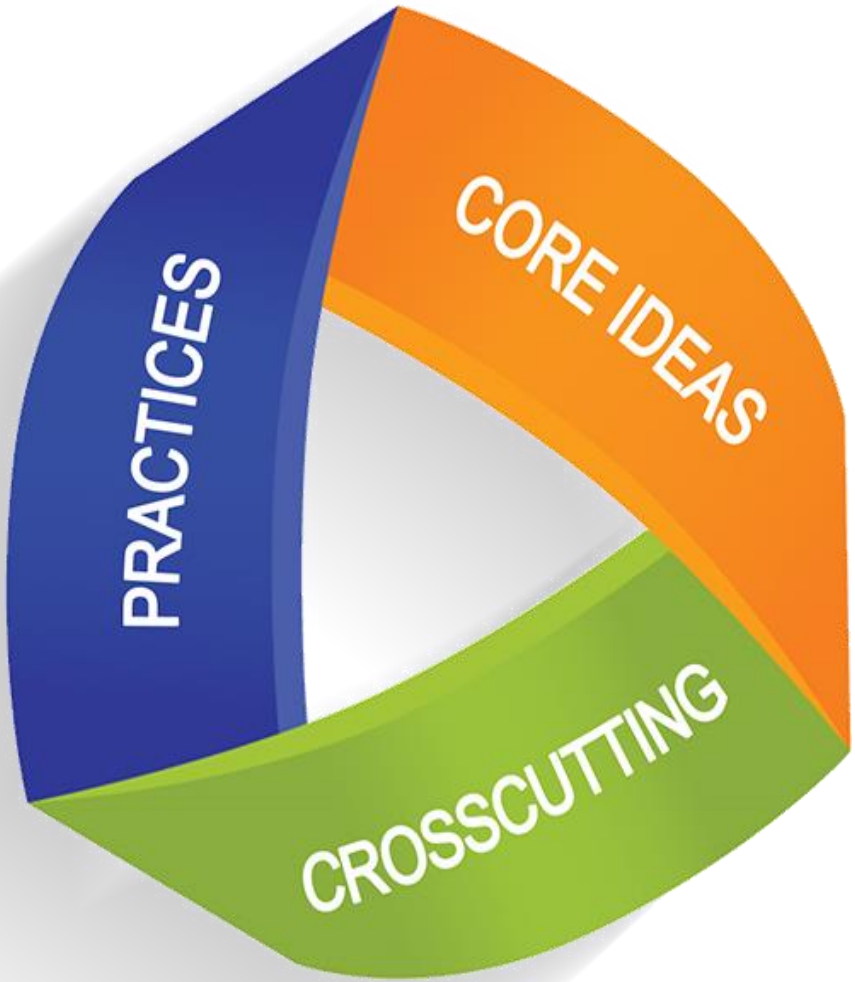
Additional STEM:

- Lego Wall (All Grades)
- Ron's Ramp Adventure (Owlets, Hoot Owls)
- Classroom tablets (Owlets, Hoot Owls)
- Nancy Larson and Foss Science Kits (K, 1, 2, 3, 4, 5)
- Kena Digital Microscope (K, 2, 5, 7)
- Coding Mouse (1)
- Dash Robots (1)
- Samsung Tablets (1, 2, 4)
- Sound Bite Exploration (3)
- The Great Toy Design Challenge (3)
- Brock Microscopes (4)
- LittleBitz Gizmos & Gadgets (4)
- Push Button Programmable Robots (4)
- Coroscope 2 (5, 7)
- Rainwater Runoff Design Challenge (6)
- Earthquake Technologies Challenge (6)
- Severe Weather Challenge (6)
- 3-D Printer (6, 8)
- Coral Reefs (7)
- Science of Sailing (8)
- Hot Air Lab (8)

Nancy Larson Science/Foss Science

- New curriculum/kits were added to the lower school classrooms
  - Goal to modernize and update the LS curriculum as well, as in the lab
  - Pilot year with the Nancy Larson Science program- teachers will give feed back

NGSS



- Crosscutting Concepts: make connections between: Physical Science, Life Science, Earth and Space Science, and Engineering Design.
- Science & Engineering Practices: describe what scientists do to investigate the natural world and what engineers do to design and build systems.
- Disciplinary Core Ideas are the key ideas in science that build on each other as students progress through grade levels.

Goals of this enhancement process:

- Create a learning space, conducive to learning/collaborating in the lab
- Enrich our students science experience:
  - New materials
  - Exciting experiments
  - Up to date curriculum
  - Exposure to technology that give them an edge for internships, camps, high school… beyond

Goals of this enhancement process:

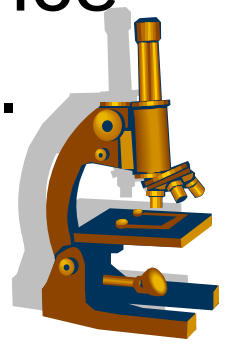
- Ensure a high quality science education!
- Create a love of science in all classrooms and grades, not just the lab!

Why STEM, and why now?

- Our students LOVE science
- Need to challenge our students, expand their knowledge, and excite them more
- For our students to understand how everything is really connected! Including math!!
- And because our world is seeking students with STEM degrees!

Key findings on America's STEM workforce from the 2016 U.S. News/ Raytheon STEM Index:

- There was a 6 percent increase in STEM graduate degrees granted
- 5 percent increase in all STEM degrees granted.
- STEM jobs have increased much faster than overall employment: 28 percent since 2000 compared to 6 percent for all jobs.



Why Saklan Science?

- Truly hands on experience
- Give our students really unique experiences to follow their own passions on different science topics
- Make science fun, engaging, and show how it relates to the students lives
- We have students who love science or who are open to loving science
- Scientist-like feel when in the lab

There is also a nerd of a science teacher, which…

(This is kinda true of all of our specialists)

We love our subject area!

We love our students!

We love our school!

A want for the students to make a difference in the world!

And we want to bring that love into the classroom and hope that our students find that love too!