HELLO ENGINEERS!

Welcome to Engineering with Simple Machines!

Course Description: Engineering with Simple Machines allows students to be engineers as they study forces, simple machines, compound/complex machines, and magnetic interactions.

Course Goals: Learners will evaluate a problem and create a structure that rescues a tiger from a moat based on their exploration of simple machines and engineering in order to recognize that they are real engineers who can solve unique problems.

(A document with course goals, understandings, knowledge, skills, and standards has been attached. Please view that to learn more about the course.)

Classroom Rules:

IN THIS CLASSROOM, I...

- Find the courage it takes to grow up and become who I really am.
- Open up to challenge so I can change.
- Care and am kind for everyone I meet is fighting a hard battle.
- Understand that dreams only work when I do.
- Set myself up for success so anything can be possible.

About Your Teacher:

- Teaching in Color (Teaching Website)
- Learning in Color (Learning Website)
- Teaching in Color on Instagram
Student Lounge

In a traditional school, teachers have a Faculty Lounge where they meet up and talk. This is our Student Lounge, where you can talk with your teacher and your classmates about things related to...

Before we start, let’s talk!

Tell us about yourself! Where are you from? What do you like to do for fun? What are some of your favorite things? What is your family like? What are three adjectives that describe you? What makes...

Week 1: Introduction to Forces

Engineering, Forces, Motion, Design Process

Learning Goal: Learners will learn about motion and forces, including effort and resistance forces. Learners will learn how to apply the Engineering Design Process.

Week 2: Simple Machines and Forces

Six Simple Machines

Learning Goal: Learners will build and explore simple machines and explain how they make work easier.

Week 3: Forces and Interactions in Compound Machines

Combining Simple Machines into Compound Machines

Learning Goal: Learners will build a compound machine by following the engineering design process and recognizing constraints.

Week 4: Magnetic Interactions

Magnetic Interactions with Machines

Learning Goal: Learners will explore magnets, explain how magnetic interactions work between objects, and use their understandings to incorporate a magnet into a machine.
Week 5: Animal Rescue
Putting It All Together

Learning Goal: Learners will use their knowledge of forces, the Engineering Design Process, machines, and magnets to create a machine that rescues the tiger from the moat.

References and Acknowledgements
Giving Credit to Contributors