

BioRenewables Lesson Plans

Project Renewables

Day One:

Farm Systems –

1. Design Challenge: Build a Power Grid Map of Mezzacello
2. Design Challenge: Create a Multimeter Display
3. Design Challenge: Complete the Circuit

Team Building – What makes a good team and how do you make that happen?

1. Design Challenge: Grace Under Pressure
2. Design Challenge: Team Identity
3. Design Challenge: STEM Identity

Layers of Reality – a fun way to introduce the STEM in #UrbanAgTech by creating a model for the way the world works through art and lecture.

Day Two

Webs of Life – a quick review of where in our world we interact with Atoms and why.

1. Design Challenge: Electricity and Matter
2. Design Challenge: Create a Simple Motor
3. Design Challenge: Using Electromagnetic Radiation to Bleach Plastic

Data 101 – A deeper dive into how and why we collect and use data from graphs and labels to predictions and proof.

1. Design Challenge: Create a Data Set
2. Design Challenge: Create a chart
3. Design Challenge: Tell a Story with Data

Day Three:

The Circle of Life – a crash course into Applied STEM and Math integration in Ag and in STEM.

1. Design Challenge: Conductors VS Insulators
2. Design Challenge: Identify a Reframe of a Simple Problem
3. Design Challenge: Using The Force

As Above; So Below – a reminder that life is sophisticated and deeper than we want to acknowledge, but is essentially Yin and Yang with a boundary layer.

1. Design Challenge: What IS Lightning?
2. Design Challenge: Air, Water, Earth, Fire
3. Design Challenge: Creating a simple LED Card

Day Four

Career Crossover – Allows students to reflect on what they have observed and how it impacts their curiosity and their future

1. Design Challenge: Career Memory Game
2. Design Challenge: Team Algorithm
3. Design Challenge: Create a Portable Broadcast System

Analyze and Modify – Create a script for the final video for the team at Camp.

1. Design Challenge: Discuss with your team what your video will be

2. Design Challenge: Assign Random Roles
3. Design Challenge: Create an Exploded LED Light

Day Five

- Finish Your Product Development
- Prep for Presentation
- Present your Final Presentation