| | Week | Date | Instructors | Topic | Sections | Project | Goal | Materials |
|---|---|---|---|---|---|---|---|---|
| October | 1 | Oct-13 | - | Orientation | - | - | - | - |
| | 2 | Oct-20 | Melissa and Hiu | Intro to "House Matter's" | What makes a house powerpoint/place students into groups of 3-4/worksheets | set groups of 3-4 and brainstorm ideas. | Introduction/Overview; Brainstorming | worksheets |
| | 3 | Oct-27 | Melissa and Hiu | Biology / Chemistry | Water We Use | using water analysis kits and filtration kits. | How to test water for ammonia nitrate and nitrates/check pH/hardness and softness | water samples, litnus paper, acid/base solutions |
| November | 4 | Nov-3 | Melissa and Peter | House Matter's | Blueprint Tinkercad Project | students will sketch their houses in the form of a blueprint, the blueprints will be converted from 2D to 3D using tinkercad | How an idea can come to a tangible product. | paper, pencils, rulers, protractors |
| | 5 | Nov-10 | Melissa and Peter | Biology / Chemistry | Bacteria and Chlorine | watch movie and answer questions (follow up with discussion) | To learn what it takes to keep water in pools clean | How we got to now (Clean) + Worksheet |
| | 6 | Nov-17 | Melissa and Peter | Physics | Solar Panels | use lego solar panels to power turbine and gauge joules needed to power something for a duration of time | What is it? How does it work? Why do we use it? (benefits), calculations on power duration | solar panel kits (4) |
| December | 7 | Dec-1 | Melissa and Peter | Physics | Solar Energy | discuss how solar panels convert sunlight into energy | Learn about photovoltaic cells and how they are used in solar energy/solar panels (learn equations) | worksheets |
| | 8 | Dec-8 | Melissa and Peter | Chemistry | Concrete - what it is and how its made | make concrete puck and slab and using different materials for strength comparison | Introduction to concrete | cement, paper clips, bobby pins, steel wool, sand, easter grass, tooth picks, 1 ft rectangular mold holder |
| | 9 | Dec-15 | Melissa and Peter | Chemistry / Physics | Concrete - concrete, asphalt, brick, mortar, when to apply, and test tension and compression of concrete | https://www.youtube.com/watch?v=T374R-0UfLw, http://www.asee.org/documents/conferences/k12/2011/07/05-Concrete-for-Kids.pdf | To learn the science of concrete and how it effects how we live | wood holder and bucket |