

## Projects for Innovation Lab

Grades 3-5

All students participate in an empathy lesson to ensure students understand how their comments and actions affect how others view the world and themselves. They often help one another during presentations, giving their recommendations on how to improve projects, research, and presentations

3rd -

- **Staying safe in severe weather** - Students first learn about natural disasters, and become an “expert” in one type. Then they design a home that can withstand a chosen weather phenomena/disaster
- **Design a kite** - Students research the origins of kites to understand their function, then design and build their own.
- **Erosion** - 3 parts - create an erosion model, compare the 3 types of soil (rock, soil, plants & soil), design a solution to decrease erosion on a water table
- **Helping hungry children in need** - students research the food groups on the food pyramid, identify what children need at different ages, create a food plan for a selected age level that keeps kid tastes’ in mind.
- **Your trip to California** - students plan a driving trip from NJ to California, they need to select the time of year, select a route, find one place to eat, visit, and sleep in each state you pass through, then build a map showing their places of interest.
- **Food Webs based on biomes** - students identify users of the chosen biome, consider the needs of the user, consider the environment of the biome, identify the predators and prey of the user, and create a food web that represents the biome.

4th -

- **Hydroponics**- students research the purpose of a hydroponic system, consider the users of the system within a school, describe what can be grown in a school, design a prototype of their own making, and decide what to do with the leftover plants.
- **Home for a person with disabilities** - Students learn about the different types of common disabilities that humans can have, they also experience some (loss of sight, hearing, etc). They must then plan, design, and build a model home for a person with a particular disability. They must identify the disability, identify the room they will be remodeling, they must list the modification and how they assist the person, draw a diagram/blueprint of their plan, finally building a prototype.
- **Comic Books** - Students learn what a comic book is, then must create a superhero, create a comic book cover art piece, then develop a sample panel from the comic with their hero in it.
- **Timely Changes** - students learn the origins of the modern calendar, including the pros and cons of its design. Then we will review alternative options, deciding if they are practical.

5th -

- **Who’s your Mt. Rushmore** - Students research the different types of monuments that humans build to honor different people. Students then decide on who they would immortalize in a monument and why, then decide the type of monument they would use to represent that person(s), then plan, design, and build a model of their monument.
- **Bigfoot** - students research urban legends in different areas (USA), learning that bigfoot has been sighted in the nearby area. Students must create a strategy to increase tourism to that area. The groups must plan an event, structure, or other attraction that will increase the number of tourists who visit the town. The groups will present their ideas to their fellow citizens (i.e. the rest of the class), and they will vote on which one would be the most effective and practical.

- **Plan a Mars Colony** - Students will research the various types of government that exist, choose one that will run the first Mars colony, then they will create a poster showing the government tree that displays each branch of the government and the job descriptions to go with them.
- **Culture** - Students learn what culture means and different regions with their cultures. Students will then give a tour of the Earth to alien visiting from space. They must prepare a tour of their chosen region that includes: the type of music, types of foods, traditions/holidays, a timeline of historical events, and design clothing for that region.
- **The Olympics** - Students will learn about the history of the Olympics, and the shifting of sports during the competition over the centuries. Students will work with the summer Olympics, selecting the sports they believe represent that time of year (not just US based), select a city to host, and create a prototype stadium to house the sports suggested.