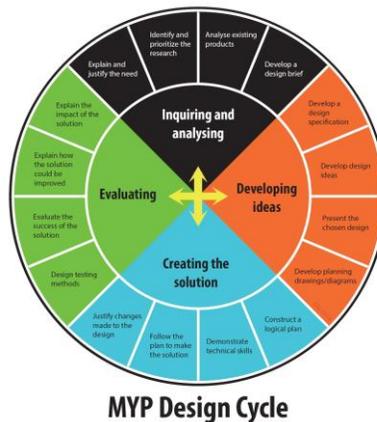


## Grade 6 Design Technology through Agriscience

### 2016-17 Course Outline

Major Walker

Welcome to IB MYP Design Technology! Your cadet will be working on several projects this year using inquiry and problem solving skills to create solutions. Students will begin to understand their responsibility as world citizens who will need to work seamlessly with our planet in an attempt to feed an ever growing world population.



The MYP uses the design cycle as a model. It is intended to be the central tool to help students to create and evaluate products and solutions in response to challenges. The MYP technology design cycle consists of four major stages, and these relate to the objectives of the course. The four stages are as follows:

- Inquiring and Analyzing - Students identify the problems to be solved.
- Developing Ideas - Students design the products/solution.
- Creating the Solution - Students use appropriate techniques and equipment.
- Evaluate - Students evaluate the product/solution.

This course uses the field of Agriscience to teach cadets the skills outlined above, and to become aware of a real planet-wide issue. Current world population is steadily increasing, and expected to reach 8 billion by 2025. How are we to feed them all?

Current methods of farming are woefully inadequate, and new methods are being developed at break-neck speed in order to meet the needs of our planet. Your cadet will be introduced to these issues and the new agriscience techniques so that he or she can create real-life solutions. The semester will include the following units

**Get with it!** AKA *Your student's backpack must **NOT** become an eternal abyss*

This unit will help cadets get acquainted with the huge transition required of them from elementary to middle school. It is SO easy to get overwhelmed, so a lot of time will be devoted to organizational skills as they move through the semester. They will also be introduced to the MYP curriculum and the Design Cycle. This method of problem solving will be utilized in every project in this course.

## Botany

In order to plan a successful solution to agricultural problems, students must have a solid baseline knowledge of plants and our subtropical climate. This unit will include the Mangrove Project where Red Mangrove propagules are cultivated at Prep for bay replenishment by various environmental groups.



## The Prep Garden and Campus

Students will plan, plant and maintain the Prep garden for both fall and spring crops. In addition, cadets will be responsible for various campus beautification projects, such as the vertical flower garden by parent pick-up.

## Hydroponics

The best part of the course! Students will learn about several hydroponic methods of crop production, and the benefits this new type of farming offers. They will investigate, plan and create their own hydroponic systems in the *Galactic Gardens Project*. Here, cadets will assume the role of astronauts on Mars who must create vegetable gardens to feed all the colonizing the scientists. (Sound familiar?)

## Plant Sales!

Stay tuned for these! Several sales are held during the year to help defray the costs of seeds, plants, soil, hydroponic supplies, etc. Students grow herbs and vegetables, organize the sale, and learn the economics of running a business.

Be prepared for a fun semester, and perhaps some interesting outcomes. Last year, several students started gardens at home, one joined a community garden co-op, and two grew hydroponic lettuce for their guinea pigs.

