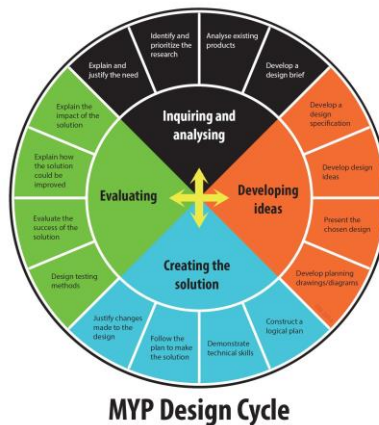


**Grade 6 IB Design Technology through Agriscience
2018-19 Course Outline
SMA-Maj Walker**

Welcome to IB 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 design cycle is intended to be the central tool to help students to create and evaluate products and solutions in response to challenges. It consists of four major stages, and these relate to the objectives of the course. At Prep, we use the field of Agriscience to teach cadets these four phases:

- 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 test and evaluate the product/solution.

The semester will consist of the units described below. Since plants require time to grow, some units will be put "on hold" while another is started.

Botany: In order to plan a successful solution to agricultural problems, students must have a solid baseline knowledge of plants and our subtropical climate. They will learn about the structure of plants as well as processes such as photosynthesis and respiration. This unit will include the Mangrove Project where Red Mangrove

propagules are collected and cultivated at Prep for bay replenishment by various environmental groups.



The Prep Garden: Students will plan, plant and maintain the Prep garden for both fall and spring crops. They will use the Design Cycle to research what vegetable and herbs to plant and then document their progress during the semester.

Campus Beautification: The cadets will use the Design Cycle to create garden areas at certain locations on the Prep Campus. As in all the units, they will document the progress of the plants as time progresses.

Hydroponics: Students will learn about several hydroponic methods of crop production: Nutrient Film Technique, Deep Water Culture, Wick, and Drip systems will be explored using the Design Cycle. Students will grow a variety of vegetables in a variety of mediums in an attempt to learn the best practices for each crop.

Plant Sales (not a unit of study): 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.

MYP Units of Study for Design Technology Grade 6

Unit Title	Unit Description	Approx. Date Range
Unit 1: Research Skills	Network basics, safe & effective searching, computer science vocabulary, note-taking, citations, plagiarism	August-September or January
Unit 2: Prep Garden	Botany, planning and creation of the Prep garden	August-December or January-May
Unit 3: Hydroponics	Hydroponic systems, global food production issues, emerging farming technologies, farming in space	October-December or January-May

MYP Design Technology Assessment

Criteria

Unit Title & Tasks	Approx. Due Date	A	B	C	D
Unit 1: Research Skills Network for Dummies Internet Vocabulary Search Engine Worksheet Citation Practice Plagiarism Worksheet	August-September January See Daily Calendar on my web page Smapscience.com	x			
Unit 2: Prep Garden Botany worksheets Seed Packets Garden Journal	August-December January-May Daily Calendar	x	x	x	x
Unit 3: Hydroponics Introduction to Hydroponics Worksheet Journals for each of the five systems	October-December January-May Daily Calendar	x	x	x	x