

Aviation Challenge Mach I

Lesson Overviews

FY-2018

Aerospace Physiology- In this briefing, trainees are introduced to concepts of flight that affect the human body. They will discuss factors that affect both the vestibular and ocular senses as well as ways to deal with sensory issues.

Aviation History and Technology- This briefing can be broken up into several smaller discussions with trainees. It covers the history of flight as well as how flight has changed as technology has improved.

UAS Intro- This briefing will cover the definition, governance and use of 'drones' both in military and civilian uses.

Water Survival Briefing- In this briefing, trainees will be introduced to water survival tips and techniques. They will also be introduced to the different types of life preservers and the situations in which each kind would be appropriate.

Land Survival Briefing- The 'Intro to Survival Briefing' will be a quick way for cadets to understand the basics of survival skills.

Gliders- Trainees will build a glider and then test the glider for performance as they add or remove weight. They will also test the performance as the weights are placed at different locations on the surface of the glider.

Instruments- This briefing will cover the inside of the basic cockpit of a standard aircraft as well as some advanced features in modern military and civilian aircraft.

Intro to Flight- This briefing provides an introduction to the scientific principles of flight as well as basics of airplane structure and parts. There is also information about the planes on-sight so that they can be used as teaching aids when appropriate.

Rotor Craft- This briefing will introduce the trainees to helicopters. We will discuss their origins and history as well as their structure and the science behind how they work.

Weather- Trainees will discuss how different types of weather affects flight. They will then use their knowledge from the discussion to identify different types of clouds throughout their time in camp.

***WatchTower Design Challenge-** An engineering design challenge. Mach1 trainees will be challenges to design and build a watchtower that will hold 4 army men, one each to look in 4 different directions. The tower must be at least 18 inches tall and freestanding. (This activity is done as a substitute activity, and may not be in every weeks curriculum)