**August 8-12**

 Class Introduction and Orientation

1. Teacher Introduction

2. Classroom and Learning Rules

3. Grading System

4. White Board and Cabinets Orientation

5. Chrome Books Sites we will use.

6. Classroom Contracts

 **August 16-19**

**Unit 1**

Pre-Course Exam

Pre-Course Exam Review

**Section A**

Lesson 1 Introduction to Aerospace Studies

Lesson 2 Engineering Practices in Action-1

 **August 23-26**

**Monday** - Lesson 2 Engineering Practices in Action-2

Lesson 2 Engineering Practices in Action -3

Lesson 3 Aviation Careers Are For You!

**Section B** Overview of commercial, Military, and General Aviation.

Lesson 1 Intro to Commercial Aviation

Lesson 2 Intro to Military Aviation

 **August 30-Sept 2**

Lesson 3 Intro to General Aviation

**Section C** Introduction to Unmanned Aircraft Systems

Lesson 1 UAS Fundamentals -1

Lesson 1 UAS Fundamentals -2

Lesson 2 UAS Operation and Safety

 **Sept 6-9**

**Section D** Introduction to Space Exploration

Lesson 1 Current and Future Space Exploration-1

Lesson 1 Current and Future Space Exploration-2

Lesson 1 Current and Future Space Exploration-3

**\*\*\*\*Quarter Quiz\*\*\*\***

 **Sept 13-16**

**Unit 2** Taking Flight - Early Aviation Innovations

**Section A** - Aviation's Primitive Beginnings

**Monday** Lesson 1 Flight in Greek Mythology

Lesson 2 Da Vinci and His Flying Machines -1

Lesson 2 Da Vinci and His Flying Machines -2

**Section B** - Lighter Than Air

Lesson 1 Hot Air and Gas Ballooning -1

Lesson 1 Hot Air and Gas Ballooning -2

 **Sept 20-23 --Grades Go In**

**Monday** Lesson 1 Hot Air and Gas Ballooning -3

Lesson 1 Hot Air and Gas Ballooning -4

**Section C** - Gliders

Lesson 1 From Birds to Gliders

Lesson 2 Glider flight and Early Innovators-1

Lesson 2 Glider flight and Early Innovators-2

**Break Sept 26-30**

 **Oct 4-7**

**Monday** Lesson 2 Glider flight and Early Innovators-3

**Section D** - Powered, Controlled Flight

Lesson 1 The "Wright" Approach-1

Lesson 1 The "Wright" Approach-2

Lesson 2 Build and Test a Wind Tunnel -1

Lesson 2 Build and Test a Wind Tunnel -2

 **Oct 11-14**

**Monday** Lesson 2 Build and Test a Wind Tunnel -3

Lesson 2 Build and Test a Wind Tunnel -4

Lesson 2 Build and Test a Wind Tunnel -5

Lesson 2 Build and Test a Wind Tunnel -6

Lesson 3 The "Wright Attitude"

 **Oct 18-21**

**Unit 2 Exam**

**Unit 3 begin**

**Section A** - First Practical Applications of Airplanes, Commercial and Military.

Lesson 1 Beginnings of U.S. Commercial Airline Service

Lesson 2 Aviation and World War 1 -1

Lesson 2 Aviation and World War 1 -2

 **Oct 24-28**

**Monday** Lesson 3 Airmail and the Transcontinental Airway System

**Section B** - Women in Early Aviation

Lesson 1 Women in Early Aviation-1

Lesson 1 Women in Early Aviation-2

**Section C** - World War II

Lesson 1 Aviation Innovation and World War II -1

Lesson 1 Aviation Innovation and World War II -2

 **Nov 1-4**

**Monday** Lesson 1 Aviation Innovation and World War II -3

Lesson 2 One for all , all for one - 1

Lesson 2 One for all , all for one - 2

**Unit 3 Exam**

**Unit 4**

Lesson 1 Development of the Jet Engine -1

Lesson 1 Development of the Jet Engine -2

**Nov 8-10 No School 11th**

Lesson 1 Development of the Jet Engine -3

Lesson 2 Commercial Air Travel -1

Lesson 2 Commercial Air Travel -2

**Section B** - The Space Race

Lesson 1 The Space Race Begins

**Nov 15-18**

**Monday** Lesson 2 To the Moon -1

Lesson 2 To the Moon -2

Lesson 2 To the Moon -3

Lesson 3 The Space Race Winds Down -1

Lesson 4 The Shuttle Program -1

**\*\*\*Thanks Giving Break Nove 20-24\*\*\***

 **Nov 28-Dec 2**

Lesson 4 The Shuttle Program -2

**Unit 4 Exam-**

**Unit 5:** Creating the Future—What’s New and Next in Aviation and Aerospace

**Section A** – Modern Aircraft Design

Lesson 1 Fly-by-Wire and “Glass” Cockpits\*

Lesson 2 Aircraft Navigation

 **Dec 6-9**

**Monday** Lesson 3 Composites and Structures

**Section B** – Government and Commercial Space

Lesson 1 Government and Commercial Space

**Section C** – End of Semester Project

Lesson 1 End of Semester Project -1

Lesson 1 End of Semester Project -2

Lesson 1 End of Semester Project -3

 **Dec 13-16**

Lesson 1 End of Semester Project -4

Lesson 1 End of Semester Project -5

**Unit 5 Exam Review**

**Unit 5 Exam --Grades Go In**

**\*\*\*Winter Break Dec 19- Jan 6\*\*\*\***

**SECOND SEMESTER**

 **Jan 10-13**

Pre-Course Exam

**Section A** - Role of Government in Aviation Safety

Lesson 1 Fundamentals of Aviation Safety -1

Lesson 1 Fundamentals of Aviation Safety -2

Lesson 2 The Federal Aviation Administration-1

 **Jan 17-20**

Lesson 2 The Federal Aviation Administration-2

**Section B** - Accident Investigation

Lesson 1 The Investigative Process -1

Lesson 1 The Investigative Process -2

Lesson 1 The Investigative Process -3

 **Jan 24-27**

Lesson 2 Accident Case Study -1

Lesson 2 Accident Case Study -2

Lesson 2 Accident Case Study -3

**Section C** Aviation Weather Services

Lesson 1 Aviation Weather Reports and Forecasting -1

 **Jan 31 - Feb 3**

Lesson 1 Aviation Weather Reports and Forecasting -2

**Unit 6 Exam**

**Unit 7: Exploring Careers in Aviation and Aerospace**

**Section A** - Flying

Lesson 1 Flying Aircraft and Drones -1

 **Feb 7-10**

Lesson 1 Flying Aircraft and Drones -2

Lesson 1 Flying Aircraft and Drones -3

Lesson 1 Flying Aircraft and Drones -4

**Section B** – Engineering

Lesson 1 Becoming an Aerospace Engineer -1

 **Feb 14-17 ---Grades Go In**

Lesson 1 Becoming an Aerospace Engineer -2

**Section C** – Other Great Aviation Careers

Lesson 1 Becoming an Air Traffic Controller-1

Lesson 1 Becoming an Air Traffic Controller-2

Lesson 2 Becoming an Aircraft Mechanic

**Unit 7 Exam**

**\*\*\*No School Feb 20-24\*\*\***

 **Feb 28-Mar 3**

**Unit 8:** Aviation Innovation and Problem Solving

Lesson 1 Reducing Aviation’s Environmental Impact-1

Lesson 1 Reducing Aviation’s Environmental Impact-2

Lesson 1 Reducing Aviation’s Environmental Impact-3

**Section B** – Modernizing Airspace

Lesson 1 Next Generation Air Transportation System

 **Mar 7-10**

Lesson 2 Integrating Drones-1

Lesson 2 Integrating Drones-2

Lesson 2 Integrating Drones-3

**Section C** – Future Aircraft

Lesson 1 Supersonic Aircraft-1

 **Mar 14-17**

Lesson 1 Supersonic Aircraft-2

Lesson 1 Supersonic Aircraft-3

Lesson 2 Autonomous Aircraft -1

Lesson 2 Autonomous Aircraft -2

 **Mar 21-24**

Lesson 2 Autonomous Aircraft -3

Lesson 3 Electric Aircraft-1

Lesson 3 Electric Aircraft-2

**Section D** – Future Space Travel

Lesson 1 Colonizing Space-1

**Mar 28-31**

Lesson 1 Colonizing Space-2

Lesson 1 Colonizing Space-3

**Unit 8 Exam**

 **April 4-6 no school on 7th**

**Unit 9: Innovation Challenge**

**Section A** – “Peep Odyssey”

Lesson 1 “Peep Odyssey” Innovation Challenge-1

Lesson 1 “Peep Odyssey” Innovation Challenge-2

Lesson 1 “Peep Odyssey” Innovation Challenge-3

Lesson 1 “Peep Odyssey” Innovation Challenge-4

 **April 18-21**

Lesson 1 “Peep Odyssey” Innovation Challenge-5

Lesson 1 “Peep Odyssey” Innovation Challenge-6

Lesson 1 “Peep Odyssey” Innovation Challenge-7

Lesson 1 “Peep Odyssey” Innovation Challenge-8

\*\*\*NO School  **April 11 -14 Easter\*\*\***

 **April 25-28**

**Unit 10:** Thinking About a Career in Aviation

Lesson 1 Developing a Mission Statement\*-1

Lesson 1 Developing a Mission Statement\*-2

Lesson 2 Investigating Education Options After High school\*-1

Lesson 2 Investigating Education Options After High school\*-2

 **May 2-5**

**Section B** – Developing Professionalism

Lesson 1 Professional Skills and Conduct\*-1

Lesson 1 Professional Skills and Conduct\*-2

Lesson 2 Building Communication Skills\*-1

Lesson 2 Building Communication Skills\*-2

 **May 9-12**

Lesson 1 Building a Career Portfolio-1

Lesson 2 Looking at FTL -1

Lesson 2 Looking at FTL -2

Lesson 2 Looking at FTL -3

 **May 16-19**

Lesson 1 Building a Career Portfolio-1

Lesson 1 Building a Career Portfolio-2

Lesson 1 Building a Career Portfolio-3

Lesson 1 Building a Career Portfolio-4

Lesson 1 Building a Career Portfolio-5

 **May 23-26**

\*\*\*\*\*Unit 10 Exam\*\*\*\*

\*\*\*\*\*Post Course Exam\*\*\*\*\*

 **May 30 - June 2**

**Reflection**