



## **Suggested Timeline & Important Dates**

\*Please note that this is a suggested timeline. Teams may determine how and when they work on various aspects of the project.\*

\*\*Teams should go above and beyond what is listed on this timeline. Judging is not restricted to only the areas below\*\*

### ***IMPORTANT DATES***

**October 9, 2009 – Application deadline**

**October 23, 2009 – Deadline to submit team photograph and t-shirt form**

**November 17, 2009 – Coaches Meeting, 4:30 p.m. – 6:00 p.m.**

Fiesta Bowl Museum  
7135 E. Camelback Rd., #190  
Scottsdale, AZ 85281

**December 7, 2009 – Aerospace Challenge Preliminary Competition DAY 1**  
Arizona State University at the West Campus, Phoenix, AZ

**December 8, 2009 – Aerospace Challenge Preliminary Competition DAY 2**  
Arizona State University at the West Campus, Phoenix, AZ

**December 31, 2009 - Aerospace Challenge Finals**  
Challenger Space Center, Peoria, AZ

**January 4, 2010 – Tostitos Fiesta Bowl**  
University of Phoenix Stadium, Glendale, AZ  
*\*Winning team will be presenting on-field at the game\**



The following is a suggested timeline addressing the various components necessary to complete your project. Teams are encouraged to go above and beyond what is listed.

## **Week 1**

### **Research Past, Current and Future Plans for Lunar Habitation & Team Details**

- Form team roles (possible roles suggested below):
  1. **PRINCIPAL INVESTIGATOR:** Communicates with teacher, assigns tasks, distributes resources, ensures that team meets deadlines.
  2. **SCIENTIST:** Checks report for scientific accuracy, provides scientific information and basis for the report; quantifies the design ideas.
  3. **ARTIST:** Illustrates the ideas of the group using traditional art materials or computer graphics.
  4. **RESEARCHER:** Guides the research process; collects and prints information from Internet sites, books; writes the bibliography for the written report; works closely with the scientist in the group.
  5. **TASKMASTER:** Gathers all the necessary resources and materials, types the report; works closely with the project leader.
- Gather information on past, current and future plans for Lunar Habitation.
- Initiate design concepts for your Lunar Base.
- Design 30-centimeter mission patch.
- Determine Team Name.
- Determine team quotation.
- Take team photograph and submit.
- Submit t-shirt sizes.

## **Week 2**

### **Determine Living Conditions**

- Explain how air, food and water will be accounted for and the amounts necessary to sustain a crew of up to 40 people for two years.
- Provide a mechanism that will describe how waste products will be treated and recycled.
- Determine where the base will be located on the moon.
- Develop a plan for protecting the Lunar Base from solar radiation, cosmic rays and debris.
- Explain how the Lunar Base will address the issue of low gravity?



### **Week 3**

#### **Helium 3 Mining, Processing and Storage**

- Gather information on Helium 3.
- Develop a plan on how the Helium 3 will be processed and stored.

### **Week 4**

#### **Secondary Lunar Base Mission**

- Determine which of the secondary mission options your team will work on and develop a plan for implementing that mission.

### **Week 5**

#### **Design of Base Interior and Creation of Scale Drawings**

- Design and represent through scaled drawings, the Space Station interior including three scale (metric) drawings from:
  1. Habitation Module
  2. Recreation Module
  3. Work Module

### **Week 6**

#### **Lunar Base Society**

- Provide written description of the following:
  1. Background of Culture
  2. Human Tasks
  3. Organization
  4. Communications
  5. Arts and Aesthetic Values
  6. Medical Care
  7. Age Requirements



## **Week 7, 8 & 9**

### **Building of Model/Verbal Presentation Prepared**

- Plan of model design.
- Build model.
- Provide a listing of all materials that were purchased for the model.
- Provide scale (metric) conversion.
- Prepare any visual aids which may be used.
- Finalize Mission Patch.
- Practice presentation and determine involvement of team members.
- Assemble and print final report.

### **CONTINUOUSLY**

- Collect any recycled materials to be used for physical model.
- Collect all receipts from purchases.
- Research lunar habitation.