



## CIVIL AIR PATROL United States Air Force Auxiliary

### CADET ENCAMPMENT PROGRAM

#### A2 Academic Foundations II: Space

#### Guidance for Instructor

Date & Time of Talk:

Location:

Arrival Time:

Point of Contact:

Cell Phone:

Email:

*Thank you for volunteering to support Civil Air Patrol cadets. You're going to have fun interacting with the cadets because this group is bright, enthusiastic, and possesses a seriousness of purpose that you won't find among an ordinary group of young people.*

**This Lesson in Context.** The encampment program's aerospace block has four main components: an introduction to aviation's academic foundations (activity A1), an introduction to space sciences (activity A2 - *this session*), an introduction to military airpower doctrine (activity A3), and finally at least 7 hours are devoted to aerospace-related field trips, hands-on activities, flying, or other types of experiential learning (activity A4).

**Suggested Instructor.** An experienced CAP aerospace education officer who is knowledgeable about existing AE resources is perhaps the ideal instructor. Guest speakers who are aerospace professionals could also make great contributions.

**Selecting a Topic.** As the instructor or guest speaker, you are free to choose any space topic as your subject. Please consider what tours and hands-on activities the cadets will be participating in at the host installation / facility, and try to select a topic that would provide a suitable academic foundation for those tours or hands-on activities. For example, if the cadets will visit an Air Force unit that operates satellites, talk about launch vehicles, orbits, satellite systems, etc. Cadets will learn best if your classroom lesson has a connection to their field trip(s).

Some possible topics to consider include:

- Planetary science
- Rocket propulsion
- Orbits and trajectories
- The space environment
- Space exploration
- Satellite technologies
- The weaponization of space
- "A day without space"
- Current or future NASA missions

**Resources.** Innumerable resources are available through CAP's aerospace education webpage, [capmembers.com/ae](http://capmembers.com/ae). You'll find detailed lesson plans for almost every topic, multi-media resources, hands-on activities, and more. While you are welcome to develop your own presentation or activity from scratch, there are so many educational resources available already that we encourage you to simply browse the AE webpage and find something of interest to you.

**Suggested Duration:** 60 minutes.

**Audience.** Teenaged cadets enrolled in the Civil Air Patrol Cadet Program, a youth activity imparting leadership skills in an aerospace-themed environment. Their #1 area of interest for cadets is aviation or aerospace. Their #2 area of interest is military service and leadership in general. Your CAP point of contact will tell you how many cadets are in attendance.

**Cadets' Backgrounds.** Cadets arrive at their annual encampment with an enthusiasm for aviation, space, and technology. Some cadets will come from local units with strong AE programs and so will possess a good deal of basic knowledge of space, while other cadets will be brand new to space and/or hail from squadrons that do not showcase space as much. Most cadets will have completed one or two modules in our *Aerospace Dimensions* texts, but we cannot presume that each cadet arrives at encampment with a common understanding of any particular space topic. The older cadets, who serve as cadre, are apt to be quite knowledgeable on space topics. As a presenter / instructor, be prepared for a diverse, but enthusiastic audience.

**Cadet Textbooks.** CAP uses formal, standards-based textbooks to present aviation and space topics. It will be helpful if you familiarize yourself with those resources.

- Cadets study CAP's *Aerospace Dimensions* and *Aerospace: The Journey of Flight* textbooks. We encourage you to at least skim the relevant sections of those texts to become aware of how we present space fundamentals to cadets. That way, you can be sure to use the same terminology and so forth. Please see [capmembers.com/ae](http://capmembers.com/ae) to access these resources.
- Also please know that at encampment cadets use a mini-text for "hip pocket training," the *Encampment Cadet Handbook*, and carry it with them at all times. You might skim through that text to see what visual aids cadets will have on hand during your class. Please see [capmembers.com/encampment](http://capmembers.com/encampment) to download the handbook.

**Suggested Format.** Cadets relate best to specific examples, not abstract concepts. Speak anecdotally. Use your life experiences to convey a personal perspective about aviation. Have some questions prepared to direct to the audience and/or allow time for the cadets to pose questions to you. A back-and-forth discussion is better than a lecture.

**Audio Visual Support.** Your CAP point of contact will tell you what A/V support is available.