

Middle School Initiative

**PART I
COVER SHEET**

CAP 1 SEMESTER 2 WEEK 5

COURSE: Arnold Aerospace Education, Achievement 2

LESSON TITLE: To fly by the Lifting Power of Rising Air

LENGTH OF LESSON: 50 Minutes

METHOD: Lecture - Performance

REFERENCE(S):

1. *Aerospace Dimensions*, Module 1, Chapter 2, 2000
2. Study Guide, 2000
3. Leader Guide, 2000
4. Resource Guide, 2000

AUDIO/VISUAL AIDS/HANDOUTS/ACTIVITY MATERIAL(S): As Needed

COGNITIVE OBJECTIVE: To learn how a glider flies.

COGNITIVE SAMPLES OF BEHAVIOR: Upon completion of this chapter, the cadet should know:

1. How gliders use the environment to obtain altitude.
2. Why gliders look differently than powered airplanes.
3. How gliders can achieve great distances without power.

AFFECTIVE OBJECTIVE: N/A

AFFECTIVE SAMPLES OF BEHAVIOR: N/A

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PART II TEACHING PLAN

Introduction

ATTENTION: Today, you will continue your Aerospace Education studies in *Aerospace Dimensions*, Module 1 with Chapter 2 - To fly by the Lifting Power of Rising Air.

MOTIVATION: How do gliders use the environment to obtain altitude and achieve great distances without power? Why do they look differently from powered airplanes? This chapter will answer those questions.

OVERVIEW: During this period, you will continue your aerospace studies with the To fly by the Lifting Power of Rising Air.

Body

NOTE: The instructor should use the lesson plan in the Leader Guide, Pages 3-4. The cadets should use the Study Guide, Pages 11-12. A materials list is located in the Leader Guide, Page 46.

Conclusion

SUMMARY: We have studied the material in *Aerospace Dimensions*, Module 1, Chapter 2.

REMOTIVATION: Now you understand the forces that allow a glider to fly and why they are different from powered airplanes.

CLOSURE: In two weeks, we will continue our AE studies with Module 1, Chapter 3 - Balloons, They Create Their Own Thermals. **Any questions? See you next week!**

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**PART III
LESSON REVIEW**

LESSON OBJECTIVE(S): Today, we learned:

1. How gliders use the environment to obtain altitude.
2. Why gliders look differently than powered airplanes.
3. How gliders can achieve great distances without power.

LESSON QUESTIONS: Contained in *Aerospace Dimensions*, Module 1, Chapter 2.