

Case Details

Case Title:

The lawn-chair scientist

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Date Published:

11/5/2008

Grade Level(s):

Middle School

Subject(s):

Earth Science

Summary:

A miscalculation turns a backyard experiment into the talk of the town! Local news picks up a story about a 13-year old boy whose sister has accidentally sent him up into commercial flight paths in a balloon-covered lawn chair. The boy's misadventure includes a run in with a low-pressure system, exposure to the effects of extreme altitude, and local infamy as yet another individual who shuts down a nearby international airport.

Suggested Citation:

Turner, B. L., DeLoney, D. Y., & Haensly, J. W. (2008). *The lawn-chair scientist*. Retrieved June 03, 2012 from Emory University, CASES Online Web site: http://www.cse.emory.edu/cases/casedisplay.cfm?case_id=2544

Learning Objectives:

1. Identify the layers of the atmosphere, their altitude and characteristics.
2. Explain the relationship between wind and weather in the lower layers of the atmosphere.
3. Explain the role of air masses and water in weather systems.
4. Explain the effects of different altitudes on the human body.
5. Diagram and label atmospheric layers.
6. Describe major features of weather systems and what causes them.
7. Explain the physiological risks of ascending to extreme altitude.

National/State Standards:

Georgia Performance Standards

SCSh1. Students will evaluate the importance of curiosity, honesty, openness, and skepticism in science. (NSES Content Standard A)

S6E3. Students will recognize the significant role of water in earth processes. (NSES

Content Standard D)

b. Relate various atmospheric conditions to stages of the water cycle.