



OVERVIEW

You will test your tetrahedron kite in flight and record data.

VOCABULARY

- ▶ area
- ▶ drag
- ▶ force
- ▶ gravity
- ▶ lift
- ▶ perimeter
- ▶ tetrahedron
- ▶ vertex
- ▶ wind energy

MATERIALS

- ▶ Built KaZoon Kite
- ▶ Stopwatch
- ▶ Tape measure
- ▶ Graph paper

STUDENT PROCEDURE

1. Watch this video about kites:
 - ▶ <http://pbskids.org/dragonflytv/show/kites.html>
2. Discuss background information provided by the teacher.
3. Answer these questions:
 - ▶ What did you notice about the kites?
 - ▶ What were some similarities among the kites?
 - ▶ What were some differences?
 - ▶ How does the shape of a kite affect the angle it flies at?
What about its size?
 - ▶ What do you think makes a kite fly?



4. Prior to testing outdoors, perform a preliminary test using the fan and allowing approximately five feet of string.
 - ▶ If your kite appears to be unstable, examine it and make any necessary adjustments.
5. Compare and discuss solutions and discrepancies.
6. Time to fly! Gather the completed kites, tape measure, stopwatch, and student pages.
7. Determine how you will measure your kite's performance – distance, in-air time, and so forth.
8. Pair up and take turns flying your kite.
9. Record how long the kite remains in the air on the student page.
10. When the kite returns to ground, measure the amount of string that was used during the time the kite was in the air. Record the data on your student page.
11. When back in the classroom, graph the class results on graph paper, noting patterns or trends.
12. Make notes on your student page of any observations that might help in the redesign challenge in the next lesson.
13. Discuss results of the testing phase and write your thoughts on your student page. Consider the following questions:
 - ▶ Did your kite perform as you expected?
 - ▶ What were some issues you encountered?
 - ▶ How could the design be improved?
 - ▶ What changes or modifications could you make?
 - ▶ What function would a tail provide?

ACTIVITY CONNECTION

In 2011, the Guinness World Record was set for the most kites in air at one time. This event was organized in part by the United Nations Relief and Works Agency and was held in the Gaza Strip. More than 12,000 kites were flown at the same time.



Student Name _____

Data

	Time in Air	Length of String
My Trial 1		
My Trial 2		
Partner's Trial 1		
Partner's Trial 2		

Redesign Ideas

Testing Results
