



Forces of Flight

Extending the Student Reading by Writing & Discussing

1. After students have finished the reading, reinforce learning about the forces of flight with this graphic. For an 11"x17" version of the graphic for classroom display, check lesson plans in which the Forces of Flight student reading is included.

2. Assign students, working individually or in small groups, to research contemporary kite making materials mentioned in the essay and report back to the class. For example, Tyvek®

(<http://www.tyvek.com/whatistyvek.htm>) claims to offer "all the best characteristics of paper, film, and fabric in one material." How was Tyvek® discovered (and what is the difference between a discovery and an invention)? How long was the development process for this product? What are other applications in which Tyvek® is used? What similar information can be found about mylar, rip-stop nylon, fiberglass, or carbon fiber?

3. Assign students, working individually or in small groups, to research the evolution of traction kiting (i.e., using the pulling power of kites) into a variety of extreme kite sports on land, water, and snow during the past twenty years. Websites by such kite manufacturers as Peter Lynn (www.peterlynnkites.com), Dave Culp Speedsailing (www.dcss.org; includes a very clear essay about the advantages kites offer to a sailor); Robby Naish (www.naishkites.com), and Flexifoil (www.flexifoil.com) include exciting photographs and some solid information; they can provide students with useful exercises in differentiating factual information from commercial promotion.

For an introduction to kite boarding/surfing, see issue 19 of the *Drachen Foundation Kite Journal*, Summer 2005. It includes interviews from "the 3-Dimensional Playground" of Maui with such pioneers at Pete Cabrinha, female rider Tomoko Okazaki, Pete Siracusa, youngster Kai Lenny, board maker Sean Ordonez, and Mike Waltze, as well as inspiring photographs and an amusing lexicon (perhaps now outdated, given how quickly sports slang evolves). Issue 20 primarily concerns New Zealander Peter Lynn, a theoretician and inventor whose current focus is kite boating. Link to both issues from the Drachen Foundation site, at www.drachen.org.

