**Additional Readings in Science and Engineering**

***Readings published by NSTA are available by web at a charge of $0.99 per article.***

***For Teachers of Grades 3-5***

• Lottero-Perdue, Pamela S., et al. "Engineering for All." *Science and Children,* March 2010, pp. 24-27. Arlington, VA: NSTA Press.

***Emphasizes engineering design process applied to windmills, but is embedded in a science unit on position, force, motion, and energy; would fit our theme well if modified to "ask nature ways to 'catch the wind'"***

• Owens, Cecilia and Erin Ash Sullivan. "Reinventing the Bridge." Science and Children, February, 2012, pp. 58-61. Arlington, VA: NSTA Press.

***Modifyies the family science night and mimics the engineering design process.***

• Sterling, Donna R. "Hurricane Proof This!"  *Science and Children,* March, 2010, pp. 48-51. Arlington, VA: NSTA Press.

***Without specifying an engineering design model, the author considers constraints, connections math. Has novel assessment ideas. Could benefit from link to AskNature.***

• Joseph, Jann. "Which Paper Towel Is Best?" Science and Children, March, 2011, pp. 37- 39. Arlington, VA: NSTA Press.

***The point of this article is to kick-up a typically confirmation inquiry toward more open inquiry. It would be very easy to adapt this inquiry closer to our theme by simply adding an Extension: How would you make a better paper towel? Check out Asknature.org***

• Lott, Kimberly. "Fire Up the Inquiry." *Science and Children,* March, 2011, pp. 29-33.Arlington, VA: NSTA Press.

***"Insulation" is a good search word for Asknature.org***

***For Teachers of Grades 6-8***

• Brendzel, Sharon. "Science on a Roll." *Science Scope,* February, 2002, pp. 18-20. Arlington, VA: NSTA Press. ***Search "absorption" on Asknature.org.***

• Gore, Susan. "Engineering-A-Future for tomorrow's young women." *Science Scope,* November, 2006, pp. 46-48. Arlington, VA: NSTA Press.

***Focus on females.***

• Hammes, Kristen. "Catapulting into technological design." *Science Scope,* November, 2006, pp. 58-61.Arlington, VA: NSTA Press.

***The catapult design challenge can easily be stretched with a "What would nature do?" query.***

• Moyer, Richard H. and Susan A. Everett. "Clips and Clamps." *Science Scope,* December, 2011, pp. 16-21. Arlington, VA: NSTA Press.

***"Clamp shut" and "spring" are good search words for Asknature.org.***

• Moyer, Richard H. and Susan A. Everett. "Windmills are going around again." *Science Scope,* March, 2011, pp. 8-15. Arlington, VA: NSTA Press.

***Search "catch the wind" on Asknature.org.***

• Moyer, Richard H. and Susan A. Everett. "Increase Your v to Lower Your D." *Science Scope,* February, 2012, pp. 16-21. Arlington, VA: NSTA Press.

***Search "buoyancy" on Asknature.org.***

**Next Generation Science Standards**

Duschl, Richard A. "The Second Dimension – Crosscutting Concepts." Science Scope, February, 2012, pp. 6-11. Arlington, VA: NSTA Press.

***Intro to NGSS Crosscutting Concepts***

Sneider, Cary. "Core Ideas of Engineering and Technology: Understanding a Framework for K–12 Science Education." *Science Scope,* January, 2012, pp. 6-11. Arlington, VA: NSTA Press.

***Intro to NGSS Eng Core Ideas : Engineering Design; Interdependence of Science, Engineering, and Technology; Influence of Engineering, Technology, and Science on Society and the Natural World.***