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Killer Waves, Fiction to Fact:

Fiction to Inspire Nonfiction Research in the Intermediate-grade Classroom

If you were 10 years old, which of the following sentences would more likely capture your attention?

Barb Ruben and Barbara Liles

"Tsunamis are giant waves caused by underwater earthquakes," or, "The wave was a monster racing towards them."

The first sentence is a statement of facts, clear, concise, but not particularly exciting. The second is a description that creates a mental image of a monster wave and inspires a vicarious personal involvement. "The wave is coming! Run!!!!"

The following is a description of a literature-based unit on tsunamis that uses the emotional connection of fiction as a stepping-stone to informational research. The prime time to teach students nonfiction research skills is in the intermediate grades. At this point in their literacy development students are moving beyond "learning to read" into "reading to learn."

To begin the unit, the classroom teacher reads *Selvakumar Knew Better* by Virginia Kroll, a picture book about the 2004 Indonesian tsunami. The book is based on a true story and serves as a discussion starter about the difference between fact and fiction. The teacher next introduces four or five appropriate chapter books about tsunamis with enticing book talks. Students then select their choices and form literature circles.

We explored a cluster of fiction and nonfiction books written for eight-to-twelve-year-olds of different reading levels, all of which work perfectly to stimulate empathy and curiosity about the subject of tsunamis.

Escaping the Giant Wave by Peg Kehret, a

Washington author, is about a 13-year-old boy from Kansas whose family takes a vacation to the Oregon Coast and winds up in the middle of a tsunami. It is a disaster adventure action story in which the protagonist is able to face his demon, the school bully, who by coincidence just happens to be vacationing at the same hotel in Oregon. *Escaping the Giant Wave*, with a Lexile reading score of 750L, would be accessible to most fourth graders and above. (Note: Lexile scores are determined by sentence length and word frequency; scores do not address the content or quality of the book. See <http://www.lexile.com>)

It is easy to imagine a class of students reading this book and immediately jumping to Google with questions galore. "What are tsunamis? How are they formed? Could they really happen here, in Oregon?"

In addition to *Escaping the Giant Wave*, we have identified three other potential literature circle fiction selections involving tsunamis. Different sophistication levels allow for a range of readers within any intermediate-age classroom.

Night of the Howling Dogs by Graham Salisbury, an Oregon author, also has a 13-year-old boy protagonist and a bully he must learn to face. This book is set in Hawaii and is based on a true story of a Boy Scout troop camping in a remote area when a tsunami hit in 1975. The Lexile score of 530L puts the book at third grade, but the setting is unique to Hawaii and may have unknown vocabulary for young Oregon readers. The descriptions of lava and eruptions could motivate a study of volcanoes as well as tsunamis.

The Killing Sea by Richard Lewis is a young adult novel set in Sumatra during the huge December 2004 tsunami. It is appropriate only for advanced readers in an intermediate classroom, though the Lexile score of 760L would place it at the high end of fourth grade. As to be expected in a

young adult book, the protagonist is older at sixteen. The descriptions of death and destruction are accurate and probably too vivid for some intermediate-age students. The scenes of the girl finding her dead mother and the boy looking for the body of his father in the piles of dead bodies are graphic.

This book would work for certain strong readers. There is a subtle love interest that does not get beyond a goodbye kiss. Some of the websites listed at the end of the article show actual footage of the Sumatran tsunami and its aftermath.

On the other end of the spectrum, *Magic Tree House #28: High Tide in Hawaii* by Mary Pope Osborne allows everyone in the class to have access to a chapter book about tsunamis. The Lexile score is only 370L (second grade). This story, set in ancient Hawaii, does not go into detail, but the reader gets a glimpse of the power of a tsunami. Mary Pope Osborne wrote a companion nonfiction book about tsunamis and other natural disasters at the same low reading level.

After the literature circle members complete their fiction books, they discuss the stories, their insights, and brainstorm informational questions they wish to research about tsunamis. Making the transition from fiction to nonfiction, students explore nonfiction resources with pre-primed curiosity.

Many informational books about tsunamis are available for young readers. The authors have provided a list of some resources that are current. These texts are rich with graphs, charts, and maps. They provide an opportunity for teachers to teach specific literacy skills for informational text, including how to read a table of contents, index, glossary, and captions.

In addition to hard copy texts, teachers may want to explore information available on the Internet. One of the best ways to expose young students to Internet research is through a web quest. Teachers preset bookmarks of appropriate websites for students to investigate in small groups or in pairs. This allows a safe entry onto the web.

In their literature circle groups, students take their list of questions about tsunamis and follow websites to search for answers. The authors recommend a number of websites, both educa-

tional- or government-sponsored. One of the more relevant to this unit is Clatsop County's website which includes maps of the Oregon coastal tsunami zones, evacuation plans, and the history of Oregon's tsunami events.

After researching tsunamis, students have the option of creating a culminating project. Some possible projects might include maps or 3-D models. After analyzing current public information materials, students can create their own brochures to teach their peers about the dangers of tsunamis. Students with computer skills can create PowerPoints or websites. *Thinkquest*. 2008. <<http://www.thinkquest.org/>> is an example of student-created informational websites.

This unit uses literature circles to motivate curiosity in young readers about science. The emotional connection a reader has with fictional characters bridges fiction and nonfiction and makes nonfiction research more relevant. As is true in all learning, when students have an authentic reason to explore informational text, the learning becomes deeper and more lasting.

These are the five fiction books recommended for tsunami literature circles described in the article:

Kehret, Peg. *Escaping the Giant Wave*. New York: Simon & Schuster, 2003.

Kroll, Virginia. *Selvakumar Knew Better*. Fremont, CA: Simon & Schuster. Illustrated by Iaojun Li. 2006.

Lewis, Richard. *The Killing Sea*. New York: Simon & Schuster. 2006.

Osborne, Mary Pope. *Magic House Book #28: High Tide in Hawaii*. New York: Stepping Stone Book. Random House. 2003.

Salisbury, Graham. *Night of the Howling Dogs*. New York: Random House Children's Books. 2007.

Recommended nonfiction books on tsunamis:

Langley, Andrew. *Hurricanes, Tsunamis, and Other Natural Disasters* (Kingfisher Knowledge) Boston, MA: Houghton Mifflin. 2006. This book contains general information about tsunamis and has high visual appeal for reluctant

readers, including colorful pictures, maps, and photos.

Karwoski, Gail Langer and illustrated by John MacDonald. *Tsunami: The True Story of an April Fools' Day Disaster*. Plain City, OH: Darby Creek Publishing. 2006. This is a detailed account of the 1946 Hawaiian tsunami that killed 149 people. It explains the origins of the Pacific Tsunami Warning System.

Morris, Ann. *Tsunami: Helping Each Other*. Minneapolis, MN: Lerner. A UNICEF photographic journey tracing a Thai family before and after the 2004 tsunami. Publications. 2005. Age level: 04-08,

Osborne, Mary Pope. *Magic Tree House Research Guides #15: Tsunamis and Other Natural Disasters*. NY, NY: Random House Books for Young Readers. 2007. Written in question/answer format, this is a basic research guide to tsunamis and other natural disasters.

Walker, Niki. *Tsunami Alert! (Disaster Alert)*. NY, NY: Crabtree Publishing Company. 2005. A basic general guide to the science behind tsunamis.

Recommended kid-friendly websites about tsunamis:

Clatsop County 2008. <<http://www.co.clatsop.or.us/default.asp?pageid=391&deptid=5>>. As mentioned in the text, the site shows the Oregon coastal tsunami zones and lists evacuation procedures.

Enchanted Learning Software. 1996-2007. <<http://www.enchantedlearning.com/subjects/tsunami/>>. General site with easy readability, includes a glossary and visuals.

Nabli, Dina. "Special report on Asia's Tsunami." *Time for kids*. 2007. <<http://www.timeforkids.com/TFK/tsunami>>. This site was developed within months of the Sumatran disaster. Includes photos of the aftermath and a great graphic of how a tsunami forms.

Pacific Tsunami Warning Center." *National Weather Service*. 2008 <<http://www.prh.noaa.gov/ptwc/?region=1>>. This site has the most up-to-date tracking of tsunamis throughout the Pacific Rim.

Thinkquest. 2008. <<http://www.thinkquest.org/>>. Student-generated information websites and referred to in the text.

"Tsunami." Federal Emergency Management Agency. <<http://www.fema.gov/kids/tsunami.htm>>. Very kid friendly emergency preparedness guide including how to take care of pets in an emergency.

Tsunami Statistics. National Oceanic and Atmospheric Administration. United States Department of Commerce. <<http://wcawc.arh.noaa.gov/tsunamiready/stats.pdf>>. Collection of historical statistical data on earthquakes and tsunamis. Potential math lessons galore.

Tsunami! Warning for kids of all ages. National Oceanic and Atmospheric Administration. United States Department of Commerce. <<http://wcawc.arh.noaa.gov/about/tsunami.book/book07.htm>>. Printable comic books/nonfiction graphic novels about tsunami alert systems. Very kid-friendly.

The following Oregon fifth-grade state standards have been used as the baseline for this unit on tsunamis. They are all literacy standards, though social studies, health, and science content standards could also be easily addressed.

EL.05.RE.03 Listen to, read, and understand a wide variety of informational and narrative text, including classic and contemporary literature, poetry, magazines, newspapers, reference materials, and online information.

EL.05.RE.04 Make connections to text, within text, and among texts across the subject areas.

EL.05.RE.09 Understand, learn, and use new vocabulary that is introduced and taught directly through informational text, literary text, and instruction across the subject areas.

EL.05.RE.10 Develop vocabulary by listening to and discussing both familiar and

conceptually challenging selections read aloud across the subject areas.

EL.05.RE.18 Use the features of informational texts, such as formats, graphics, diagrams, illustrations, charts, maps, and organizational devices to find information and support understanding.

EL.05.RE.22 Identify key facts and information after reading several passages or articles on the same topic.

*After many years of teaching elementary grades in Portland, **Barb Ruben** is now Assistant Professor in the Graduate School of Education at Portland State University, from where she earned her ED.D.*

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