

Science Time

Program Content for January 18, 2017

Read the special insert tracking Vendée Globe 2016 “Week 9 - Wildlife” on page C4 of the Wednesday, January 11, 2017 edition of The Seattle Times.

Vendée Globe is a solo, non-stop, around-the-world sailing race, 28,000 miles, ~100 days at sea, in 60' boats. These paired essays highlight the experience of one sailor, Rich Wilson, and a team of experts he has recruited to write about different topics from week-to-week. In addition to completing this Science Time, learn more about Vendée Globe and follow Rich's journey, as well as access a number of other resources for both educators and students at <http://sitesalive.com/> and in the Seattle Times every Wednesday.

Objective

- I can detail the unique features of albatross.

Next Generation Science Standards (NGSS) connection

Disciplinary Core Ideas - Interdependent Relationships in Ecosystems

- Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors. (MS-LS2-1)

Pre-reading and Vocabulary: Define each term and then use it in a sentence to demonstrate your understanding.

1. updraft/downdraft
2. diversity
3. epic
4. mariner

Comprehension Questions

Essay 1 - Rich Wilson, *Skipper Great American IV*

1. What ocean creatures have come on board of Rich's boat?
2. What birds has Rich seen in the sky?
3. What characteristics makes Albatross unique?

Essay 2 - Sy Montgomery, *Author*

1. According to the author, what is our planet's largest wilderness?
2. What 3 things do Rich and a “magnificent creature” have in common?
3. What type of bird has the longest wingspan?
4. What is the wingspan of the largest species of these birds?
5. What do these birds with the longest wingspan look like?
6. Why do albatross follow boats?
7. What unique feat can albatross accomplish without flapping?

Science Time is posted to the Web on Wednesdays. Please share this NIE Science Time program with other teachers. To sign-up for the electronic edition for your class, please register

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8. What is the top speed albatross can reach when flying?

Prompts and Extensions

1. Follow the daily travel of Rich Wilson as he circumnavigates the globe. Explore past reports, read the ship's log, listen to podcast updates, view photos, post a question to Rich Wilson, and more at www.sitesalive.com
2. Rich raises two questions in his essay: How did the albatross learn to fly like that (using updrafts and downdrafts so it doesn't have to flap its wings)? and How did the flying fish ever figure out to leap out of the water and glide on their fins as wings for 100 meters to escape predators? In both of these instances Rich is hinting at the evolutionary pathway taken by both the albatross and flying fish. Answer one (or both) of these questions about how evolution shaped the ability of albatross to fly with minimal flapping and flying fish to use its fins to leap out of the water.
 - In your research detail the common ancestor of the organism you chose, the adaptation that helped each organism survive and reproduce, and the evidence gathered by scientists to support these changes over time.
3. Learn about the science behind the albatrosses flying technique, dynamic soaring, in this [video](#) and the potential it holds for human-made aircrafts.
4. This [National Geographic talk](#) by photographer Frans Lanting highlights his journey to document the albatross.
5. Albatrosses long term survival is threatened by humans and the large amounts of plastic pollution we create that ends up in the ocean. This [short video](#) will introduce you to the way in which our plastic waste is impacting the albatross. This [article](#) further documents the plastic pollution problem.