

Using Current Events in a Science Classroom

When walking by my classroom, one will find an assortment of news articles cut from recent print media that are Scotch taped to my classroom door. My students and I are always looking for new magazine and newspaper articles to add to the door. These articles relate our fifth-grade science curriculum to current events happening around the world and provide an application for new knowledge gained in the classroom. Taped to the door are articles about new fossil discoveries, zebra mussels in nearby lakes, Hurricane Harvey's devastation, and many other current events. From newspapers to television and the internet, news is available 24/7, and much of this news can be related to science in the classroom. Using current events brings relevancy into the classroom and encourages students to think about science outside their school.

The fifth science Texas Essentials Knowledge and Skills (TEKS) standards require students to identify fossils as evidence of past living organisms. The discovery of a new fossil was recently revealed in an issue of National Geographic (Greshko, 2017). Miners in Canada accidentally uncovered a 110-million-year-old nodosaur—a herbivore measuring 18 feet long and 3000 pounds. This creature lived in conifer forests and fern-filled meadows along an ancient inland sea with humid breezes. Today, that ancient seabed lies under cold, wind-swept plains filled with wheat fields and forests.

Within the article, students can learn how the biosphere has changed over time. It is obvious that different organisms live in Canada today compared to 100 million years ago. The water on Earth (hydrosphere) has changed as well. During the Cretaceous period, the rising ocean water carved an inland sea with its waves lapping near Alberta, Canada. The newly discovered nodosaur may have grazed near the inland sea while searching for food. The inland sea stretched all the way to Texas and is the reason why my students discover sea life fossils in their own

backyards. As Earth's climate (atmosphere) changed, the ancient inland sea receded causing organisms to change over time or disappear. Hence, the hydrosphere and the atmosphere affected Earth's plants and animals (biosphere). Students may wonder what causes the sea to rise and fall over time. Wonderings can lead to engaging discussions and further research.

The nodosaur fossil was painstakingly removed from its rock encasement, so students can further explore the lithosphere (Earth's crust and upper mantle), the processes involved in the formation of sedimentary rock, and the role the hydrosphere plays in forming sedimentary rocks. After studying fossils, when finding one in their own backyards, my students can make observations and inferences pertaining to the environment in which the fossil lived. My students realized fossils actually tell a story if one is willing to examine and think.

Through time, humans have transported organisms from their native habitats to new areas. European explorers brought New World plants and animals to their home countries. Ancient Romans moved exotic animals to the Roman Coliseum for entertainment purposes. Transported organisms either perished in their new habitat or thrived. Texas fifth graders are required to learn about changes to ecosystems. One of these changes is caused by invasive species. When a non-native organism causes changes to the environment, it is known as invasive. Many times, an invasive species has no predators. This concept relates to zebra mussels entering Texas lakes.

The Fort Worth Star Telegram newspaper article, *Zebra Mussels Found in Lake Grapevine* (Hanna, 2018), explains how scientists are surprised zebra mussel larva have adapted to the warm Texas waters, especially since zebra mussels originated in Europe's Caspian and Black Seas and were introduced to the United States through the St. Lawrence Seaway. Unfortunately, there are no known predators of this phytoplankton-eating mussel, and the article states Texas Parks and Wildlife is

unsure of the long-range effects on food webs since the arrival of zebra mussels is fairly new to Texas. While reading the article, students will be able to relate the biosphere and hydrosphere that exists in and around Texas' lakes. Students can explore and predict how food webs in Texas' lakes will be affected by zebra mussels. In turn, how will that affect humans? Students may ponder whether climate change within Earth's atmosphere is affecting the movement and survival of zebra mussels. As an extension, students may investigate how NASA satellites such as the Moderate Resolution Imaging Spectroradiometer (MODIS) can collect data on chlorophyll in Texas lakes in order to monitor the amount of phytoplankton consumed by zebra mussels.

The study of zebra mussels captured my students' interest and led to further research as well as questions pertaining to the spread of this invasive species. My students researched how they can help stop the spread of zebra mussel larvae in lakes near our school. They learned about the importance of washing and wiping down boats as well as fishing equipment. The students also created a zebra mussel identification card to keep with them while boating or fishing. The card included information about what to do when spotting this invader. My students learned they can become citizen scientists in their own communities.

On August 25, 2017, a category four storm known as Hurricane Harvey, came ashore near Port Aransas, Texas. Due to its historic flooding, many of my students were worried about their friends and relatives who lived in and around the Houston area. This weather event flooded the media with news updates and photographs. My own daughter traveled to Port Aransas to assist in the recovery effort. She sent pictures to my classroom to show the powerful results of this dangerous hurricane. These photos gave my students insight into the fifth grade TEKS regarding weather versus climate.

Forbes magazine published an article entitled, We Looked into the Effects of Hurricane Harvey and Here Is What We Found (Holmes, 2017). The information in the article covered the economic effect, the historic rainfall, and the kindness of strangers. Besides economic costs running as high as \$190 billion, the article focused on the 51.88 inches of rainfall near the Houston area. Scientists believe this vast amount of rainfall “exceeds that of any other flood event in the continental U.S. over the past 1,000 years” (Holmes, 2017). Today, students can use data collected by NASA satellites such as SMAP, ASTER, and GOES to further study Hurricane Harvey’s effects.

When students read about Hurricane Harvey in August, 2017, storm clouds were building above our school bringing us several inches of rain. As rain pattered on our school roof, students read about the atmosphere and hydrosphere greatly affecting the biosphere around Houston as lives changed in a few hours. Homes and personal belongings were destroyed. Lack of safe drinking water and available food were of grave concern. As displaced humans searched for higher ground, so did pets, snakes, alligators, fire ants, deer and other wildlife. Wind damage and runoff uprooted plants. The atmosphere affected the lithosphere as shown by the NASA’s MODIS photograph taken from the International Space Station which revealed the amount of sediment washing into the Gulf of Mexico.

Hurricane Harvey was relevant to my students and several topics fostered further exploration using information put out by the media. The question on everyone’s mind was how can we help fellow Texans only 260 miles away? Our school collected hundreds of dollars in change and donated school supplies for South Texas children affected by the hurricane. We sent letters to schools along the Texas Gulf Coast to let fellow students know we were thinking about them and

praying for them. Hurricane Harvey was an opportunity to connect Earth's atmosphere, lithosphere, and biosphere with people hearts.

Science isn't just data and theories. When you can connect science to passion, then lessons become relevant, engaging, and sometimes emotional. That is why I use current events to make strong connections between my classroom and global awareness. Using current events in a science classroom can motivate students to make a change in their own lives and the lives of others.

References

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