What’s the Buzz? Learning About Malaria

A lesson plan for K-1 Science
21st Century Interdisciplinary Theme: Health Literacy
By: Mary-Craige Wells of Wells Elementary, Wilson, North Carolina

This lesson utilizes documents from the North Carolina State Government Publications Collection. Ensuring Democracy through Digital Access, a NC LSTA-funded grant project.

Learning Outcome

To make students aware of diseases that affected North Carolina in the 1800-1900’s. They will apply the knowledge learned about mosquitoes to give them a better perspective on how to prevent the spread of the disease.

Teacher Planning

Time Required: Flexible to your individual classroom needs

Type of Activity: Critical thinking and Application

Materials/Resources Needed

- Computer, internet access to digital library and various other websites
- NC State digital document showing difference between pest and malaria mosquito URL: http://digital.ncdcr.gov/u/?/p249901coll22,70480
- Book: Why Mosquitoes Buzz in People’s Ears by Verna Aardema
- Art supplies to make anti-malaria posters

Activity Sequence

This would be a great lesson to teach when children get back to school from summer break. The mosquitoes are still biting and it allows ample during the school year to keep in touch with another country that is affected by malaria.

The duration of this lesson depends on your class. Knowing that the attention span of younger children is shorter, I have broken this down by numbered steps. You will have to alter this to suit your needs.

1. Read the story Why Mosquitoes Buzz in People’s Ears by Verna Aardema

This Caldecott award winning African tale uses the cumulative format. It's a pour quoi tale or myth, telling how some natural phenomena came to be. In this case it's why mosquitoes buzz in people's ears. According to this tale, it happened this way: a mosquito said something foolish to the iguana who put sticks in his ears so that he would hear no more such foolishness. This frightened the next animal who saw the iguana and so went the chain of action and panic until a monkey inadvertently killed an owlet which caused the mother
owl to mourn and neglect her duties of waking the sun. When the animals finally figured out the tragedy, they blamed the mosquito and were furious with him. That's why mosquitoes buzz in people's ears: they are asking if everyone is still angry with them.

Lead your students in a discussion about why most people dislike mosquitoes. I'm sure most of them will talk about the painful, itchy stings they create, while others will talk about how annoying they are. Pass out the mosquito coloring sheet to your students and allow them to record what they know about mosquitoes on their paper. Coloring Sheet:  http://familycrafts.about.com/library/nosearch/Color_Mosquito.pdf

2. Lead your students in a discussion about diseases. Come up with a definition using their words. After a definition has been established, inform your students that in the 1800’s and early 1900’s hundreds of people died from a disease carried by mosquitoes in North Carolina. Malaria is a mosquito-borne disease caused by a parasite. People with malaria often experience fever, chills, and flu-like illness. Left untreated, they may develop severe complications and die. In 2008, an estimated 190 - 311 million cases of malaria occurred worldwide and 708,000 - 1,003,000 people died, most of them young children in sub-Saharan Africa. At this point, show students the following link from a 1939 NC Health publication (page 103).http://digital.ncdcr.gov/cdm4/document.php?CISOROOT=/p249901coll22&CISOPTR=257409&CISO SHOW=257408

This document shows the difference between a typical mosquito and a mosquito that transmits malaria. Lead your students in a discussion about the differences and similarities of the two. Some questions you may want to ask your students at this point are:

1. Where do mosquitoes come from?
   (Answer: They are born in the water)
2. What is a mosquito’s purpose?
   (Answer: Food for dragonflies, birds, amphibians, and fish)
3. Do you think we have a problem with malaria in the North Carolina today?
   (Answer: No, North Carolina eradicated malaria in the 1940’s)
4. Does the United States have the same malaria problem as other parts of the world?
   (Answer: No. Malaria was eradicated in the United States by the early 1950’s)
5. How did North Carolina and the United States eradicate malaria?
   (Answer: use of chemicals, educating people, and reduction of breeding places)
6. Could people still have malaria in the United States?
   (Answer: Yes, they can bring it into our country from traveling to other infected countries)
7. What are some ways we can prevent malaria?

The following website has some great activities to use for educating your class about malaria (story book, PowerPoint, activities): http://www.globalhealthforum.org/for-students/toolkits

Some additional publications that you can share with your class:
Mosquitoes 1955:

Facts about malaria:

The control of Mosquitoes:

Statistics 1899-1940:

CDC information on malaria:
http://www.cdc.gov/malaria/about/facts.html

3. Create an anti-malaria campaign with your students. It is important for students to know that there are other parts of the world that have serious malaria problems and children their own age are dying at a rate of 1 every 30 seconds. Lead your students in a discussion about what they can do.

Check out the following link: http://www.nothingbutnets.net/blogs/teaching-malaria-prevention.html

Sending a donation of just $10.00 will provide a bed net for a family in need. Try to create your own area in the classroom with a bed net. Students could use this as a reading location or even a place to role play.

Assessment

Students can be assessed through their Anti-Malaria campaign posters.
Author’s Notes

Sending a donation to another country is a great way to create a global connection with your students. Contacting representatives from these websites can lead to communication between your students and those overseas.

Other fun activities about mosquitoes:

Make a mosquito (craft activity)

Educational Activities

Sequencing cards

Building a mosquito trap

North Carolina Essential Standards

K.H.1 Understand change over time.

K1.G.2 Understand the interaction between humans and the environment.

1.C.1 Understand the diversity of people in the local community

K.L.1 Compare characteristics of animals that make them alike and different from other animals and nonliving things.

1.L.1 Understand characteristics of various environments and behaviors of humans that enable plants and animals to survive

K1.PCH.1 Apply measures for cleanliness and disease prevention

1.PCH.2 Understand wellness, disease prevention, and recognition of symptoms