THE ST. LOUIS AMERICAN
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The St. Louis American is proud to partner with Normandy School District, the St. Louis Public School District and the Saint Louis Science Center to provide this classroom tool for STEM education for students in 3rd, 4th and 5th grades, with content based on Missouri Learning Standards.

Weekly Newspaper In Education Program

STEM

science, technology, engineering, and math

CLASSROOM SPOTLIGHT

Mr. Wright's 1st Grade Class Lexington Elementary

Students in Mr. Wright's class worked on making lava lamps using a variety of different household items.

Photo by Wiley Price

Teachers, if you are using the St. Louis American's NIE program and would like to nominate your class for a Classroom Spotlight, please email:kjones@stlamerican.com

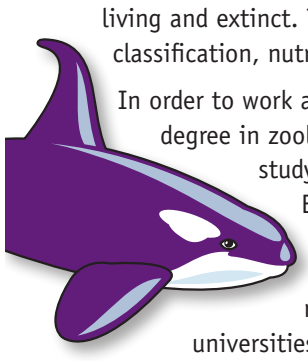
SCIENCE CORNER

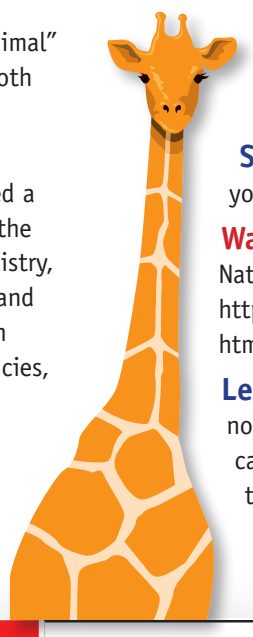
Who Wants To Be A Zoologist?

Zoology comes from Greek words meaning "animal" and "knowledge." Zoologists study animals, both living and extinct. These studies may include classification, nutrition or behavior.

In order to work as a zoologist, you will need a degree in zoology. This degree involves the study of biology, physics, chemistry, English, algebra, calculus, and statistics. Zoologists often work for government agencies, nonprofit organizations, universities, museums, and zoos. They may also work to protect endangered animals and their habitats.

People who study zoology might work as animal caretakers, parks naturalists, veterinary technicians, or zookeepers. Arboretums, aquariums, botanical gardens, fish and wildlife services, even cosmetic companies, hire zoologists.

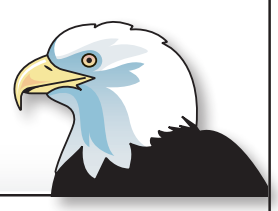




Students: What skills do zoologists need? What would you enjoy about being a zoologist?

Want To Learn More? Read more about zoology at the Natural History Museum web site: http://www.nhm.ac.uk/kids-only/ologist/zoologist/index.html

Learning Standards: I can read a nonfiction article to learn about careers in math, science, and technology.



SCIENCE EXPERIMENT

O-S-M-O-S-I-S!

Zoology includes the study of nutrition to make certain that animals have all the nutrients they need to grow and survive. Roger Arliner Young studied the effects of hydration and dehydration. One way to stay hydrated is osmosis, which is the process of absorption. For this experiment, you will see how a potato uses osmosis for hydration.

Materials Needed:

3 cups Water Salt Sugar

Potato Knife Paper Pen or Pencil

Process: Fill each cup halfway with water. Label one cup "plain water," label one cup "salt," label one cup "sugar." Add 3-4 tablespoons of salt to the salt cup and stir to dissolve. Add 3-4 tablespoons of sugar to the sugar cup and stir to dissolve. Your teacher will cut three thin slices of potato — add one slice to each of the three cups. After 30-45 minutes, check the potato slices. The potatoes soak up water, salt, and sugar through osmosis. Have the potato slices in salt and sugar water become stronger or weaker? Has the potato in plain water become stronger or weaker?

Analyze: If you consume drinks with salt or sugar, what do you think happens to your cells? Do you think plain water does a better job of keeping you hydrated? Why or why not?

Read on to find out more about osmosis:
http://www.faqkids.com/311-osmosis.html

Learning Standards:
I can follow directions to complete an experiment. I can make careful observations and deductions based on my results.

MATH CONNECTION

BY THE NUMBERS

Many studies have shown that children need to drink 8-10 glasses of water each day to stay hydrated. A glass is considered to be 8 ounces. Use the information to answer the following questions.

Questions:

1. It is recommended that you drink _____ ounces of water per day. If you multiply by 7, you will see that you need to drink _____ ounces of water per week. Convert that number to quarts, pints and gallons.

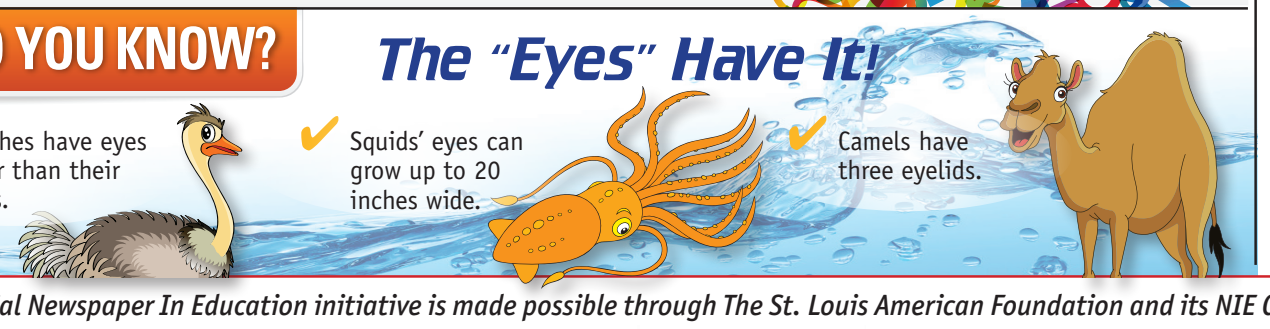
2. Survey your classmates to see how many ounces of water they drink per day. Create a bar graph to display your results. Analyze your results. Find the average number of ounces consumed by your classmates per day.

Learning Standards: I can add, subtract, multiply, and divide. I can use information to create a bar graph and analyze the results.

DID YOU KNOW?

The "Eyes" Have It!

- Ostriches have eyes bigger than their brains.
- Squids' eyes can grow up to 20 inches wide.
- Camels have three eyelids.



INVENTORS & INVENTIONS

FIRST AFRICAN AMERICAN ZOOLOGIST—

Roger Arliner Young

Roger Arliner Young was the first African American female to receive a doctorate in zoology. Read her timeline below to see her achievements:

1900 Born in Clifton Forge, Virginia

1916 Admitted to Howard University

1921 Took her first science course with Ernest Everett Just

1923 Graduated with a bachelor's degree

1924 Entered the University of Chicago, published her first research article in Science magazine, September 1924

1926 Earned Master's degree in zoology and admitted into the honor society of Sigma Xi

1927 Began working with Just at the Marine Biological Laboratory, studying hydration and dehydration of cells and the effects of radiation

1929 Filled in for Just as the head of the zoology department

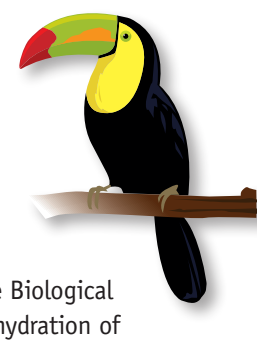
1937 Began work on doctorate degree at the University of Pennsylvania

1940 Earned her doctorate degree and became an assistant professor at North Carolina College for Negroes in Raleigh.

1950 Worked in Texas and also Jackson State College in Mississippi

1962 Went to work at Southern University in New Orleans

1964 Roger Arliner Young died November 9th.



Students: What was significant about Young's degree in zoology? How old was Young when her first article was published?

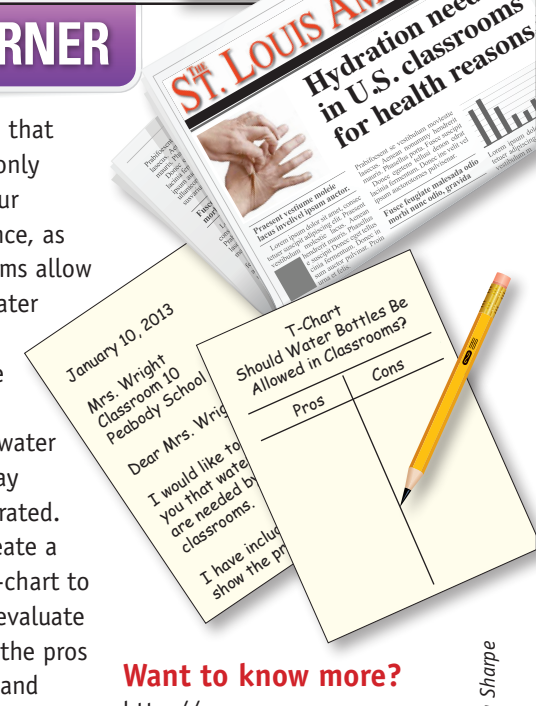
Want to know more?

"Young women of achievement: a resource for girls in science, math, and technology," by Frances A. Karnes and Kristen R. Stephens.

"Super Women in Science," by Kelly DiDomenico

Learning Standards: I can read a timeline to learn important events in a biography.

MAP CORNER



Studies have shown that water benefits not only your health, but your academic performance, as well. Some classrooms allow students to carry water bottles in class to assure that they are drinking enough water to stay hydrated. Create a T-chart to evaluate the pros and cons of having water bottles in the classrooms. Once your T-chart is complete, write a letter to your teacher explaining why you should or should not have water bottles in class. Remember, your goal is to persuade your teacher.

Want to know more?
http://www.superkidsnutrition.com/nutrition_answers/fw_hydration-health.php

Learning Standards:
I can write for a specific audience and purpose. I can use a graphic organizer to develop my thoughts.

Content—Jennifer Wirthwein • Design—Beth Sharpe