



# Day-by-Day Math: Activities for Grades 3–6

by Susan Ohanian

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*Day-by-Day Math: Activities for Grades 3–6, by Susan Ohanian, is an eclectic and quirky collection of events — and the mathematical investigations, problems, or activities that are suggested by them. Each day of the year, from January 1 through December 31, lists historical events, each a lighthearted or serious moment. Some of the classroom suggestions are ideal for five-, ten-, or fifteen-minute main period “openers;” some can be used for longer class investigations; many are suitable for individual assignments. There’s something in this diverse collection for everyone, which is sure to add an extra bit of oomph to your math instruction. Here are some dates and investigations that your students can explore this coming year:*

## **January 23, 1951**

The C102 jetliner makes history, flying from Toronto to Chicago to New York and back. It flies at twice the speed — 520 miles — and twice the altitude — 36,000 feet — of propeller-driven airplanes. At this altitude, planes are able to fly above unsettled weather.

### **Investigate**

Find out how long it takes to make a typical commercial flight from New York to San Francisco. What is the hourly speed? Is the flight time from San Francisco to New York the same?

## **1975**

During what is dubbed “The Storm of the Century,” the wind chill is between  $-50^{\circ}$  and  $-80^{\circ}$  Fahrenheit in Duluth, Minnesota. Weather information is available from many online sources.

### **Investigate**

Keep a weather graph charting the temperature for a month. Then find the average temperature for the month. Check an almanac to find out whether this is above or below average.

## **January 23, 1849**

Elizabeth Blackwell, who had been turned down by 28 colleges before she found one that would let her study medicine, graduates from Geneva Medical College (now Hobart and Williams Smith Colleges) in Geneva, New York, at the head of her class and becomes the first woman doctor in the United States. For more information about Elizabeth Blackwell, check [hyperlink] <http://www.greatwomen.org/blkwele.htm>.

### **Investigate**

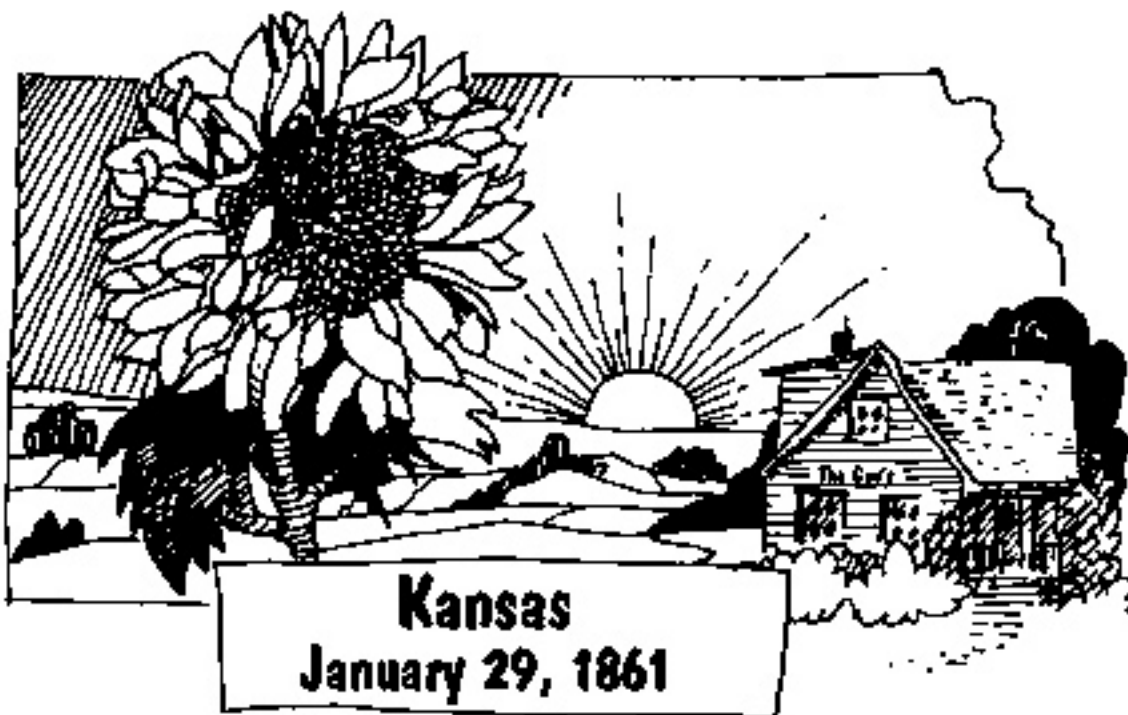
Look at the list of doctors in the yellow pages of the phone book. How many are male and how many are female? Can you determine whether female doctors are more apt to specialize in one field of medicine over another?

1985

The Coca-Cola Company announces it is replacing its 99-year-old recipe with a new formula. Customers react so negatively that on July 10 the same year it reintroduces the old Coke under a new name, Coca-Cola Classic.

### Investigate

Every minute, people around the world drink 311,111 Cokes. How many Cokes are consumed in one week?



January 29, 1861

Kansas becomes the 34th state. The name Kansas comes from an Indian word meaning flat or spreading water. The state flower is the sunflower. The sunflower provides pioneer settlers in the Midwest with oil for their lamps and food for themselves and their stock. Native Americans roast sunflower seeds and ground them into flour for bread or pound them to release an oil for cooking and for making body paint.

### Investigate

Look at a live sunflower or a detailed picture of one. A sunflower has two distinct parallel rows of seeds spiraling clockwise and counterclockwise. The seeds are Fibonacci numbers, typically 34 going one way and 55 going the other way, although sometimes they are 55 and 89. Find other natural examples of Fibonacci patterns. Good places to look include pinecones, pineapples, artichokes, and African daisies. For a terrific site on Fibonacci numbers, go to <http://www.ee.surrey.ac.uk/Personal/R.Knott/Fibonacci/fibnat.html>.

## 1998

Carl Gorman, a gentle Navajo artist and one of the 400 Navajo code talkers during World War II, dies. Gorman and 28 other Navajo volunteers turned their native language into a secret code that allowed Marine commanders to issue reports and orders and to coordinate complex operations. Although the highly respected Japanese code crackers broke U.S. Army, Navy, and Air Corps codes, they were never able to break the Marine Navajo code. As Gorman's New York Times obituary notes, "Navajo is a language without an alphabet and with such a complex, irregular syntax that in 1942 it was estimated that outside of the 50,000 Navajos, no more than 30 other people in the world had any knowledge of it, none of them Japanese." Online information from the Native American museum that is part of the Smithsonian Institution is available at <http://www.si.edu/nmai/nav.htm>. The Navajo Code Talkers' Dictionary is available online at: <http://www.history.navy.mil/faqs/faq61-4.htm>.

### Investigate

Team up with at least one other person and invent a code using numbers.