

HISTORIC KITE EVENTS

Write these words for your students: "Niagara Falls, weather research, electricity, radio, photography, and airplanes." Ask them how kites played a part in each one.

- 1749 Alexander Wilson flew a kite train to record air temperatures at different altitudes.
- 1752 Ben Franklin proved there was electricity in lightning.
- 1804 George Cayley developed the concept of heavier-than-air flight. His glider was a modified arch top kite.
- 1827 George Pocock used kites to pull a horseless carriage.
- 1847 A kite flown by Homan Walsh, age 10, aided in the construction of a suspension bridge across the Niagara River.
- 1893 The Eddy Diamond and the Hargrave Box raised scientific instruments for weather research.
- 1899 The Wright Brothers used kites to test their theories for the first flying machine (airplane).
- 1900 Guglielmo Marconi used a kite to lift an antenna to make his historical radio link between America and Europe.
- 1901 The French Military (Conyne) kite raised military observers.
- 1903 The Wright Brothers flew the first manned flying machine.
- 1903 A kite train towed S.F. Cody across the English Channel.
- 1906 Kites carried a camera aloft to take aerial photographs of the damage caused by the San Francisco earthquake.
- 1907 Dr. Alexander Graham Bell lifted his wife off the ground using a kite made of over 3,000 tetrahedral cells.
- 1919 A kite train was flown in Lindenberg, Germany to an altitude of 31,955 feet.
- 1939-1945 The Gibson Girl Box, Garber's Target Kite, and Saul's Barrage Kite were all used in World War II.
- 1948 Francis Rogallo patented his Flexi-wing kite. It was the forerunner of the hang glider and delta kite.
- 1964 Domina Jalbert designed the parafoil. His concepts have been adapted for parachutes and kites.
- 1972 Peter Powell introduced his dual line stunt kite.
- 1978 Kuzuhiko Asaba flew 4,128 kites on a single line.
- 1989 Kite flying becomes a sport with the establishment of a national stunt kite circuit. The "California Swept Wing" stunt kite has had the greatest influence on stunt flying.

WHAT IS A KITE?

Challenge your students to come up with a definition for a kite. Ask, "Class, what is a kite?"

Amazingly enough, this question will probably stump your class. Everyone knows what a kite is visually, but many have difficulty explaining it clearly and concisely in words.

You can stimulate the discussion with the question, "If you had a friend that lived on the moon, and they had never seen a kite, how would you describe it?"

| Your Students Might Say | You Can Ask Them |
|--------------------------------|---|
| It's a toy | How is it different from a rubber ball? |
| It can fly | How is it different from an airplane? |
| It rises in the air | How is it different from a balloon? |
| It uses the wind | How is it different from a windmill? |
| It has paper or fabric | How is it different from your shirt? |
| It has sticks | How is it different from a fan? |
| It's lightweight | How is it different from a feather? |

Look for the following key ideas that usually come from different students and can stimulate additional topics for discussion:

- Kites are tethered objects using one or more lines
- Kites depend on air moving across their surfaces to fly
- Kites generate lift and have an aerodynamic shape

Definition:

According to the Drachen Foundation in Seattle, WA, "A kite is a heavier-than-air craft that depends on the wind to overcome gravity to fly. All kites have one or more surfaces to be acted upon by the wind, a bridle to hold the kite at an efficient angle into the wind, a flying line to keep the kite from blowing away."