

**COMMON
CORE**

Orville & Wilbur

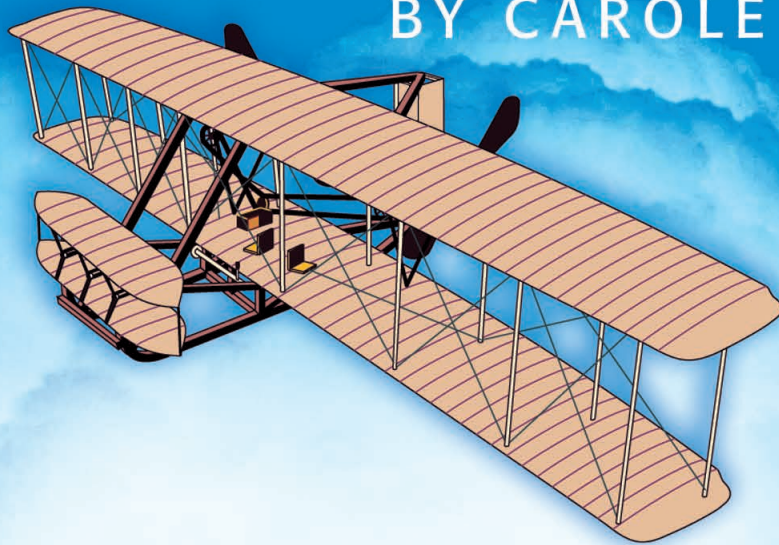


Wright



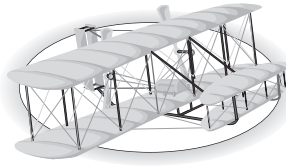
...Step Out Into the Sky.

BY CAROLE MARSH



The high flying story of two
bold brothers and their
quest to achieve the impossible!

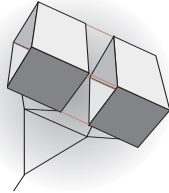
1903  **2003**
100th ANNIVERSARY



A Timeline of Events



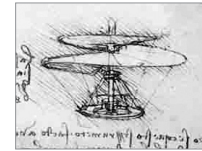
4th century B.C.E.
The kite is invented in China.



c. 875 C.E.
A Spanish doctor attaches wings to his body and flies, but crashes because he failed to make tailfeathers!



1485-1500
Italian artist, Leonardo da Vinci, designs a number of muscle-powered "ornithopters."



1678
A Frenchman attempts to fly using "flappers." It was a flop!



November 21, 1783
First successful flight in a hot air balloon.



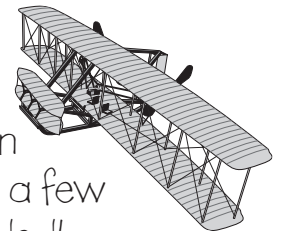
Early 1800s
In England, George Cayley designs early airplanes and helicopters.



Mid-to-late 1800s
Many people design, test, fly, fail to fly, and crash many different types of "air craft"!



December 17, 1903
Orville and Wilbur Wright become the first to achieve flight in a heavier-than-air plane, using power, that lasts more than a few seconds, is controlled across distance, and successfully landed!



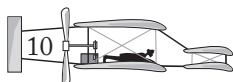
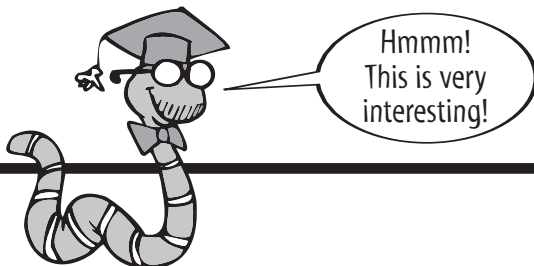
The Wright Stuff?

You may assume that the Wright brothers were two little geniuses who loved school and made all A's—not so! The boys were very bright. They did go to school, of course, but they hated being confined to desks all day long. It is likely that they were “gifted and talented” but not the kind of kids who learn as well in the classroom as they could experimenting with things on their own, which is exactly what they did.

See If You Have the Wright Stuff!

Conduct the following experiments and record your results.

EXPERIMENT	RESULTS
<p>1 Take a ruler and hold it up as high as you can. Let it go.</p>	<p>This is an example of:</p> <p>a. ___ pitch b. ___ yaw c. ___ gravity</p>
<p>2 Take a handkerchief and hold the 4 corners together. Twirl around and see if you can fill the handkerchief with air:</p>	<p>The shape the handkerchief made when filled with air was:</p> <p>a. ___ square b. ___ curved c. ___ flat</p>
<p>3 Get a piece of bendable material such as a chopstick or a drinking straw. Bend it as much as you can without risking it breaking.</p>	<p>Why would something that can bend with the force of the air be important to creating an early airplane?</p> <p>a. ___ It is more like a wing and can get lift b. ___ It shouldn't bend; it should be stiff</p>



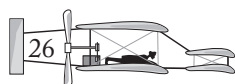
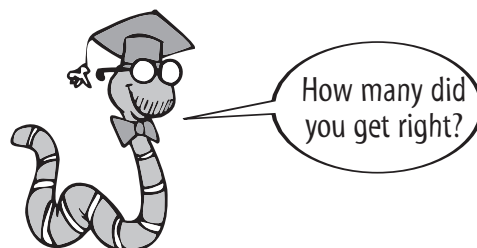


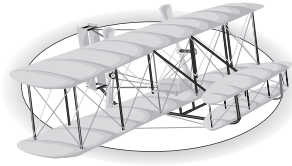
Wright Brothers and First Flight Trivia!



Orville and Wilbur were fascinating guys! Circle T for True or F for False, whichever you believe about the trivia below!

- TRUE / FALSE Wilbur was born in Indiana; Orville was born in Ohio.
- TRUE / FALSE Their father was a bishop of the United Brethren Church.
- TRUE / FALSE As children, they earned spending money by selling mechanical toys they made at home.
- TRUE / FALSE When Orville started a printing business, he built his own printing press out of items that included a beat-up trombone and parts of old buggies.
- TRUE / FALSE The Wright brothers tested more than 200 different wing models in their wind tunnel.
- TRUE / FALSE They made almost 1,000 flights in their 1902 glider.
- TRUE / FALSE *Flyer* cost less than \$1,000 to build.
- TRUE / FALSE In 1908, Orville crashed a plane in Virginia; he was hurt and a passenger was killed.
- TRUE / FALSE *Flyer* was made of wooden poles, baling wire, muslin cloth, bicycle chains, and a gasoline engine that had no more power than a lawn mower!
- TRUE / FALSE Orville and Wilbur flipped a coin to see who got to make the historic flight at Kitty Hawk.
- TRUE / FALSE Wilbur once flew an airplane around the Statue of Liberty!





Answer Key

page 10: 1-c; 2-b; 3-a

page 11: 1-e; 2-d; 3-c; 4-f; 5-a; 6-b

page 13: c, a, d, e, f, b

page 14: **LEFT, RIGHT, HIGHER**

page 15: West Virginia, Virginia;

Atlantic Ocean; Ohio

page 16: 1-4; 2-3; 3-732; 4-71; 5-\$25.00; 6-750

page 17/18: 1-east; 2-west; 3-22; 4-5.5;

5-44; 6-gravity

page 19: patience, mistakes, failure,

encouragement, perseverance, time, optimism,
brainstorming

page 20: 1-g; 2-a; 3-e; 4-d; 5-c; 6-h; 7-b; 8-f

page 21: 1-Orville; 2-Flyer; 3-glider; 4-Kill Devil;

5-Kitty Hawk; 6-1903; 7-fly

page 23: 1-f; 2-a; 3-e; 4-b; 5-d; 6-g; 7-c

page 25: Wright Brothers, Flyer

page 26: All are true!

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