

Newspaper in Education Presents

# inquizi kidz

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Would Orville and Wilbur flip if they flew in a 777?

## kidzbiz

### Libby's Travels

By Leslie Rowe

**B**raden River Middle seventh grader Libby Van Dalen's world travels have taken her back and forth from her native Netherlands, and she'll soon ski the Alps in Switzerland and Austria. As she crosses the Skyway Bridge and boards a huge airplane, Libby's thoughts will turn to Tech Ed class. On a recent trip, after learning about the four forces of flight—*lift, thrust, gravity, and drag*—

Libby found herself examining the *ailerons* (those hinged flaps on the wings). As she crossed bridges she thought about the five types of stress in a structure. (She could name them all—can you?)

(Okay, here's the answer: *torsion, compression, tension, bending, and shear.*)

A bright and hard-working student, Libby likes to hang with friends, ride horses, and play piano. But ever since Tech Ed, she looks at the world a little differently. "It made me think about bridges and buildings and how they are constructed," she said. "I think it's more interesting than I did before. Every day we learned something new." For a class structural challenge, Libby built a 10" tower of lightweight balsa wood—that held 204 pounds!! Amazing!

## school biz

### Well Done!

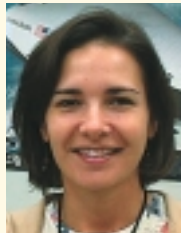
By Leslie Rowe

If there's one word to describe Adriana Radigan, technology teacher and Technology Student Association advisor at **Braden River Middle**, it's *bright*. She has a bright mind—she

understands technology extremely well and she's great at sharing her knowledge. She has a bright outlook—her students can tell that she cares about them *and* the subject matter.

She has a bright personality, with a quiet welcoming smile that remains friendly yet keeps control of the classroom.

When it comes to technology education, Adriana knows her stuff. She can tell you how *and* why planes fly and she can explain structural dynamics like an architect. She creates interest in her classroom with fun projects—like building model airplanes that fly on the strength of a rubber band and a propeller, or launching homemade rockets made from two-liter bottles. Adriana recently applied for a technology grant to update the lab at Braden River Middle with advanced technological tools and equipment. Writing and researching the grant application took a lot of time and effort, but it was worth it! Her classroom was awarded \$40,000! Well done, Ms. Radigan!



Adriana Radigan

### Flying: Mankind's Dream Come True!

By Julie Gillies

**R**emember when you were little and wished you could fly? Maybe you have a younger brother who likes to tie a towel around his neck and pretend to soar like Superman. A century ago, inspired by this same dream, the Wright brothers persevered against gravity—and won! In 1899, Wilbur Wright declared with great boldness, "I am convinced that human flight is both possible and practical." The determination of these two men, Wilbur and Orville Wright, changed the course of history.

The first known attempt at flying took place many centuries before Wilbur's daring declaration. Around 1000 B.C., the Chinese invented kites. Eventually they made kites large enough to carry one daring soul a short distance. In the early 1500's, Leonardo de Vinci sketched his famous flying machines (over 100 of them) based on bird anatomies. Over the centuries, many attempts to fly using artificial wings ended in injury or death. In the late 1700's, hot air balloons came along. These fragile gizmos were controlled mostly by the wind; not a very dependable way to fly. In 1799, Sir George Cayley, an Englishman known as the *Father of Aerodynamics*, conceived a flying machine—basically a kite mounted on a stick with a mobile tail. This was the first accurate but crude concept of an airplane.

In the late 1890's, a German engineer named Otto Lilienthal designed a glider that would fly. Fascinated by the dream of flight, he published a book on aerodynamics. This book was a great help to the Wright brothers. Samuel Langley, a physicist and astronomer who lived at the same time, understood that power was needed to allow the glider to fly efficiently. He designed a model of a plane called an aerodrome, which used a steam-powered engine.

In 1894, Octave Chanute, an engineer inspired by Otto Lilienthal, published a virtual encyclopedia of flying, "Progress in Flying Machines." The Wright brothers used this book and frequently communicated with Octave about their developments. On December 17, 1903, after many years of trial and error, Orville Wright took a 700 pound airplane known



as the *Flyer* for a twelve second flight. It was the very first successful powered and piloted flight in history.

A century has passed since that first, brief flight. Today, one of the most technologically advanced airplanes is the Boeing 777. In 1910, inspired by an air show, William Boeing founded the Boeing Company. He built his own plane, started his own company, and today Boeing leads the aviation industry.

Would Orville & Wilbur flip if they flew in a 777? Chances are, if the Wright brothers boarded a modern plane with bathrooms, movies, snacks, and hundreds of people, they wouldn't flip at all. They'd just ask the pilot to move over!

### Discover the Future

Many careers are available in the aviation industry. Maybe one of these jobs is for you! Your library and the Internet have lots more information.

- Pilot
- Aviation Mechanic
- Flight Attendant
- Aerospace Engineer
- Airport Staff
- Aircraft Manufacturing
- Flight Dispatcher
- Cargo Agent
- Air Traffic Controller
- Flight Researcher
- Flight Tester
- Ramp Agent
- Medivac Pilot
- Military Pilot
- Astronaut
- NASA Staff

For more career information see your school counselor and get information on-line at:  
<http://jobstar.org/tools/career/spec-car.cfm>  
 OR  
<http://www.acinet.org/acinet/default.asp>



## explore it

### Make Your Own Kite

Go fly a kite! Try making your own version of the world's first flying machine. Ask your parents for help in getting supplies and assisting you as needed. On the next windy day, head out to an open area free of wires and trees. Imagine what it must have felt like to actually ride in a kite, like the Chinese people of long ago.

The Big Wind Kite Factory from Moloka'i, Hawaii presents:

#### Uncle Jonathan's Easiest Kite Ever

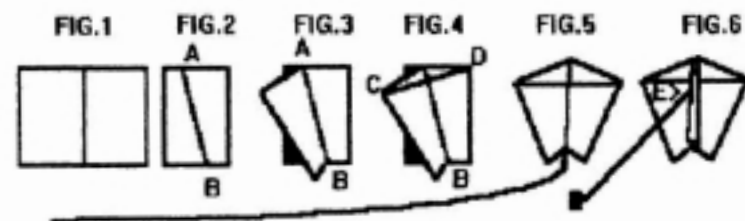
(Source: <http://www.aloha.net/~bigwind/20kidskites.html>)

#### Material list:

- One sheet of brightly colored 8 1/2" x 11" typing paper.
- One 8" bamboo barbecue shishkabab stick.
- 6 to 10 feet of florescent surveyor's flagging plastic tape. Available at any hardware store. A plastic bag cut in a 1" wide spiral all around will also make a great tail.
- 1/2" wide masking tape or any type of plastic tape.
- 6 to 10 feet of string.
- A piece of 1"x 3" cardboard on which to wind the string.
- Scissors
- Hole punch

#### Directions:

1. Fold a sheet of 8 1/2" x 11" paper in half to 8 1/2" x 5 1/2".
2. Fold again along the diagonal line A in Figure 2.
3. Fold back one side forming kite shape in Figure 3 and place tape firmly along fold line AB. (No stick is needed here because the fold stiffens the paper and acts like a spine.)
4. Place barbecue stick from point C to D and tape it down firmly.
5. Cut off 6 to 10 feet of plastic ribbon and tape it to the bottom of the kite at B.
6. Flip kite over onto its back and fold the front flap back and forth until it stands straight up. (Otherwise it acts like a rudder and the kite spins around in circles.)
7. Punch a hole in the flap at E, about 1/3 down from the top point A.
8. Tie one end of the string to the hole and wind the other end onto the cardboard string winder.



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- Sugg Middle School
- Ballard Elementary Magnet
- Daughtrey Preparatory Magnet
- Harlee Middle Magnet
- Johnson Middle Magnet
- Lee Middle Magnet



#### Braden River Middle School



- Haile Middle School
- Lincoln Middle Magnet
- Manatee Elementary Magnet
- Rowlett Elementary Magnet
- Tillman Elementary Magnet
- Wakeland Elementary Magnet

Schools listed in red offer instruction in the subject area featured in today's InquiziKIDz

Next Weeks Inquizikidz - Do you value values?



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