

I got the idea for my program from something we are going to be doing here at MIT. The 100<sup>th</sup> year anniversary of the first flight of the Wright Brothers is this year, and various discussions I've had in an academic setting made me think that it would be great to have a children's program celebrating the anniversary as well. This program will probably introduce many children to the Wright Brothers, or certainly give them a deeper knowledge and appreciation of them and flight in general. I know in just doing the work for this project I have found a new respect for them. We take flying for granted these days, but humans attempted to fly for centuries before the Wright Brothers were successful.

I also found that publishers are looking to capitalize on the 100<sup>th</sup> anniversary, as there are many new children's books about the Wright Brothers that have been published this year. While a library probably only wants to have so many books on one topic, it is a great time to pick up a few new ones. In my bibliography below I list not only the resources I would use to put the program together, but also other titles that it would be great to have on hand for children to check out after the program if interested.

**Audience:**

This program could be tailored to younger children, but I think children ages 9 and higher would get the most out of it. As this has to do with airplanes, the hope is that it would attract boys, as well as girls. This program could also be modified easily for young adults.

**Objectives:**

My main goal would be to teach children about aviation history, the Wright Brothers and some of the science behind flying. There is also an important underlying theme of perseverance in the Wright Brothers story. Also, I want the kids to have fun and be amazed and enchanted by making something fly better on their own.

**Time Frame:**

I've gone back and forth with this one – but I think I like the idea of a two session – for about an hour each. I don't think I know yet what is realistic in terms of the time that children will maintain focus, what parents would want to commit to, etc. Therefore, this outline is subject to change – and could be put in one session. (Nancy, as I have no experience with children's programming, I would love any thoughts or feedback you could give.)

I see the session(s) following this outline.

**Session One:**

- I. Introduction – Humans and flight – we wanted to for a very long time.
- II. Setting the stage of the turn of the last century. Give the children an idea about what else was going on in that time period – have a timeline showing other events in history to help them understand it better.
- III. Enter the Wright Brothers – discuss their life in Ohio, their working with bicycles (and how that would come into play in their aircraft), and their journey to Kitty Hawk, NC. (show a map) – Play 30 minute video/DVD listed in Bibliography. Review the aspects of flight and get them ready for next time.

**Session Two (or break?):**

- IV. Discussion of the four forces of flight -- with use of How Things Fly website <http://www.aero.hq.nasa.gov/edu/index.html>, or the book *Wright Brothers for Kids* – kids will learn about lift, weight, thrust and drag. Demonstrate each to the children with a paper airplane so they don't seem so foreign.

- V. Paper airplane contest!! Have children make a paper airplane of their choosing. Test them out and see which ones work best. Then have all the children follow the instructions found at: <http://www.zurqui.com/crinfocus/paper/air-bld1.html> (How to make the Best Paper Airplane in the World). Have the children make their airplanes and then see how much further they go. Continue to tweak and modify. Incorporate the forces of flight into the discussion, as well as bringing back the Wright Brothers and how many times they had to experiment and build again.

**Materials:**

For paper airplanes – paper (of varying weights and colors, but that creases well, if possible), paperclips.

**Means of Evaluation:**

I think much evaluation can simply come from watching and listening to the children as the program happens. Are they engaged? Interested? Or do they look bored and restless? I would note when the kids looked particularly interested, as well as particularly bored and try to modify the program to make it better in the future. At the end of the program I would ask what was the most interesting thing they learned and if it made them want to learn more about the Wright Brothers, planes and flying. I would also simply ask them if they enjoyed it – I can spot polite lying pretty well.

**Suggested Bibliography:**

Busby, Peter. *First to Fly: How Wilbur & Orville Wright Invented the Airplane the Airplane*. David Craig, Jack McMaster (Illustrator). Crown Publishing, 2003.

Carson, Mary Kay. *Wright Brothers for Kids: How they invented the airplane with 21 activities exploring the science and history of flight*. Chicago Review Press, 2003.

Jackson, Paul. *Quick and Easy Paper Planes that Really Fly*. Flying Frog Publishing, 1997.

Krensky, Stephen. *Taking Flight: The Story of the Wright Brothers*. Simon & Schuster (Juv.), 2000.

Reynolds, Quentin. *The Wright Brothers: Pioneers of American Aviation*. Random House (Juv.), Reissue edition, 1981.

Schmidt, Norman. *Best Ever Paper Airplanes*. Sterling Dimensions, 1995.

Sullivan, George. *In Their Own Words: The Wright Brothers*. Scholastic Paperbacks, 2003.

*The Wright Brothers*. Schlessinger Media, a Division of Library Video Company, 1996.

Yolen, Jane. *My Brothers' Flying Machine*. Illustrated by Jim Burke. Little Brown & Co., 2003.

**Websites:**

(As there are many resources on the web, perhaps the library could feature several Internet links regarding the Wright Brothers on the computers in the children's area to allow children to explore on their own.)

**How to Build the Best Paper Airplane in the World --**

<http://www.zurqui.com/crinfocus/paper/air-bld1.html>

Straightforward instructions for making a paper airplane from a regular sized sheet of paper.

**NASA's Ultra-Efficient Engine Technology, Kids Page.**

<http://www.ueet.nasa.gov/StudentSite/historyofflight.html> -- Discusses history of flight.

A good site to gain information to start talking with the children about how long humans have aspired to fly.

**The Story of Wilbur & Orville Wright --**

<http://homeschooling.about.com/library/blwright1.htm> -- targeted towards home

schoolers, this site has a wide variety of information for kids on the Wright Brothers.