



1905: Complete Flight at Last

You hear from your Dayton friends that Orville and Wilbur have still not given up on perfecting flight. It is now 7 years since their kite experiments of 1899. After all the crashes, how easy it would have been for the brothers to quit long ago. You see a few items in the Cincinnati papers about their flights, but none of the New York or Chicago papers pick up these stories. The world still doesn't know much about their great achievements. You decide to visit again, and when you reach Huffman Prairie in October, you see that some major changes have occurred.

Flyer III sits on the rail ready to launch. The wings look the same, but the craft is a full 10 feet longer than the earlier model. The front elevator has been moved forward, and the rear rudders have been moved further to the rear. You watch as the weight drops in the launch derrick, the launch cradle carrying the flyer shoots down the track, and the flyer climbs into the air. Then, stunned, you watch as Orville circles the field again and again, does figure eights, and finally lands after 20 full minutes in the air! In addition, the flight looks smooth and totally controlled—no more jerky up-and-down motions as in 1903 and 1904.

“Wait until the Society hears about this!” you think excitedly. “It's just incredible. How can it be that the world still doesn't know about this? Is it that people don't understand it, or don't believe it?”

Wilbur explains calmly that they have achieved more precise control in flight by separating the controls for the rudder and wing-warping. Moving the front elevator and rear rudders away from the center of the plane also improves up-and-down control.

This 1905 airplane can be flown until the fuel tank is empty, staying in the air for more than half an hour at a time. It can fly for nearly 25 miles around Huffman's farm, executing turns and figure eights 50 feet above the ground. After 7 years of work, the brothers finally have a practical working airplane.

As you leave, you thank Orville and Wilbur for letting you be a small part of their experiments, and you congratulate them, they've made the dream of powered flight come true. You feel privileged. After all that you've seen, you know that the world is on the verge of a big change.



1905 Wright aircraft in flight.



Activity 22—Design a Mission Patch

A “mission patch,” like the ones shown here, is designed for every NASA spaceflight. Choose one of the years from 1900 through 1905 and design a patch for the Wright Brothers’ mission that year (you can find more mission patches under the “History” link at the top of the page at <http://spaceflight.nasa.gov>).



Activity 23—Be an Inventor

If you have read all the sections in this book about the Wright Brothers’ quest for flight, you know that they followed a very logical process to solve a number of problems. Not everything they tried worked the first time, and they had to go back and redesign things several times to get them to work. In the end, their ideas were excellent; they are still used today to control a plane in three dimensions. They discovered how propellers work in the air and they constructed and used a wind tunnel to give accurate results. They were remarkable inventors.

Suppose you were an inventor and were also interested in transportation like Orville and Wilbur Wright. Write a short paragraph or two about what you would like to invent. How would your invention improve transportation? What problems do you think you would have to solve to be successful? How would you get people to learn about your invention? On another piece of paper, draw a diagram or sketch of your idea.

