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The Wright Brothers National Memorial at Kill Devil Hills, North Carolina. It commemorates the world's first powered flight which took place on December 17, 1903.

Once the Wright brothers were able to achieve sustained and controlled flight, based on their calculations and field tests, they constructed a larger version of their 1902 glider. They called it the <u>Flyer</u>. Most folks today know it as *Flyer 1* or the *Kitty Hawk*.

But <u>Flyer 1</u> would be an airplane, not a glider. Will and Orville needed to figure out how to use a propeller in the air. Although they looked at shipbuilding literature, it didn't help them. There was no theory of propulsion. At the time, no one truly understood a propeller is nothing more than a wing rotating on its axis which lifts the plane forward.

Once the Wright brothers reasoned through this fundamental tenet of self-propelled flight, they were ready to build <u>their power source</u>. It was a <u>4-cylinder</u>, 12 horsepower <u>gas</u> engine they built with the help of their mechanic, Charlie Taylor. (Be sure to follow the links in this paragraph to view NASA-created animations depicting how *Flyer's* engine actually <u>worked</u>.)

The Wright brothers had been in a race to see who could develop the first heavier-than-air powered flying machine. <u>Samuel Langley</u>, the distinguished secretary of the Smithsonian Institute, had developed an <u>Aerodrome</u>. When it <u>crashed</u> on launch, Langley left future experiments to the Wright brothers.

Langley wasn't the only competition the brothers faced, however. They had to press forward. It was time for another trip to <u>Kitty Hawk</u> and <u>Kill Devil Hill</u>.

See Alignments to State and Common Core standards for this story online at: <u>http://www.awesomestories.com/asset/AcademicAlignment/KITTY-HAWK-History-of-Flight</u>

See Learning Tasks for this story online at:

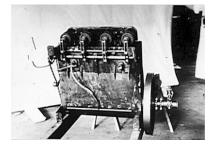
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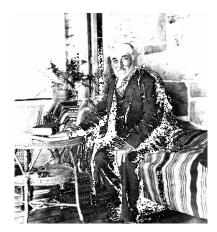
KITTY HAWK



Media Stream







Flyer-1

Image online, courtesy wright-brothers.org website. View this asset at: <u>http://www.awesomestories.com/asset/view/Flyer-1</u>

Wright Brother's Aircraft Engine

Image online, courtesy the U.S. Library of Congress. PD

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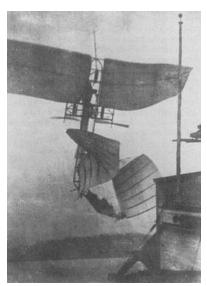
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Samuel Langley

Image online, courtesy the Smithsonian Institution website. PD View this asset at: <u>http://www.awesomestories.com/asset/view/Samuel-Langley</u>



Langley's Aerodrome Image online, courtesy wright-brothers.org website. View this asset at: <u>http://www.awesomestories.com/asset/view/Langley-s-Aerodrome</u>



Langley's Failed Attempt to Fly - at Launch Image online, courtesy wright-brothers.org website. View this asset at: http://www.awesomestories.com/asset/view/Langley-s-Failed-Attempt-to-Fly-at-Launch



<u>View of Kitty Hawk</u> Image online, courtesy the 456fis.org <u>website</u>. View this asset at: <u>http://www.awesomestories.com/asset/view/View-of-Kitty-Hawk</u>



<u>View of Kill Devil Hill</u> Image online, courtesy wright-brothers.org website. View this asset at: <u>http://www.awesomestories.com/asset/view/View-of-Kill-Devil-Hill</u>



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