

## "THE WRIGHT BROTHERS" - THE FIRST MANNED POWERED FLIGHT

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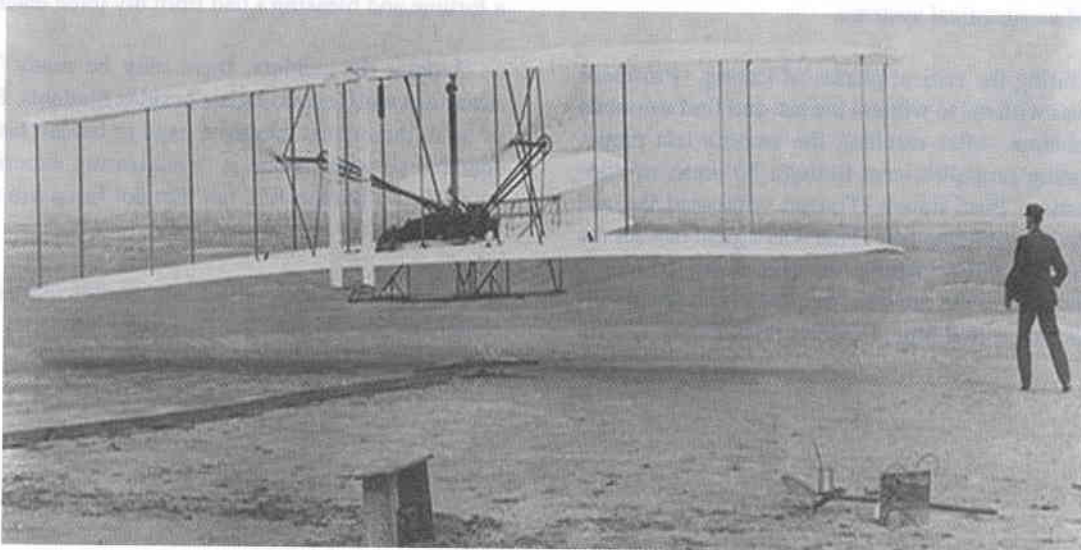
ON 17 DECEMBER 1903, A FLIGHT OF 12 SECONDS COVERING A DISTANCE OF 120 FT (37 M) CHANGED HISTORY. THE WRIGHT BROTHERS HAD FLOWN THE FIRST MANNED, POWERED HEAVIER - THAN-AIR FLYING MACHINE. THE LOCATION WAS KITTY HAWK, NORTH CAROLINA, USA.

Not only were the Wright brothers intuitive engineers, they were also scientists, test pilots and mathematicians. In addition to their unprecedented glider trials, they carried out meticulous wind tunnel tests, and designed their own propellers.

In 1899 they made a biplane kite with a 5ft (1.5m) wingspan and a new feature - wing warping - which enabled it to maintain lateral stability. A fixed foreplane gave fore and aft stability. The following year they built a 17ft (5m) wingspan glider and took it from Dayton, Ohio, their home, to the sand dunes at Kill Devil Hills on the North Carolina Coast, some 500 miles (800km) away, a site carefully chosen for its sandy surface and steady winds. In 1901 they advanced to a bigger one, which had a 22ft (6.7m) wingspan and anhedral wings and whose longest flights were over 100 yards (90m). The wingspan of the glider that they flew a year later was 33ft (10m). It had two

pivoted rudders astern of the wings, which prevented yaw and enabled it to make balanced turns.

In 1903 they at last built the aircraft towards which all their efforts had been directed: a 40 ft 4 in (12.3m) wingspan biplane with skids, not wheels. They named this "Flyer". They also made the 12hp petrol engine that drove two pusher propellers. The first attempt for the manned powered flight was made on 14 December 1903. It was decided by a toss of coin that 36-year-old Wilbur would fly the aircraft. However as the aircraft was launched, he pulled the nose up too steeply and stalled. After carrying out repairs the second attempt was to be made on 16 December. This could not be done as the wind speed on that day was not sufficient. Finally, on 17 December 2003, when the windspeed was 27 mph, it was the turn of Orville 4 years younger to Wilbur. The takeoff was successful, an airspeed of 33mph resulting in a ground speed of 6 mph was achieved and the aeroplane flew for 12 seconds, during which it covered 120ft (37m): **the first successful powered, controlled flight in history.** Wilbur made the second on the same day. Each made another flight that day before a gust of wind wrecked the "Flyer" (Flyer 1). They returned to Dayton and, using a more powerful engine, built Flyers 2 and 3. By 1908 they had built a two-seater flyer. Their final type was the Model L of 1915.



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