

# The Wright Brothers

## Who Were the Wright Brothers?

Wilbur and Orville Wright were famous inventors who grew up in Ohio, USA. Wilbur was born in 1867 and Orville was born years later in 1871. The brothers are famous for being the first people to build and fly an aeroplane with an engine.

## What Was Their Early Life Like?

Wilbur and Orville's father encouraged them to read lots of books and think carefully about the things that they found interesting. Orville spent several summers learning the printing trade and together they opened a printing shop. The brothers became well-known for the **printing presses** that they designed, built and sold.

## Did You Know...?

Otto Lilienthal designed and flew the first **glider** by studying the way that birds fly. Otto was a great inspiration to the Wright brothers.

In 1892, the brothers opened their own bicycle repair shop. They began to build and fly aeroplanes while working in the shop. The Wright brothers learnt from people who had already created flying machines.

## What Was the First Aeroplane Like?

Wilbur and Orville tested many designs to try to work out how to make an aeroplane fly. They realised that the design of the wings was important to get the aeroplane off the ground. They built wings with different lengths, shapes and tip designs to find out which would work the best. In 1903, they chose their best plan and built an aeroplane with wings and propellers. It also had a rudder to help the pilot to steer and an engine to give it power. The aeroplane's first flight lasted for 12 seconds. There were five **spectators**.

## What Happened after the First Flight?

After the first flight, the brothers carried on building aeroplanes. By 1905, they had built an aeroplane that could fly for 39 minutes and it could even fly in circles. Wilbur and Orville continued to make aeroplanes while other people struggled to keep up with their designs. The brothers made aeroplanes for the US army which could fly for at least one hour. Years later, they opened a flight school in Ohio where pilots were trained.



## Glossary

<b>glider</b>	A light aircraft that flies without an engine.
<b>printing press</b>	A machine for printing text or pictures.
<b>spectators</b>	People who watch a show, game or event.



# Questions

1. When did the Wright Brothers first fly an aeroplane with an engine?

- 1903
- 1910
- 1900
- 1917

2. What were the Wright brothers called? Tick **two**.

- William
- Wilbur
- Orville
- Oliver

3. When did they start to build and fly aeroplanes?

- While travelling in Europe.
- While studying at university.
- While living at home.
- While working in the shop.

4. Number the events from 1-4 to show the order that they appear in the text.

- After that, the brothers carried on building aeroplanes.
- The brothers opened their own bicycle repair shop.
- William and Orville Wright were famous inventors.
- They realised that the design of the wings was important.

5. Find and copy one word which means the same as '**creators**'.

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6. Why did the aeroplane have a rudder?

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7. Summarise in 25 words or fewer what the Wright Brothers are famous for.

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# Answers

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- 2** The brothers opened their own bicycle repair shop.
- 1** William and Orville Wright were famous inventors.
- 3** They realised that the design of the wings was important.

5. Find and copy one word which means the same as '**creators**'.

**inventors**

6. Why did the aeroplane have a rudder?

**The aeroplane had a rudder to help the pilot to steer.**

7. Summarise in 25 words or fewer what the Wright Brothers are famous for.

**Pupils' own responses, such as: The Wright brothers were famous for designing and flying the first aeroplane with an engine. It flew for 59 seconds in 1903.**

# The Wright Brothers

## Who Were the Wright Brothers?

Wilbur and Orville Wright were famous designers and inventors who grew up in Ohio, USA. Wilbur was born in 1867 and Orville was born years later in 1871. They are famous for being the first people to build and fly an aeroplane powered by an engine.

## What Was Their Early Life Like?

Wilbur and Orville's father encouraged them to read lots of books and learn more about the world. He enjoyed thinking carefully about things and taught his children to do the same. Instead of going to university, Orville spent several summers learning the printing trade and, together, the brothers opened a printing shop. The brothers were well-known in their local area for the **printing presses** that they designed, built and sold. In 1892, the Wright brothers opened their own bicycle sales and repair shop. They used their profits from the shop to research flying machines.

## Were the Wright Brothers the First People to Fly?

Before the Wright brothers, many people had explored different ways to fly. Leonardo Da Vinci was a famous artist who drew plans for flying machines in the 1700s. However, Da Vinci's machines were never built. Otto Lilienthal was a German inventor who designed and flew the first **glider**. He studied the way that birds flew and built gliders with similar wings. Otto was a great inspiration to the Wright brothers.

## What Was the First Aeroplane Like?

Wilbur and Orville experimented with many different designs to try to make an aeroplane fly. They realised that the design of the wings was crucial to get the plane off the ground. They built wings with different lengths, shapes and tip designs to find out which would work the best. In 1903, they designed and built an aeroplane with wings, propellers and an engine. It also had rudder to help the pilot to steer. On 17<sup>th</sup> December 1903, the aeroplane flew for 12 seconds and there were five **spectators**.



### What Happened after the First Flight?

After their first success, the brothers continued to build aeroplanes. By 1905, they had built an aeroplane that could fly for 39 minutes and it could even fly in circles. Wilbur and Orville became more successful while other people struggled to keep up with their designs. The brothers created aeroplanes for the US army that could fly for at least one hour with a pilot and a passenger. Years later, they opened a flight school in Ohio where pilots were trained. Modern designs of aeroplane wings are quite similar to their early sketches.

#### Glossary

<b>glider</b>	A light aircraft that flies without an engine.
<b>printing press</b>	A machine for printing text or pictures.
<b>spectators</b>	People who watch a show, game or event.



# Questions

1. Where did the Wright brothers grow up?

- New York
- Ohio
- Florida
- Texas

2. Who designed and flew the first glider?

- Orville Wright
- Leonardo Da Vinci
- Otto Lilienthal
- Wilbur Wright

3. Draw **four** lines and complete the sentence.

In 1892, the  
brothers opened...

the brothers carried  
on building aeroplanes.

After the first flight, ...

the wings  
was important.

They realised that  
the design of...

their own bicycle  
repair shop.

By 1905, they had  
built an aeroplane...

that could fly for  
39 minutes.

4. What did the brothers' father encourage them to do?

- Join the church.
- Go to university.
- Play a lot of sports.
- Read lots of books.

5. Find and copy one phrase which shows that Otto Lilienthal was important to the brothers.

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6. Fill in the missing words.

Wilbur and Orville became more \_\_\_\_\_ while other people  
\_\_\_\_\_ to keep up with their designs.

7. Explain and compare the inventions of the Wright brothers and Otto Lilienthal.

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8. Predict how flying machines might change in the future.

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# Answers

1. Where did the Wright brothers grow up?

- New York
- Ohio**
- Florida
- Texas

2. Who designed and flew the first glider?

- Orville Wright
- Leonardo Da Vinci
- Otto Lilienthal**
- Wilbur Wright

3. Draw **four** lines and complete the sentence.

In 1892, the brothers opened...	the brothers carried on building aeroplanes.
After the first flight, ...	the wings was important.
They realised that the design of...	their own bicycle repair shop.
By 1905, they had built an aeroplane...	that could fly for 39 minutes.

4. What did the brothers' father encourage them to do?

- Join the church.
- Go to university.
- Play a lot of sports.
- Read lots of books.**

5. Find and copy one phrase which shows that Otto Lilienthal was important to the brothers.

**great inspiration**

6. Fill in the missing words.

Wilbur and Orville became more **successful** while other people **struggled** to keep up with their designs.

7. Explain and compare the inventions of the Wright brothers and Otto Lilienthal.

**Pupils' own responses, such as: Otto Lilienthal designed and built a glider. The Wright brothers designed and built an aeroplane. Gliders and aeroplanes are both flying machines. Otto's glider was light and had no engine whereas the Wright brothers' aeroplane had an engine.**

8. Predict how flying machines might change in the future.

**Pupils' own responses, such as: I think that people in the future will invent planes that use autopilot to fly and don't need pilots to fly them. They will be powered by renewable energy like solar power.**

# The Wright Brothers

## Who Were the Wright Brothers?

Wilbur and Orville Wright were famous inventors and **aviators** who grew up in Ohio, USA. Wilbur was quiet and serious while Orville was curious and confident. On 17<sup>th</sup> December 1903, the brothers built and flew the first aeroplane powered by an engine; they are famous for this invention.

## What Was Their Early Life Like?

Their father was a **bishop**: he encouraged them to read lots of books and think carefully about the world. Instead of going to university, Orville spent several summers learning the printing trade and even persuaded Wilbur to open a printing shop with him. The brothers developed a reputation in the local area for the quality **printing presses** that they designed, built and sold. In 1892, the Wright brothers opened their own bicycle sales and repair shop. The bicycle shop was successful; they used their profits to research flying machines and to sketch original designs.

## Were the Wright Brothers the First People to Fly?

Before the Wright Brothers, many others had explored the possibility of flight. A Greek myth describes a tale of a boy, Icarus, who flew too close to the sun. Leonardo Da Vinci, a famous artist, designed different machines in the 1700s but his inventions were never built. The Wright brothers studied the work of more recent and successful inventors, including Otto Lilienthal, who designed and flew the first **glider**. He studied the way that birds flew and built gliders with similar wings that could carry him in flight. Otto was a major source of inspiration to the Wright brothers; they used his work on gliders to design an aeroplane powered by an engine.

## What Was the First Aeroplane Like?

Wilbur and Orville experimented with many different designs to make an aeroplane fly for a sustained period. They realised that the design of the wings was crucial to get the plane off the ground. They built wings with different lengths, shapes and tip designs and created a wind tunnel to test their experiments. By 1903, they had designed and built an aeroplane with wings, propellers and an engine; it also had a rudder so that the pilot could steer. On 17<sup>th</sup> December 1903, the aeroplane flew for 12 seconds: its first flight was witnessed by five **spectators**.



## What Happened after the First Flight?

After their first success, the brothers continued to develop and build aeroplanes. By 1905, they had built an aeroplane that could maintain flight for 39 minutes; it could even perform manoeuvres such as flying in circles. Wilbur and Orville became more successful while other people struggled to keep up with their designs. The brothers created aeroplanes for the US army that could fly for at least one hour with a pilot and a passenger. Years later, they opened a flight school in Ohio where pilots were trained. Modern designs of aeroplane wings are remarkably similar to their early sketches.

### Glossary

<b>aviator</b>	A person who flies an aircraft.
<b>bishop</b>	A senior member of the church.
<b>glider</b>	A light aircraft that flies without an engine.
<b>printing press</b>	A machine for printing text or pictures.
<b>spectators</b>	People who watch a show, game or event.



# Questions

1. Tick **two** words that are used to describe Orville Wright.

- curious
- quiet
- serious
- confident

2. Draw **four** lines and complete the sentence.

In 1892, the  
brothers opened...

the brothers carried  
on building aeroplanes.

After the first flight, ...

the wings  
was important.

They realised that  
the design of...

their own bicycle  
repair shop.

By 1905, they had  
built an aeroplane...

that could fly for  
39 minutes.

3. What invention are the Wright brothers famous for?

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4. Find and copy one phrase which shows that Otto Lilienthal was important to the brothers.

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5. Why do you think the Wright brothers' first flight was watched by spectators?

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6. Explain how you think that the Wright brothers' father influenced them.

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7. Predict how flying machines might change in the future.

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8. Why do you think that the Wright brothers succeeded where other people failed?

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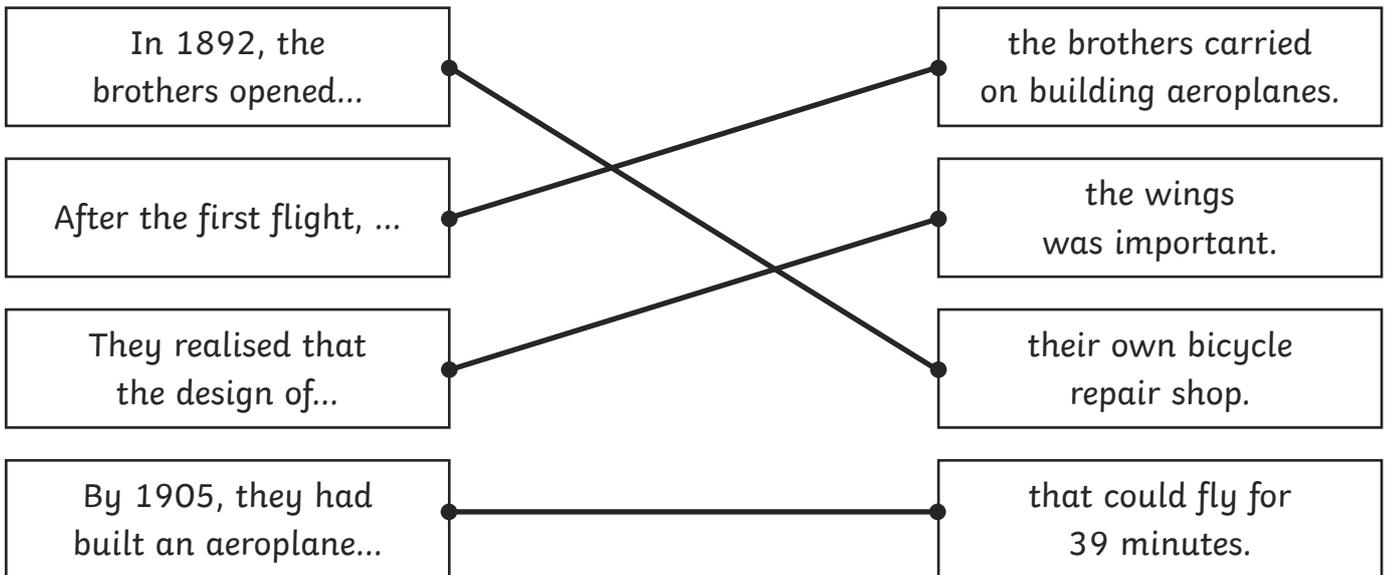
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# Answers

1. Tick **two** words that are used to describe Orville Wright.

- curious**
- quiet
- serious
- confident**

2. Draw **four** lines and complete the sentence.



3. What invention are the Wright brothers famous for?

**The Wright brothers are famous for building and flying the first aeroplane powered by an engine.**

4. Find and copy one phrase which shows that Otto Lilienthal was important to the brothers.

**great inspiration**

5. Why do you think the Wright brothers' first flight was watched by spectators?

**Pupils' own responses, such as: I think that the first flight was watched by spectators because it would have been very exciting to see someone fly in an aeroplane for the first time.**

6. Explain how you think that the Wright brothers' father influenced them.

**Pupils' own responses, such as: I think that the Wright brothers' father influenced them by encouraging them to read lots of books and think carefully about the world as children. When they were adults, thought about how to change the world and make it better.**

7. Predict how flying machines might change in the future.

**Pupils' own responses, such as: I think that people in the future will invent planes that use autopilot to fly and don't need pilots to fly them. They will be powered by renewable energy like solar power.**

8. Why do you think that the Wright brothers succeeded where other people failed?

**Pupils' own responses, such as: I think that the Wright brothers succeeded because they were very intelligent and persistent. They didn't give up and had to experiment many times to find the perfect wing size and engine. It took them a long time to finally succeed.**