

AEROPLANES

A front-on view of a large white commercial airplane, likely a Boeing 747, flying through a sky with soft, golden-hued clouds. The aircraft features blue and gold decorative stripes along its fuselage. The landing gear is visible, and the engines are mounted on the wings.

George Ivanoff

PM

Aeroplanes

Level 24

Curriculum Areas History; Science

Running Words 1028

Text Types Information Report (Informative) pages 2–19
Description (Informative) pages 20–22

Retelling to encourage critical thinking about the content

Ask each student to retell the information report and description in his or her own words. Record the retellings for further discussion and reflection.

Think and Talk About ...

Fact boxes in the book encourage each student to explore the statements further and to share the information with others.

Questions to reinforce meaning and stimulate discussion

Literal

- 1 What are biplanes?
- 2 What is the Royal Flying Doctor Service?

Inferential

- 3 Why would a newspaper offer a prize to fly an aeroplane across the English Channel?
- 4 What does the statement *Aeroplanes took fighting to the skies* mean?
- 5 Why are chemicals used to put out fires?
- 6 Why was the word 'comet' included in the name of the first passenger jet aeroplane?

Applied Knowledge

- 7 Why do aeroplanes need wings?
- 8 What is the speed of sound?

The *Dreamliner*

Literal

- 1 When was the *Dreamliner* aeroplane first tested?

Inferential

- 2 Why were people from 160 countries invited to vote for the name of the new Boeing 787?
- 3 Why did the public choose the name '*Dreamliner*'?

Applied Knowledge

- 4 Who or what is Boeing?

Links with other PM Guided Reading Books and Cards

Level 24	Card	Information Report	<i>The School of the Air</i>
Level 24	Book	Information Report/Description	<i>Heavy Machines</i>

AEROPLANES

For teachers' inspection ONLY

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What Is an Aeroplane?

An aeroplane is an aircraft that transports people and objects.

There are three important things that make an aircraft an aeroplane: it flies, it has wings that do not move and it has an **engine**.

A helicopter has an engine, but no wings.

A glider has wings, but no engine.

Only an aeroplane has both.



a helicopter

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Most aeroplanes have two wings
– one on either side of the body.

Some aeroplanes have four wings – two on either side.
These are called “biplanes”.



a glider

Propeller Engines

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A plane with two propellers prepares to take off.

Some aeroplanes use propeller engines.

A propeller is a type of fan.

In a car, the engine makes the wheels go round.

The wheels make the car move.

In an aeroplane with a propeller, the engine makes the propellers go round. The propellers make the aeroplane move.

Some aeroplanes have only one propeller, which is at the front of the machine.

Other aeroplanes have two propellers – one on each wing. And some aeroplanes have even more propellers.

Jet Engines

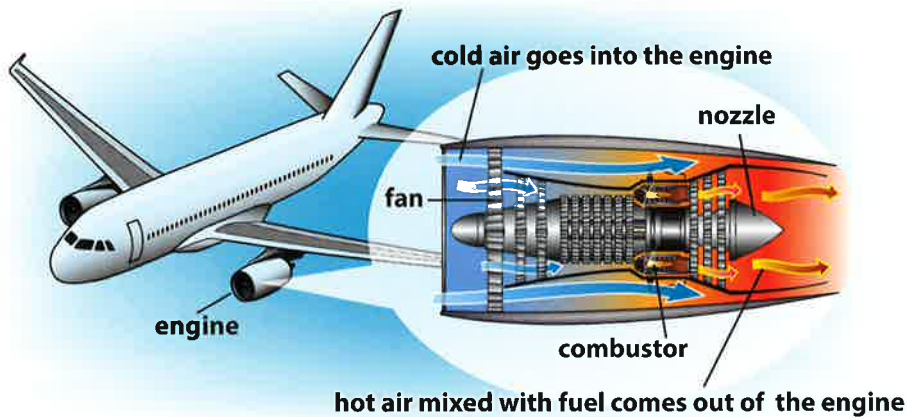
Some aeroplanes use jet engines.

A jet engine works in three steps:

1. A fan sucks cold air into the front of the engine.
2. A **combustor** mixes the air with burning **fuel**.
3. A nozzle then blasts the hot air out the back of the engine.

The hot air blasted out the back of the engine pushes the aeroplane forwards.

How a Jet Engine Works



Aeroplanes with jet engines are now more common than aeroplanes with propeller engines. An aeroplane powered by a jet engine can fly faster than one with propellers.

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The First Aeroplane

The first aeroplane was built in 1903, by two American brothers called Wilbur and Orville Wright.

On 17 December 1903, Orville made the first flight in an aeroplane called the *Flyer I*.

The flight lasted 12 seconds.

The aeroplane flew a distance of 37 metres.

The Wright brothers made many test flights each time they changed the design of their aeroplane.

In 1904, the brothers built the *Flyer II* and in 1905 they built the *Flyer III*.

With each new aeroplane, they were able to fly for much longer periods of time.

On 5 October 1905, the *Flyer III* flew for 39 minutes and 23 seconds.

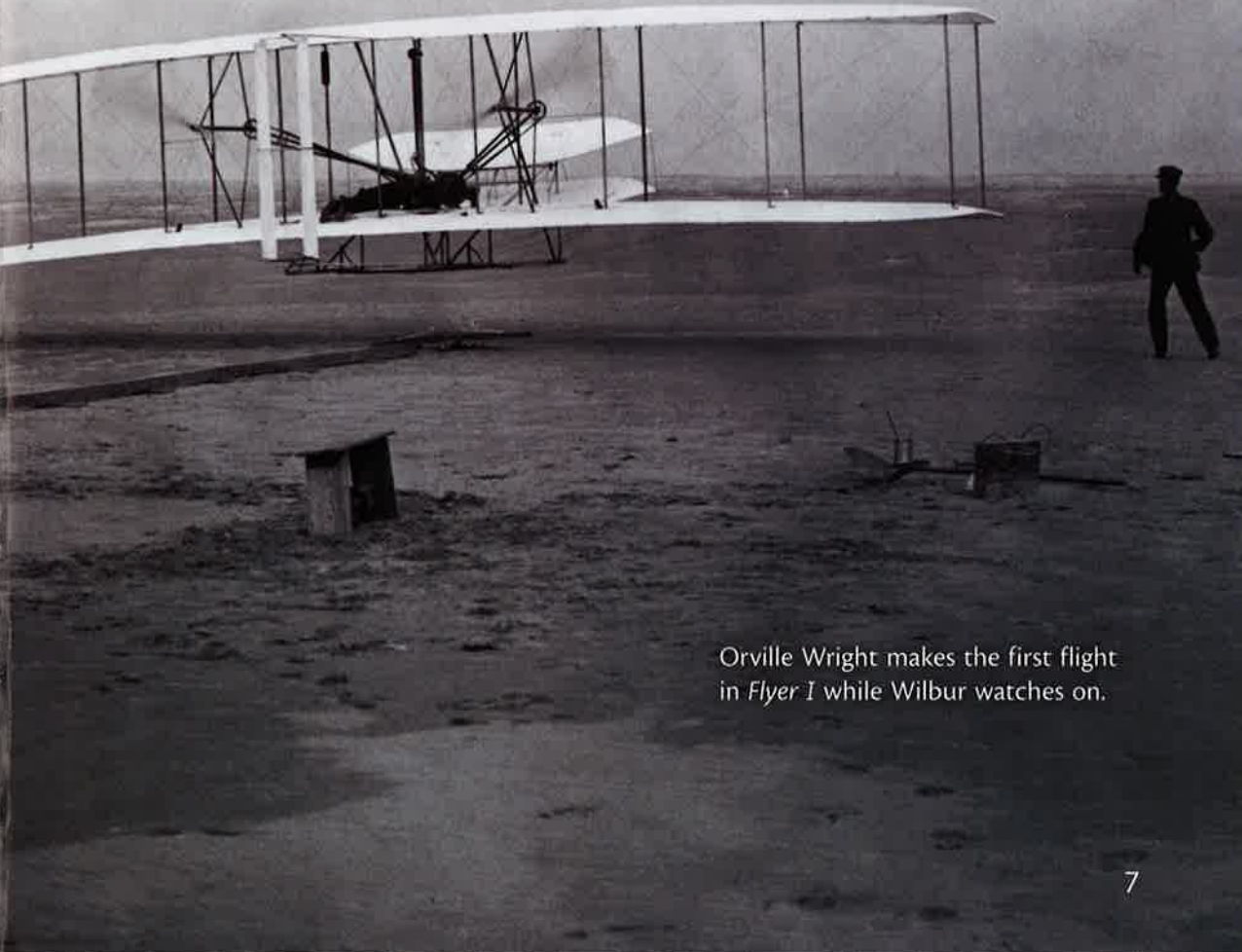
Think and Talk About ...

The Wright brothers began flying with gliders before moving on to aeroplanes.



Orville (left) and Wilbur (right) Wright

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Orville Wright makes the first flight in *Flyer I* while Wilbur watches on.