

English for Foundation Aviation Unit 4 A

Aircraft Structure



Work in pairs or small teams. Discuss the pictures below and the task. Team agree on the response before writing in the response box. Write full grammatical sentences as responses.

Picture 1: Decide whether this aircraft is landing, taking off or in the cruise.



response:

Picture 2: Decide whether the aircraft is landing, taking off or in the cruise.



response:

Picture 3: Decide whether the aircraft is landing, taking off or in the cruise.



response:



Speaking and Structure Practice:

Work in pairs or small teams. Match each of the sentences with one of the pictures above. Agree on your answer before you write the number of the picture.

1. "The flaps are partly extended for takeoff."	matches picture number	
2. "During cruise flight the flaps are retracted."	matches picture number	
3. "During landing the flaps are fully extended."	matches picture number	
4. "This aircraft is taking off."	matches picture number	
5. "This aircraft is in the cruise."	matches picture number	
6. "This aircraft is neither taking off nor landing."	matches picture number	
7. "This aircraft is on final approach."	matches picture number	
8. "Aircraft don't normally land in this configuration."	matches picture number	



Structure and Writing Practice

Work in pairs or small teams to construct a comparative sentence to describe each of the following pictures.

<p>picture 1</p>	<p>picture 2</p>



Technical Listening Practice [Unit_4a_John_studies_a_wing.mp3]

Listen to the recording of the dialogue between John and his father as they discuss wings. When ready complete the tasks in the next section.



After-listening: Speaking, Writing and Structure Practice

In pairs or small teams complete the following tasks.

1. Describe how the wing shape changed as the aircraft approached Tenerife.

2. Indicate where the extra wing surfaces appeared. Use a diagram, if necessary.

3. Decide which airspeed generates more lift: fast or slow. Try to explain why.

4. Decide what is another word for curvature on a wing.

5. Describe at which point flaps are at maximum extension and why.

Read the transcript of the recording on the next page to check your responses.



Reading Practice

John Learns Interesting Things about Wings.

During the flight to Tenerife John and his father were invited to visit the flightdeck. They enjoyed their visit very much. During the rest of the flight John had a window seat. He was seated in the middle section of the aircraft just behind the wing. As the aircraft approached the island of Tenerife it began to descend and John noticed the shape of the wing begin to change. The wing seemed to grow wider as the aircraft descended. Extra surfaces appeared at the back and the front of the wing.

"What's happening to the wing, father?", he asked pointing through the window.

"That must be the flaps extending", his father replied.

"Why is it happening?", asked John.

His father explained that when the aircraft is travelling fast, the airspeed creates a lot of lift and the wing can be smaller. However, when the aircraft slows down, the wing needs to get bigger again to create the same lift.

John's father drew a diagram to help explain what he meant. He explained that the area of the wing was important and also the curvature or camber.

When the camber increased, the lift also increased.

As the aircraft descended and slowed down just before landing, the flaps extended to their maximum. John could see that the wing shape was now much more curved and very different to the shape during the cruise part of the flight.



A Britannia 757 aircraft is refuelled and re-stocked on the apron at Tenerife Airport



Speaking, Interactions and Writing Practice:

Look at the diagram below of a typical flight path from Edinburgh, Scotland to the Canary Islands. Work in pairs or small teams to decide how many nautical miles (or kilometres if you prefer) the flight covers and approximately how long the flight would take. Write a description of the route. Mention the countries that the route passes over or near.



Approximate length of flight in miles or kilometres	
Countries overflown during the flight	
Approximate duration of the flight at a ground speed of 500 nautical miles per hour.	
approximate percentage of the flight over water	

SPEED CONVERSIONS - KNOTS, MPH, KPH		
Knots	Miles per Hour	Kilometers per Hour
1	1.152	1.85



Speaking Practice:

Look at this picture of an aircraft approaching the airport of Tenerife Norte. Discuss the things that a pilot would have to be alert for during this approach. Mount Teide is an active volcano. Discuss how this might add extra difficulties to aircraft flying in the vicinity.



Mount Teide: the highest mountain in The Canary Islands 3,718 m (12,198 ft).



Speaking and Writing Practice

Work in pairs or in small teams. Try to find general answers for the following questions. Agree on your answer and write it in the box.

1. What is the main function of the wing?

2. Does the wing keep the same shape during an entire flight?

3. Name the extensions at the back of the wing.

4. Name the extensions at the front of the wing.