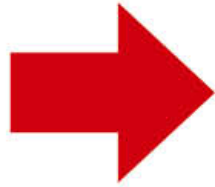


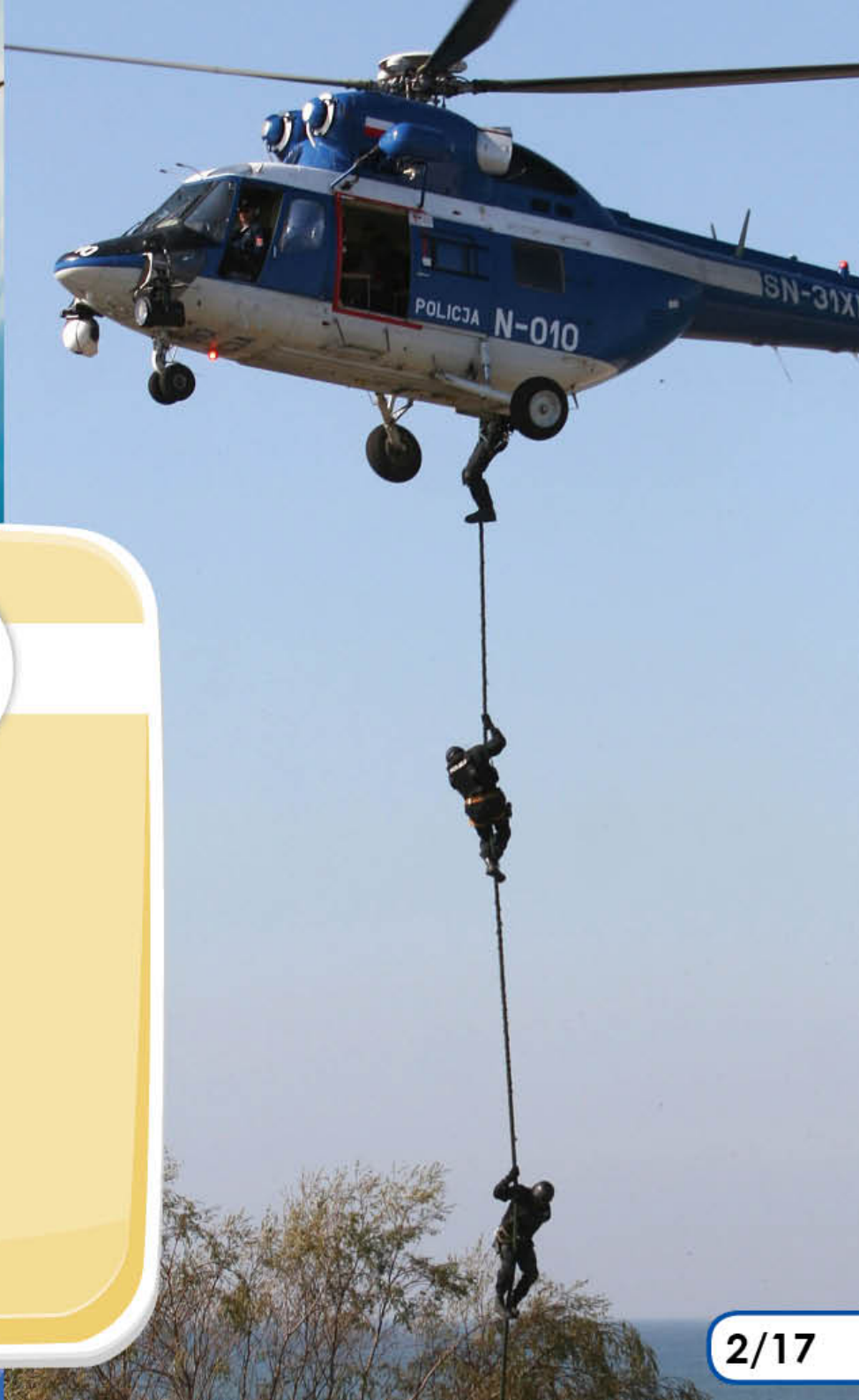


Are You Ready?

Listen to me.



Eyes on me.



INTENSIVE READING

Lesson

7

Classic English Junior Level 5 - Unit 16 Inventions

Leonardo's Helicopter

Lesson Structure

1	Learning Objective
2	Warm-up
3	Comprehension Skill
4	Intensive Reading
5	Writing Project
6	Wrap-up

You are going to:

Review the article called

Leonardo's Helicopter

Learn the comprehension skill

Fact or opinion

Warm-up

02:00

Look and say.



Science Research



Fire Control



First Aid in an Emergency



What other ways can helicopters be used?



Let's

Go!



Comprehension Skill

02:00



Fact

A statement of fact can be proven true or false.

Opinion

A statement of opinion tells someone's ideas or feelings.

Examples:

1. George Washington was the first US president. (**Fact**)
2. George Washington was a great president. (**Opinion**)

Intensive Reading—Comprehension

03:00

Read the passage and learn the phrase.

LEONARDO'S HELICOPTER

Leonardo da Vinci watched an eagle fly through the air. He carefully **observed** the shape of the eagle's wings and the movement of its muscles. He took detailed notes about the **air currents**.

Suddenly he realized that the eagle's wings **pressed** down against the air and the air pressed back up against the wings. This air pressure was the secret to flight! And if an eagle could fly, he thought, so could a person.

air current

air moving from an area of high pressure to an area of low pressure

e.g. Eagles use warm air currents to lift them high in the sky.

Intensive Reading—Comprehension

03:00

Read the passage and do the activities.

Based on his studies of air currents and bird flight, Leonardo designed a strange-looking machine. Leonardo's drawings show a **device** with a rotating spiral "wing." As the wing turned, he reasoned, the air pressure below the wing would become greater than the air pressure above it.



Which one of the following is Leonardo's device?

A**B**

What is the theory behind Leonardo's machine?

Intensive Reading—Comprehension

02:00

Read the passage and answer the question.

1. This difference in pressure would **lift** the machine into the air, just as the pressure against the eagle's wings lifted the bird.

2. Leonardo called his flying machine an "ariel screw." As good as the idea was, there were two **major** problems with it.



Are the underlined sentences facts or opinions?



...

Intensive Reading—Comprehension

03:00

Read the passage and learn the grammar.

First, the combustion engine hadn't been invented yet, and there was nothing in existence that was powerful enough to turn the large screwlike wing.

Also, Leonardo would have had to **rely on** wood, rope, and cloth **to** build his machine. These materials were far too heavy to make a device that could fly.

Grammar

rely on/upon sb/sth to do

to trust or depend on someone or something to do what you need or expect them to do

e.g.

Nowadays we often rely on computers to help us do difficult tasks.



Can you make a sentence with "rely on ... to ..."?

Intensive Reading—Comprehension

03:00

Read the passage and do the activity.

It was not until 1885 that a successful gasoline-powered engine was developed, and in the 1930s **helicopter** flight finally became practical and safe.

But it was an artist on a sunny hill in Italy four hundred years before who first dreamed that it could happen.

EXAMPLE:

Fact

It was not until 1885 that a successful gasoline-powered engine was developed.

(retell)

Opinion

I think the gasoline-powered engine is one of the best inventions in history.



Please retell the underlined sentence following the example.



...



Activity Time!

Practice

Writing Project—Preparation

03:00

Talk to the teacher about Leonardo da Vinci.

How did Leonardo find the secret to flight?

What device did he design? What was it like?

What do you think of Leonardo?



He ...

...

...

Writing Project

03:00

Write down some key words.

Fact

(Name, Achievements ...)

Opinion

(Reasons why you think he is good, bad, interesting etc)



Write a passage after class on your worksheet.

Intensive Reading

Leonardo's Helicopter

Comprehension Skill

Fact or opinion





See You Soon!

51TALK

