

The Human Genome Project (B1)

A – Before you start

Answer the questions with a partner.

1. What do you know about DNA? (*What is it? When was it discovered? etc.*)
2. How many uses of DNA science can you think of?

B – Listen and answer

Read these incomplete statements. Then listen (without reading) and complete them.

1. DNA was first isolated in the year _____.
2. Renato Dulbecco, an Italian-American _____, suggested sequencing the human genome.
3. Dulbecco was the winner of the Nobel Prize for _____ in 1975.
4. In 1988, Dulbecco's project was approved by the US _____ of Science.
5. The project officially began in October _____.
6. Research centres in the US, _____, _____, _____, Germany and the UK took part in it.
7. It was decided to sequence smaller genomes first, like those of the _____, worm and fruit fly.
8. The project involved the work of biologists, _____, _____ and mathematicians.

C – Read and answer

Read the article and answer the questions.

1. What is the definition of genomics?
2. Why did Renato Dulbecco think it would be useful to sequence the human genome?
3. Why were some biologists against the project?
4. Why was the Human Genome Project different from any previous biology projects?
5. What examples does the article give of illnesses caused by genetic mutations?
6. On what other occasion did scientists from all over the world work together successfully?
7. In what kinds of treatment have there been improvements as a result of the project?
8. What is CRISPR/Cas9?

D – Learn it! Use it!

Complete these sentences with words from the glossary. (You may have to adapt the expression in some way; e.g. change the verb tense, or change from singular to plural.)

1. In some countries, there are _____ laws that seriously limit women's freedom.
2. The judges of the school art competition _____ the first prize to an awful painting of a rat!
3. I don't think I've passed the written exam. Some of the questions were really _____.
4. It would be great to organise a conference on this theme, but where will we get the _____?
5. Don't eat those apples! They're full of _____.
6. Some people were in favour of the idea. Others _____ that it would be a waste of money.

E – Ready for the B1 PRELIMINARY English Exam? (Paper 1, Reading: Part 6)

Write one word only in each space.

Renato Dulbecco was born in 1914 in Calabria, Southern Italy, but he ¹ _____ most of his childhood in Liguria, Northern Italy. He studied medicine at Turin University and was only 22 when he got his ² _____.

During World War II, he was a medical officer and was sent to the front, first in France and then in Russia, ³ _____ he was wounded. Later he joined the resistance movement fighting ⁴ _____ the German occupation of Italy.

After the war, Dulbecco moved to the United States and carried ⁵ _____ important research on the viruses that can cause cancer, for ⁶ _____ he was given the Nobel Prize for Medicine in 1975. He died in 2012, a few days before his 98th birthday.

F – Write about it

Write about one of your country's greatest scientists (living or dead). Include:

- some biographical information
- what field the scientist worked in;
- what his/her best-known discovery was;
- what (if any) awards he/she received.

Answers

B – Listen and answer

1. 1869 2. virologist 3. Medicine 4. National Academy 5. 1990 6. China, Japan, France
7. mouse 8. engineers, computer scientists

C – Read and answer

1. It's the study of genes and their functions. 2. Because he thought it would help understand cancer. 3. They thought that it was risky to put so much money into one big project and that it was unfair to small research units. 4. It was a very large international collaboration that involved thousands of scientists working in many research centres in different countries. 5. The examples are cancer, cystic fibrosis and Alzheimer's. 6. During the Covid pandemic. 7. In targeted and personalised treatments. 8. It's a technique that can repair errors in DNA.

D – Learn it! Use it!

1. unfair 2. awarded 3. challenging 4. funding 5. worms 6. argued

E – Ready for the B1 PRELIMINARY English Exam?

1. spent 2. degree 3. where 4. against 5. out 6. which