

Watch the video:

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Answer these simple questions true or false:

- 1) Evolution is organisms adapting to theory environment
- 2) The survival of the fittest sounds like evolution always favours the biggest, the strongest or the fastest creatures.
- 3) Genes want to make more copies of themselves.
- 4) Evolution proceeds blindly.

Reading comprehension:

THE TRIP ON THE BEAGLE

Read the text about Charles Darwin's trip on the Beagle. Match each sentence (A-K) with the right gap (1-8). There are two extra sentences. The first one (0) is an example.

In December 1931, the Beagle, an English research ship, set sail (0) This ship was quite an ordinary ship, but on this trip she carried the (1) Nobody could predict this voyage would start a revolution in scientific thought that would radically change (2) today. During this trip, Darwin collected and observed specimens, read books, but especially noticed (3) To him, every single find was a new piece in the great world's puzzle and this kept him involved for many years after. As he travelled, Darwin was amazed by the huge variety of animals and plants that inhabited the planet: one single day's work in a Brazilian rainforest provided more than 70 different species of beetles! A huge number then, although today (4)!

10 Darwin wanted to discover how this diversity of life came to be. He also noticed that very unusual species must have followed one another on the planet: the fossils he collected resembled monstrous creatures. There was no living individual like them around! Today, in fact, (5) that have ever lived are now extinct. And if that is correct, hundreds of millions of species have appeared, lived on the planet and 15 then totally disappeared. Why so many and why so different?

Darwin then noticed that every species adapted to the environment they lived in: physical and behavioural characteristics were combined to enable them to catch food, resist hard conditions, or reproduce. And some managed better than others. The word (6), which enable organisms to survive is 'adaptation', and 'fitness' is the 20 ability of an individual to successfully pass on genes to its children.

In particular, of all the places that Darwin visited on that trip, he was attracted by a very peculiar group of islands 1000 km west of South America, the Galapagos. Some of these small islands were dry, almost barren, and very hot. However, a rich variety of wildlife lived on them, including giant tortoises, rare species of birds and marine iguanas. At 25 first, Darwin noticed an odd variety of beak shapes among the birds and he observed that the shell shape of the tortoises was distinctly different from island to island. He therefore (7) the struggle for existence had selected the fittest individuals who then had survived and reproduced more often than the individuals not so well-suited. Today, (8) disease-causing bacteria become resistant to antibiotics and why 30 insects develop resistance to some pesticides.

A	scientists use to describe the traits	..... [redacted]
B	scientists discuss about the causes of living diversity	..... [redacted]
C	scientists estimate them in terms of millions	..... [redacted]
D	scientists believe that 99.9 percent of all species	..... [redacted]
E	scientists see the principles of evolution as some of the reasons why	..... [redacted]
F	deduced that generation after generation	..... [redacted]
G	things other scientists had missed	..... [redacted]
H	the way scientists look at life	..... [redacted]
I	some scientists adjust their beliefs to	..... [redacted]
J	then almost unknown Charles Darwin	..... [redacted]
K	<i>for a 5-year voyage around the world</i>	..... [redacted]

Darwin vs God?

About two hundred years ago, Charles Darwin, the bearded Victorian sage on the ten pound note, was born. Many people believe he was the man who discovered that we come from monkeys. Yet, he did no such thing. **1** Instead, Darwin set out to answer the questions: How are new species formed? Where do they come from? What is their origin? His theory was not about the origin of life itself. Although Darwin believed that this question too would turn out to have a perfectly natural explanation, he thought that it was, then, beyond the power of science to answer.

We often hear that when *On the Origin of Species* was published there was much protest and a historic clash of science and religion. But is that true? **2** The Victorian public that first read or read about *On the Origin of Species* were, for the most part, not biblical literalists. For decades, the most enlightened writers in the fields of science and religion had accepted that much of the Old Testament, and Genesis in particular, had to be read in a metaphorical sense. So Victorian readers were confronted with one of the leading men of science of the day publishing a work that claimed that, contrary to long-held beliefs, new species were not somehow created in each new geological age to fit the new conditions. Instead, new species were the lineal descendants of earlier species. **3** Thus all living and extinct species were related on a single genealogical family tree – the tree of life.

Darwin's theories inspired lots of reactions. **4** Darwin's wide variety of arguments and evidence persuaded many that he had found the hidden bond that naturalists had been seeking which explained how all the different genera and species were related. Other writers felt that Darwin's views were an attack on the role of a Creator in nature. Instead of tracing a lineage to the son of God, Darwin's theory suggested that man had only beastly origins.

Others, like the Reverend Charles Kingsley, felt differently. He wrote enthusiastically to Darwin about his theory. To religious thinkers like Kingsley, Darwin had uncovered a new law by which God governed the natural world. For such thinkers, it was quite reasonable to reconcile Darwin's views with their religious beliefs. As the years passed and reviews and counter-reviews appeared, the fact of Darwinian evolution – the common descent of species – became increasingly recognised. Yet, the other key Darwinian idea – natural selection – was much less welcome. As scientific and non-scientific readers came increasingly to accept the Darwinian concept of common ancestry for species, the view that natural selection was the primary mechanism was often rejected. **5** The bottom line seemed to be: was there a meaning or intention behind how life changed? According to Darwin, there were only natural reasons.

The fact that Darwin's views were largely accepted throughout the international community within ten to fifteen years is remarkable. **6** Countless confirmations and refinements were published. New fossil forms were discovered which filled gaps between already known groups, just as Darwin had predicted.

(Abridged from 'BBC History', January 2009)

FCE Reading and Use of English
— Part 6

3 GAPPED TEXT. You are going to read an article about Darwin's theory of evolution. Six sentences have been removed from the article. Choose from the sentences A–G the one which fits each gap (1–6). There is one extra sentence which you do not need to use.

- A** Among the scientific community they ranged from contemptuous rejection to enthusiastic support.
- B** Many suggested instead that the variations that natural selection picked out were themselves divinely guided or caused.
- C** It is probably more fantasy than fact.
- D** Scientists found that new avenues were thrown open to their particular fields of research.
- E** Yet, close study of many thousands of organisms showed that there was a constant abundance of variety or slight differences between all individuals.
- F** These had gradually changed as the environment changed around them.
- G** Writers before Darwin had made connections between humans and apes and monkeys because of our obvious physical similarities.