

# 1 Light travels incredibly fast

Comparison of adverbs  
Adverbs of degree  
Position and order of adverbial phrases  
Describing and comparing the way things happen

## What on Earth?

Scientists disagree about exactly when the Big Bang, which created the universe, happened. But we know that it was between ten and twenty billion years ago. The universe has been expanding extremely rapidly ever since, and is a million million million miles across. We can also measure distances in space in light years, the distance travelled in one year at the speed of light. And light travels incredibly fast! The speed of light is an amazing 300,000 kilometres a second. Lightning also travels really quickly and can heat the air around it to 28,000°C. But it travels more slowly than light, up to 150,000 kilometres a second.

The Earth itself is four and a half billion years old and scientists believe that life began suddenly in the sea soon after that. Life developed extremely slowly after this quick start. It was only four hundred million years ago that organisms began to breathe oxygen and live on land. People believe that apes started to walk on two feet between three and seven million years ago. However, we can say more accurately that humans appeared on Earth two million years ago.

It's believed that the Earth weighs an astonishing six billion trillion tonnes. And at 6,380 kilometres, the distance from the surface of the Earth to the centre is nearly as far as from New York to Moscow. The Earth rotates most quickly at 1,675 kilometres an hour at the equator, more slowly at about 900 kilometres an hour in Paris and London, and doesn't rotate at all at the exact North or South Pole.

Perhaps we ought to call our planet Water, because most of its surface is ocean. And animals and plants are largely made up of water – a tomato is 95% water, a potato 80% and a human 65%.

### QUIZ How much do you know about the world you live in?

- Approximately how old is the universe?  
A 13.7 billion years. B 13.7 million years.
- Which travels faster?  
A Light. B Lightning.
- When did life on earth begin?  
A Four billion years ago. B Four million years ago.
- Which began later?  
A Life on land. B Life in the sea.
- Which distance is further?  
A From New York to Moscow. B From the surface to the centre of the Earth.
- Where does the Earth rotate most quickly?  
A At the Equator. B At the North Pole.
- Which contains a higher percentage of water?  
A A potato. B A human.

### 3 Comprehension

- Read and listen to *What on Earth?*, and check your answers to the quiz. How well did you do?

### 4 Grammar

Complete.

#### Comparison of adverbs

Lightning travels \_\_\_\_\_ slowly than light.  
Which began \_\_\_\_\_: life on land or in the sea?  
Where does the Earth rotate \_\_\_\_\_ quickly?

Adverbs ending in *-ly* take *more/most*. Adverbs with the same form as adjectives add *-er/-est*.

#### Irregular forms

well better \_\_\_\_\_  
badly worse worst  
far further furthest

#### Adverbs of degree

quite really extremely incredibly  
The universe has been expanding \_\_\_\_\_ rapidly.  
Lightning also travels \_\_\_\_\_ quickly.

#### Position and order of adverbial phrases

Life began *suddenly* *in the sea* *after that*.  
Manner → Place → Time

Check the answers: Grammar Summary page 00

### 5 Grammar Practice

Complete with the correct adverbs.

- Since the Big Bang the universe has been getting bigger \_\_\_\_\_. (incredible/quick)
- Light travels \_\_\_\_\_ than lightning. (fast)
- We know \_\_\_\_\_ when humans appeared than when apes first walked. (exact)
- The Earth rotates \_\_\_\_\_ at the Equator. (rapid)
- The Earth turns \_\_\_\_\_ as you move \_\_\_\_\_ away from the Equator. (slow, far)
- Tomatoes are almost \_\_\_\_\_ made up of water. (complete)

### 6 Grammar Practice

Put the adverbial phrases in the correct order.

- The Big Bang happened ... (over 13 million years ago/suddenly)
- Life developed ... (in the sea/for billions of years/slowly)
- Organisms started to breathe oxygen ... (400,000,000 years ago/on land)
- Apes walked ... (over 3,000,000 years ago/on two feet)
- The Earth rotates ... (in both London and Paris/at roughly the same speed)

### 7 Listening

Listen and complete the text.

## SPACEFLIGHT RECORDS

- The three astronauts who have been in space longest are all Russian: Sergei Krikalev with a total of \_\_\_\_\_ days, Sergei Avdeyev, 747 days, and Valeri Polyakov, \_\_\_\_\_ days.
- The two astronauts who have flown most often (\_\_\_\_\_ flights each) are Franklin Chang-Diaz and Jerry L. Ross, both from the USA.
- The first two spacewalks took place in 1965. In March Alexei Leonov left his spacecraft for minutes and in June Edward White did the same for \_\_\_\_\_ minutes.
- The first moonwalk was from Apollo 11 on 21 July 1969, when Neil Armstrong and Buzz Aldrin walked on the surface of the Moon for \_\_\_\_\_ hours, 31 minutes and 40 seconds. Soon after, on 19 November 1969, Pete Conrad and Alan Bean left their spacecraft, Apollo 12, for a walk which lasted \_\_\_\_\_ hours, 56 minutes and three seconds.

Now make sentences comparing the astronauts.

... was in space longest. Krikalev flew in space longer than ...

... have made the most space flights. Conrad and Bean walked on the Moon longer than ...

### 8 Pronunciation

Listen and repeat.

13.7 billion years four and a half billion years  
300,000 kilometres a second 1,675 kilometres an hour  
28,000°C 95% six billion trillion tonnes  
two hours, 31 minutes and 40 seconds

### 9 Speaking

Ask three other students these questions and note down their answers.

- How fast can you say the alphabet backwards in English?
- How far can you throw a tennis ball?
- How high can you reach?
- How far do you travel to school?
- How early do you get up on Saturdays?

Now make comparisons between yourself and the other students.

Sasha can say the alphabet backwards in 45 seconds. That's faster than me. I get up at eight on Saturdays. That's earlier than you.

### 10 Writing

Look at your notes from exercise 9. Write a paragraph using comparative and superlative adverbs.

*Helena and Monika can both reach 2.2 metres, but Stefan can reach the highest.*