

## Reading eLesson

# Death of the dinosaurs

Earlier this month at a conference in Texas, US\*, a group of 41 scientists from all over the world announced that they finally had enough evidence to end the mystery of why the dinosaurs died 65 million years ago.

Before this conference there were many different theories to explain the death of the dinosaurs, who had lived on earth for around 150 million years. The two most likely explanations for their death were that there had been a huge volcanic explosion, or that an asteroid had struck the earth. At this conference, the experts discussed evidence from the previous two decades and announced that a huge asteroid was the most likely cause.

The 180 km wide Chicxulub crater in the Yucatan region of Mexico was a key part of the evidence. This was created by the impact of a rock hitting the earth 65 million years ago. Debris from the crater can be found all over the world, right across the Atlantic Ocean, into Europe and beyond. This shows the power of the explosion and the damage that was caused. In fact, this crater is still visible from space.

Experts believe that the asteroid was probably 10–15 km wide and it flew to the earth at the speed of about 20 km per second – 20 times faster than a flying bullet. According to one study, the force of the space-rock hitting Earth was equal to approximately one billion atomic bombs.

Following the impact, the earth then experienced forest fires, landslides, earthquakes, tsunamis and strong winds (there is actually still evidence of destruction caused by huge waves around the coast of Mexico). After the explosion, enormous amounts of dust and debris were thrown into the air; the planet went into complete darkness and cold for many months, and this was followed by acid rain. Many species of animals and plants, including large sea mammals, could not survive in this very difficult environment. It is thought that between 50–70% of plant and animal species on earth were killed off. The death of the dinosaurs allowed mammals to become dominant, which in turn led to the birth of humans.

Scientists suggest that an impact such as this happens roughly once every 100 million years.

\* 41st Lunar and Planetary Science Conference

1 How much do you know about dinosaurs? Do this quiz and find out! Circle the correct answers.

- 1 The dinosaurs died out *6.5 million / 65 million / 165 million* years ago.
- 2 Dinosaurs were *plant eaters / meat eaters / plant and meat eaters*.
- 3 The dinosaurs lived on earth for approximately *50 million years / 100 million years / 150 million years*.
- 4 Scientists have identified at least *17 / 70 / 700* different species of dinosaur.
- 5 The dinosaur age ended because of *an asteroid / disease / a huge volcanic explosion*.
- 6 In the age of the dinosaurs there were *mammals and birds / mammals but no birds / birds but no mammals*.
- 7 People who study dinosaurs are called *dinosaurists / fossilists / palaeontologists*.

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2 Now read the text. What do you think the following details refer to?

Details	They refer to
50–70 %	the speed of the asteroid
180 km wide	the number of experts examining the evidence
20 km per second	the frequency of a strike from an asteroid like this one
150 million years	the size of the asteroid
10–15 km wide	the amount of plant and animal life killed off
once in a 100 million years	the size of the crater in Mexico
41	the length of the dinosaur age

3 Look at the following answers, and see if you can make the questions.

- 1 two main ones
- 2 either by a volcanic explosion or by an asteroid
- 3 the asteroid theory
- 4 in the Yucatan region of Mexico
- 5 no, except from space
- 6 fires, landslides, earthquakes, huge waves and storms
- 7 evidence of damage caused by very big waves
- 8 for several months
- 9 acid rain
- 10 over half

4 Discuss the following with your partner.

- 1 Do you find the study of dinosaurs interesting or not? Can you say why?
- 2 Were you taught about the dinosaur age at school or not? Was this a good or bad thing?
- 3 Who are usually more interested in dinosaurs in your country, boys or girls? Why is this?
- 4 Since January 2010 at the Natural History Museum, London, children can have 'sleepovers' next to the skeleton of a huge dinosaur, after a torch-lit tour of the dinosaur gallery. What do you think of this idea? Do you know of other museums where this happens?
- 5 Some people say that today, 65 million years later, we are having a similar, destructive effect on earth. This is because of global warming, over-fishing, over-hunting, destruction of forests, etc. Do you agree?

### Glossary

**asteroid** (*noun*) - a space-rock, a mass of rock that moves around in space.

**crater** (*noun*) - a large round hole in the ground which is caused by an explosion

**debris** (*noun*) - the broken pieces that are left when something large has been destroyed

**dominant** (*adj*) - more important or powerful than the other things

**evidence** (*noun*) - facts or physical signs that help to prove something: *The study found no evidence that fish feel pain.*

**impact** (*noun*) - the force of one object hitting another

**landslide** (*noun*) - a heavy fall of rocks or soil down the side of a mountain

**theory** (*noun*) - an idea that explains how or why something happens

**visible** (*adj*) - able to be seen