



Unit 8

Is the Earth in danger?

Cross-curricular – Science

- 1 Look at the photograph. What does it show?



- 2 Read the online series of questions and answers. Who do you think answered the questions?

- 3 Find the nouns in the text that match the verbs in the table. Then match these definitions with the nouns. One definition is used twice. One of the noun-verb pairs is the odd one out. Which one, and why?

a danger an effect a meeting the highest point
a statement that something is true

Verb	Noun	Definition of noun
claim		
encounter		
impact		
risk		
peak		
threaten		

- 4 Which question in the text is the following information from?

- 1 The planet that some people are afraid of will stay at a safe distance.
- 2 There are regular updates to the information that is published.
- 3 One date for the end of the world is said to be more like the end of a year.
- 4 Earth has been in existence for a very long time.
- 5 The end of the world did not occur at the time it was predicted to happen.
- 6 New equipment is being developed to prevent activity in space damaging our systems.
- 7 Research is being done into objects from space that might hit Earth.

- 5 Which answer from the text contains the largest number of passive structures? Why do you think that is?

- 6 Answer the questions.

Do you think governments should finance research into threats from space? How important do you think it is?



- 1 Are there any threats to the Earth in 2012? Many websites say the world will end in December 2012.

Nothing bad will happen to the Earth in 2012. Our planet has been managing just fine for more than 4 billion years, and scientists know of no threat associated with 2012.

- 2 What is the origin of the prediction?

It started with claims that Nibiru, a supposed planet discovered by the Sumerians (an ancient civilisation) is headed towards Earth. This catastrophe was predicted for May 2003, but when nothing happened the date was moved forward to December 2012. Then this story was linked to the end of one of the cycles in the ancient Mayan calendar (the Mayas are another ancient people) on December 21, 2012.

- 3 Does the Mayan calendar end in December 2012?

Just as the calendar on your kitchen wall does not cease to exist after December 31, the Mayan calendar does not end on December 21, 2012. This date is the end of a Mayan period but after that – just as your calendar begins again on January 1 – another period begins for the Mayan calendar.

- 4 Is there a planet called Nibiru or Eris that is approaching the Earth and threatening us with widespread destruction?

Nibiru and other stories about wayward planets are an Internet hoax. If Nibiru were real and headed for an encounter with the Earth in 2012, astronomers would have been tracking it for at least the past decade, and it would be visible by now to the naked eye. Eris is real, but it is a dwarf planet similar to Pluto that will remain in the outer solar system; the closest it can come to Earth is about 4 billion miles.

- 5 Is the Earth in danger of being hit by an asteroid?

The Earth has always been subject to impacts by comets and asteroids, although big hits are very rare. The last one was 65 million years ago, which probably led to the extinction of the dinosaurs. Today NASA astronomers can identify any large near-Earth asteroids long before they hit. We know that there are none as large as the one that killed the dinosaurs. All this work is done openly with the discoveries posted on the NASA website, so you can see for yourself that nothing is predicted to hit any time soon.

- 6 Is there a danger from giant solar storms predicted for 2012?

Solar activity has a regular cycle, with peaks approximately every 11 years. Near these activity peaks, solar flares can cause some interruption of satellite communications, although engineers are learning how to protect electronics against most solar storms. But there is no special risk associated with 2012. The next solar flare peak will occur in 2012–2014 and is predicted to be an average solar cycle, no different than previous cycles throughout history.

- 7 How do NASA scientists feel about theories about the end of the world?

For any claims of disaster or dramatic changes, where is the evidence? There is none, and for all the fictional assertions, whether they are made in books, movies, documentaries or online, we cannot change that fact. There is no credible evidence for any of the assertions made in support of unusual events taking place in December 2012.