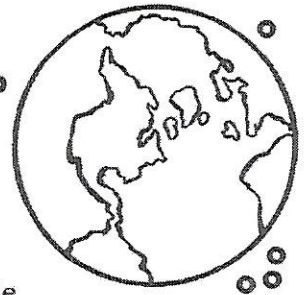




# Climate Change

● Answer the questions immediately after reading each paragraph.

The Earth's climate has never been stable. Since the planet was born, over 4,6 million years ago, changes in the climate have taken place because of natural phenomena. About 18 000 years ago temperatures were lower than today's temperatures by about 4 degrees Celsius. The polar ice cap was three times larger than now. Nearly 10 000 years ago, when our civilization was born, glaciers covered 30 % of our planet including North America. Little by little the glaciers melted, the sea level increased and countries took the shape we know today.



① Was it hotter or colder on Earth 18 000 years ago? Explain.

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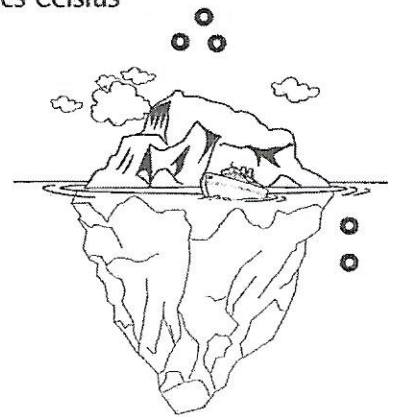
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② Why did the sea level increase 10 000 years ago? Circle the correct answer.

- a) the glaciers got thicker      b) the glaciers melted      c) the temperature was lower by 4 degrees Celsius

Since the 19<sup>th</sup> century the climate has continued to change. But now the changes are due to human activities. Earth's climate is becoming warmer, which is disturbing weather patterns. Automobile exhaust (nitrogen oxide) and factory smoke increase greenhouse gases in the atmosphere. Greenhouse gases form a layer of gases around the Earth and keep it from cooling down. The gases that accumulate in this layer retain heat from the sun, causing our planet to heat up. This is called global warming.



③ What are we? We cause global warming by accumulating in the atmosphere.

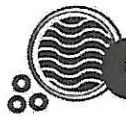
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④ What two things increase greenhouse gases in the atmosphere?

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## Climate Change (continued)

Scientists have been recording temperatures for nearly 100 years. During the 20<sup>th</sup> century they observed that the temperature on our planet's surface increased by 0,5 to 0,7 degrees Celsius. That doesn't seem like much but it's enough to prove that global warming is taking place. This small change can cause torrential rains and heat waves. In the Arctic and the Antarctic the layer of ice is getting thinner, causing sea levels to rise.



5 Did our planet's temperature increase by several degrees in the 20<sup>th</sup> century? Explain.

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6 Use your dictionary to find the definition of the word "torrential".

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Studies on insects, birds and plants show that the climate is changing. Birds make their nests earlier, and butterflies are flying farther north. Plants come out of the ground faster and live longer. We have calculated that if the polar ice cap melts completely, ocean water will rise by several metres and will flood many countries. To avoid these catastrophes, scientists suggest reducing greenhouse gases by replacing polluting types of energy with "greener" forms of energy.



7 In your opinion, why are butterflies going farther north?

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8 Do you think that "green" energy is good for the planet's inhabitants? Explain.

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