only catches mistakes but helps you write great content and realize what a reader feels. It corrects you, it understands you, and it teaches you.

Today, Grammarly has offices in San Francisco, New York, Vancouver, and Kyiv. And its product is used daily by approximately 30 million users, and this amount continues growing.

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CHEMICAL CAUSES OF GLOBAL WARMING

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First of all, the formation of carbon dioxide contributes to the warming. Cars, factories - humanity is mercilessly killing the planet with CO_2, and plants are simply not able to process much there. Of all these gases, carbon dioxide is the most important, both for its role in the greenhouse effect and for its role in the human economy (Selin, n.d.). When any organic matter burns out, carbon dioxide and water are formed, this process is described by the following equation (take sugar as an

organic substance):

$C_6H_{12}O_6 + 6\ O_2 \longrightarrow 6\ H_2O + 6\ CO_2 + \text{energy}.$

The next harmful chemical is nitrous oxide. On our planet, its excess appeared due to the use of nitrogenous fertilizers in agriculture. Microorganisms decompose it into more harmful components, denitrification occurs.

$NH_4NO_3 \longrightarrow NO_3^- \longrightarrow NO_2 \longrightarrow NO \longrightarrow N_2O$

In turn, the first representative of a series of alkanes is methane, one of the most dangerous gases contributing to global warming. It is produced during the digestive processes of cattle. Also, more methane is emitted from rice paddies. It is also harmful in that it causes suffocation.

Ozone is another greenhouse gas. It irritates the mucous membranes of both humans and animals. Ozone can be obtained from oxygen, nitrous oxide, and a variety of other chemical gases. An important clarification - we are talking about ozone from the troposphere. Also ozone comes from methane, which describes the following reaction equation:

$CH_4 + 4O_2 \longrightarrow HCHO + H_2O + 2O_3$

It is also worth considering a compound such as calcium carbonate, known as chalk. It has a detrimental effect on the flora and fauna of the marine world. How is this related to warming? Due to carbonate, the acidity of the water increases, which affects the number of marine inhabitants. Along with this, food chains are destroyed. As a result, the balance inside the sea world is disturbed, which leads to a change in the internal climate, and, accordingly, the climate of the entire planet.

Let's move on to substances created by humans. The greatest harm to the environment, which is the subject of an increase in the temperature of the earth, is carried by chlorofluorocarbons. The natural sources of these compounds are still not known to humans. There are at least two reasons for their harm to our planet. First, unlike many other atmospheric molecules, they can absorb radiation that makes it through our atmosphere from space. Second, they absorb the radiation (trap the heat) very efficiently, because of the nature of the fluorine bonds inside them (Kreger, C.). Together with methane, carbon dioxide and other compounds, they create a

greenhouse effect.

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GLOBAL WARMING

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Global warming is an increase in average global temperature caused by releasing heat-trapping gases. It occurs when harmful air pollutants, mainly carbon dioxide (CO_2) is concentrated in the atmosphere and absorbs thermal energy. The consequences of global warming are different: glaciers melting, rising sea levels, extreme weather changes, raging wildfires, droughts, and powerful storms. Today many scientists and leading world organizations pay attention to this urgent problem.

One of the things that makes an enormous contribution to global warming is the greenhouse effect. The discovery of it belongs to the Swedish chemist and physicist Svante Arrhenius. Usually, the Earth's surface absorbs incoming sunlight and solar radiation and then bounces it back into space. However, scientists proved that certain gases, called greenhouse gases, keep the energy in the atmosphere. The natural greenhouse effect makes Earth's climate appropriate for living. Without it, the atmosphere would be -18°C, instead of the normal 15°C. Nevertheless, the enormous concentration of greenhouse gases is responsible for heating our planet.

Throughout the history of the Earth, the amount of these gases could go up and down. However, it remained nearly the same for most of the time. For instance, the level of carbon dioxide earlier was approximately 280 parts per million. In the 18th