

Lesson Plan ( 1-4 class )

**Lesson Title:**

We protect the environment.  
Specific topic: Climate change

**Objectives:**

- determining the difference between weather and climate,
- defining terms: climate change, global warming, renewable energy sources,
- explain what the greenhouse effect is,
- indicating human behavior that is conducive to climate protection,
- distinguish between renewable and non-renewable energy sources,
- enumerating examples of extreme weather phenomena,
- listing examples of actions that he can implement himself in order to protect the climate,
- determining the importance of human activities aimed at protecting the climate,
- justifying the need to protect nature.

**Materials Needed:**

projector, computer (multimedia board)  
two thermometers  
plastic container  
lamp  
watch  
ice cubes  
presentation  
printed worksheets  
colorful pictures

**Outline of the lesson:**

1. Conversation with children on "What is nature and what is climate".  
- explanation of the difference,  
- introduction of the concept of atmosphere.

2. Climate change

Guided conversation about the causes of climate change.

Presentation of graphics (photos) showing the sources of greenhouse gas emissions (students indicate those sources that have a negative impact on the environment).

3. Introduction of the concept of the "greenhouse effect" and the experiment.

**EXPERIENCE:**

In a sunny place (or under a lamp), we put two thermometers next to each other and observe the temperature every 1 minute. and save the data.

after 5 minutes additionally, one thermometer is covered with a plastic container - we check the temperature every 1 minute. and save the data.

In addition, ice cubes can be placed next to the thermometers (students observe where the ice melts faster).

Summary of experience and drawing conclusions.

4. Comparison of the experience with the situation in the atmosphere, where heat is trapped due to the presence of greenhouse gas.

PRESENTATION OR PHOTO SHOW

"Where do greenhouse gases come from?"

- demand (increasingly) for electricity and heat, which is mainly obtained from the combustion of fossil fuels,
- livestock farming (methane),
- industrial pollution,
- transport,
- methane emissions from landfills.

5. Effects of global warming (presentation or film)

To make students aware that climate change is progressing all over the world and mainly concerns the increase in temperature on Earth, which causes:

Droughts/storms/severe storms/floods/sea level rise through melting glaciers/record heat waves/fires/changes in snow cover, etc.

6. Examples of actions to reduce greenhouse gas - work in groups.

Matching pairs of pictures showing positive and negative climate behavior:

E.g. cycling / driving a non-green car

### **Summary**

Introduction to discussing renewable energy sources (topic of the next lesson) - the teacher talks about the ways to reduce the greenhouse effect and presents pictures with symbols of renewable energy sources.