





Efficace Pedagogic Resource for Active Learning

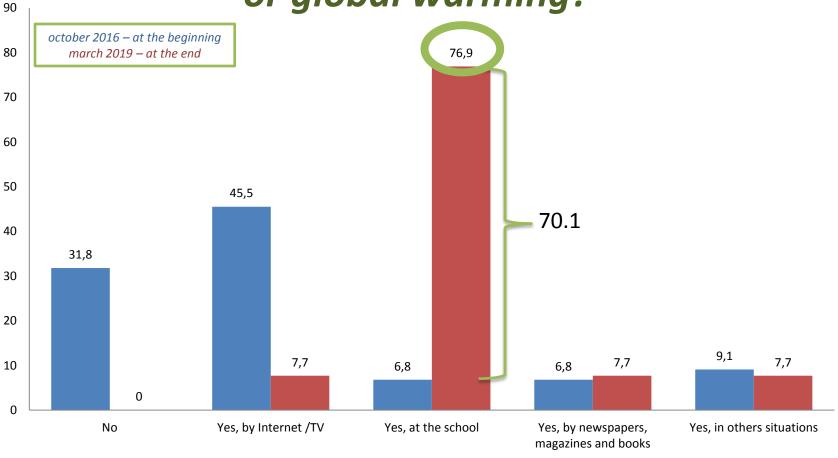
FINAL PRODUCTS AND SUMMARIES

Comparative analysis of surveys to start and finish the project SURVEY ABOUT CLIMATE CHANGE OR GLOBAL WARMING

october 2016 – at the beginning march 2019 – at the end

Karczmiska, march 2019

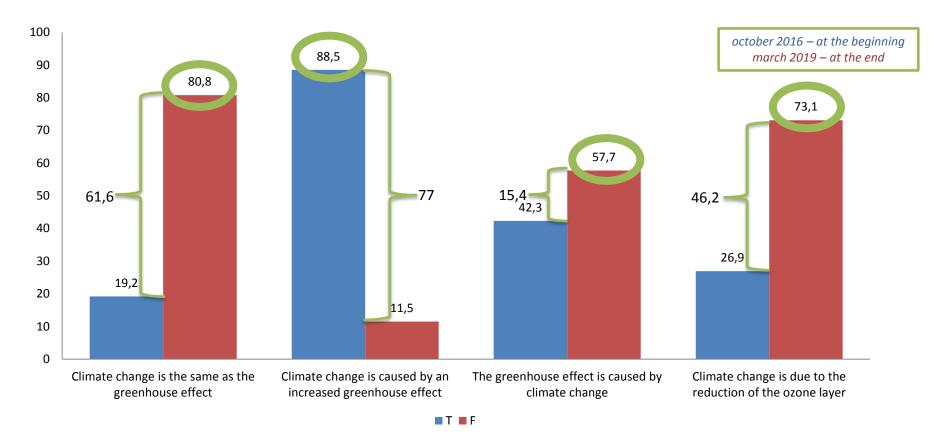
1. Have you heard about climate change or global warming?



at the beginning at the end

- After three years of project implementation, all students heard about the problem of climate change or global warming.
- 76.9% of the respondents learned about it at school, that is 70.1% more than at the beginning.

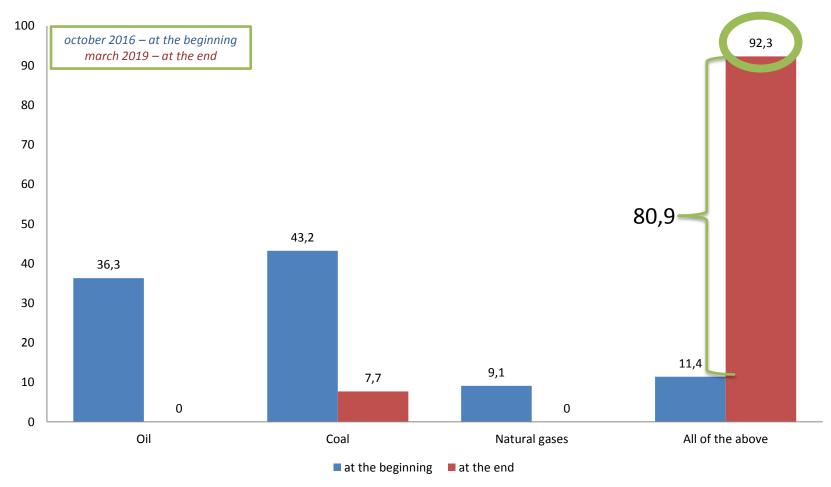
2. Answer True (T) or False (F)



Answers show that pupils no longer have a problem distinguishing between the following phenomena: climate change, the greenhouse effect, global warming, the ozone hole.

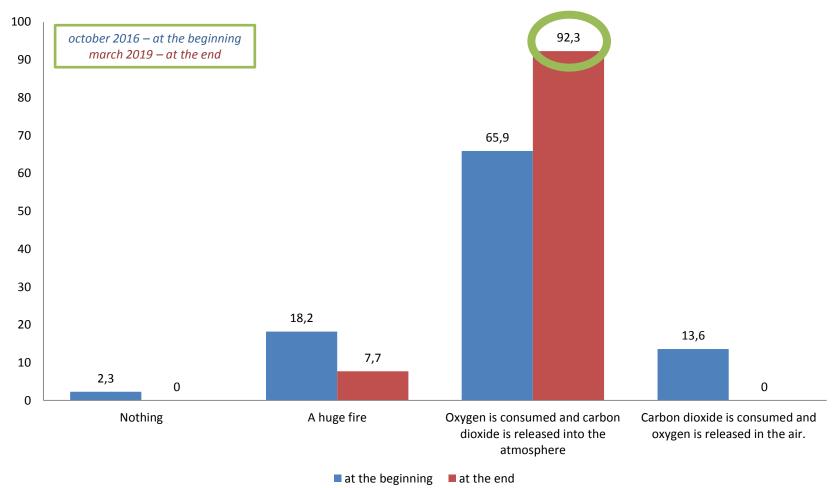
> The subjects are able to indicate which of them are the causes and which effects.

3. Which of the following are fossil fuels?



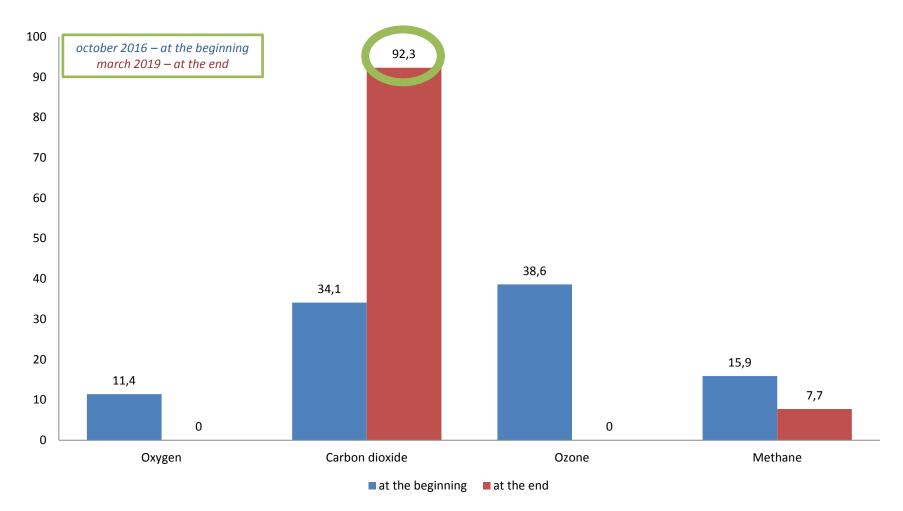
92.3% of students know different types of fossil fuels, which are non-renewable energy sources, that is 80,9% more than at the beginning.

4. What happens when we burn fossil fuels?



Now 92.3% of students know that fossil fuels burned are the main source of greenhouse gases emissions.

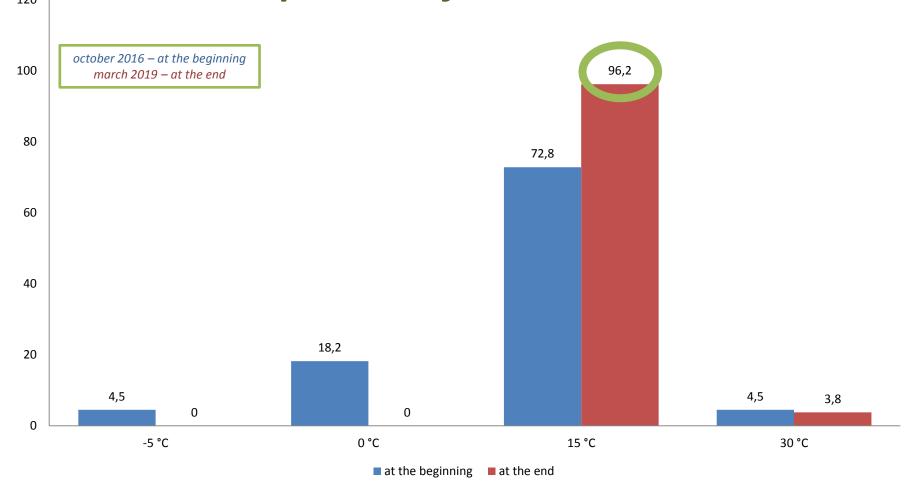
5. Which it is the main greenhouse gas?



> 100% of students know two main greenhouse gases.

92.3% of respondents correctly indicate the one (carbon dioxide) that has the greatest impact on global warming.

6. What do you think is the most ideal (average) temperature for the Earth?

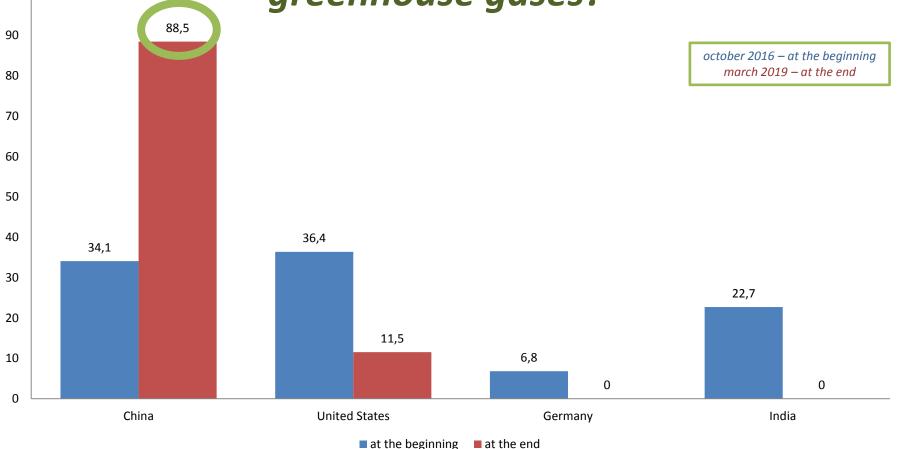


96.2% of students correctly indicate the average temperature on the Earth.

Now only 3.8% do not have this knowledge but at the beginning there were 27.2% of them.

7. Which country currently emits the most greenhouse gases?

100



- 88.5% of respondents correctly indicate the country currently the main source of greenhouse gases emissions.
- 11.5% of students do not have current knowledge in this area, at the beginning there were 65.9% of them.

8. Which of the following light bulbs uses the least energy, and therefore results in fewer greenhouse gas emissions? 100 october 2016 – at the beginning 88,5 90 march 2019 – at the end 80 70 59,1 60 50 40 30 18,2 20 13,6 11.5 9,1 10 0 0

88.5% of students correctly indicate the type of light bulb that is energy-saving and does not increase the greenhouse effect.

at the beginning

Halogen

at the end

LED

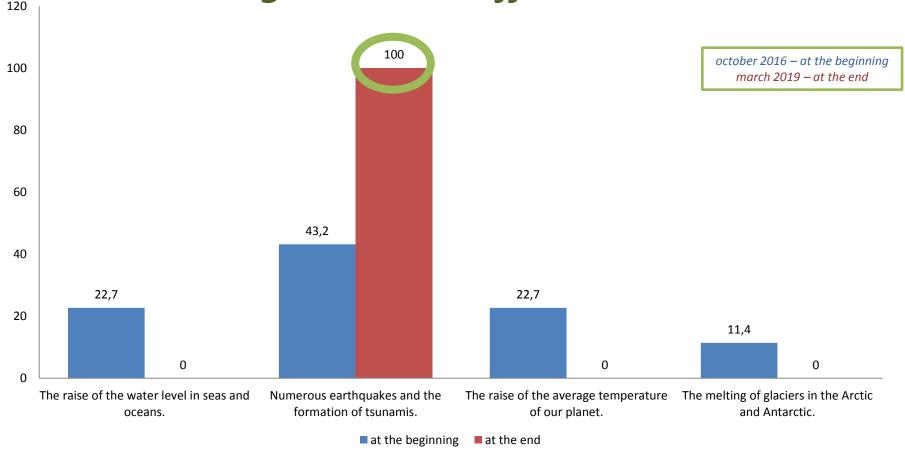
Compact fluorescent

0

Incadescent

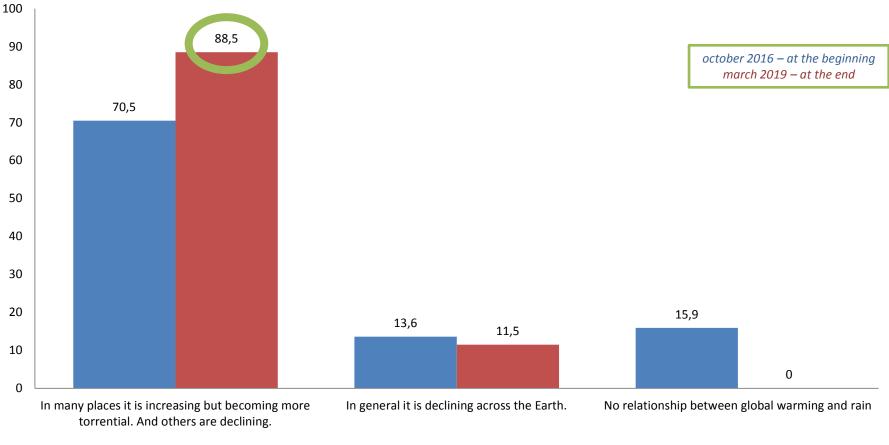
> No student marked a traditional light bulb at the end of the project.

9. Select the <u>false</u> answer. The result of the greenhouse effect is:



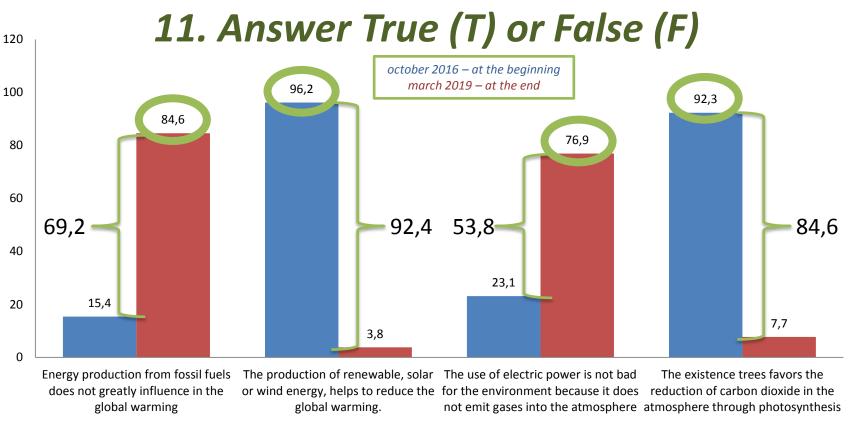
> All students correctly recognize the results of the greenhouse effect.

10. And what about rain? Mark the correct option.



at the beginning at the end

- 100% of students see relationship between global warming and rain.
- > 88.5% of respondents know how global warming affects the climate.



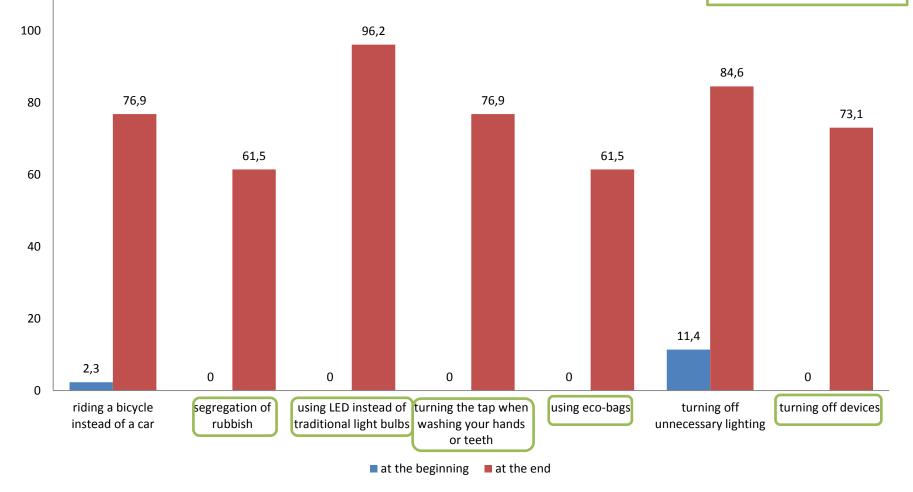
- T F
- 84.6% of respondents know that the energy production from fossil fuels has a major impact on the global warming.
- > 96.2% of students know that renewable energy helps to reduce the global warming.
- 92.3% of students know that trees play a huge role in reducing the main greenhouse gas during the photosynthesis process.

12. Have you ever done anything consciously to reduce the effects of climate change? 100 92,3 86,3 90 80 70 60 84,6 50 40 30 20 13,7 7,7 10 0 at the beginning at the end

NO YES

92.3% of students declare pro-environmental activities every day.
That's 84.6% more than at the beginning.

Yes, for example



> 92.3% of students changed their daily habits.

There are five new behaviors for environmental protection.

120





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