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Environmental education at the first stage of primary school- ecological problems

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Abstract

The main topic of this work is how we can introduce environmental education to children in primary school, especially how to take care of our planet Earth, using modern technologies that we have at our disposal. The work contains a preface, a theoretical part, which describes what is destroying our planet and how we could prevent it. This is followed by a practical part, which will describe the activities that are focused on the consequences of human activity on our planet. The main goal of this article is to describe the theoretical part, in which the problems that threaten our planet will be described in more detail. At the same time, it is necessary to describe the connection between these problems and teaching at the first stage of primary school. Environmental education is a cross-cutting theme of the FEP in the Czech Republic and it is important to involve it in current teaching. Children today have no idea what the consequences of their behavior may be in the coming decades if they do not change it. This current issue can be introduced to students using modern technologies that should be available to every school. With the help of these technologies, they will be introduced to the consequences of their behavior and offer them a solution.

Keywords: planet Earth, pollution, ecology, environmental education

Introduction

This article provides a brief summary of the pollution of our planet Earth and the consequences that can occur if we do not start doing something about it as the inhabitants of this planet. The article is divided into individual chapters that deal with various topics, such as: how did the planet Earth look like 100 years ago, how can we help the planet, what is actually environmental education, etc. The last chapter describes the project day, during which children they will try modern technologies and at the same time learn how we can help the planet.

Planet Earth 100 Years Ago and Nowdays

We are currently facing various environmental problems that have a major impact on the functioning of planet Earth. The big problem is global warming, which is the reason why glaciers melt, and animals that are adapted to such a cold environment are dying because they have nowhere to live and nothing to hunt. Many species of animals lose their natural habitat due to large-scale deforestation of rainforests, and large holes in the ozone layer cause fires that kill animals and destroy habitats. There are even more such problems and it is very important that we arouse in children an interest in taking care of our planet and preventing such problems. It is also important to explain to students how instead of the planet will look like if the behavior of the inhabitants does not change.

100 years ago, the planet Earth looked completely different. The air was cleaner, the oceans were not clogged with rubbish and fuel released from ships and oil tankers. Not so many tons of garbage were generated every day, because people didn't have much to throw away, they hid everything and used it repeatedly. Probably the biggest difference is the population. In the last 100 years, less than 6 billion people have grown on the planet.

How We Can Help Our Planet?

We can help our planet Earth in several ways. We can only start by recycling all our waste or reducing it. Instead of a plastic plastic bag, we take a canvas bag, instead of a disposable cup in which we get our coffee in our hand, we have it brewed in our own thermo mug or instead of a plastic bag for vegetables or fruit, we can buy cloth drawstring bags. There are many ways to replace these habits pollute the planet.

There are many other ways we can help the planet and introduce them to children using modern technology. The best means will probably be VR, where students can move to the underwater world (Ocean Rift application) or to Chernobyl, where they will see what a nuclear disaster can do. Unfortunately, we did not register any application for virtual reality in which students would see what it looks like: the ocean, in which garbage floats or life in huge landfills in South America.

Another way to provide students with information about what our planet currently looks like is to use iPads and various applications or a program that can be easily installed on iPads (hraozemi.cz, plastjeplast.cz).

There are really many possibilities and it is very important to use them to show students who have the opportunity to save the planet Earth how to do it and why to do it at all. It is important to cultivate a relationship with nature and ecology in pupils (children). Pupils should understand what traces their behavior can leave here on Earth.

What Is an Environmental Education in Czech Republic?

Pupils should already have the basic ecological habits that their parents have imprinted on them when they start primary school. Currently, this is expected because the ecology is very modern and children perceive it all around them (on television, in the store, in the city,...). Most families try to live in harmony with nature, go to the forest with their children, grow their own vegetables and fruits, sort waste or have their own composter in the garden.

If children already have such habits and sort waste themselves in the classroom and are interested in this topic, it is easier to include environmental education in their teaching. But if we do not have such children in the classroom, we must make environmental education all the more interesting so that these children can also create eco-benefits.

Environmental education in the Czech Framework Educational Plan (FEP) is a cross-cutting theme that teaching in the Czech Republic should include. And why is this cross-sectional topic included in primary school teaching at all? It has already been said here. Pupils must automate friendly behavior towards nature and the environment. We should lead students to understand the complexities of the relationship between man and the environment. We should explain to children why it is important to be kind to nature, animals, etc.... Environmental education affects the rational aspects of a child's personality and also affects his emotional side. If we can influence the child's emotionality with the help of this upbringing, we can achieve the fact that we are raising an emotionally stable individual who will be dedicated to save the planet in the future and will not be indifferent to its development.

According to the Czech FEP (framework educational plan), environmental education is divided into individual parts. The first part is Man and his world, in which students learn to perceive and evaluate the consequences of human activities. The student learns to be responsible with respect to the environment. The second part is Man and nature. In this part, the student will learn the basic laws of nature, the interrelationship of ecosystems and the position of man in nature. The third part is Man and Society. This section explains the links between ecological, technological and social phenomena. The fourth part is called Man and Health. The fourth part is very important, because we explain to students how environmental problems affect their health (polluted water, microplastics in water, drug residues in water, ...). The fifth part is Information and Communication Technologies. In this part, students use modern technologies - the Internet, VR, iPads, etc. - to be able to find the necessary information about what it looks like in the world. In this way, we lead students to take an interest in the world and its development on their own. The last part is Art and Culture. In this last part, students will learn to perceive the aesthetic qualities of the environment in which they live.

Project Day - Environmental - ECO DAY

We could involve a project day on the topic of ECOLOGY in the first grade of primary school. It doesn't matter at all that the students are still at very young age. The sooner such a topic is started the better it would be.

1. At the beginning of the project day, there will be a brainstorming session with the pupils to check if they have any awareness of the ecology and ecological problems that exist in the world. Brainstorming can take place using iPads, on which the Jamboard application will be installed, in which students will trap their ideas and all will be displayed on interactive whiteboards.

2. After brainstorming, we will release a video for students, in which everything will be explained about ecology and the problems that afflict our planet. It's a video for young children, so they should get the most important out of it.

3. On iPads, students will have prepared a worksheet that will focus on the ecology and issues that threaten our planet (only environmental issues). Pupils will use the iPad to find the information which is needed. Pupils will learn to search for information on the Internet, so we will complete the fifth part of environmental education.

4. After working out the worksheet, groups of VR students will be given - virtual reality. One for each group. In virtual reality, the Ocean Rift program will be set up, in which students will see what it looks like in the depths of the seas and oceans. For such small children, it is necessary to transfer such a topic to other subjects, so the student who will be wearing glasses will describe what it looks like at sea and the others in the group will draw according to the description. If there was an application where the ocean was polluted, the same would be done with it.

5. At the end of the project day, the students will create a message for Planet Earth again on the iPads. They then print and issue all the messages with the teacher.

Conclusion

In conclusion, it can be said that environmental education is one of the most important subjects in primary school. Pupils will learn a lot of new things that they will be able to use in the future, not only information, but also that they will learn to work with modern technologies. The involvement of technology is now a necessity, it is impossible to live and

function without them. Society is already set up in this way and must submit to it, so it is necessary to teach children. But it is also necessary to teach children how to take care of our planets, even though technology is one of the things that destroys planets. It can be limited so that it does not harm, and yet the most important thing to benefit from it is information. All of this requires environmental education.

References

- Planeza Země je dvakrát prašnější než před 100 lety.* www.novinky.cz. (2011, January 15). Retrieved August 10, 2022.
- Fernandez, A. H., Camargo, C. B., & Nascimento, M. S. L. (2019). Technologies and environmental education: A beneficial relationship. *Research in Social Sciences and Technology*, 4(2), 13-30.
- Procter & Gamble Central Europe. (2021, April 24). *EKONAVYKY ODPAD CZ* [Video]. YouTube. http://www.youtube.com/watch?v=WyqOOCjyMBo&ab_channel=Procter%26GambleCentralEurope