SUSTAINABLE DEVELOPMENT IN KINDERGARTEN

Learning objectives

NATIONAL CURRICULUM FOR EARLY AND PRESCHOOL EDUCATION

- The National curriculum for early and pre-school education contains starting points, values, principles and goals…

- These starting points, values, principles and goals represent the backbone of shaping the educational process and curriculum of each kindergarten, as well as the system of early and preschool education as a whole.

- There is no ready-made, universally applicable recipe for the application of the starting points, values, principles and goals contained in the National Curriculum for Early and Preschool Education in educational practice. Each kindergarten should look for its own path of development according to its specific conditions, staffing and space possibilities and the social context in which it operates.

- **The National Curriculum for Early and Preschool Education in Croatia has been applied since the pedagogical year 2015/2016.**

KEY COMPETENCIES FOR LIFELONG LEARNING

- The National Curriculum for Early and Preschool Education encourages and strengthens the development of eight basic competences for lifelong learning, which the Croatian education policy has accepted from the European Union, [13] which are:
- 1. Communication in the mother tongue
- 2. Communication in foreign languages
- 3. Mathematical competence and basic competences in science
- 4. Digital competence
- 5. Learn how to learn
- 6. Social and civic competence
- 7. Initiative and entrepreneurship
- 8. Cultural awareness and expression.

COMPETENCIES

Mathematical competence and basic competences in science and technology

- Mathematical competence refers to the ability of students to develop and apply mathematical thinking in problem solving in a range of different everyday situations;

- Natural science competence refers to the ability to use knowledge and methodologies that explain the world of nature in order to ask questions and draw conclusions based on facts;

- Technological competence is understood as the ability to apply natural science knowledge and methodology in response to human needs and desires.

- Basics competencies in science and technology also include understanding the changes caused by human activity and the responsibility of the individual as a citizen.

Digital competence

•It refers to the ability for safe and critical use of information and communication technology for work in personal and social life and in communication. Its key elements are basic information and communication skills and abilities: the use of computers to find, evaluate, store, create, display and exchange information, and develop collaborative networks over the Internet.

STEM IMPLEMENTATION

STEM program

- STEM is a curriculum based on the idea of educating students in four specific disciplines - science, technology, engineering and mathematics - in an interdisciplinary and applied approach.

- Instead of teaching these four disciplines separately and being separate subjects, STEM integrates them into a unique learning paradigm based on real interactions.

- There are no greater natural scientists and engineers than children themselves. Children are naturally curious and learn mathematical, scientific and engineering concepts through play. By providing them with a quality environment (which does not have to be financially inaccessible), children can use their natural inclination to explore, to build and to ask questions through play. With this program, science wants to approach and popularize the youngest age through a program adorned with various experiments and workshops that children do independently to come to the answer critically and logically, all with a lot of didactically designed games, outdoor activities and teamwork.

Robotics Program (STEM)

- Today, when children are exposed to technology at all times, the goal of the robotics program is to enable children to develop critical thinking, allow them to peek behind the screen and discover what is hidden there, encourage them to creatively solve problems and "designe thinking", develop logical-mathematical competencies and basics of programming to become small innovators and creators instead of content consumers.

- In addition, the goal is to connect STEM and foreign language learning so that children can fully develop, create and explore with fun and play.

SUSTAINABLE DEVELOPMENT

UN DECADE OF EDUCATION FOR SUSTAINABLE DEVELOPMENT

- UNESCO declared the period from 2005 to 2014 the UN Decade of Education for Sustainable Development. Key educational principles were adopted at the 2005 UN World Summit and include: interdisciplinarity and integrity, value orientation, critical thinking and problem solving, multidisciplinarity, participation in decision-making, applicability, relevance to the local community.

- Participation and inclusion are necessary components of education for sustainable development, with an emphasis on strengthening active citizenship, human rights and social change. Change is necessary at all levels and at all stages of education and encompasses social learning, which makes education for sustainable development a broader process than the purpose of education itself (Gothenburg Guidelines, 2008).

EACH ACTIVITY IN THE EDUCATIONAL INSTITUTION SHOULD BE ANALYZED KEEPING IN MIND THE FOLLOWING ISSUES:

- How will this activity contribute to sustainability?

- What are the opportunities for learning about global citizenship, solidarity and individuality in preschools?

- What types of values do conflicts develop?

- What issues of power and powerlessness have been brought up?

- How is participation or lack of participation reflected?

- Education for sustainable development in early childhood should be recognized as a dynamic, not a static process, as a means, rather than goal, and as a challenge for lasting cultural and social change, not once for a constantly measurable outcome

(Hägglund i Pramling Samuelsson, 2009.).
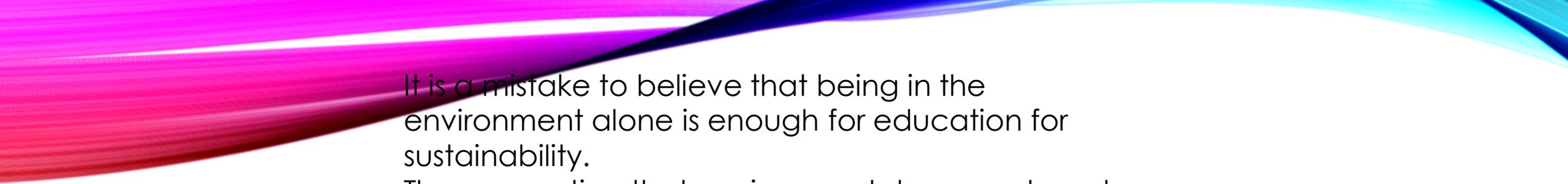
It is a mistake to believe that being in the environment alone is enough for education for sustainability.

The assumption that environmental concepts such as the greenhouse effect and ozone holes are below the intellectual capacities of children, and cannot fit into the curriculum.

Practitioners often think that educating for sustainable development is teaching about natural disasters, rather than encouraging and empowering children to actively support sustainability. There is a need for educators to consciously choose pedagogical activities that will help achieve the goals in line with education for sustainable development. To achieve these ambitions, we need well-educated educators, ready to consciously make decisions about preschool programs. Our results point to the need for reform within education for educators in areas related to education for sustainable development and with the importance of child participation.

ESD- APPLICATION OF SUSTAINABLE DEVELOPMENT IN KINDERGARTEN "RADOST"

- The topics of ecology and sustainable development are part of our curriculum and are included in the daily activities of children in kindergarten. The recognizable kindergarten eco culture makes us unique in restoring and creating a better world.

The purpose of education for sustainable development is to direct education in the direction that contributes to the sustainable future of present and future generations.

Children in our facilities have long been sorting plastic and paper waste. It's part of their daily routine.

ERASMUS + PROJECTS

- Kindergarten "Radost" was presented with many projects on the topic of sustainable development and ecology. We strive to enrich our programs with new activities for children, so participating in this project is another opportunity for that. Namely, the kindergarten "Radost" has been participating in Erasmus + projects for many years. We have already worked on the project "Democracy in kindergarten" and "On the money trail", so the project "Greenopolis" was a natural sequence in our work.

- Given the social and technological progress in all parts of society, progress has been made in our kindergarten, so it is common to use modern technology in our daily activities. Since we had experiences from the previous project "On the money trail" where the use of e-books / picture books proved to be very interesting and stimulating, we accepted participation both because of the topic and because of the methods and forms of modern technology in everyday work.

- Sustainable development cannot be talked about without emphasizing the role of education. Education is key to developing and promoting sustainable solutions for the development needs of the people of the European Union and the planet (UN, 2013);

- Education for sustainable development should be understood as an integral part of quality education and lifelong learning. Sustainable development should begin in preschool (UN, 2018), where there is a chance for greater impact.

- If we want education for sustainable development to be successful, it needs to be implemented in a real environment of children. Change and sustainability can go together if accepted in both, local and global society. Innovation must be meaningful to children, educators and whole families - only then will it be influential.
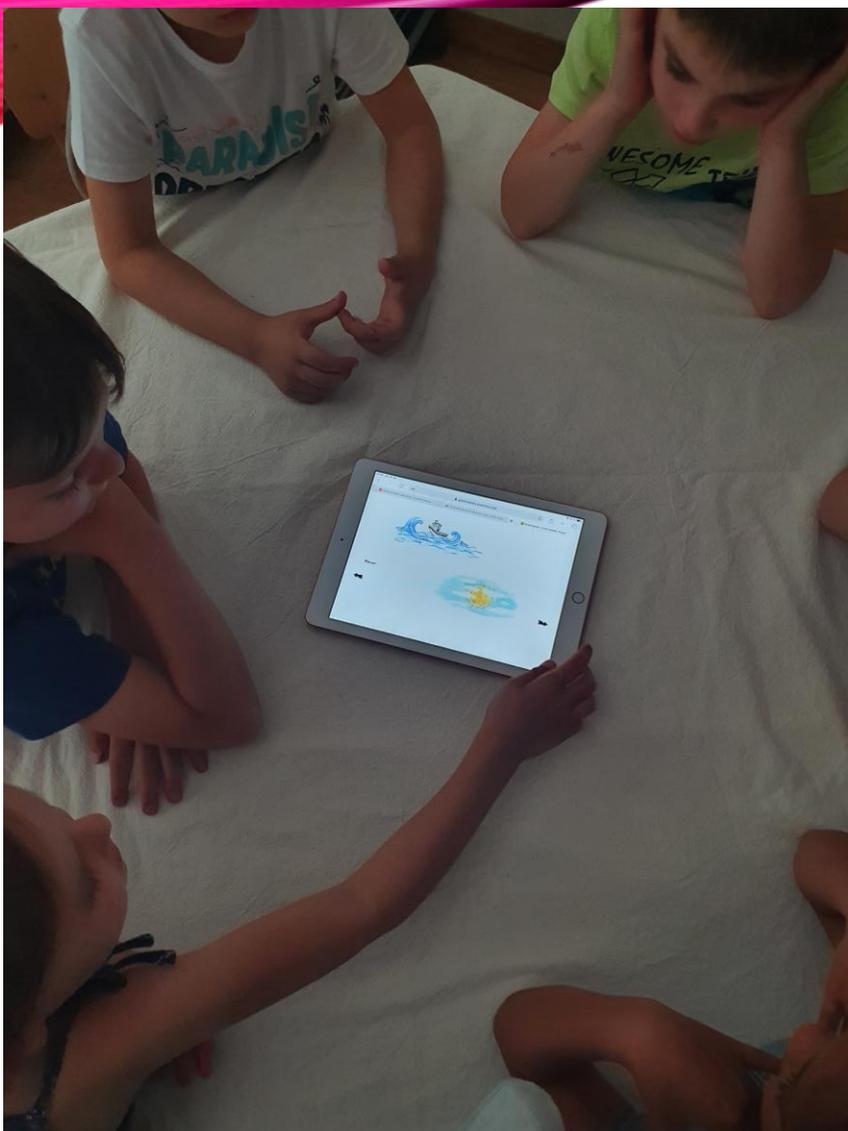
PROJECT„GREENOPOLIS"

- Testing the e-Book in the group Tintilinići 3-6 y.o.

ART CONTEST
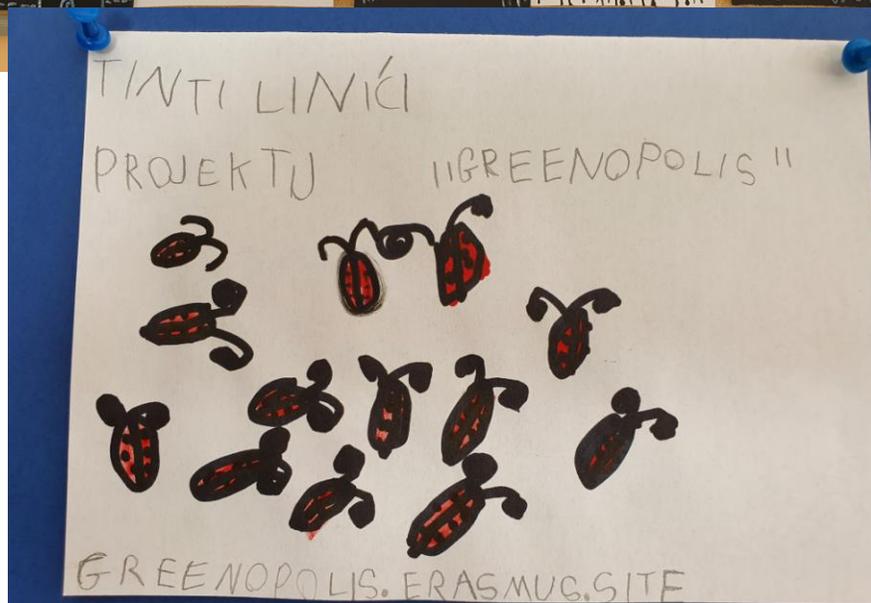
THANK YOU

- References:
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- Shaping the future we want: UN Decade of Education for Sustainable Development; final report; UNESCO. Director-General, 2009-2017 (Bokova, I.G.) Buckler, Carolee [8], Creech, Heather ; 2014 (Oblikovanje budućnosti koju želimo: UN-ovo desetljeće obrazovanja za održivi razvoj; završno izvješće)