“Computers in our life”

Project KA210-SCH

Co-funded by the Erasmus+ Programme of the European Union

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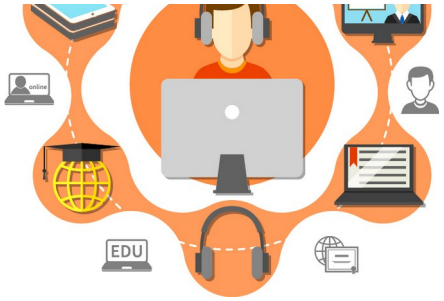
GOOD PRACTICES REPORT



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This guide was prepared during the works connected with the “Computers in our life”KA210-SCH - Small-scale partnerships in school education, co-funded by the Erasmus+ Programme of the European Union.

Project teams:

- **Cyprus: Agios Georgios Lyceum, Larnaca**
- **Greece: 2nd Gymnasium of Xanthi**
- **Italy: Istituto Comprensivo G.Verga Comiso (Rg)**
- **Portugal: Agrupamento de Escolas Alberto Sampaio**

CONTENT

PROJECT COORDINATOR

AGIOS GEORGIOS LYCEUM

Larnaca, Cyprus

The Agios Georgios Lyceum is a public secondary school (16+). It offers general education courses that contribute to the fulfillment of requirements that apply to the national School Leaving Certificate (Apolytirion). The courses offered are divided into different directions among which are Classical Studies, Science Studies, Economic Studies, Foreign Language Studies, and arts industry.

The school is one of the largest lyceums in Cyprus. It hosts about 600 students and 87 teachers, part timers and full-timers and promotes a flexible approach to learning and tries to build educational networks at the national and international level. Besides the supply of solid knowledge to their students, school put efforts in promoting an open and inclusive culture. Through different educational initiatives as well as social actions, schools' priority is to motivate students and staff to get involved in volunteering actions of all manners.

The school itself, as well as through cooperation with other entities (organizations, local community, other schools), aims at creating opportunities for the whole school community to get involved.

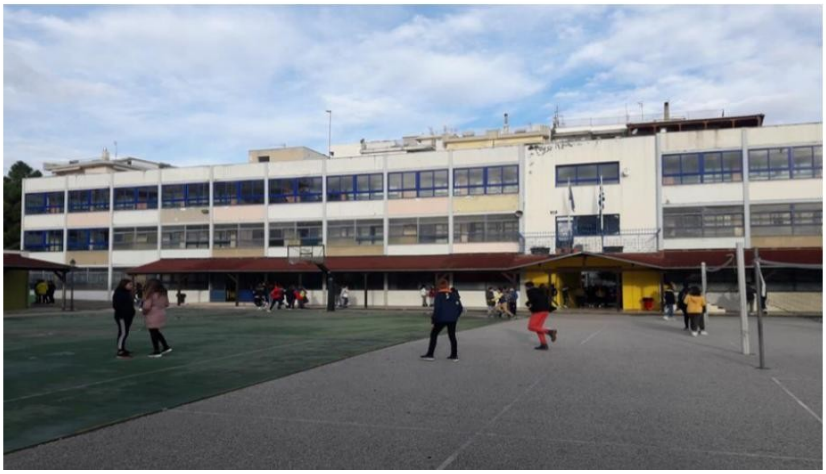
PROJECT PARTNERS

2nd GYMNASIUM OF XANTHI
XANTHI, GREECE

The 2nd Gymnasium of Xanthi is a typical Greek middle school. Currently, it employs 47 teachers and has 360 pupils.

The school follows the standard curriculum, which has been designed by the authorities of the Ministry of Education, nevertheless, staff members try to develop activities that will enhance the learning process. The school has a general interest in new teaching methodologies and their impact on the teaching process. Personalized learning is a very modern approach to teaching that takes into consideration the needs of each and every pupil. Therefore, the school like to experiment with personalized learning and then to apply it in the teaching process.

The school has participated in projects about the application of new educational methodologies in schools and so they can use their past experience in the new project.



PROJECT PARTNERS

ISTITUTO COMPRENSIVO G.VERGA COMISO

ITALY

The Istituto Comprensivo “Giovanni Verga”, founded in September 2000, brings together the three basic school levels: Nursery School, with 2 buildings "Monserrato" and "San Giovanni Bosco"; “Monserrato” Primary School and “Giovanni Verga” Lower secondary school . Our school is attended by about 689 students and has a staff of 82 teachers.

Our school has been engaged in a lot of activities such as STEM, Healthy Food, The Environment, Creative Writing and Storytelling, and Critical Thinking skills. Among the major environmental emergencies, the school has focused on the management of water resources, valuable assets of the planet and the community. Laboratories have been activated for Applied Sciences, to study the chemistry and physics of water. STEM: laboratories have been set up in order to teach Maths using innovative methods such as cooperative learning and problem solving related to everyday life, using brainstorming and stimulating pupils to critical thinking with the help of challenging logical games. Coding has been applied to algebra, geometry and arithmetic. Coordinators were Mr Bellassai, Mrs La Cognata and Mrs Barone experts in innovative teaching, flipped classroom courses and digital teaching by implementing new learning environments.

PROJECT PARTNERS

AGRUPAMENTO DE ESCOLAS A. SAMPAIO

PORTUGAL

It is the first school in Braga, to promote the inclusion of deaf students, and that has been doing over the past few years. It works as the Office for Educational Support Specialist on Deafness (Special Education). The school also includes a set of equipment, as a result of investment in various projects over many years, and that allows the assumption of space as an active space for the dissemination and construction of culture, science and the arts, open to the community that surrounds it .The School is open from 08:30 to 24:00 hours.There are teachers from several different areas: languages; math, Sciences, History, Geography, Arts, Physical Education, Design, Music, Mechanic, engineering, ICT,Philosophy, Psychology, etc. There are also three psychologists at our schools and some Special Needs Teachers. Our students can take part in many clubs, where they can spend their free time at school such as: Sports club, Chess Club, Music Club, Science Club, Workshop and Atelier Arts; astronomy club; environment club; Portuguese Language Workshop, robotics workshop; Radio and TV workshop ; Astronomy club, Theater workshop, drama club; Project parliament youth. A lot of different teachers with different skills will be involved in this project in order to do our best.

PROJECT SUMMARY

Nowadays computers are used everywhere and almost everyone is aware of this fact. However, most people have a very vague and general idea of what is really going on.For example, what does it mean to disclose information that

can be processed by computers or what is the impact of computers on employment? To be able to answer these and other similar questions one needs to be familiar with recent developments in information sciences, in general, and have an understanding of their impact in social life. In particular, progress in artificial intelligence, the emergence of machine learning, the ability to process big data, the design of clever robots, and finally the proliferation of social media have a deep impact in our life, nevertheless, this is something that is not touched in modern European schools. Consequently, most people with only secondary education do not really have a thorough understanding of why and how this happens. In particular, most people do not seem to understand how these technologies affect their personal life or the life of the community they are living in. Although these technologies play a very important role in modern life, still very very few nations have incorporated them in their curricula (a notable exception is Finland). Since it is not possible to change curricula overnight, implementing a project whose aim is to introduce these technologies and their impact to school communities is a brilliant idea. As it is obvious, such a project cannot substitute a course that is usually accompanied by a textbook, nevertheless, it can give the opportunity to all involved stakeholders to get a basic understanding of these technologies and their impact on modern life. Moreover, teachers participating in the project's

activities had the chance to see how the output that will be produced can be part of existing curricula, thus enhancing current curricula. In addition, all such partnerships brought together pupils, teachers, and parents from different European countries thus giving the opportunity to all these people to really

appreciate their European identity. In particular, all involved parties had the opportunity to work together, to communicate, to exchange ideas and finally to come closer.

Activity Title:

1. Learning about social media and their impact in life
2. Artificial intelligence in our life
3. How computers affect the economic life
4. Robots in our Life

During the meetings:

- we examined robotics and the impact of robots in our life;
- we visited facilities to see how robots function and what they can achieve;
- we experimented with toy robots;
- we examined how economy can be affected by computers and visited financial institutions;
- We examined real world appliances that use AI and problems that are solved using AI;
- In the final meeting, we explored how social media affect our life through discussions and workshops.

To explore and examine the usefulness of computers in our life, in practice, each partner school designed a short course for each part of the project . The proposed activities were presented and taught to pupils and teachers from the partner schools during the short term mobilities for students. At the end of each meeting, participating teachers evaluated the results. Unfortunately, most schools in Europe follow a curricula designed by ministries, and have to

engage pupils with traditional teaching methodologies and usually subjects like the importance of the computers in every sector of our life, are not discussed. Thanks to the Erasmus+ framework, we were able to connect and find kindred spirits ready to share thoughts, information , experiment new strategies and break new ground together as a team. Teachers and pupils (14-17 years old) worked alongside during the whole project to adapt learning instructions and to have the best outcomes.

PROJECT OBJECTIVES

The aim of this project is twofold. First of all, we want to introduce a number of technologies (Artificial Intelligence, robotics, big data, and machine learning). Obviously, this can be achieved by introducing both teachers and

pupils to the relevant ideas and notions. However, since we want to enhance the curricula of the participating organizations, we hoped to be able to introduce these ideas and notions to all members of our school communities (e.g., by writing a booklet that explains all relevant ideas or by making a DVD, a video etc.). This way, all pupils were introduced to innovative practices. In addition, the profile of the teaching profession was strengthened since pupils and parents realized that their teachers seek to teach pupils new things in unexpected ways (e.g., by enhancing existing curricula). Naturally, pupils are more interested in science in general after their exposition to all these ideas and this is very beneficial for our school communities, The second fundamental aim of the project is to help the members of all relevant communities (e.g., parents, other school communities, local communities) to understand how these technologies affect the life of every single person. We plan to highlight the pros and cons of these technologies. This way folks understood that computers were neither our friends nor our enemies: They are tools that should be used wisely by everyone. In addition, we helped pupils to combat prejudices related to people working with computers. Unfortunately, it is a fact that currently there is a huge disparity in men and women who work in computer related jobs. By demystifying these important technologies, we hope to make them more attractive to our female pupils. In the long run, it will be a success if more than the very small number of female pupils will consider a career in computer and technology business. We hoped to make our pupils more interested in research and innovation by trying to find ways that computers affect our lives and to propose ways that can make certain things more friendly and more useful to the general public. Finally, all people that

participated directly or indirectly to the project improved their digital competences. In addition, all participants had the chance to improve their linguistic and social skills, which is extremely important.

PROJECT ACTIVITIES

1st INTERNATIONAL MEETING

Agrupamento de Escolas Alberto Sampaio

OCTOBER 1-8 2022

Theme: Robots in our Life

In this training event, we explored robotics and the impact of robots in modern life. The idea was to explain what real robots were how they operate and what they are capable of doing. We explored the indstrial use of robots but also their use in space exploration, in medicine, exploration of oceans, their use in very demanding operations, etc. Pupils learnt things by using all available tools. In addition, pupils visited facilities that employ robots and saw how they functioned and what could they achieve. Also, they experimented with toy robots (Arduino, LEGO, etc.).

2nd INTERNATIONAL MEETING

ISTITUTO COMPRENSIVO "G. VERGA" COMISO

27 FEBRUARY-3 MARCH 2023

Theme: How computers affect the economic life

In this training activity we introduced pupils to bitcoin and related technologies and explained how economy can be affected by computers. Of course, we talked about more conventional things (e.g., e-banking, credit cards, etc.) and we expected most pupils to be familiar with these technologies. However, since most pupils were quite illiterate when it came to economics, this was a good chance to introduce them to core ideas and concepts of economics and then to show how these were affected by computers. Naturally, visits to financial institutions where specialists explained certain things helped pupils to better understand all relevant ideas and concepts. All these new ideas and concepts can be easily integrated in normal activities of the involved schools in various projects that are implemented in the schools and all courses that somehow discuss things about economy.

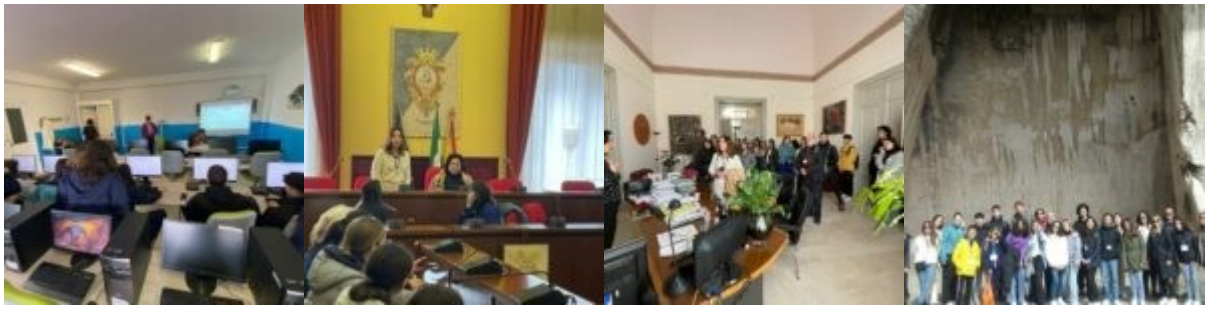
- Activity in the computer classroom: **Performance of the 3 most traded currencies in Europe**

	USD	GBP	CHF
01/01/1999			
01/01/2004			
01/01/2009			
01/01/2014			
01/01/2019			
01/01/2023			

- Activity at the robotic laboratory

Web addresses

- https://icvergacomiso.edu.it/project/computers-in-our-life/



3rd INTERNATIONAL MEETING

2-6 OCTOBER 2023

2nd GYMNASIUM OF XANTHI
Greece

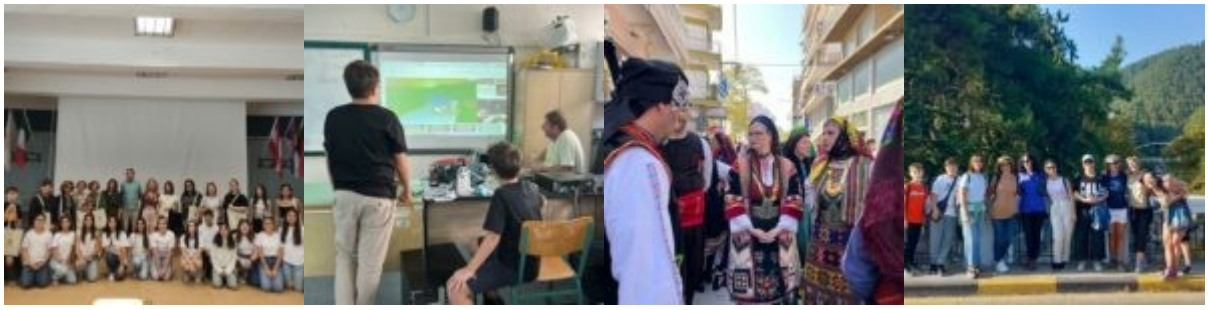
Theme: Artificial intelligence in our life

In this training activity pupils were introduced to Artificial Intelligence (AI) and deep learning. They didn't formally learn what AI and Deep learning was

Instead they were presented with many examples where these technologies have been successfully applied and gradually they understood what these technologies were about, for example, they learnt the famous "Towers of Hanoi" puzzle, how it can be solved by a human and how we can instruct a computer to solve it. In addition, pupils had the chance to examine real world appliances that use AI and see how these improve the quality of our life. Also, pupils and teachers

had the chance to discuss with experts in the field, that worked in the local university, about the many facets of AI.

They also learnt things about knowledge, information and their representations.



4th INTERNATIONAL MEETING

11-15 DECEMBER 2023

AGIOS GEORGIOS LYCEUM, LARNACA

CYPRUS

Theme: Learning about social media and their impact in life

In this activity we examined how social media affects modern life. In particular, we

(a) presented all forms of social media (pupils are familiar with some but not with all of them)

(b) explained how social media can affect the social life of a person

(c) studied how social media can alter the personal life of a person

(e)induced addiction was a big problem nowadays

(d) examined if social media can improve school life

(e) described ways to avoid pitfalls when using social media

In order to ensure the success of the activity the host institution invited people who have a deep knowledge of social media to give short lectures about different aspects of social media. In addition, the host designed a number of little projects that helped participants to see the pros and cons of social media.