



Co-funded by the
European Solidarity Corps
of the European Union



2023-1-TRO1-KA220-SCH-000160173
GREEN AGRIPRENEURS OF FUTURE

GREEN AGRIPRENEURS OF FUTURE

STEM and AI THEME: SUSTAINABLE AGRICULTURE

STEM ACTIVITY PLAN TEMPLATE

Country:	North Macedonia
Teachers' Names:	Jasna Gjeorgievska
Subject Title:	Tailor-made compost production from organic wastes
Learning Objectives/Goal:	To realise the importance and necessity of sustainable agriculture
Related Outcomes:	Science: Recycling and sustainability
	Information Technologies: Artificial intelligence, canva
	Engineering: Irrigation system design
	Maths: Ratio, data collection and evaluation, decimal notation, area
	Other: Environment and Climate Change Sustainable
Grade:	6th
Duration:	40+40+40+40
21st Century Skills:	Collaboration and teamwork, data literacy, flexibility and adaptability, digital literacy, leadership and responsibility, creativity and innovation, critical thinking and problem solving, entrepreneurship and self-management
Learning Approach:	Learning by doing and experiencing, Research, Cooperative Learning, Learning by discovery
Duties (Student and Teacher roles):	Teacher, guidance
	Student, research, application and conclusion
Materials and Technologies to use:	Recycling materials, general network, artificial intelligence, canva, soil, seeds, organic waste, moisture sensors
Lesson Plan According to 5E Learning Model	<p>Lesson Introduction/Attention Grabbing - Duration: 10min</p> <p>The following two visuals are shown to the class on the smart board. What are the differences between the visuals? How did the visuals make you feel? Which one would you prefer to live in? What are the conditions that will cause these visuals in the world we live in? By</p>



Co-funded by the
European Solidarity Corps
of the European Union



2023-1-TRO1-KA220-SCH-000160173
GREEN AGRIPRENEURS OF FUTURE

asking questions, students are asked to draw attention to the visuals and think about them. Then a conversation is started with the students about global food problems, environmental pollution and the importance of agricultural sustainability.





Co-funded by the
European Solidarity Corps
of the European Union



2023-1-TRO1-KA220-SCH-000160173
GREEN AGRIPRENEURS OF FUTURE



Exploring - Duration: 30min

Students are divided into four groups. Each group is asked to research a different theme. Theme titles 1. Efficient use of water resources, 2. Energy efficiency, 3. Sustainability of soil fertility, 4. Seed fertility. In this process, they are guided and provided to access information.

Explain-Time 40 min

Students share the information they have acquired in the discovery phase. They make sense of the concepts learnt and express them correctly. Where necessary, the teacher gives, corrects or expands the concepts.

Students are assigned homework. Each group will come to the lesson by doing research on what can be done around the school in terms of sustainable agricultural activities in their theme. Plastic waste containers of different sizes, organic wastes, soil, seeds are asked from the students to be used in the next lesson.

Elaborate-Duration 40min



Co-funded by the
European Solidarity Corps
of the European Union



2023-1-TRO1-KA220-SCH-000160173
GREEN AGRIPRENEURS OF FUTURE

	<p>Students from the four groups are distributed one by one, one student from each theme, and different groups are formed. Each group takes a seed family, determines the water, soil and light needs of the seed and plans and implements where and how this seed can be grown in the school. While doing this, the groups also fulfil the tasks assigned to them. One group designs a project using humidity sensors to increase water efficiency. Other groups use artificial intelligence and various programmes to prepare posters, songs, poems and booklets about sustainable agriculture to inform their friends in other classes.</p> <p>Video recordings are made during the activities.</p>
	<p>Evaluation-Time 40min</p> <p>The students hang the posters they have prepared in various parts of the school and distribute the booklets they have made to the classes. They also form a team to give information about their work in the garden. The team they formed tells the students in the other class about their work by showing them around. Questions from the students are answered and the teacher guides the students during this process. At the end of these presentations and information, they conduct a survey to investigate how much awareness they have raised about sustainable agriculture in their classes. The questionnaire is administered separately to both the students who carry out the study and the students who follow the study. The results of the survey are analysed by the students and published on the school board as a chart. The answers to the survey questions are taken in the form of an interview and video recordings are made during this process. Finally, a collage is made from the video recordings and a separate video is prepared to be presented in all classes.</p>
Related Resources:	General Network
References:	