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| Activity plan | | | | |
| ACTIVITY PLAN | | | | |
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| **Theme** | **Subtopic** | **Activity Title** |
| 2. STEAM integration in environmental Education | 2.2. Technology for Environmental Solutions | Designing a school garden |

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| Introduction part (or activity overview) |
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| **Introduction part (or activity overview)** | Тhrough this activity the students will acquire the following competencies:  Students engage in environmental education and hands-on creativity.  Create positive relationship with the environment.  Develop a sense of place and a curiosity of nature.  Also, students are empowered to promote environmental stewardship, biodiversity, and educational opportunities for the entire school community. |
| **SETTING** | Classroom and outdoor work in a school yard, complemented by digital research. |

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| Materials Needed |
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| **Materials Needed** | - Drawing paper or poster boards; markers, colored pencils, digital drawing tools; rulers, compasses, and other drawing instruments; reference materials (e.g., books, websites, photographs) of gardens and plants; information about local plant species, climate considerationsand gardening techniques; poster boards or large paper for final presentations; projector or screen (if presenting digital designs); seeds or plant catalogs for inspiration. |

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| **Learning Outcomes** | -Develop creativity and artistic skills; developthe ability to perceive and create and design your own 3D shapes; develop spatial reasoning skills, essential for understanding and manipulating three-dimensional objects, a skill valuable in fields such as architecture; being able to calculate the price of a real gardentaking into account all the costs of purchasing materials for making beds, benches, tables, plants for the garden itself; connect aspects of the area formula to the visual representation. |  |
| **Activity Contents** | **Activity1 Steps** (Duration:1-2 hours per session, depending on the complexity of designs and available class time)  **Activity (Introduction to school gardening, research, planning and designing)**  **Theoretical part: (15 minutes)**  The teacher discusses with students about the importance of school gardens in promoting environmental education, healthy living, and community engagement; show examples of school gardens or community gardens.  Students watch short videos about :  Video 1 :<https://www.youtube.com/watch?v=kjUQkPLVt7M>  Duration (1min 49sec)  Overview: Recycled garden ideas from recycled materials  Video 2 : <https://www.youtube.com/watch?v=fni5898gk-k>  Duration(8min 06 sec)  Overview: This video is about best school garden ideas  **Task 1: (30 minutes)**  The teacher instructs students to research different types of gardens, plant species, and design ideas they can brainstorm ideas for their school garden designs, considering important factors, they sketch out rough designs and make notes about their design concepts and inspirations.  **Task 2: (60-90 minutes)**  The teacher gives the students a task to develop design of a school garden and to create a content.  Students start developing their school garden designs, either by hand or using design software, aiming to ensure practicality and functionality. They write a brief description or rationale for their school garden designs, explaining the goals, features, and benefits of their proposed gardens (encourage them to use clear and persuasive language).  **Task 3: (70 minutes)**  The teacher gives the students a task to prepare a presentation about their designs.  Students practice their presentation skills and prepare to articulate the intentions and merits behind their school garden designs. Then they present their designs to the class, explaining their design choices, objectives, and intended benefits.  Students provide constructive criticism and suggestions for improvement on each other's designs, give positive reinforcement and recognition of innovative ideas and thoughtful planning.  Students discuss what they learned from the process and reflect on the potential impact of their designs on the school community and the environment.  Students clean up their workspaces and organize their materials.  **Additional Tips:**  The teacher should involved other school stakeholders, such as teachers, administrators, parents, and community members, in the design process to ensure diverse perspectives and support for the garden project.  The teacher should considered organizing a voting or selection process to choose the final school garden design, involving students, teachers, and community members in the decision-making process. |  |
| **Assessments** | The teacher evaluates the students' work and achievements through:   * Verbal feedback during class; * Conversation with/among students; * Monitoring of students during individual and group work; * Observation the individual contribution of each student when working in groups; * Evaluation of students' presentations; * Highlighting the most elegant and ideal solution or Eco-sustainable house;   Each student independently evaluates his contribution to the work.  The final score is evaluated with a grade. It is possible to involve all students in the class in the assessment. After the presentations, students conduct oral reflection. |  |
| **Key Competences** | * Cognitive competence * Cultural competence |  |
| **Connections with Eco STEAM** | **Eco:** Encouraging students to consider the principles of sustainable gardening, such as water conservation, soil health, and native plant selection, in their designs.  **S**cience: students will learn which plants thrive in our regions, what kind of soil is needed for these plants to thrive, in what period which plants are best to grow.  **T**echnology: Learning how to apply recycling materials to beautify the environment.  **E**ngineering: Designing their own model of a school garden using recycling materials.  **A**rt: learning to make a sketch of a school garden.  **M**ath: Performing various mathematical calculations to find out theprice of a possible school garden. |  |
| **References** | •Academic and scientific literature on garden designs , ecosystems, and conservation.  •Online databases and resources for designing a school garden. |  |
| **Notes** | •The activity should be adaptable to different local ecosystems and weather conditions.  •Encouraging students to think about their future role in designing and shaping the space in which they live and work. |  |

**Assessment Table for Web Quest Reports:**

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| Assessment Criteria | Points | Comments |
| Depth of Research | \_\_/5 |  |
| Understanding of different plants role | \_\_/5 |  |
| Accuracy of Information | \_\_/5 |  |
| Quality of Presentation | \_\_/5 |  |
| Use of Visuals | \_\_/5 |  |

**Assessment Table for Group Presentations:**

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| Assessment Criteria | Points | Comments |
| Comprehensiveness of Findings | \_\_/5 |  |
| Clarity in Presentation of Data | \_\_/5 |  |
| Understanding of garden design | \_\_/5 |  |
| Ecological Interpretations and Insights | \_\_/5 |  |
| Teamwork and Collaboration | \_\_/5 |  |
| Use of Visual Aids in Presentation | \_\_/5 |  |