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| Activity plan | | | | |
| ACTIVITY PLAN | | | | |
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| **Theme** | **Subtopic** | **Activity Title** |
| 3. Creative and critical thinking in Eco STEAM education | 3.3. Environmental art and expression | Creating upcycling innovations |

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| Introduction part (or activity overview) |
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| **Introduction part (or activity overview)** | This session is designed to deepen students' creativity, resourcefulness and environmental awareness.  The main objective of the activity is to encourage students to repurpose discarded materials into creative and innovative artworks, fostering sustainability and creativity.  By following this activity plan, you can empower your students to explore their creativity while making a positive impact on the environment through innovative upcycling projects. |
| **SETTING** | Classroom complemented by digital research. |

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| Materials Needed |
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| **Materials Needed** | - Various discarded or recyclable materials (e.g., cardboard, plastic bottles, old magazines, fabric scraps, bottle caps, broken electronics, etc.)  - Basic art supplies (scissors, glue, tape, paint, markers, etc.)  - Tools for upcycling (e.g., utility knives, hole punchers, hot glue guns, etc.)  - Reference materials or examples of upcycled art projects  - Workspaces with tables and chairs  - Aprons or old clothing to protect against stains |

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| **Learning Outcomes** | * Developing deep understanding about the need to recycle certain materials. * Improving knowledge about the possible use of various recycling materials. * Enhancing skills in digital research and data analysis. * Improvement of creativity and development of awareness for the huge possibilities for recycling. |  |
| **Activity Contents** | **Activity1 Steps** (Duration:1-2 hours per session, depending on the complexity of projects and available class time)  **Activity (Upcycling, selection of materials, design planning )**  **Theoretical part: (40 minutes)**  The teacher explanes the concept of upcycling and its importance in reducing waste and promoting sustainability, explore examples of upcycled art projects or innovations.  Students are watching videos:  Video 1 : <https://www.youtube.com/watch?v=4B0zhN7YPVw>  Duration:(3min 6sec)  Overview: the video is about three upcycling ideas.  Video 2 :<https://www.youtube.com/watch?v=SN9XFS2zMLg>  Duration : (5min 51sec)  Overview : This video is about 15 clever ways to upcycle everything around you.  Video 3 : <https://www.youtube.com/watch?v=M0yZwfiNuUI>  Duration : (3min 42sec)  Overview : this video is about making newspaper gift bag.  Students select materials based on their interests and creative vision for their upcycling projects.  **Task 1: (15 minutes)**  The teacher gives the students a task to draw a sketch of their designs.  Students sketch out their designs and plan the steps needed to bring their ideas to life.  **Task 2: (60-90 minutes)**  The teacher guides students to create upcycling project creations, to collaborate and present.  Students start working on their upcycling projects, experimenting with different techniques and combinations of materials to achieve innovative results, aware of the importance of problem-solving and adaptability in the creative process.  Students collaborate and exchange ideas with their peers, providing feedback and support to one another. They discuss and share their progress, challenges, and successes.  Students add any final touches or details, and prepare their projects for presentation.  **Task 3: (30 minutes)**  The teacher encourages students to present their work.  Students present their upcycling projects to the class, explain their creative process, materials used, and the inspiration behind their innovations.  They reflect on how their upcycling projects contribute to environmental sustainability and repurposing materials creatively. Students discuss about the benefits of upcycling, the challenges encountered, and the lessons learned through the creative process.  Students clean up their workspaces and organize their materials.  **Additional Tips:**  The teacher provides examples of innovative upcycling projects from artists and designers around the world to inspire students and showcase the possibilities of repurposing materials creatively.  The teacher encourages students to think critically about the environmental impact of their materials and processes, and to consider ways to minimize waste and maximize resource efficiency in their art projects.  The teacher should considered incorporating interdisciplinary elements into the activity, such as discussions about sustainability, environmental science, or product design.  The teacher should organise showcase the finished upcycling projects in a display or exhibition to celebrate students' creativity and promote awareness of sustainable art practices. |  |
| **Assessments** | * Assessment of Web Quest reports for depth of research and understanding. * Personal presentations synthesizing the benefits of upcycling, the challenges encountered, and the lessons learned through the creative process. * Reflection on how their upcycling projects contribute to environmental sustainability and inspire others to repurpose materials creatively. |  |
| **Key Competences** | * Cognitive competence * Cultural competence * Creativity competence |  |
| **Connections with Eco STEAM** | **Eco**-Recycling as base of modern living  **S**cience - ecological science (study of recycling innovations)  **T**echnology- use of digital tools for research  **E**ngineering -creation of finished products for different purposes from materials that can be recycled  **A**rts-developing creativity and the ability to repurpose and reuse certain creations  **M**ath- data analysis of amounts of waste and ways to repurpose and reuse |  |
| **References** | •Academic and scientific literature about designs of recyclable materials  •Online databases and resources for design examples with upcycling materials |  |
| **Notes** | •The activity should be adaptable to different local upcycling materials.  •Emphasize safety and ethical conduct during practical work.  •Encourage students to reflect on their role in the usage of recycling materials and the importance of sustainable practices. |  |

**Assessment Table for Web Quest Reports:**

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| Assessment Criteria | Points | Comments |
| Depth of Research | \_\_/5 |  |
| Understanding of Species' 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 recycling proceses | \_\_/5 |  |
| Ecological Interpretations and Insights | \_\_/5 |  |
| Teamwork and Collaboration | \_\_/5 |  |
| Use of Visual Aids in Presentation | \_\_/5 |  |