Cultivate school entrepreneurial mind-set through holistic approach targeting teachers and pupils

enterschoolmind

IO8A1: Development of activities

1.5 Ethical and sustainable thinking (including the sense of community and common good)

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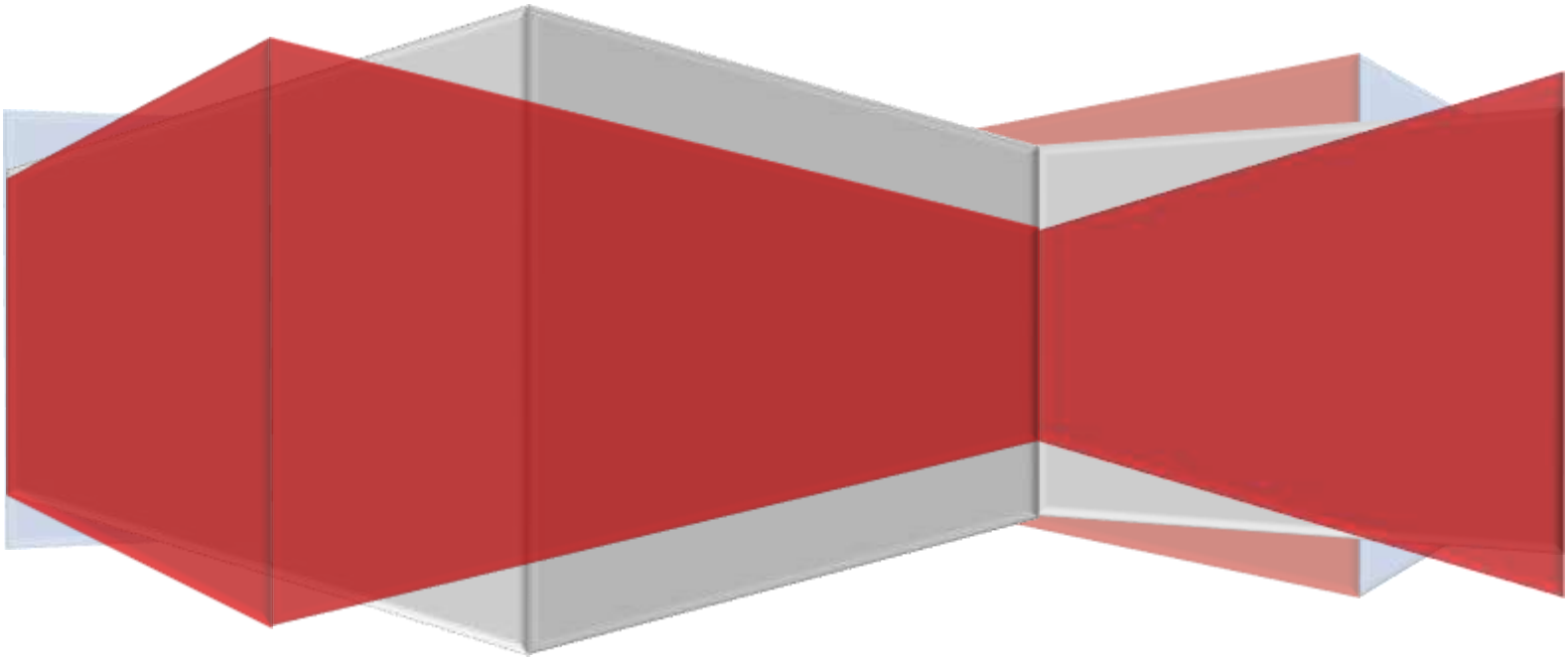

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1.5 Ethical and sustainable thinking (including sense of community and common good)	
Duration	2 hours (can be extended)
Lessons it could be used in	• PSHE/RE (Personal, Social, Health and Economic education) • Design/Arts • Technology/Crafting • Project Lessons/Project Days • Interdisciplinary
Learning Outcomes	• Estimate how much garbage we produce • Learn how to avoid waste • Deal with recycling • Videos on the internet provide essential information • Solve interactive exercises on the topic • Find creative solutions • Develop and follow a project plan • Communicate and discuss constructively in small groups • Develop critical thinking (further) • Work concentrated and goal-oriented in the group • Create posters for others and convey important information to them • Set goals and continue to reach them
Type of activity	☐ Story Telling ☐ Game Activity ☐ Theater /Drama Activity ☐ Use of Reflection Techniques ☒ Creation of an Item ☐ Role Play ☐ Other Experiential Activity

Aims and objectives of the activity	The project emphasizes the design and construction of an environmentally friendly machine out of trash from the scratch. This enhances project-based learning and fostering of a broad variety of competences. It links environmental issues and sustainability in general with the possibility of creating something new by recycling and upcycling already used material. The pupils work in small groups of 4-5 and plan, develop and create a work piece together, which fosters a set of personal, social, technical and methodological competencies. It is recommended to find a variety of options for the features of the machine and to invite all pupils to actively participate in the planning process through the use of a morphological box in the initial stage of the project. The aim of this technique is to approach a task in a value-free manner, to find new options, to develop combinations and systematically visualize solutions. This project helps students understanding how much rubbish every person produces and what can be done with it instead of throwing it in the bin. It supports to consider how their creative potential, their communication and critical thinking skills can direct the project process and how a project is made from the start until the end in a small group. Self-directed learning and working in small groups make the creation, preparation and the actual work piece possible. The pupils review the stock of material available and fill in the matrix in the handout “construction plan”. After critically analysing and discussing the options in their small group they can decide on the materials they want to use and draw a construction plan which fosters their creativity. During the implementation phase they work closely together to progress and create the final work piece. As with the previously mentioned techniques the creative and social learning in addition to development of knowledge on the topic of Recycling/Upcycling, avoidance of rubbish and project management is important.
Implementation of the activity	• Establish small groups of 4-5 pupils • Hand out the paper “construction plan” • Ask the pupils to check the available material (waste)

	• Explain the tasks to the pupils and let them start working • Let them construct their machine • Ask the groups to present and explain the purpose of their environmentally friendly machine • Allow enough time for personal and group reflecting
Resources and materials required to run the activity	• A lot of "(re-)usable" and clean rubbish and waste. Pupils should bring some along, but the teacher has to make sure that there is enough appropriate material available. It might be interesting to also bring some trash that is of no further use to demonstrate that after being used only once, this waste will pollute the environment. • Pupils need a lot of additional tools and material to adjust, assembly and fix parts together, e.g. tape, hammer and nails, screws and screw driver, saw, scissors, glue, paper clips, stapler, wire etc. • Paper and pens for notes and construction plan etc. • Handout: Construction Plan (can be adjusted according to the kind of machine the teacher expects pupils to design)
Equipment and facilities	Enough space for the pupils to construct their environmentally friendly machines. Big classroom or arts or crafting room is needed.
Tips for the trainer	Before this lesson takes place, the teacher should give an introduction on environmentally friendly behaviour, sustainability, how to avoid waste, recycling and upcycling. After the presentation of the machines has taken place there should be a reflection of the competences the pupils developed by asking questions like… • Now that it's over, what are your first thoughts about this project? Are they mostly positive or negative? • If positive, what comes to mind specifically? Negative? • Have you had an idea you communicated? • Was this idea accepted by the others?

	• How did you feel during the planning phase? During construction phase? Any phase you felt more involved than during another? • How did the communication in your group take place? • What is the most important thing you learned? • Are you ok with your behaviour? • How was your partners' behaviour? Did they accept other ideas? • How do you think you worked with this group compared to groups you've worked with in the past? • Did your group follow your initial plan or did you adjust it? • If you were to work with this same group again, what is one change the group could make to work together more effectively? • What was the greatest challenge you had as a group?
Materials for implementing the Tool	Please see above.