In2steam Lesson Plan 1

1. Name of the lesson	***The green tablet***
2. Target group	Pupils 8-11 years old
3. Duration	1,5 h
4. STEAM Skills/ 21st Century Skills	Creative Thinking Problem Solving Tinkering Tech Literacy 
5. Expected learning outcomes	By the end of this unit, learners will be able to: ● learn required skills and be ready for mandated assessments; ● think creatively, develop their imagination, explore, invent, develop critical thinking; ● manage themselves, negotiate and work in groups.
6. Subjects and topics covered	Learners are presented with wide-raging tools and materials that they use to explore STE(A)M phenomena. The purpose of the activity is to study and analyze the colors of the leaves and plants and their properties. The activity will be used to tech science and biology, and discover the main characteristics of the plants and the Different Stages of the Plant Life Cycle (Seed, Germination, Seedling, Adult Plant, Pollination, Seed Dispersal) The students are invited to analyze the different colors in nature while they create their green table: they will use creative thinking and their fantasy to design and build a “piece of art” made with natural elements.
7. Methodologies	Tinkering
8. Integration of the Arts	Students will create their personal piece of art with natural elements collected in the garden/open space where the activities will be held.
9. Learning Environment	Open-air: a garden, a green space in school, courtyard.
10. Required resources	List resources required for a successful lesson: - **Paper tablets:** these tablets need to be prepared by teachers before the activity. - **Glue**: to be used by students to paste the natural elements collected into the tablet. - **Availability of an open-air environment**: a garden, a green space in school, courtyard.

	- It would be preferable to implement the activity in **spring,** in order to be able to collect leaves and flowers of a different color.
11. Prior knowledge **a. teacher** **b. students**	In order to deliver this lesson, the teacher will need to have the following knowledge and skills set: • Teachers must be able to adapt the science lesson on a plant in an outdoor setting and using non-formal education tools. • Teachers involved have to know about the **Tinkering approach.** They will apply the Tinkering approach during a science lesson, using arts and fantasy to explain scientific concepts. In order to be able to participate and contribute to this lesson, the students will have achieved the following standards: • Students will learn about plants and their life cycle, they will understand that nature has different colors and they will explore the different species of plants and flowers of the environment around them. • By planning, designing, making, testing, and refining in a personal process of creating something new, the learners draw on their prior knowledge, creates connections between different existing ideas and concepts, and builds new understanding which is synthesised into their existing mental models
12. Detailed description of the step-by-step sequences of the unit, incl. specific activities to support the learning experience	STEP 1: Students will use the tablets that will be given to them to develop their own personal creativity in order to explore STE(A)M phenomena through the process of creating something new. The teachers will have previously prepared the material that students will use for the activity: they will give each student a cardboard sheet in the shape of a painter's tablet. STEP 2: Students are invited to explore the environment around them by collecting small samples of leaves and flowers from the plants and trees they find around

	them. Then they will apply some glue to paste the artefacts found on their painter's board. STEP 3: Step 3 will concern the moment of evaluation and analysis: the teacher will invite students to share their work with their peers, starting to address the topics of the lesson by exploring the species of plants and flowers that the students were able to see and admire through their inspection of the natural environment. Then, each student will take home their own natural artwork.
13. Gender-inclusive strategies and activities planned	Identify specific steps to ensure girls are as motivated and as engaged as boys across all activities: Teachers will pay attention that each student is engaged in the activity: specifically, they will invite male and female students to use their imagination and inclinations in creating their painter's board, for instance in choosing their favorite plant or flower for the samples.
14. Assessment & Evaluation	Include activities to check for understanding, opportunities for self-assessment and reflection; make allowances to evaluate the work during the lesson, so that necessary adjustments can be made and findings can be used for further planning: The moment of evaluation and analysis of the activity will be held with the involvement of each student, in order to engage them fully in the activity and to make sure that the concept will be transmitted easily and in such a way that the moment of learning is a moment of sharing.