BotSTEM – Erasms+ KA2 Project

2017-1-ES01-KA201-038204

Good practice template

1.	**Title of the activity / practice**	**Scribbling story**
2.	**Origin of the activity**	Giulia Martellini – educator – Il Mosaico Soc.Coop.Sociale Potenza Picena (MC) Italy
3.	**Age of the students**	5-6 y.o. students
4.	**Target group (type of the learners, size of the group)**	12 students who attend the last year of kindergarten divided into 4 groups
5.		
6.	**School subjects + topics concerned**	- Science - Technology - Art
7.	**Educational goals of the practice**	• Stimulate creativity • Plan following an idea and recognize and correct errors • Problem solving • Debugging • Develop collaboration and teamwork • Develop creativity, collaboration, respect • Stimulate attention, listening and memory
8.	**Duration**	2 hours
9.	**Place**	Classroom
10.	**Short description of the activity**	*Tinkering activity* (to "tinker" is to make small changes in something, often to repair or improve it. In the context of learning, tinkering is part of a hands-on, trial and error-based process that rewards persistence, resourcefulness, and self-sufficiency)

BotSTEM – Erasms+ KA2 Project

2017-1-ES01-KA201-038204

1) In the classroom the story "Matteo and the magic machine"* is read, the children identify the characters of the story and draw them:
- Matteo, his friend Leo and their moms
- The Magic Machine
- A caterpillar
- Bees
- Ants

2) Divide the class into small group. Each group will have to customize the scribbling machine to create the various characters.

3) The children will create the scenography of the story.

4) The story will be read again and the characters/scribbling machines will be operated in the correct moment

*It is the history of two friends, Matteo and Leo, that one day, while they are playing in the park, they discover that Matteo's toy car is magic and it can make to live their fantastic adventures. That day will bring them to the discovery of the animals of the lawn.

A **Scribbling Machine** is a motorized contraption that moves in unusual ways and leaves a mark to trace its path. It's made from simple materials and demonstrates the erratic motion created by an offset motor. Each Scribbling Machine is unique, because everyone is investigating different methods for changing the variables: the length and weight of the eccentric motors, methods of drawing, materials used for the base, the speed of the motors, etc.

- Find a base, such as yoghurt cup, and create a hole as large as the motor.

	- Decorate the cup with recycled materials as you wish. - Attach 3 or 4 markers to the container with scotch or hot-melt glue stick. - Insert the motor into the hole, open the markers and place the machine on top of a large sheet of paper. Connect the motors to the batteries with the wires to trace the jittering movement of the scribbling machine.
11. Evaluation	Build a scribbling machine is a playful platform for the learners to investigate concepts at the intersection of art, science and technology. Thanks to this kind of activity the object created are as significant as the process of testing, questioning and occasional failing.
12. Materials / Resources / technical requirements	Recyclable containers, clothespins, pipe cleaners, popsicle sticks, nuts, washers, or other small weights, googly eyes, coloured sheets, large sheets of paper, hobby motors (1.5-3.0 V), AA battery, wires, markers, hot-melt glue stick, masking tape.
13. Tips for educators / theoretical background (if applicable) or curriculum context	