

- 1. Name of the project:** Cherry on the cake
- 2. Subjects covered from STEAM areas:** Arts, Technology, Math, Science
- 3. Target group (age range and size of the group):** 13-15 y.o., 15-30 pupils
- 4. Duration of the activity:** 5 lessons (2 Arts, 1 for Technologies, Maths, and Science each)
- 5. Keywords:** geometry, stereometry, colours, design
- 6. Key sentence describing the context of the activity, followed by a short description (200 words):** Prepare a model of the cake and decorate it with ecologically dyed materials.

 Make a model of a cake, integrating knowledge of mathematics, art, technology and science into the making process. In mathematics lessons, students will consolidate their knowledge of the elements of a cylinder, and a cuboid and make layouts. In science lessons, they will learn to use natural dyes to dye selected materials. In technology, they would make cake models.
 In Arts, working in pairs or individually, they decorated cake models with plasticine.
- 7. Description of the activity environment, including the list of materials and tools needed:**
 A standard school classroom is sufficient for this activity. Special precautions should be taken when students experiment with natural dyes (covering the surfaces, lab coats, etc.).
 Materials needed (depending on the group sizes): cardboard and paper, scissors, duct tape, modelling clay, natural dyeing substances (juices, other plant material), plasticine (various colours), other colouring tools (pencils, etc.)
- 8. Step-by-step, detailed description of the activity, including teaching and learning strategies:**
 The shape of the cake (rectangular, roll) and the elements of the shapes are discussed in mathematics lessons. Calculations of the surface area of different 3D shapes are made connecting to the need for knowledge of the area to be decorated. The 7th-grade pupils made rectangular tiling; the 8th-grade pupils made roll tiling. In technology lessons, they made cake models from cardboard and paper by choosing the appropriate dimensions. In science lessons, they discussed which natural materials can be used for colouring. In the experiments, pupils dyed modelling clay. In art lessons, the top and sides of the cake were decorated with plasticine.
- 9. Learning objectives/competencies:** Students will learn: the calculation of cylinder and cuboid surface area, dye selected materials with natural dyes, and design the decorations for cakes.
- 10. Evaluation/Assessment guidelines:** Prepared exposition for external (peer) evaluation and intragroup reflection.
- 11. Lessons learned:** We realised that we could have done the task in a greener way. If we had encouraged the students to decorate the cakes with their own natural modelling clay, we would have developed sustainability from the Sustainable Development Goals.

12. Additional information/Links:

Gallery of the activity results:



13. Contact person: Radviliškis Vincas Kudirka progymnasium, Monika Barauskaitė
MoBarau3331[at]emokykla.lt