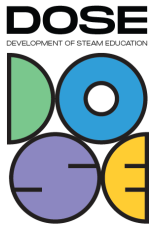


TEMPLATE for BEST PRACTICE EXAMPLES



1. **Name of the project:** STEAM puppet theatre
2. **Subjects covered from STEAM areas:** language and literature, biology (science), IT, technologies, Arts (visuals, music, theatre).
3. **Target group (age range and size of the group):** 16 y. o., 15-20 pupils
4. **Duration of the activity:** 1 month (at least)
5. **Key words:** STEAM competences, creativity, context based STEAM learning, theatre, puppets
6. **Key sentence describing context of the activity, followed by short description (200 words):**

A puppet theatre performance where pupils produce the puppets, use lightning and direct all the performance based on well known play.

The project uses an integrated contextualised content-based problem-based learning strategy - a puppet theatre performance based on K. Ostrauskas' play "Jurate and Kastytis". The pupils played the role of puppeteers, constructors, decorators and actors. The project's social partner, Alytus Aitvaras Puppet Theatre, has expanded the variety of learning environments and enriched the experience with relevant experiences: not only can students use the formal STEM learning environments at school, but also the potential learning environments and resources of Alytus Aitvaras Puppet Theatre Puppet Room. At the end of the project activity, the students will present their performance to the school and the city community, as well as an exhibition of the puppets and a video of the performance.

7. **Description of the activity environment, including the list of materials and tools needed:**

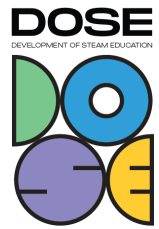
The preparation can be executed at the school with the bellow indicated equipment. The final performance and rehearsals require a theatre (auditorium or partnered professional theatre).

Essential equipment and software:

- Inkscape vector graphics;
- MS Publisher;
- Audio editor Audacity;
- 3D printer;
- Laser cutting and engraving machine.

Partners (theatre professionals) are involved for better teaching experience.

TEMPLATE for BEST PRACTICE EXAMPLES



8. Step by step, detailed description of the activity, including teaching and learning strategies:

The aim of the project activities is to convey the message that STEAM is all around us and does not need some particularly expensive equipment, laboratories (although at an older age it is preferable), the main thing is to recognise the context of STEAM in the immediate environment, to be able to apply the STEM criteria in the planning of the activities and to help the students to experience the success of their creation.

The opportunity to learn outside the school walls (theatre) and to be mentored by professionals increases students' interest and diversifies the experience. As the pupils are tasked with putting on a puppet show, working with a puppet director, actors, sound and lighting technician will help us to get to know their daily lives, to be creators and participants in a real process and in a dedicated environment.

The educational content of the project includes the following components:

- Getting to know the specifics of puppet theatre.
- Analysis of the play and identification of the objects to be created/produced, analysis of the characters.
- Modelling and production of the puppets required for the production of the play.
- Design and production of the scenery required for the production of the play.
- Arranging the soundtrack for the play.
- Planning the lighting for the play.
- Design of promotional material for the performance (poster, flyers).
- Implementation of the production: public performance.
- Video filming and editing of the performance.

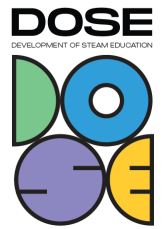
The project is implemented by the pupils of one of the classes, which is distinguished by the presence of both particularly gifted pupils and pupils with special educational needs. Teachers working in such a classroom find it difficult to engage the pupils in a common activity in which all the pupils can succeed. The variety of technological tools, solutions and instruction used in the project allows for equal participation of pupils of very different abilities. There is also the possibility for students from other classes of the upper secondary school to join in.

The project uses problem-based learning based on the Empirical Learning Cycle (Honey, Mumford, 1992; Kolb 1984) to enable continuous improvement of technological solutions, skills, and the acquisition of new knowledge and abilities. The synergy of the methods used and the teaching and assessment strategies helps everyone to achieve maximum individual success, while at the same time, since performance is a team effort, to take responsibility for the quality of the final result, develops the students' sense of initiative and encourages them to share their knowledge, advice and experience. At the end of the project activities, the students who have successfully participated in the activities will receive a certificate of their improved STEAM competences and they will present their performance to the public of the school and the city, as well as a puppet exhibition and a video of the performance.

The concept of the project is universal, suitable for pupils of all ages, the only differences are the tools used, the materials used for the puppets, the scenery, and the age-appropriate play chosen.

9. Learning objectives/competencies:

TEMPLATE for BEST PRACTICE EXAMPLES



The aim of the project is to develop students' STEM and creativity competences through the implementation of an integrated STEAM and other school subjects content and a problem-based learning strategy.

Objectives:

- Application of knowledge of biology about the anatomical and morphological structure of living organisms and mechanics to puppet modelling;
- Applying knowledge of biology about ecological communities in the design of scenery;
- Finding engineering solutions for modelling puppets;
- Acquisition and application of technological knowledge and skills in the design and manufacture of puppets;
- Applying knowledge of Lithuanian literature in the context of integrated STEAM activities.
- Developing students' personal competences and collaborative skills;
- Enriching impressions and imagination with inspiring experiences through solution-finding, interaction and collaboration with professionals in the field, in non-traditional formal and non-formal educational environments, through experimentation.

10. Evaluation/Assessment guidelines:

The project uses formative, criterion-based assessment, based on students' engagement with the tasks on offer; and individual self-assessment to capture personal success and satisfaction with the result. Motivation to achieve maximum results: a public performance where you act on stage with the puppet and among the scenery you have made.

11. Lessons learned:

- Time management- students are involved in much more extracurricular activities and have more social responsibilities than we could even imagine.
- Project must include an activity aimed to introduce students with body language: what signals certain face expressions send the audience, why sometimes a kind of behavior may be misunderstood.
- Drama is a perfect context for STEAM based activities.
- The more professionals (like a director of Puppet Theatre "Aitvaras", a sound and light director from the Alytus City Theatre, various musicians) local community are involved, the more motivated students become.

12. Additional information/Links:

<https://jotvingiugimnazija.lt/naujienos/523-leles-ir-sesiolikmeciai-vel-suartinti-moderniu-technologiju>
<http://steam.jotvingiugimnazija.lt/?p=2839>

13. Contact persons:

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