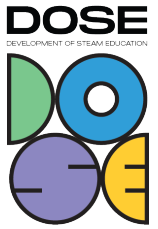
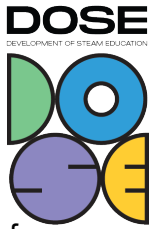


## TEMPLATE for BEST PRACTICE EXAMPLES - SOLVED TASK



1. Name of the task:  
Mondrian Art
2. Why did you choose this task?  
The idea was liked by the students and easily integrated into the subjects according to the topics learned or studied.
3. Subjects covered from STEAM areas:  
history, mathematics, ICT, art.
4. Target group (age range and size of the group):  
38 fourteen-year-old students
5. Duration of the activity:  
History-1;  
Mathematics-1;  
ICT-1;  
art-2.  
5 lessons in total.
6. Key words:  
Mondrian Art, STEAM, integration of subjects.
7. Key sentence describing context of the activity, followed by short description (200 words):  
STEAM activities were inclusive of independent learning, increased students' independence, improved social skills, strengthened subject integration, and developed STEAM skills. Educational activities are based on the development of students' learning to learn and personal and cognitive competencies, awareness and attitude to strengthen STEAM. Targeted use of ICT motivates students to learn and achieve higher results.
8. Description of the activity environment, including the list of materials and tools needed:  
Activities took place in classrooms during lessons. Project activities were integrated into lessons.  
**Tools and instruments:**  
**History-** Power Point Slideshows, Mentimente. Art. Pencils, erasers, A3 format sheets, gouache, watercolor, palettes, brushes.  
**Mathematics-**rulers, math textbook, examples of area calculations (for students with learning difficulties), calculators (for students with learning difficulties).  
**ICT-**desktops, Excel spreadsheet.  
We used the Reflectus tool for self-assessment in the lessons.
9. Step by step, detailed description of the activity, including teaching and learning strategies:

## TEMPLATE for BEST PRACTICE EXAMPLES - SOLVED TASK



The STEAM challenge involved the **integration of four** subjects.

The challenge began with **history** lessons. The teacher introduced the students to the history of the emergence of Mondrian art, watched and discussed the video at [https://youtu.be/dhv3\\_nGfETw](https://youtu.be/dhv3_nGfETw).

**Methods:** conversation and discussion about the influence of art on man and history, comparative analysis - past and present, looking for examples in the XVI-XIX and XX-XXI centuries.

The 8th grade students started the two-lesson cycle of **art** with a reminder of the peculiarities of the modern art current - abstractionism. Revised basic chromatic colours (red, blue, yellow) and achromatic colours (black, white, grey). Static and dynamic compositions were sketched. Students got acquainted with the works of P. Mondrian in the early and later years. Students drew, painted, enjoyed the creative process.

**Methods:** narration, demonstration, discussion, brainstorming, self-assessment.

At the end of the art class, activities continued in the **math** class. The students repeated the names, properties and area formulas of the geometric shapes of the plane. 15 geometric shapes were chosen. Named the shapes and measured the required lengths. Calculated the areas of the measured geometric shapes.

**Methods:** counseling, practical work in measuring lengths and calculating areas, self-assessment.

To test mathematical calculations in the **information technology** lessons, students applied an Excel spreadsheet. They wrote the formulas for calculating the areas, summed up the measured lengths and checked their calculations.

**Methods:** consulting, practical work in integrating data into an Excel spreadsheet, self-assessment.

**An exhibition of student work** was held in the lobby on the second floor of the school.

10. Learning objectives/competencies:

**History. Topic "Mondrian Art".**

**Goal:** get acquainted with the history of the origin of P. Mondrian's art, development and influence on contemporary art.

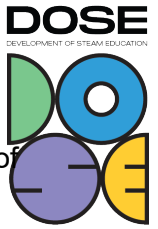
**Task:** to develop the understanding that the development of art has changed the worldview of man from the Renaissance to the present day. To remember and compare the changes in the history of art.

**Art. Topic "Abstractionism - Peculiarities of the Modern Art Current of the 20th Century".**

**Goal:** draw and exhibit student work in the school lobby.

**Task:** after drawing the peculiarities of abstractionism - the modern art current of the 20th century, repeating the main chromatic and achromatic colors, discussing static and dynamic

## TEMPLATE for BEST PRACTICE EXAMPLES - SOLVED TASK



compositions and getting acquainted with the history of P. Mondrian's art, draw a composition of geometric figures.

### **Mathematics. Topic "Areas of plane geometric shapes".**

**Goal:** repeat the application of the area formulas for the geometric shapes of the plane.

**Task:** after selecting 15 geometric shapes from the drawing, measure and capture their required lengths. After applying the formulas for calculating geometric shapes learned in the mathematics lesson, calculate the areas of the selected shapes.

### **Information Technology. Topic "Excel spreadsheet".**

**Goal:** check the calculations of the areas of geometric shapes in the mathematics lesson with an Excel spreadsheet.

**Task:** summarize the data of 15 measured geometric shapes using formulas in Excel to calculate the areas of the shapes.

General competencies were developed during the challenge: ability to learn (to set and achieve goals), communication (appropriate expression of ideas and communication), social (communication and cooperation), cognition (desire to learn, discover), initiative and creativity (to offer creative ideas), personal (reflect on your feelings, evaluate your actions), information literacy (proper use of ICT, Internet, Excel).

### 11. Evaluation/Assessment guidelines:

Assessment in a **history** lesson: how students understood and will apply knowledge: 'just in case'.

Creative work in the **art** lesson was assessed with a grade according to the following criteria:

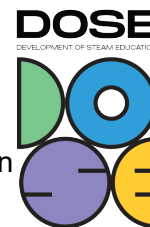
1. The idea of the work.
2. Search for variants of idea expression (sketches).
3. Application of art technique.
4. Selection of display mode.
5. Use of means of artistic expression (composition, rhythm, lines, colors).
6. Consistency of creative work.
7. The artistic whole of the work.
8. Presentation of creative work.

The following indicators were taken into account:

1. Preparing for the lesson.
2. Work in the lesson (active, independent, willing to perform a task, or passively participate in the lesson).
3. Observation of artistic expression and works of art, knowledge and understanding, ability and ability to learn.

In **math and information technology lessons**, students were assessed with a cumulative score according to pre-provided assessment criteria. During the math lesson, students were able to score 45 points (3 points per figure). The accuracy of the measurement, the correct

## TEMPLATE for BEST PRACTICE EXAMPLES - SOLVED TASK



naming of the name of the geometric figure, and the application of the area formula were taken into account in the evaluation.

### 12. Lessons learned:

- Students became acquainted with the history of the emergence of Mondrian art, its evolution, and its influence on contemporary art. \
- Each student drew one Mondrian art drawing.
- Revised formulas for areas of square, rectangle, right triangle, any triangle, trapezoid, circle. Measured the required lengths and calculated the areas of the 15 selected figures.
- Applied an Excel spreadsheet to check mathematical calculations.

### 13. Additional information/Links:

The project was coordinated by teachers of Šiauliai Gytariai Progymnasium:

Jūratė Baranauskienė, senior teacher of history;  
Ilona Jankauskienė, senior art teacher;  
Inga Pokvytienė, senior teacher of mathematics;  
Rūta Norutienė, information technology teacher methodologist.

### 14. Contact person:

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