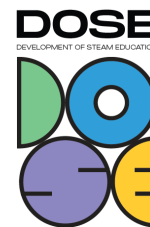


TEMPLATE for BEST PRACTICE EXAMPLES - SOLVED TASK



1. Name of the task:

Oxidation drawing (banana tattoo)

2. Why did you choose this task?

This task was new to me. I have never done an oxidation drawing with my students before. It was also exciting because of the availability of work tools, interesting work techniques, and a quick result.

3. Subjects covered from STEAM areas:

Cognition of the world, chemistry, art and technology, civic education.

4. Target group (age range and size of the group):

6-7 years, grade 1a, 24 students

5. Duration of the activity:

The duration of the educational activity is 4 hours, and 2 days for the monitoring of the oxidation process.

6. Key words:

STEAM, oxidation drawing, banana tattoo, hands-on activities.

7. Key sentence describing context of the activity, followed by short description (200 words):

Applying a special technique, a pattern (tattoo) is created on the banana peel. The use of banana peels and other secondary raw materials creates a collage on the theme of nature conservation. In the course of the work, a new technology is tested - testing a banana peel with a toothpick and creating a pattern. The concept of "banana tattoo" is introduced and the phenomenon of oxidation is explained. Creating a sustainable collage on the theme "Let's protect hedgehogs" is an example of sustainable work, the details of which "return" to the second or third use and do not harm the Earth, and the photo of the collage remains and testifies to the children's work.

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

Measures. Secondary raw materials: brown and green plastic bottles, cardboard box, leaflets, banana peel. Toothpicks, sand, gouache.

Educational methods. Inclusive story, review of filmed documentaries, practical activities, group work, discussion.

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

Learning strategy.

I stage. Familiarity with the oxidation-reduction phenomenon (observation of cut fruit samples: just after cutting and an hour later, clarification of what happened during oxidation).

Phase II. Perception of how real tattoos are done (review and discussion of filmed documentary).

Stage III. Presentation of the necessary tools for the experiment (conversation-discussion about secondary raw materials, interpretation of the concept of sustainability).

Stage IV. Creating a sketch of a drawing (writing a pattern on a piece of paper).

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Stage V. Performing an oxidation drawing (transferring the created pattern to the banana peel).

Stage VI. Creating a collage: sandblasting, bottle cutting, letter cutting, preparation of a “hedgehog”, creation of a sign “Hedgehog Passage”, arrangement of banana peel-needles.

Stage VII. Observation of the oxidation phenomenon on banana peels: after an hour, after 4 hours, after a day, etc.

Stage VIII. Conclusion, reflection: sustainability, what is difficult, what is new, what I like and so on.

Based on the activities, the film “The STEAM Challenge. Oxidation drawing (banana tattoo)”:

<https://www.youtube.com/watch?v=DBVWNAjgzG0>



Fig. 1. These bananas will soon be tattooed. Fig. 2 Gathering information about banana tattoos



Fig. 3. Viewing and discussing tattoo documentaries

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Fig. 4. Sketch of a pattern on a sheet of paper and an oxidative drawing on the peel of a banana



Figure 5-6. Peel a squash, grate it and draw a drawing on a banana peel



Figure 7. Creating a collage "Let's protect hedgehogs" from raw materials

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Figure 8-9. Monitoring the oxidation phenomenon

10. Learning objectives/competencies:

Purpose. Apply a special technique on the banana peel to create a pattern (tattoo). Using banana peels and other secondary raw materials to create a collage on the theme of conservation.

Tasks of integrated subjects.

Knowing the world/science - to look at the natural conditions under which the phenomenon of oxidation takes place, to give examples.

Chemistry - get acquainted with the oxidation-reduction process on the banana peel.

Art and technology - to learn new art techniques, to create a collage from secondary raw materials. Finish the work neatly.

Civic education - to understand that it is possible to use secondary raw materials for a work of art and thus protect nature from pollution. Understand that oxidative drawing can be applied in various advertising, branding projects, marketing.

11. Evaluation/Assessment guidelines:

The students evaluated the STEAM challenge by expressing their opinions:

What did I learn again?

"I learned that it is possible to make a tattoo on a banana"

"I realized that doing a tattoo on a banana peel is a workout to do a tattoo on a person's skin."

"I learned that there is such a sign 'Let's protect hedgehogs.'"

"I learned that it is possible to cut plastic bottles with scissors. I never thought it could be done. "

"I realized that when a person gets a tattoo, their skin is pierced and it's a painful process."

"I've learned that tattoos are very different."

Who did the hardest?

"The hardest part was cutting the plastic bottles into the 'trees', into the 'grass'."

"The hardest part for me was making a machine."

"It was hard to circle and cut out the letters."

12. Lessons learned:

The challenge was not only for the students but also for the teachers:

- New technology tested - banana peel toothpick testing and pattern creation.
- Introduction to the term "banana tattoo".

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The creation of a sustainable collage, the details of which have “returned” to secondary use for the second time and did not harm the Earth, and the photo of the collage remains and will testify to the children's work.

13. Additional information/Links:

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14. Contact person:

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