

Didactic Scenario

1. Title

Shapes of Simplification

2. Keywords

Photography, Geometry, Art, Digital Software

3. Basic Information

STEAM Subject: Technology, Art, Math

Typical interaction time with the instructional scenario in teaching hours for in-school work:
45 minutes

General description of the scenario:

<u>Phases</u>	<u>Stage</u>	<u>Time</u>
Reverse engineering, shapes and art	Preparation	15 minutes
Simplification process	Implementation	20 minutes
Closing	Evaluation	10 minutes

Age group: 1-4 grades

Estimated difficulty level:

Very Easy	Easy	Moderate	Challenging	Very Challenging
		X		

Teaching resources

Material: Colored markers for children, printed black and white photos of animals, humans and other structures.

School infrastructure: A computer for a teacher, a projector or a TV screen.

Additional material from external sources/online tools:

Art and shapes

<https://thevirtualinstructor.com/Shape.html#:~:text=Shapes%20can%20play%20important%20roles,some%20other%20form%20of%20contrast.>

MATH IS FUN for interactive learning about 2D/3D shapes

<https://www.mathsisfun.com/shape.html>

Differentiated Instruction for students of differing abilities and learning styles in the same class: N/A

Developed by: Reinaldas Šulskis

4. Educational Problem

Most of the time students during the learning process tend to skip a few but very important steps. Which are like the foundation of the building? In the world of ART, it's a simplification. Like in the other science fields, if you apply reverse engineering, then you can recreate things again and improve them. As Pablo Picasso once said, "EVERY ACT OF CREATION BEGINS WITH AN ACT OF DESTRUCTION".

5. Learning Objective (-s)

1. Introduction to reverse engineering process.
2. Learning about 2D/3D shapes.
3. Deconstructing figures in the photos and portraying them with geometric shapes.

6. Phases of the Scenario

Phase 1

Title: Reverse engineering, shapes and art

Indoor	Outdoor	Mixed
X		

Phase duration in minutes: 15 minutes

Detailed description of the scenario phase:

With the help of the slide presentation:

- *Teacher introduces students to the reverse engineering process.
- *Teacher provides examples of reverse engineering.
- *Teacher and students have a short discussion about the good and bad things about using reverse engineering.
- *Teacher introduces different geometric shapes
- *By using <https://www.mathsisfun.com/shape.html> website teacher together with students examine different kinds of shapes and tells why shapes in art are important when it comes to drawing.

Activity sheets: N/A

Phase 2

Title: Simplification process

Indoor	Outdoor	Mixed
X		

Phase duration in minutes: 20 minutes

Detailed description of the scenario phase:

- *Students by using colored markers and printed black and white photos attempt the reverse engineering process by simplifying animals, humans and other structures.

Activity sheets: Photos of animals, humans and other structures.

Phase 3

Title: Closing

Indoor	Outdoor	Mixed
X		
Phase duration in minutes: 10 minutes		
Detailed description of the scenario phase: *The teacher together with students has a short reflection on what happened, what students learned, how they can use this knowledge in the future, etc.		
Activity sheets: N/A		

7. Evaluation Methodology

Open discussion about the topics covered and by following questions such as “What happened?”, “What did we learn today?”, “Where we can use these new methods?”, “How did I feel during the learning process?” etc.

8. Additional Resources for the teacher

- *Slides
- *Photos
- *One pager notes