



Co-funded by the
Erasmus+ Programme
of the European Union

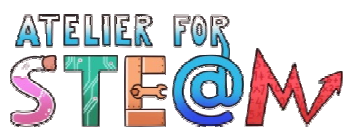


STEM Discovery Campaign 2021

“Atelier for STE(A)M Competition”

-Template for the description of the
activity-

Annex 2.



"The colours of Science"

Names of authors (and contact, like email address)

MRS. TANASESCU GABRIELA-VIOLETA

Computer Science teacher, "Traian" High School, Constanta, Romania

vtanasescu@gmail.com

Title of the lesson plan

Digital art with Weave Silk - Interactive Generative Art

Description of the lesson plan

The subject of the educational material is the interactive application **Weave Silk**, an online tool for creating symmetrical art, including rotational symmetry.

As students engage in various creative activities based on the use of information that results in digital products, they create and share small works of art, learn important concepts related to art / design, and at the same time learn to be creative, to think systematically and work in a team. Their artistic creations are produced exclusively - or are modified, processed - through a computerized process.

Learning Objectives, Skills, and competencies

What are the main objectives of this lesson plan?

Write here the skills the learner will develop and demonstrate during this activity (e.g., communicative skills, computational thinking, problem solving, etc).

Objectives of the presentation:

- Experiencing how the **Weave Silk** application is used interactively to create products in digital format (control over color, symmetry, mirroring mode and spiral mode, etc.);
- Identifying the ways in which students' artistic creations (small works of art) are produced exclusively, or are modified and processed, through a computerized process;
- Dissemination of the results of the work submitted by the students, of the digital products created, on the Internet.

This lesson plan will enhance among the students the following skills, defined as 21st century skills:

- Critical thinking, problem solving,, analysis, interpretation, synthesizing information
- Research skills and practices, interrogative questioning
- Creativity, artistry, curiosity, imagination, innovation

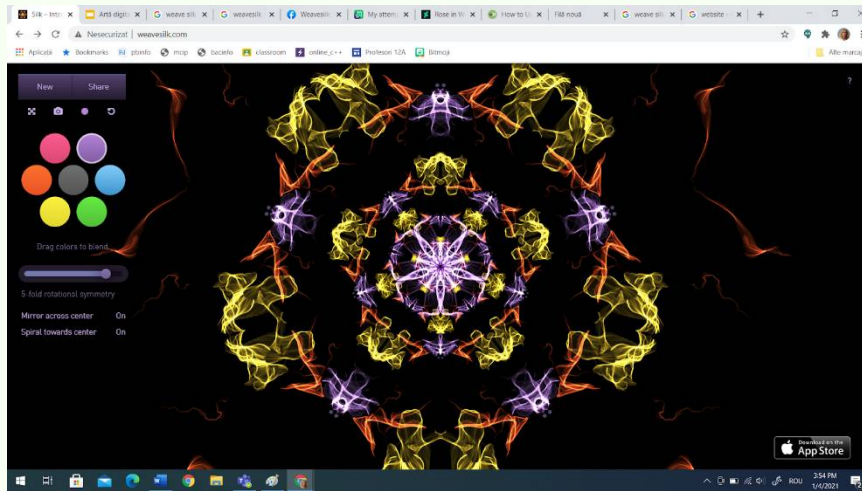
ICT Tools and Resources

What ICT tools, resources or other technologies will be required?

Choose the tool(s) and explain how you will use it.

Weave Silk application: <http://weavesilk.com/>

Weave Silk: Interactive Generative Art is an online interactive tool for creating symmetrical digital art, with the ability to use rotational symmetry.



Learning space

Where will the learning take place e.g. school classroom, local library, outdoors, in an online space?

This activity is suitable for physically distant, hybrid and online classrooms.

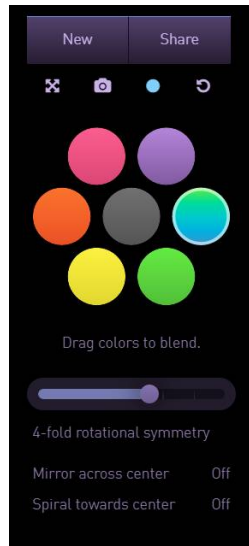
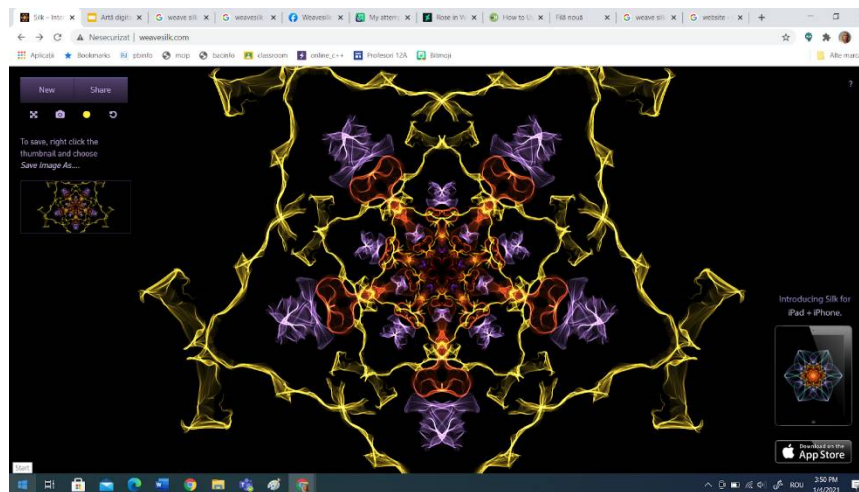
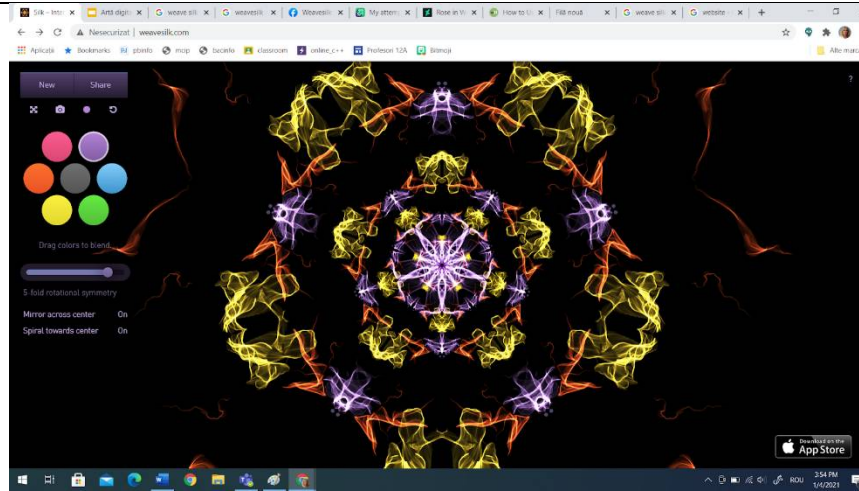
Scenariodescription

note: assuming a double period (i.e 2 x 45 minutes)

Activity	Detail	Duration
<i>Activity number and name</i>	<i>Description of the activity</i>	<i>minutes</i>
What is the Weave Silk app?	<p>Weave Silk: Interactive Generative Art is an online interactive tool for creating symmetrical digital art, with the ability to use rotational symmetry.</p> <p>By using the Weave Silk application, you will be able to discover unique expressions, valances and unlimited possibilities of expression.</p> <ul style="list-style-type: none"> ▪ For PC: http://weavesilk.com/ ▪ For mobile devices / iPad, iPhone: https://apps.apple.com/ro/app/silk-2-generative-art/id1050339928?mt=8&ign-mpt=uo%3D4 	10'

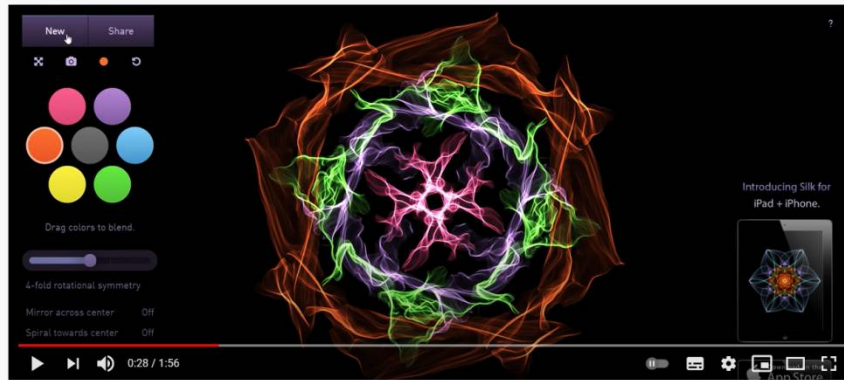
How to use Weave Silk?

10'



New - drawn in a new space;
Share - share your creations on social networks (Facebook, Twitter, Pinterest) or send an email to friends
Fullscreen - full screen
Save picture - save the drawing / right click on the thumbnail (.png)
Controls - choose new drawing settings
Undo - cancel the last action
Select Controls:
7-color menu - choose a color to display or mix colors
Rotational Symmetry - select the number of symmetry "points" (0-6) at a time
Mirror across center - mirror (on)
Spiral towards center - the drawn lines will spiral towards the center of the screen (on)

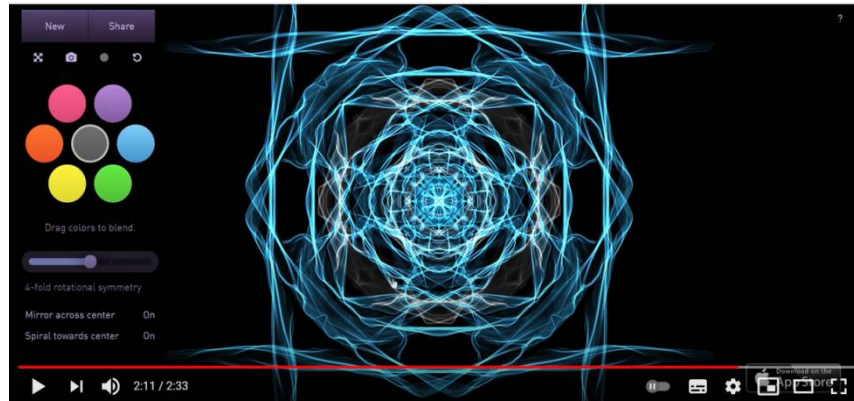
▪ **Video tutorial 1 (author, Mrs. Tanasescu Gabriela-Violeta):**



Tutorial 1, Weave Silk - Interactive Generative Art

<https://youtu.be/VxDEy8dxUos>

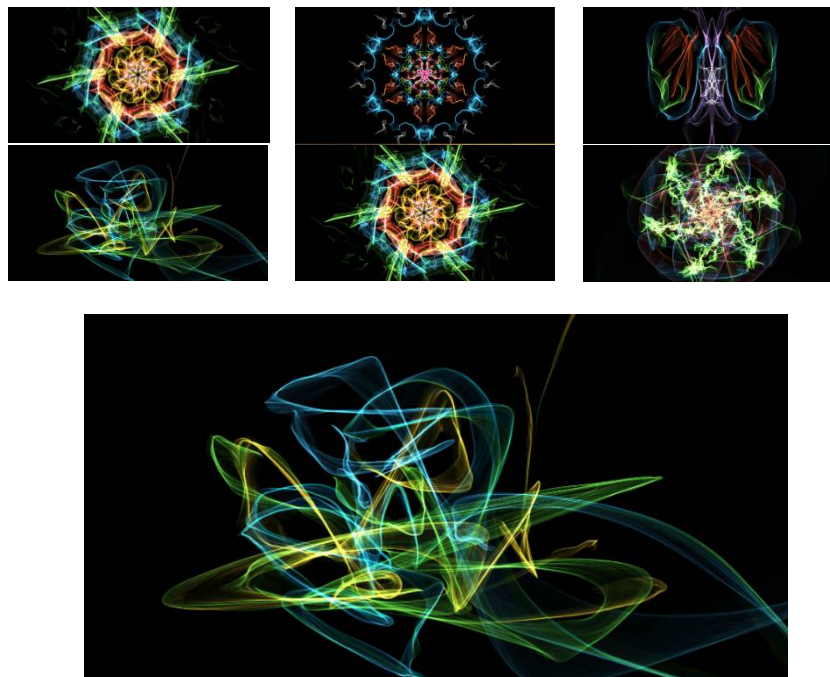
▪ **Video tutorial 2 (author, Mrs. Tanasescu Gabriela-Violeta):**



Tutorial 2, Weave Silk - Interactive Generative Art

<https://youtu.be/2mP-cd2pSRk>

**Examples
DIGITAL ART**



10'

Save and share

For students:

You have learned to be creative and think systematically
Save and share the results of your work with others!

CUSTOMIZE!

Print your creations on various objects (mugs, T-shirts, etc.)!

15'

Look!

▪ <http://r.weavesilk.com/?v=4&id=ovt3a1x3q9e>

5'

	<ul style="list-style-type: none"> ▪ http://r.weavesilk.com/?v=4&id=isb3a1yk5kz ▪ http://r.weavesilk.com/?v=4&id=eqm3a1ynv52 ▪ http://r.weavesilk.com/?v=4&id=luk3a1yrs73 	
--	---	--

Assessment

How will students be assessed on their learning? Max 10 sentences

SAVE AND SHARE

For students:

You have learned to be creative and think systematically

Save and share the results of your work with others!

CUSTOMIZE!

Print your creations on various objects (mugs, T-shirts, etc.)!

Annex

- ✓ **Attracting new generations of students into STEM careers**

What am I doing this?

It is important to explain the relevance of STEM content for people's lives and to promote interest in solving useful, concrete tasks.

The teacher must establish the objectives proposed according to the school curriculum, collaborate with the volunteers and achieve the feedback necessary for a successful educational activity.

Partnerships with universities, with various STEM companies will arouse students' interest in a career in this field. Moreover, internship programs in interested companies are highly appreciated by older students due to their practical side.

"More empathy for STEM!"

With the help of practical applications and exercises, by using STEM skills in real life, by identifying role models of people with a successful career eager to share their experience, the teacher can motivate students to choose different STEM subjects for learning. The starting point is the teacher's ability to transfer his passion to students.

A special role is played by finding new ways in which girls are encouraged in STEM education. The proposed topics can be closer to their interests, or form questions "How do we change the world?"

The teacher explained the need for a high level of qualification: good skills, analysis, critical thinking.

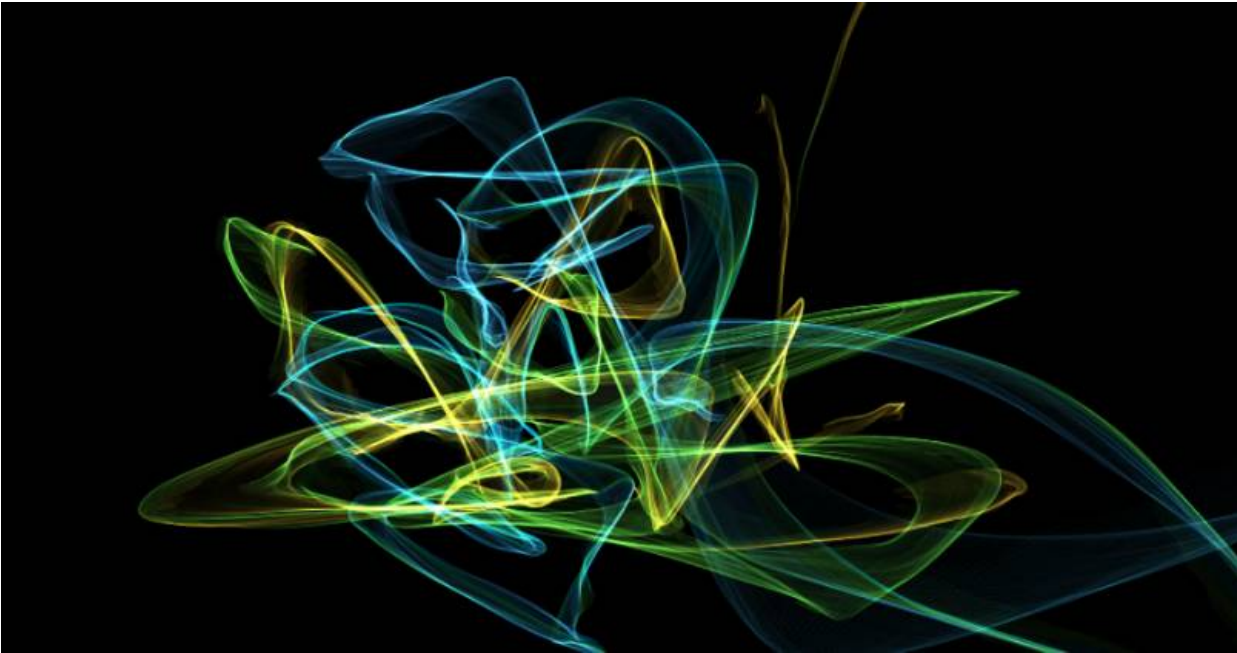
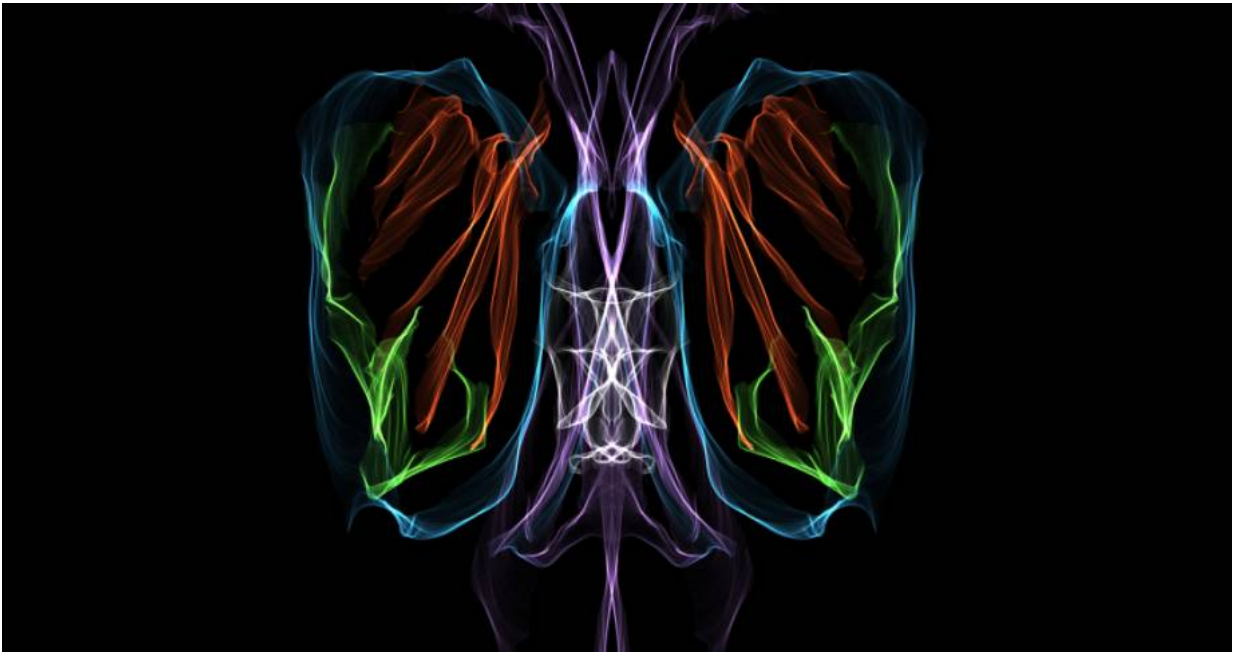
STEM is more engaging for students for the future economic success, on the future oriented agenda.

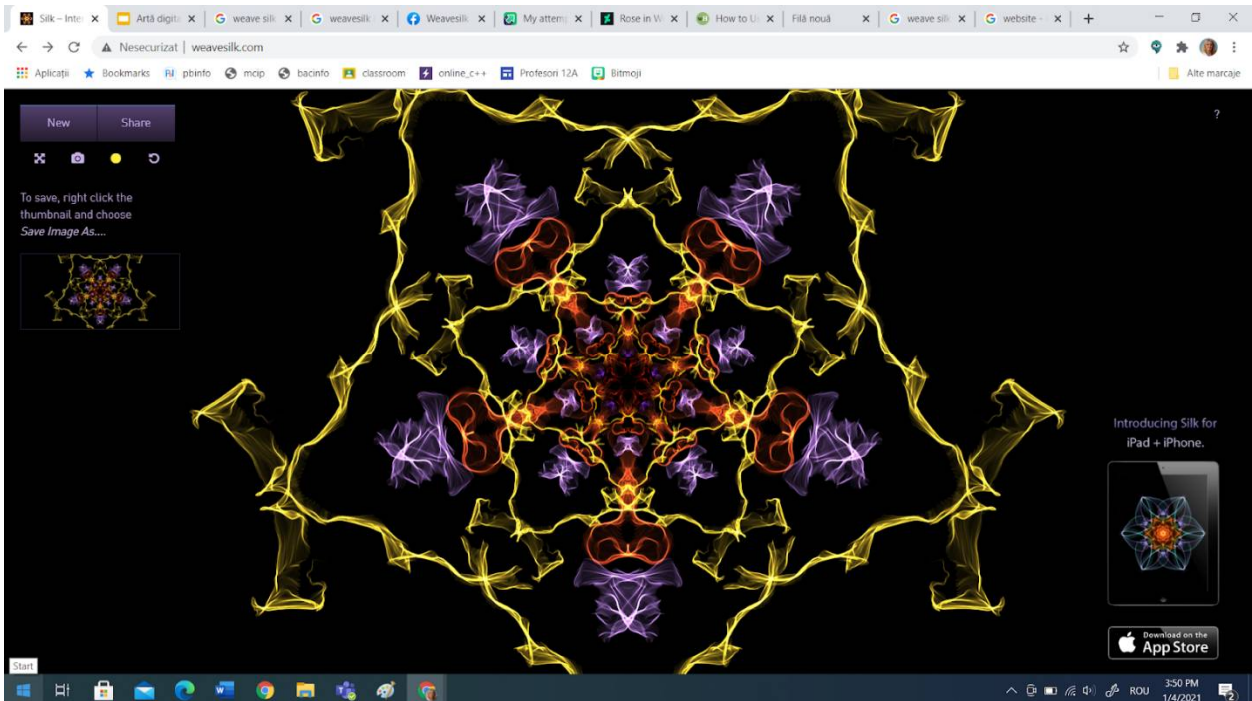
- ✓ **Weave Silk application:** <http://weavesilk.com/>

I used the application proposed in the educational process, the students proving to be particularly excited and inspired by the various options that the Weave Silk application makes available to users for the creation of digital art:

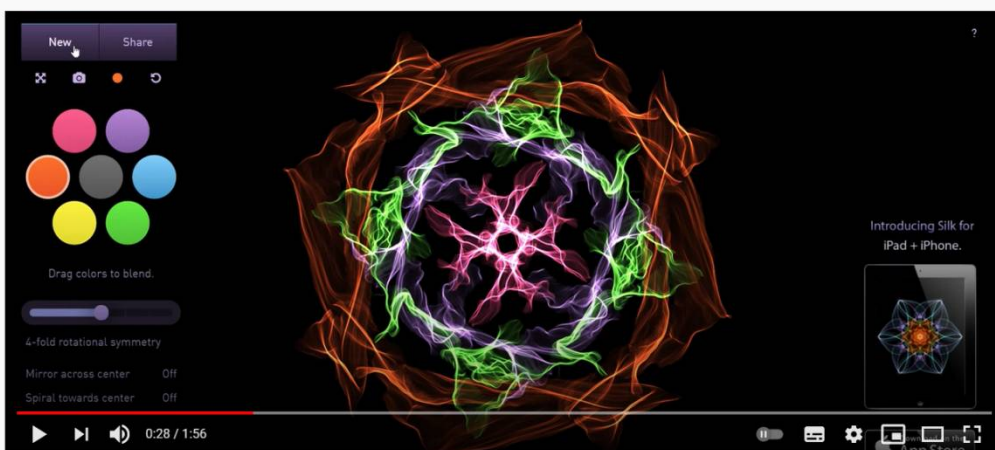
- <http://r.weavesilk.com/?v=4&id=ovt3a1x3q9e>
- <http://r.weavesilk.com/?v=4&id=isb3a1yk5kz>
- <http://r.weavesilk.com/?v=4&id=eqm3a1ynv52>
- <http://r.weavesilk.com/?v=4&id=luk3a1yrs73>

- ✓ **Other examples:**





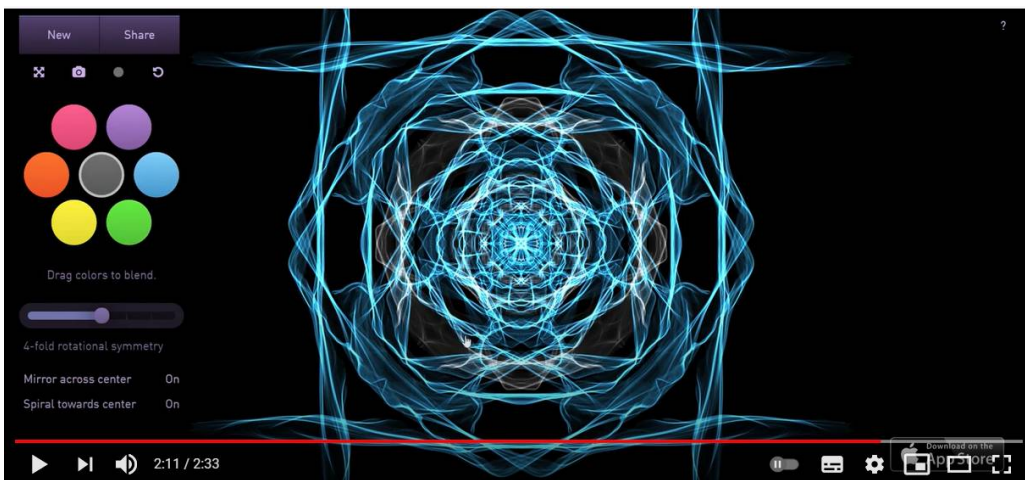
✓ **Video tutorial 1 (author, Mrs. Tanasescu Gabriela-Violeta):**



Tutorial 1, Weave Silk - Interactive Generative Art

<https://youtu.be/VxDEy8dxUos>

✓ **Video tutorial 2 (author, Mrs. Tanasescu Gabriela-Violeta):**



Tutorial 2, Weave Silk - Interactive Generative Art

<https://youtu.be/2mP-cd2pSRk>

BIBLIOGRAPHY:

- DIGITALIADA:<https://www.digitaliada.ro/Arta-digitala-cu-Weave-Silk-a1688316961839959>
Mrs. Gabriela-Violeta Tanasescu