

## **SPIRALS BY CONSTRUCTIONS**

**Teacher Norma Lisa Neiman (IT)**

### **SPIRALS BY EQUILATERAL TRIANGLES**

**LESSON PLAN:** 9<sup>th</sup> grade Students - 13-14 years old

**SUBJECT:** embedding triangles properties to art.

**LESSON IDEA** Equilateral triangle Art

<http://eisforexplore.blogspot.com/2013/04/spiral-triangles.html>

given by Monika **Monika Schwarze**

#### **AIMS:**

- Reasoning on triangles
- Reasoning on the Pythagorean Theorem
- Using properties of equilateral triangles
- Using properties of equilateral triangles to create an art outcome
- Shape understanding of the constructed spiral
- Investigating on the angles and ratios

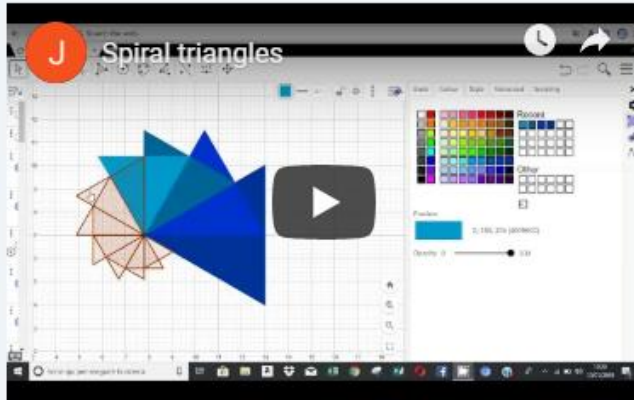
#### **PROCESS:**

1. We analyzed the equilateral properties in the classroom
2. Through a digital classroom (easyclass) the students revised the Pythagorean Theorem, from the class library
3. We constructed the equilateral triangle with GeoGebra in the Math Lab and explored the properties.
4. The students constructed the spiral of equilateral triangles and then created their art outcomes.
5. We investigated on the angles and ratios for the following project

## OUTCOMES

### The math of spirals: students teach students

#### 1. Spirals with equilateral triangles (IT)



Video by Jacopo Bove (IT)

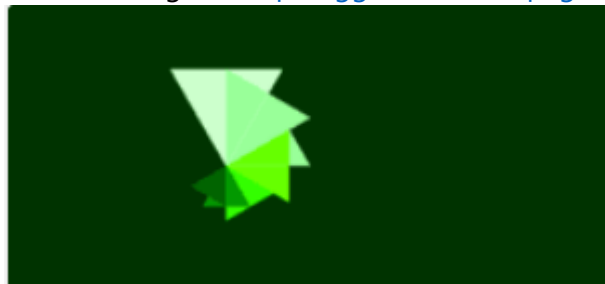
<https://youtu.be/mxx77SAdyBY>



Rachele Morganti <https://ggbm.at/sh2vcpag>



Gabriele Lazzari <https://ggbm.at/j2r7qxnq>



Valerian Virlan <https://ggbm.at/fpqemwev>



Tommaso Maesano <https://ggbm.at/fmbxfe4q>



Veronica D'Alessio <https://ggbm.at/uuvekpvv>



Sebastiano Coco <https://ggbm.at/u3c8zzmy>