Our Planetarium Story



Marina Molla, 9th Primary School of Komotini, Ministry of Education and Religious Affairs, Greece (mollamarina@gmail.com)



Our Planetarium in the 4th Gymnasium of Komotini, Greece

Our Planetarium Story is the story of 16 6th graders of a Minority Primary School in Komotini, Greece that were inspired to make their own Planetarium out of paper and a wooden skeleton after working on a space related project for a year.

Our goal was to show what students had learnt and to inspire about space and astronomy other children in our school, in Minority and Public Schools and the local community.

Introduction



The project was implemented in the 2nd Minority Primary School of Komotini which is located in the northeastern part of Greece.

Komotini is a multicultural and multilingual city.

The population consists of Christians and Muslims.

The students of Minority Schools are Muslims and the School program is bilingual and consists of Greek and Turkish language program.

The curriculum follows the articles of the Treaty of Lausanne and the Educational protocols that followed the Treaty.





2nd Minority Primary School of Komotini, Greece

Methodology

EUROPLANET SCIENCE C NGRESS EPSC2020

Curriculum integration:

Astronomy is part of the curriculum of the Greek language Program for Minority Primary Schools of the Education of the Muslim Minority Children of Thrace.

The Greek language textbook has a unit called Space while the textbook s of History & Geography discuss Great Explorers & Navigation, Planet Earth and Mapping. We also used Arts, ICT and Physical Education.

Teaching approach:

Interdisciplinary teaching approach Inquiry based learning

Classroom context:

16 6th graders (12 girls & 4 boys) One student with special needs

Implementation:

Collaboration of 4 teachers (the teachers of Greek language, History & Geography, of Physical Education & the Assistant teacher)

Aim:

Inclusion, enhancing students to express themselves & boost their self confidence



Inquiring in teams

Collaborating and presenting our work in the plenary of the classroom





Creative outcome

EUROPLANET SCIENCE C NGRESS EPSC2020

- •Fascinated by astronomy we decided to make a Planetarium and inspire other children too.
- •Our Planetarium is a Geodesic Dome (diameter of 5m & height of 3m) made out of paper and a wooden skeleton. We used the instructions of making cardboard Planetarium from Beals
 Science but had to adjust it to our resources.
- We worked eager and passionate for 2 months during school hours and weekends after their suggestions.
- •Our classroom became a workshop of Mathematics, Geometry, and Engineering.
- •The making of the presentations were a workshop of Astronomy, History, Mythology, Geography and Drama.
- •Our presentation were about Navigation and Orientation, the Night Sky and the Constellations, the Solar System and the Galaxy.
- •We used free online timelapse videos and Stellarium.

Images from our classroom



<u>In June of 2018</u> it was set up for the first time in the 4th Gymnasium of Komotini were it was visited by:

- •Our whole school (125 students) and the proud mothers of the passionate 6th graders who had made it.
- •120 students of 6th grade from 4 Primary Schools (2 Minority and 2 Public)

During Space Week 2018 it was set up again in the 4th Gymnasium for 350 students of its students.

In <u>May 2019</u> for 5 days it was set up in the Minority High school of Komotini as part of the city's festival. Presentations were given to 820 students of the hosting School and in the evening to <u>families of our community</u> (270 parents and children)



Photo from an article in the local newspaper "Xronos" about our Planetarium



Discussion



"Our Planetarium" affected positively all the students and teachers involved.

It was inclusive, engaging, creative, and inspiring..

It boosted student's self-esteem and made them reach out to the local community to show their work and what they have learnt about space.

The number of teachers collaborating in our School has grown.

"Our Planetarium" enhanced collaboration between Minority and Public Schools and the interaction between Schools, teachers, students and families through which all benefited.





Our youngest visitor a 3 year old child.



Our planetarium with the names of the 16th graders who made it!

Acknowledgements



I would like to acknowledge Eleftheria Tsourlidaki, Researcher at Ellinogermaniki Agogi, Greece, for her guidance and support.

References

Hanover Research.: Best practices in elementary STEM programs. Washington, DC: Hanover Research, 2012.

Percy, J.R.: Teaching Astronomy: Why and How?, JAAVSO, Vol.35, pp.248-254, 2006.



