



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



**Eskilstuna  
kommun**



SWEDEN

**ERASMUS+ 2017-1-ES01-KA219-038074\_1**  
**OUT OF THE DARK: ASTRONOMY AS UNIFYING THREAD FOR CULTURES.**



**TRANSNATIONAL MEETING.**

**ESKILSTUNA, SWEDEN. 20-26<sup>TH</sup> MAY 2018.**

List of teachers attending the meeting:

**From Italy:** BURINI, DILETTA; SCAPECCIA, ORIANA

**From Sweden:** STRALBERG, ERIKA MARIA; OSTERBERG, ANNA KRISTIN; BILLBERG, ANN JENNY; DIAZ, ANA

**From Spain:** MORALES, MARIA JOSE; MILLÁN, JOSÉ LUIS

**AGENDA OF THE MEETING MINUTE 21<sup>th</sup> MAY:**

1. Welcome by Swedish teachers and Headmaster M. Andreas Wilk
2. Cassimiri, IES Carpe Diem, Djurgårdsskolan. Presentation guided by students of each country, city and school.
3. Coffee break
4. Work in transnational groups and guided visit in the Swedish school – 1st teacher's meeting
5. Lunch
6. Home economics, Cinnamon buns.

The first day we work revising the main points of the Erasmus+ Project Out of the Dark.

We study the **Evaluation** proposed by the Italian team, and we decided to make it easier dividing the questions in different blocks:

- general questions (information about the Project, organisation in each school, dissemination)
- transnational meetings
- work in the different contents of the Project
- final evaluation

Djurgårdsskolan  
Skogvartagvägen 1  
63349 Eskilstuna

Email: [expeditionen.djurgardsskolan@eskilstuna.se](mailto:expeditionen.djurgardsskolan@eskilstuna.se)



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



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

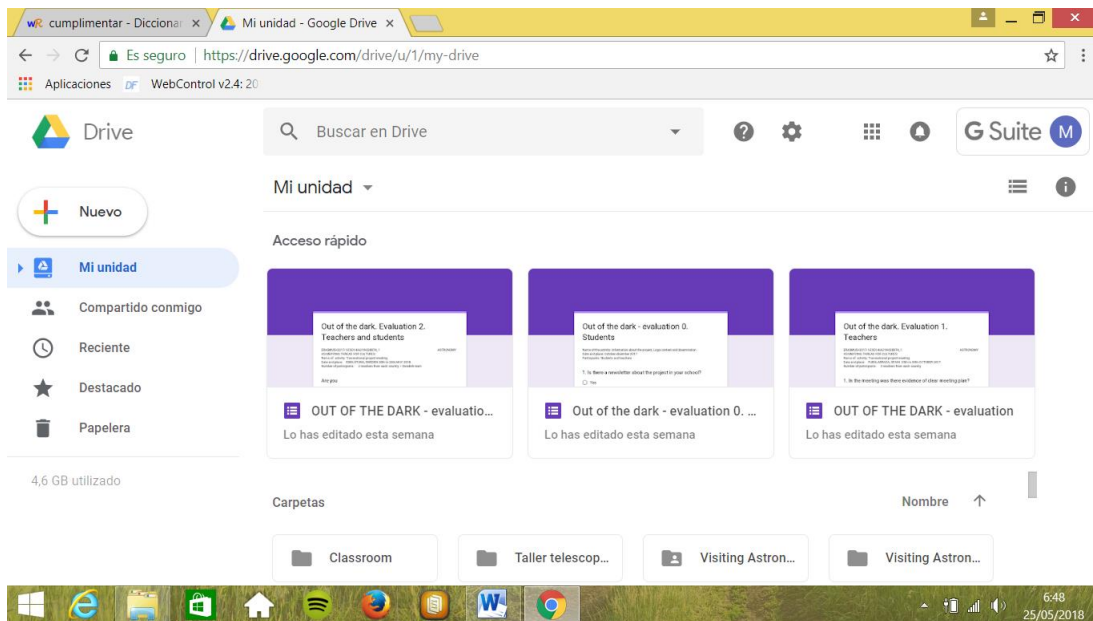


Eskilstuna  
kommun



SWEDEN

We create an application form that allows to fill in and to have the results immediately. (Google form in drive)



## AGENDA OF THE MEETING MINUTE 22<sup>th</sup> MAY:

1. Reading contest in transnational groups. The Little Prince
2. Coffee break
3. Writing a new chapter to The Little Prince in transnational groups. 2nd teachers meeting
4. Lunch
5. Cultural activity: Guided tour in Eskilstuna. The guides are students at S:t Eskils Gymnasium School
6. Reception at the Town Hall

In our second day, teachers meet and introduce a little change in the schedule given that it could be cloudy and the stargazing has to be moved to Thursday. We planify a walk in the forest, so as to know something more about nature in Sweden and the activity with Stellarium and the star map.

We prepare all the materials: compass, protractor of angles, rules, pens and the template with the map of stars according to the planisphere in 40° N of latitude.

We write the guidelines so that spanish students can teach their classmates from the others countries to do the task and compare results (See the blog of the Project <http://outofthedarkerasmus.blogspot.se/>)

Djurgårdsskolan  
Skogvartagvägen 1  
63349 Eskilstuna

Email: [expeditionen.djurgardsskolan@eskilstuna.se](mailto:expeditionen.djurgardsskolan@eskilstuna.se)



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



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



**Eskilstuna  
kommun**



SWEDEN

## AGENDA OF THE MEETING MINUTE 23<sup>th</sup> MAY:

1. Walking in the forest
2. Coffee break: Spanish breakfast prepared by the students
3. Activity Stellarium and star map.
4. Lunch
5. Concert by the Music Class.
6. Headmaster meeting: Visiting the Nature School with a group of English headmasters
7. Activities in the park for the students
8. 3rd teachers meeting

We start the day with a walk in the forest, learning about the right of public access and the importance of the forest for Sweden as a country.

Spanish students then prepared a taste of Spanish breakfast, much appreciated.

During our workshop with Starmaps and Stellarium, all students learned more about how to make a starmap using compass, protractor of angles, rules, pens and the template with the map of stars according to the planisphere in 40° N of latitude. In transnational groups the discussed and helped each other to solve problems with longitude and latitude. The Spanish students had done a similar work earlier and functioned as help-teachers.

After lunch and concert, we had games in the park and all students played "Sten, sax, påse".

Today we fill the form and check if there is any problem, and we planify the transnational meeting in Italy revising the Project.

Dates: 19-25 november

Age of the students: 16-17

Activities:

- Presentations about scientist, famous astronomers. They can explain the evolution of the knowledge in this field.
- Picture exhibition. Given that we have found some difficulties to take good pictures through our telescopes, we decided to collect photos of the best moments of the development of the project throughout the first year, and then to continue making a collage and displaying it in the last meeting, in Spain.
- The spanish team would have done the podcast with the guidelines to build a sundial, a gnomon and a quarter. We will build them in Gualdo Tadino during the meeting.
- Measurement of the mountains of the moon. Italy will be able to take the pictures of the moon with the help of an expert. So we will be able to do the measurements and calculations to write the scientific essay.
- We have to write the template for the essay to be used by our transnational groups of students.

Djurgårdsskolan  
Skogvartagvägen 1  
63349 Eskilstuna

Email: [expeditionen.djurgardsskolan@eskilstuna.se](mailto:expeditionen.djurgardsskolan@eskilstuna.se)



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



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



**Eskilstuna  
kommun**



SWEDEN

- Myths related to Astronomy. Italy and Spain share the latin myths.
- Cultural activities. In Gualdo Tadino and Gubio, medieval cities.

#### **AGENDA OF THE MEETING MINUTE 24<sup>th</sup> MAY:**

1. Cultural activity in Stockholm:
  - a. Cosmonova "Cosmos, the eternal journey". Natural History Museum.
  - b. Lunch in Stockholm
  - c. Guided tour through the old city
2. Why seasons? Workshop.
3. Stargazing. We use the telescopes to observe the moon and we look for some circumpolar constellations: Cassiopeia, Ursa major, Cepheus.

A visit to Stockholm, where we went to the iMax-cinema and saw the film "Cosmos, the eternal journey". Lunch, and then a guided tour through the old town of Stockholm.

After the activity in Stockholm is time to use our new knowledge about the sky.

In the evening, 9.30 pm, we all met at one of the first public schools built in Sweden. We showed Stellarium and discussed what we should be able to see, later on at night, with our telescopes. We had a discussion about why it is so light in Sweden in May, and concluded that it is because of the seasons.

The students were then divided into transnational groups and every group got some material and the task to build a model that explains why Sweden has such a great difference between the seasons. There is often a difference of 50 degrees Celsius between summer and winter. The material used was balloons, pens, duct tape, string, a beach ball and a lamp.

Afterwards all groups presented their work to the others.

After some cinnamon buns and hot chocolate we went down the lake to see if we could find some stars. All students lay down on a large canvas cover, and learned how to use their fists to estimate the altitude of the stars. Because of the light night we used telescopes and binoculars to look at the few stars we could see and also the moon. We realized we could see some of the constellations we had put into the Star maps.





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



**Eskilstuna  
kommun**



SWEDEN

So we are able to understand

- The differences between the South of Europe (40°N in Madrid, 43°N in Gualdo Tadino) and the North (59° in Eskilstuna).
- We realize the difficulties to observe the sky in this moment of the year being so close to the north polar circle.
- We compare the different telescopes, construction and resolution.

At 00.30 am we had some grilled sausages and went home.

#### **AGENDA OF THE MEETING MINUTE 25<sup>th</sup> MAY:**

1. Guided tour at the Art Museum
2. Workshop at the Art Museum
3. Lunch
4. Musical *Hair* at the Theatre
5. Fare well dinner

The Museum teachers gave the students a short guided tour at the museum, showing them some art related to the Universe. In the workshop they were divided into transnational groups and every group got a task to solve. The tasks were to build a spaceship and a planet. At the end of the session every group presented their thoughts about how they solved the task.

After lunch we saw the musical *Hair*, performed by high school students from St Eskils high school.

At the farewell dinner in the evening, there was a ceremony for the winners of the reading and writing contests. Prizes for first and second place. The best new chapter of the *Little Prince* was read out aloud at dinner.

**From Italy:** BURINI, DILETTA;

SCAPECCIA, ORIANA

**From Sweden:** STRALBERG, ERIKA MARIA;

OSTERBERG, ANNA KRISTIN;

BILLBERG, ANN JENNY;

DIAZ, ANA

**From Spain:** MORALES, MARIA JOSE;

MILLÁN, JOSÉ LUIS

Djurgårdsskolan  
Skogvartagvägen 1  
63349 Eskilstuna  
Email: [expeditionen.djurgardsskolan@eskilstuna.se](mailto:expeditionen.djurgardsskolan@eskilstuna.se)



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