# UNIQUE UNIVERSE

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Using new technologies, art, and our imagination to have a look at places far away.

## EDUCATIONAL CONTEXT

### AGE

10-99 years old

### DURATION

>4h

### PREREQUISITES

They should now how to open and salve files in programs. If they have experience with changing photos it is helpful. But they can also learn this within this activity. They can also

## EDUCATIONAL OBJECTIVES

**WHAT DO YOU AIM FOR YOUR STUDENTS TO LEARN THROUGH THIS ACTIVITY**

### COGNITIVE OBJECTIVES

Learners' ability to process information in a meaningful way.
Students can alter pictures. They understand that not all pictures are real. Students know about the objects that they observe.

### AFFECTIVE OBJECTIVES

Learners' attitudes and feelings that are a result of the learning process.
Students see that they can create an image with there imagination. They feel small compared to the universe. They can compare what new technologies can do, with what they can do by heart. They get a slight feeling of what technology might be able to do in a few years.

### PSYCHOMOTOR OBJECTIVES

Learners' ability to use motor skills to learn:
Students can do an acrylic water painting.
Students can use a Robotic Telescope. They can take pictures and process them with gimp.

## CONNECTION TO THE CURRICULA

- Write learning subjects and chapters of your country's curricula where your activity could be implemented
- Physics: cosmos
- Basic digital Education: Interaction, Production

Erasmus+

- Art: Nature and Technology, creativity and design

## EDUCATIONAL APPROACH

Inquiry based learning

*In the following pages there is a template based on the inquiry learning method. It is not necessary to follow this method. You can choose any approach you like.*

## ORIENTING & ASKING QUESTIONS

*StudentsOrienting: Provide Contact with the content and/or provoke curiosity*

Have a slideshow with nice Fotos from the Universe, together with suiting Music for like 4 or 5 Minutes.

*Define Goals and/or questions from current knowledge*

What have you seen? Stars, Galaxies, Nebulas, … What are the differences? Why do stars look differently?

## HYPOTHESIS GENERATION AND DESIGN

*Generation of Hypotheses or Preliminary Explanations*
What would you like to draw? Which technique would you like to use?

*Design/Model*

Create your peace of art.

## PLANNING AND INVESTIGATION

*Plan Investigation*

*The students use Stellarium to find their Object. They note the coordinates.*

They figure out if their object is visible at this time of the year. If yes, they decide which one of the Faulkes Telescopes will be suitable. (Southern/Northern hemisphere and size of the mirror).

*Perform Investigation*

They use Kiosk to “order” their observation.

If a life observation is possible, they can do both.

## ANALYSIS & INTERPRETATION

*Analysis and interpretation: Gather result from data*

If their Photos turned out well, they can use those. Else they can look for some in the archive.
They use the Photos, to create an astronomical RGB-image with Gimp.

## CONCLUSION & EVALUATION

*Conclude and communicate result/explanation*

They now compare their created image with their piece of art.

*Evaluation/Reflection*
What does it mean to them? What does it mean for their future and what for the future of humans?

*Consider other explanations*