

# MW-GAIA: BRINGING THE MILKY WAY TO SCHOOLS 2021

JUNE

2-4

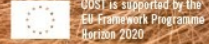
2021

## TOPICS COVERED

- The Milky Way as a Galaxy: the science and research background
- Dissemination of the GAIA science
- Bringing the research closer to the public
- Teaching the Milky Way in schools
- How to make teaching and science communication more inclusive

Deadline for abstract submission: 14 May 2021

Deadline for registrations: 1 June 2021



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VILNIUS UNIVERSITY (VILNIUS, LT)

# Poster 4

## ORGANIZERS



## Rigonda Skorulskienė

Institute of Theoretical Physics and Astronomy, Vilnius University, Lithuania

### Astronomy Education in Lithuania

Astronomy in the reformed curriculum There are no specialized school courses for astronomy, instead astronomy content will be found in Environmental Studies (a general term for science and social sciences in primary school); General Science (Year 1-2(4) of secondary school) and in Physics (Year 3(5)-6) of secondary school. Year 7-8 astronomy courses will be only for the students who choose to learn Physics.

In the primary education (1st-4th grade) children will be taught to recognize the Sun, Moon, planets, day and season changes, Earth satellites and their purposes. Finally, they will be explained how scientists study space. In the 5th grade, there will be a bigger focus on the Solar system (asteroids, comets, small solar system bodies). Students will be taught differences between meteoroids, meteors and meteorites, the cosmic distances will be discussed and their unit of measurements. In the 6th grade, Students will be taught live and virtual stargazing, space objects and occurrences. The meaning of constellations and space research will be discussed as well. In the 7th grade, Solar and Moon eclipses, devices to study the sky, and safe use of telescopes will be taught. Different telescope types, as well as the history of stargazing and space science, will be discussed. In the 8th grade, nuclear synthesis, as the energy of the star will be explained. Composition/structure of the Sun, history of space and its expansion, stellar evolution will be analyzed. Finally, star and planets exploration (transit method), and types of planets harbored by different types of stars. In the 9th grade, the Kepler's laws of planetary motion will be analyzed. Acceleration of free-fall due to gravity will be compared on Earth and other planets. In the 10th grade, Earth magnetic poles, magnetic field, and its importance for life on Earth will be analyzed, as well as astronomical studies using electromagnetic waves.

# Astronomy Education in Lithuania

Rigonda Skorulskienė, Vilnius university PhD student  
Physics teacher – expert in Kaunas Jesuit Gymnasium

## Astronomy in the reformed curriculum

There are **no specialized school courses for astronomy**, instead, astronomy content will be found in the following subjects:  
Environmental Studies - in the primary school;  
General Science ( in the year 1-2 of secondary school);  
Physics – in secondary school.

**The reforms for the curriculum is still ongoing.**

**In primary education** (1st-4th grade) children will be taught to recognize the Sun, Moon, planets, day and season changes, Earth satellites and their purposes. Finally, they will be explained how scientists study space.

**In the 5th grade**, there will be a bigger focus on the Solar system (asteroids, comets, small solar system bodies). Students will be taught the differences between meteoroids, meteors and meteorites, the cosmic distances will be discussed and their unit of measurements.

**In the 6th grade**, Students will be taught live and virtual stargazing, space objects and occurrences. The meaning of constellations and space research will be discussed as well.

**In the 7th grade**, Solar and Moon eclipses (1, 2, 3), devices to study the sky, and safe use of telescopes will be taught. Different telescope types, as well as the history of stargazing and space science, will be discussed.



**In the 8th grade**, nuclear synthesis, as the energy of the star will be explained. The composition/structure of the Sun, history of space and its expansion, stellar evolution will be analysed. Finally, star and planets exploration (transit method), and types of planets harboured by different types of stars.

**In the 9th grade**, Kepler's laws of planetary motion will be analysed. Acceleration of free-fall due to gravity will be compared in Earth and other planets.

**In the 10th grade**, Earth magnetic poles, magnetic field, and its importance for life on Earth will be analysed, as well as astronomical studies using electromagnetic waves.

**The 11th and 12th grade** astronomy course will be only for the students who choose to learn Physics, however, the program is yet to be finalized.



## Astronomy education outside the classroom:

In Lithuania, we have an increasing focus on science popularization. In the bigger cities, we have planetariums and other entities engaged in science popularization. A lot of events are being organized throughout the year focused on science, such as “Starry nights”, “Night of Science” (6), “Science Festival”.

**Moletai Astronomical Observatory** (7) and **Ethnocosmology Museum** (8) are often visited by schools. In many schools Astronomy extracurricular activity is being organized. Every year National Astronomy Olympiad (4, 5) and Astronomy Summer camp are being organized for students.

Photos from personal archive.

Background image:

<https://astrotourismwa.com.au/milky-way-galaxy>

More info about the curriculum:

[www.mokykla2030.lt](http://www.mokykla2030.lt)

