

# Gamtamokslinis U · G · D · Y · M · A · S



2021 Vol. 18, No. 2

ISSN 1648-939X / Print/  
ISSN 2669-1140 / Online /

Natural Science Education

**2021, Vol. 18, No. 2**

**ISSN 1648-939X /Print/  
ISSN 2669-1140 /Online/**

**Gamtamokslinis  
UGDYMAS**

**Natural Science  
EDUCATION**

**Естественнонаучное  
ОБРАЗОВАНИЕ**

Scientific Methodical Center „Scientia Educologica“, Lithuania,  
*the Associated Member of Lithuanian Scientific Society, European Society for the  
History of Science (ESHS) and ICASE (International Council of Associations for  
Science Education)*

**2021**

This journal is indexed in a list of Science Education Journals (USA), Copernicus Index (Poland), Open Academic Journals Index (OAJI), WebQualis (QUALIS/CAPES), Academic Resource Index (Research-Bib), MIAR, EuroPub, QOAM, Crossref, ScienceGate, SCRIBD etc.

## Redaktorių kolegija (Editorial Board)

### Vyriausiasis redaktorius (Editor-in-Chief)

Prof. dr. **Vincentas Lamanauskas** – Vilniaus universitetas (Vilnius University, Lithuania)

### Redaktoriaus pavaduotoja (Deputy Editor-in-Chief)

Dr. **Rita Makarskaitė-Petkevičienė** – Vilniaus universitetas (Vilnius University, Lithuania)

### Nariai (Editors)

#### Nerutė Augustonytė

Prof. dr. **Martin Bilek**

Prof. dr. **Andris Broks**

Dr. **Liudmila Korozhnieva**

Dr. **Jarmila Kmetova**

Prof. dr. **Jari Lavonen**

Dr. **Solange Wagner Locatelli**

Dr. **Iwona Maciejovska**

Dr. **Eleonora Melnik**

Dr. **Uladzimir Slabin**

Dr. **Laimutė Salickaitė-Bunikienė**

Dr. **Laima Railienė**

Dr. **Violeta Šlekienė**

Dr. **Elena Vasilevskaya**

– Vilniaus universitetas (Vilnius University, Lithuania)

– Vilniaus universitetas (Vilnius University, Lithuania)

– Pasvalio Lévens pagrindinė mokykla (Lévens Basic School, Pasvalys, Lithuania)

– Karolio universitetas (Charles University, Czechia)

– Latvijos universitetas (University of Latvia, Latvia)

– Petrozavodsko valstybinis universitetas (Petrozavodsk State University, Russia)

– Matej Bel universitetas (Matej Bel University, Slovakia)

– Helsinkio universitetas (University of Helsinki, Finland)

– Federalinis ABC universitetas (Federal University of ABC, Brazil)

– Jogailos universitetas (Jagiellonian University, Poland)

– Petrozavodsko valstybinis universitetas (Petrozavodsk State University, Russia)

– Oregono universitetas (University of Oregon, USA)

– Vilniaus universitetas (Vilnius University, Lithuania)

– MMC „Scientia Educologica“ (SMC „Scientia Educologica“, Lithuania)

– Vilniaus universitetas (Vilnius University)

– Baltarusijos valstybinis universitetas (Belarus State University, Belarus)

GAMTAMOKSLINIS UGDYMAS – periodinis, recenzuojamas mokslinis metodinis žurnalas, kurį leidžia mokslinis metodinis centras „Scientia Educologica“. Tai tarptautinis žurnalas, kuriame moksliniai ir metodiniai straipsniai publikuojami lietuvių, anglų ir rusų kalbomis. Leidinys skirtas mokytojams, aukščių mokyklų dėstytojams ir visiems, besidomintiems gamtamoksliniu ugdymu.

\*\*\*

NATURAL SCIENCE EDUCATION – is a periodical, peer reviewed, scientific-methodical journal, issued by the SMC „Scientia Educologica“. It is an international journal, wherein the scientific and methodical articles published in Lithuanian, English and Russian languages. This journal is intended for the teachers of general education schools, the lecturers of higher educational institutions and all, who are interested in the problems of natural science education.

CGIJ OAJI: 0.201; ICDS: 3.6; Copernicus Index ICV: 98.56 (2020)

**ISSN 1648-939X**

© Mokslinis metodinis centras „Scientia Educologica“, Lietuva /  
Scientific Methodical Centre „Scientia Educologica“, Lithuania

Leidžiamas nuo 2004 metų du kartus per metus / Published since 2004 twice a year