

# REGULATIONS

for conducting a National Competition for  
STEM sciences in schools in Bulgaria 2018

„Who SUPER STEM is in your school“

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## 1) Aim

The aim of the competition is to encourage talented STEM students in the school who are proactive and curious to create ideas, create and experiment. STEM - Science, Technology, Engineering and Mathematics

[http://www.scitechfestival.org/mained\\_hs\\_resource.asp](http://www.scitechfestival.org/mained_hs_resource.asp)

### S (Science) - **Science**

Science is conventionally divided into two strands - natural sciences that study natural phenomena, and social sciences that study human behavior and society. They are based on the collection of observable, empirical and measurable evidence that is subject to certain principles of reasoning. The scientific method consists of collecting data through observation and experiments and the formulation and testing of hypotheses. Includes: biology, chemistry, astronomy, physics, geography, history, mechanics, economics, law, etc.

### T (Technology) - **Technology**

Technology is the knowledge that deals with the creation and use of technical means and their interconnection with life, society and the environment, based on such topics as industrial art, engineering, applied science and pure science.

### E (Engineering) - **Engineering**

Engineering is an application of science and mathematics to design or produce something that benefits the public. This may include structures, machines, processes and systems. For example, an engineer can build bridges, buildings, computers, appliances, power plants and transport systems, and so on.

### M (Mathematics) - **Mathematics**

Mathematics means "science, knowledge, cognition". Mathematics is the study of areas such as quantities, spatial structures, spatial types, and calculations. Mathematicians use systems of abstractions and axioms to make scientific guesses that they then try to prove by following the rules of logic.

## 2) Principles

- STEM sciences and their in-depth study at school have a leading role for pupils' future achievements and their educational and professional development, and indirectly on all areas of the society.
- School children and students can have a higher interest and learn effectively when studying with each other and their peers (Peer to Peer), and when pupils themselves share their own achievements.
- Non-formal and informal learning can make a significant contribution to learning outcomes and interest in STEM sciences.
- Teachers encouraging pupils to be interested, explore and experiment are the leading "engine" for student achievements in STEM science at school.

## 3) Organiser

The organization of the competition is carried out by EduTechFlag with the support of partner organizations.

## 4) Personal data

By completing the application form, the applicants agree that the organizer will handle the personal data contained in the application and additional documents.

## 5) Participants

The applicants are only student/pupils that are the first up to the thirteenth grade inclusive, who are trained in Bulgarian municipal, state and private schools in Bulgaria.

Participation may be individual or teamwork, as indicated by the team leader.

## 6) Application

### A) SUPER STEM school child/student

Students can participate by submitting a summary (1/2 summary page or 3-minute video, in Bulgarian or English) for a project / idea (or achievement and / or experiment, idea or summer school) in the field of STEM. The abstract / video must contain:

- Presentation of the school.
- Presentation and / or demonstration of experiment / participation / idea / project in STEM area.
- Personal opinion: Why are the STEM sciences important for the candidate?

The project / idea / experiment / idea may be from the present or previous years.

**IMPORTANT!** Students who participated in SUPER STEM 2017 can also participate. They may present an improvement to the project from 2017 or participate in with a different project.

## 6) SUPER STEM teacher

Teachers can participate by submitting a summary (1/2 page in Bulgarian or English), which should contain:

- Presentation of the school.
- Describe with no more than 3 sentences each STEM project you have participated in and/or participate in (project name, purpose, results, how many students attended, etc.).
- **Applying by an electronic portfolio is an advantage!**

## 7) Categories

• Students (SUPER STEM are students who participate / create / experiment / experiment with STEM projects (outside school / informal environment, but not necessarily):

- students up to 10 years of age (grades 1-4)
- students under 15 (4-8 grade)
- students over 15 years of age (8-13th grade)

• SUPER STEM Teachers:

- DIGITAL EXCELLENCE (the teacher encouraging pupils to be interested and interested in ICT / programming / software technologies and other activities related to digital resources and tools in school)
- STEM AMBASSADOR (the teacher who encourages students to be interested and interested in STEM).

## 8) Application period

From the 10<sup>th</sup> of November until the 30<sup>th</sup> of November 2018 (11.59 pm) including

## 9) Contest conducting

The contest is held in one round with the following form (<https://edutechflag.eu/участвай>):

- To apply for a SUPER STEM student.
- To nominate a SUPER STEM teacher.

## 10) Evaluation

The evaluation is done by STEM experts.

## 11) Criteria

The evaluation of the SUPER STEM students is based on the criteria:

Award criteria for evaluating projects / ideas for SUPER STEM students	Points
Conformity of the project / idea with the STEM area in which it is applying.	10
Description of the purpose of the project / idea .	20
Smart presentation of the project / idea, what experiments / calculations were made.	20
Innovation of the project / idea.	10
Using examples and materials for creating the project / idea, experiments .	10
Demonstration of enthusiasm and interest in STEM.	20
Applicability of the project / idea in practice.	10
Total	100

The evaluation of SUPER STEM teachers is based on the following criteria:

Award criteria for SUPER STEM teachers	Points
Argumenting how the teacher promotes the interest of students in STEAM sciences.	30
Example (s) about STEM projects.	50
Applying by electronic portfolio	20
Total	100

## 12) Ranking - levels

- *School level: "SUPER STEM in your school". Ranking announcement at School Level - December 15, 2018*
- *City level: "SUPER STEM in your school". Announcement of city-level ranking - 20.12.2018*
- *Regional level: "SUPER STEM in your school". Announcement of classification at regional city level - 20.12.2018*
- *National level: "SUPER STEM in your school" Bulgaria. Announcement of ranking at national level - 25.12.2018*

## 13) Awarding

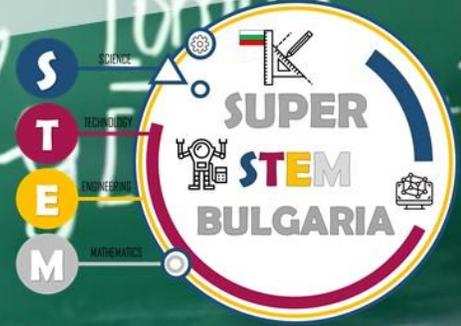
- *REGIONAL CITY: Awarding "SUPER STEM in your school" at regional level in the regional cities in Bulgaria. Announcement of ranking at regional city level - 20 December 2018*
- *NATIONAL LEVEL: Awarding "SUPER STEM in your School" Bulgaria. Announcement of the ranking at the national level - 25 December 2018*

## 14) Awarding ceremony

- *The awarding ceremony will take place in January 2019.*
- *The host organization, the date and the program for the SUPER STEM 2018 Award Ceremony will be announced on <https://edutechflag.eu/stem>.*

КАНДИДАТСТВАЙ ДО 30 Ноември 2018

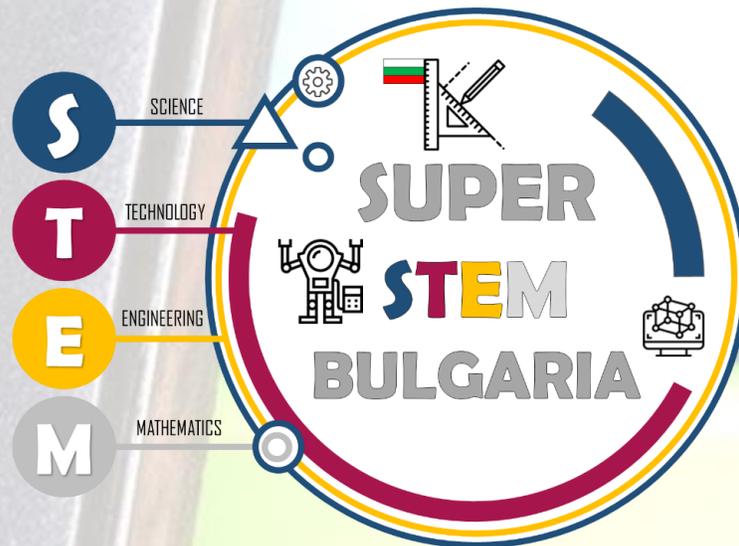
<https://edutechflag.eu/stem>



*There is no greater education than one that is self-driven!*

Science - Technology - Engineering - Mathematics

# Търси се **SUPER STEM** в твоето училище! Национален конкурс за **STEM** науки 2018



*There is no greater education than one that is self-driven!*