

## NANO-TECHNOLOGY COMPETITION

The Nano Competition will address the students between the age 13 to 18 and teachers whom can be both from the project partners' countries and from other countries. The theme of the competitions will be determined by partners and will be announced to the users on the VL. Students who are willing to attend this competition will prepare their projects and upload their projects to the VL. The VL users will vote on the successful projects for a month. The favorite projects will be awarded and promulgated on VL and the winners will be invited to the international Nano Tech Conference that will be held in İstanbul/Turkey. The essential aim of the competition is to encourage the students to produce projects with regard to Nano technology and inspire science education for future scientists. The Nano Tech Competition will be ritual each following year to create new Nano Pioneers.

## NANO-TECH CONFERENCE

An international Nano Tech Conference will be held in İstanbul for one day and will address to at least 200 participants targeting educational stakeholders including the Ministry of Education and the academicians on science and the sessions on the last technological improvements and the effects on humankind. The outcomes of the project will be introduced in the workshops and distributed to the targets groups for the sake of project dissemination.



[www.ntse-nanotech.eu](http://www.ntse-nanotech.eu)



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NTSE

Nano -Tech Science Education

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## NANO -TECH SCIENCE EDUCATION (NTSE)

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## NANO –TECH SCIENCE EDUCATION (NTSE)

Nano technology for science education (NTSE) is a Transversal KA3 ICT project that aims to use ICT as a tool to make the learning of science subjects more attractive and accessible. The project target groups are students from the general and vocational school aged 13 to 18; teachers in science subject; and college & university students attending science education courses. Mainly, the project will establish a Virtual Lab, as an experimental virtual aid to science learning. The project seeks to address the problems by integrating well established but currently independent technological developments, within creative and motivating teaching materials and virtual learning spaces.

### NTSE Project Aims

To create a new direction in Science teaching by means of ICT through making Science education more attractive to students (13-18) and teachers more current and applicable for prospective Science teachers of all backgrounds.

### The specific project objectives are;

- To encourage students to learn about nano-technologies, to be engaged in explorative and amusing science learning through experiments and activities.
- To make the science education more appealing and motivating via the design of materials, books and games suitable for different grade level the project in order to promote nanotechnologies and popularize them.
- To make science teachers in general and vocational education more enthusiastic and capable of using the ICT in their lessons.
- To encourage the university students in sciences to enter the teaching profession and share with the support of the ICT their enthusiasm for sciences with the young learners.



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## THE PROJECT OUTPUTS

The ongoing long-term goal of this project is to reach as many of the original target groups as possible. Through the project's outputs, the Virtual Lab, the Nano-Science Camp, and the Nano-Tech Guidelines, Annual Nano-tech book for teachers, an ICT-based approach concentrated towards Science teaching can find a wide dissemination.

### VIRTUAL LAB

The use of a Virtual Lab (VL) will serve as a platform for science lessons, as a database of teaching materials and as a hub for science-learning graphic aids and recorded and illustrated appealing experiments on Nano-Tech. Students and teachers in secondary will be able to use and refine the VL, for lessons and sharing information. Their experiences will be recorded both on the Virtual Lab and in the Annual Nano-tech books. The VL will last long after the life of the project and will be an ongoing platform for sharing ideas, lesson plans and information. It will be updated and tested through inviting 10 teachers from the partner countries each year.



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## NANO-TECH GUIDELINES & NANO-TECH ANNUAL

During the project, two books (Annual & Guidelines) will be produced to highlight on yearly basis the project achievements.

### Nano-Tech Guidelines

There will be pedagogical guidance including teaching strategies and online assessment grids/ innovative methods for the assessment of the impact on learners and technical guidance. The aim of the guidelines is to demonstrate how Nano- technology will be used in Science Lessons. The Nano Tech Guidelines will be produced to enable the target groups to use VL properly according to their educational settings and will be printed in 6 different languages (BG, EL, EN, IT, RO, TR)

### Nano-Tech Annual

The Nano Tech Annual will be produced for Nano Tech readers to acknowledge them about the past year of the project and will include facts, statistics and graphics about the project. After the finalization of the project, it will be printed annually. The project annual will be dispatched to the schools, directories, universities, public libraries, teacher training centers, research institutions.

### Nano-Science Camp

The Nano Science Camp will be made in Lozen in Bulgaria addressing the teachers and their students. Partners' universities and general & vocational schools and the entrepreneur learners in the Nano-tech project competitions will be invited to the Nano Science Camp which includes hands-on demonstrations, weeding animations, and a demonstration of Nano material. The aim of the camp is to gather the learners who are eager to use/learn science, earning them the title "little Nano pioneers" and this camp will go on being approbation of the contents and functionalities of the VL. After the project the camp will be ritual.



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