TEAMWORK, TRAINING AND TECHNOLOGY NETWORK

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WHAT IS TTTNET

“Teamwork, Training and Technology Network” (TTTNet)

Implemented with the financial support of the European Commission under the Lifelong Learning Program, sub-program COMENIUS

(LLP is the predecessor of the new framework program for support of the international cooperation in education – Erasmus+)

The project partnership includes organisations from 9 European countries...
THE TTTNET PROJECT PARTNERSHIP

- **Polo Europeo della Conoscenza-I.C. Lorenzi-Fumane** - Italy
- Center for Creative Training Association - Bulgaria
- Space Camp - Turkey
- Institute for Education Association - Romania
- DOGA Schools - Turkey
- Bulgarian Academy of Sciences - PH.D. Research Career Development Centre
- Foundation for Research and Technology (FORTH) - Greece
- The University of Stavanger - Norway
- Spanish Confederation of Education and Training Centers
- **Intellisense** - Hungary / since 2015
- Moscow City Pedagogical University – Russian Federation
THE TTTNET PROJECT

...aimed at *making science education more attractive and appealing to the young learners* by

- Identifying **innovations** in the educational practices
- Summarising and disseminating **good practices**
- Working actively to **mainstream** those findings into educational policies

...is a **Comenius** Network

- It focuses on the problematic which is topical for the **school education** context
- It is a **NETWORK** project which strives to build **synergies**
TTTNET BUILDS ON PREVIOUS PROJECTS
WHY EU SUPPORTS SUCH PROJECT?

- **Education and skills** are “core strategic asset for growth”
- Among the challenges to be addressed by the EU member states is **development of STEM related skills**
  
  **STEM = science, technology, engineering and mathematics**

- EU economy / Modern, knowledge-based economies **require** people with higher and more relevant skills
- By 2020, 20% more jobs will require higher level skills. Education needs to drive up both standards and levels of achievement to match this demand, as well as encourage the transversal skills needed to ensure young people are **able to be entrepreneurial** and **adapt** to the inevitable changes in the labour market during their career.
WHY EU SUPPORTS SUCH PROJECT?

“A fokozottan technológia- és kutatásalapú ágazatokban várhatóan a jövőben is fennmarad a szakképzett munkavállalók iránti jelenlegi nagy kereslet, ami befolyásolja a természettudományokkal, a technológiával, a műszaki tudományokkal és a matematikával kapcsolatos készségek iránti igényt. Komolyabb erőfeszítésekre van tehát szükség a természettudományok, a technológia, a műszaki tudományok és a matematika kiemelt oktatási területként történő meghatározásához és a közreműködés növeléséhez valamennyi szinten.”

COM(2012) 669 “Gondoljuk újra az oktatást: beruházás a készségekbe a jobb társadalmi-gazdasági eredmények érdekében”

...The demand for a qualified workforce in technology and research intensive sectors is and will remain at a high level... Greater efforts must now be made to highlight STEM as a priority area of education, and increase engagement at all levels.

(COM(2012) 669 final – “Rethinking Education: Investing in skills for better socio-economic outcomes”)
WHY EU SUPPORTS SUCH PROJECT?

A transzverzális készségek, többek között a kritikus gondolkodás, a kezdeményezőkészség, a problémamegoldás és a közös munkavégzés képessége felkészítik az egyéneket az életpályák napjainkban jellemző változatos és kiszámíthatatlan alakulására.

COM(2012) 669 “Gondoljuk újra az oktatást: beruházás a készségekbe a jobb társadalmi-gazdasági eredmények érdekében”

Transversal skills such as the ability to think critically, take initiative, problem solve and work collaboratively will prepare individuals for today's varied and unpredictable career paths.

(COM(2012) 669 final – “Rethinking Education: Investing in skills for better socio-economic outcomes”)
THE TTTNET TARGET GROUPS

- **Science and technology teachers** are the core target group.
- Primary target groups include also **education decision makers** and **authorities**, **educators** at teacher training centers, teacher consulting organizations, **students** that are involved in the formal school education (mainly 12-18 years old), **young scientists** and **technology specialists** and **business organizations** active in curriculum change processes.
THE TTTNET PROJECT PARTNERS WORKED TO...

• **Collect good practices** demonstrating attractive and inspiring science education, produced by teachers around Europe;

• **Identify innovations** and methodologies for science teaching that raise and sustain interest towards sciences and pursuit of scientific carrier;

• Support **visibility**, wider spread and practical implementation of the identified resources and methodologies in the general education by activities and measures such as: increased accessibility through an **on-line repository** at the network portal website, cascading seminars, e-Newsletters, etc.

• Organise 3 International Network Conferences for demonstration of the identified practices, resources and innovations and for networking, debates and cooperation between **educational practitioners, scientific researchers, employers and other stakeholders**.

• Produce **Policy recommendations** as a driving step towards implementation of sound principles and strategies for innovation-empowered science education.
INNOVATIVE SCIENCE EDUCATION
International conference
7 – 8.10.2016, VERONA (ITALY)
The TTTNet partnership initiated a Student’s poster competition titled “Engaging Science Situation”

- Addressed school students aged from 13 to 18 years
- 72 registrations / 50 posters (by individuals & teams)
In 2016 TTT Network announced “Attractive science education” contest good educational practices in STEM.

Teachers from Greece, Turkey, Romania, Croatia, Serbia, FYROM and Bulgaria took part in the competition.

Prizes: Nano kit is awarded to

- Georgios Villias - Biology teacher at Varvakeio Model High School, Athens (Greece) for the lesson plan: The “Shipwreck bar” mystery (A Karyotype (chromosome) analysis activity game)

and to

- Candan KAFALI – from Küçükkuyu Fernur Sözen Ortaokulu, Çanakkale/Turkey for the activity “Hardboard Production With Pumpkin Shell”
TTTNET TEACHERS’ CONTEST 2016

Prize: MakeyMakey is awarded to 2 teams and 2 teachers as follows:

- **Antoaneta Hineva, Boyanka Boycheva, Eleonora Pavlova, Evgenya Mihaylova, Milen Mavrodiev, Silvya Zaharieva, Tsvetelina Peeva** – from High School of Mathematics “Dr Petar Beron” (Bulgaria) for the activity “*Substance turnover Nitrogen cycle*” (composting)

- **George Andredakis and MSc Irene Chalacatevaki** – from Music School of Chania for the activity “*Teaching Reaction of Neutralization (including Double Replacement Reactions) using dancing and theatrical performances*”

- **Gabriela-Violeta TANASESCU**, Computer Science Teacher at “Traian” High School, Constanta, Romania for the activity „*3, 2, 1…Start to MARS!*“

- **Damyana Grancharova** – Foreign Language High School “Akad. L. Stoyanov” – Blagoevgrad for the activity “*Searching for the truth: Has a man ever landed on the moon? Open debate in English*”
Making science education more engaging and attractive
What can be done?

TTTNET HIGHLIGHTS
INSPIRED AND INSPIRING TEACHERS

The “mad” scientist
Inge Christ on
http://forskning.no
UTILISING THE POTENTIAL OF THE TECHNOLOGIES
EARLY CAREER ORIENTATION
Connecting school with life

Visit at Coca-Cola Hellenic
Visit to a research lab
Visit at 3M company
NewsMedia
COOPERATION WITH STAKEHOLDERS OUTSIDE THE SCHOOL: MUSEUMS, SCIENCE CENTERS, ETC
All 15-year-olds in Stavanger are spending two days of their school year studying energy-related science in a new facility opened at the **Norwegian Petroleum Museum**.

Pupils using these facilities take a “**Newton module**”, a multidisciplinary educational program with the emphasis on science and technology.
PROJECT-BASED LEARNING CENTER
START-PRO IN MOSCOW
WHAT IS NEXT

• New Teachers’ contest for good educational practices
  - Intel Compute stick
  - Nano-kit
  - MakeyMakey

• New Poster competition for students
  - Kindle
  - Noon VR headset for virtual reality
  - Portable Wireless Speaker

Deadline: 10th February 2017
BECOME PART OF THE TTT NETWORK

• Write us at: tttnet@cct.bg
• Visit the project web-site: http://tttnet.eu/
• Contribute to the on-line repository with good practices: http://tttnet.eu/goodpractices/