

What is inGenious?

inGenious is the European Coordinating Body in Science, Technology, Engineering and Maths (STEM) education, one of the largest projects in science education undertaken in Europe. It brings teachers and industry together to ensure STEM education is both up-to-date and relevant to the job skills young people need, and to increase young pupils interest in science education and career options by exposing them to real-life applications of science in class.



Why do we need inGenious?

- More than half the EU 27 countries have below average PISA scores in maths and science (OECD, 2009)
- Three global surveys (Rose, Pisa, Timss) indicate that 13-15 year olds in developed nations do not place a high value on science and technology: they do not think these are important for their career
- The number of science enrolments and graduates in Europe has been slowing down over the last decade, from 24.3% in 2002 to 22.6% in 2011 (Eurostat)
- China has more than quadrupled its number of STEM graduates since 2000 to nearly 2 million in 2006
- Women and girls are still under-represented in STEM: only 20% of graduates, in particular, in the fields of computing and engineering



What does inGenious do?

inGenious focuses on the contribution that the private sector can offer to science education at primary and secondary school level.

No longer a taboo, schools contacts with business are key to addressing STEM challenges in Europe (decreasing numbers of STEM graduates, skills shortage in the labour market), and ensuring young people have the skills they need for employment.

inGenious responds to the need for coordination of, and support to, efforts in place, providing a European-wide framework for collaboration between schools and companies.

Who runs inGenious?

Launched by European Schoolnet and the European Round Table of Industrialists, with the support of the European Commission, Research Framework Programme – Science in Society

To date the inGenious consortium includes 17 multinational companies, 5 industry associations, 18 public bodies and universities.

 **inGenious - Science**

 **@inGenious_eu**

What activities inGenious is driving?

Fostering school – industry collaboration on the ground:

- Pilot exercise with about 180 teachers selected each year across Europe to test and evaluate new collaborations with private actors (more than 12,000 pupils directly engaged so far)
- Over 1200 teachers in the pilot online Community, and over 24,000 pupils reached (based on estimate of at least 1 class/20 pupils per teacher)
- Regular training events, face-to-face (summer schools and workshops) and online (webinars and forums)
- Database of industry science education activities and policy measures across EU publicly available online
- Publication of the **inGenious code**: first European level ready to use toolkit to facilitate school - industry collaboration, with guidelines and checklists based on the experience of leading organisations and schools worldwide (<http://www.ingenious-science.eu/web/guest/ingenious-code>)

Policy debate and partnerships building:

- National events (i.e. Needs analysis workshops) with main stakeholders in each country
- European events to present and debate consolidated results and policy recommendations
- Platform for partners to share experiences/resources, scale up initiatives in place and launch new initiatives
- Transfer of experience and establishment of collaboration platforms (ie replication of STEM national platforms, regional cluster events), to favour mainstreaming and support integration of school-industry activities in the curriculum.



What's inGenious impact so far?

- Based on first results collected from pilot research, “Adding the element of career learning to school STEM education could lead to a **20 percent** increase in number of pupils positively considering a career in STEM.”
- **92 per cent** of teachers believe inGenious activities have proactively enhanced their teaching skills and practices
- **86 per cent** of teachers agree and strongly agree that pupils exposed to inGenious practices are more interested in STEM careers (more on <http://www.ingenious-science.eu/web/guest/pilot-results>)
- **inGenious** teacher rewarded by the Town Hall (PT), **inGenious** school winner at Teen Tech Awards 2013 for best international collaboration (UK)

What's coming up?

- Competition for schools (30 countries, 9 languages) invited to expose their pupils to real-life STEM
- Award ceremony in Brussels, May 2014
- Launch of a new educational video **“Ignite your future”** to inspire pupils on STEM careers, accompanied by dedicated teaching resources
- First **Massive Online Course (MOOC)** for teachers professional development on promoting interest in STEM careers in class