

# Creative Little Scientists

Enabling Creativity through Science and Mathematics in Preschool and First Years of Primary Education



The Creative Little Scientists project is supported financially by the European Commission within the Seventh Framework Programme



*“The principle goal of education is to create people who are capable of doing new things, not simply of repeating what other generations have done – people who are creative, inventive and discoverers.”*

Jean Piaget

*“Creativity is contagious. Pass it on.”*

Albert Einstein

Science and mathematics education, creativity and innovation are areas equally recognized as important for Europe, and their strengthening as a vital priority. The Creative Little Scientists project constitutes a timely contribution to a better understanding, at the European level, of the potential available on the common ground that science and mathematics education in pre-school and early primary school (up to the age of eight) can share with creativity.

## Project Aims

The Creative Little Scientists consortium comprising expertise of the highest level and quality in the areas of science and mathematics education in early childhood, creativity in education, cognitive psychology, comparative educational studies, and teacher training has set as **overall aims**:

- To provide Europe with a clear picture of existing and possible practices, as well as their implications and the related opportunities and challenges, in the intersection of science and mathematics learning, and development of creative skills in pre-school and the early years of primary education (up to the pupil age of eight); and
- To transform the knowledge generated through this into policy guidelines, as well as guidelines, curricula and exemplary materials for relevant teacher training in the various European contexts.

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## Project Objectives

To achieve these aims the Creative Little Scientists consortium has designed and is carrying out research, which integrates elements of comparative research, in-depth field study and curriculum design. This research is operationally defined in terms of the following **specific objectives**:



- **To define a clear and detailed conceptual framework** comprising the issues at stake and the parameters which need to be addressed in all stages of the research.
- **To map and assess comparatively existing approaches** to science and mathematics education in pre-school and first years of primary school (up to the pupil age of eight) in the nine sample countries, highlighting instances of, or recording the absence of, practices marrying science and mathematics learning, teaching and assessment with creativity.
- **To provide a deeper analysis of the implications of the mapped and compared approaches** which will reveal the details of current practice and provide insights into whether and how children's creativity is fostered and the emergence of appropriate learning outcomes in science and mathematics is achieved.
- **To propose a set of curriculum design principles as concrete guidelines for European initial teacher training and continuous professional development programmes**, which will foster creativity-based approaches to science and mathematics learning in preschool and the first years of primary education.
- **To exploit the results of the research at the European level as well as at national and institutional level**, making them easily available to educational policy makers and other stakeholders, especially teacher training policy makers and institutions. This work will start with a special focus on teacher training, and will be completed through the synthesis of all research outputs and their transformation into an accessible Final Report on Creativity and Science and Mathematics Education for Young Children and a concrete Set of Recommendations to Policy Makers and Stakeholders.
- **To disseminate the messages and outputs of the project widely in Europe and beyond** through targeted communication actions addressing all stakeholders (teachers, school administrators, teacher trainers, curriculum designers, policy makers, parents).



## Project Number

SIS-CP-2011-289081

## Programme / Action Line / Project Type

FP7-Science-in-Society-2011-1 / Collaborative Project / Young people and science

## Full Title

Creative Little Scientists: Enabling Creativity through Science and Mathematics in Preschool and First Years of Primary Education

## Area

Research and Coordination Actions on New Methods in Science Education

## Topic

SiS.2011.2.2.3.1 Science and mathematics related activities carried out in pre-school and in the first years of primary schools: their link to the development of creative skills

## Start date - End date

01/10/2011 - 31/03/2014

## Target groups

science and mathematics teachers and school leaders; teacher trainers; policy makers; curriculum designers

## Key words

preschool education; lower primary education; science education; mathematics education; creativity; inquiry-based teaching; teacher training; comparative research

## Website

[www.creative-little-scientists.eu](http://www.creative-little-scientists.eu)

## Project Coordinator

Dr Fani Stylianidou  
Ellinogermaniki Agogi  
Dimitriou Panagea Str.  
GR-153 51 Pallini, Greece  
Tel: +30 210 8176788  
Fax: +30 210 6032554  
Email: [fani@ea.gr](mailto:fani@ea.gr)

## Project Participants

☰ Ellinogermaniki Agogi  
[www.ea.gr](http://www.ea.gr)

🇬🇧 Institute of Education, University of London  
[www.ioe.ac.uk](http://www.ioe.ac.uk)

🇬🇧 Open University  
[www.open.ac.uk](http://www.open.ac.uk)

🇬🇧 Bishop Grosseteste University College Lincoln  
[www.bishopg.ac.uk](http://www.bishopg.ac.uk)

🇫🇮 University of Eastern Finland  
[www.uef.fi](http://www.uef.fi)

🇧🇪 Artevelde University College  
[www.arteveldehs.be](http://www.arteveldehs.be)

🇩🇪 Goethe University Frankfurt  
[www.uni-frankfurt.de](http://www.uni-frankfurt.de)

🇵🇹 University of Minho  
[www.uminho.pt](http://www.uminho.pt)

🇷🇴 National Institute for Laser, Plasma and Radiation Physics  
[www.inflpr.ro](http://www.inflpr.ro)

🇫🇷 Université de Picardie Jules Verne  
[www.u-picardie.fr](http://www.u-picardie.fr)

🇲🇹 University of Malta  
[www.um.edu.mt](http://www.um.edu.mt)