



CEYS PROJECT

School in Europe today would benefit considerably from acknowledging and

Why creativity in early years science?

fostering the link between science education and creativity. There is increasing recognition of young children's capabilities and the importance of early years education in building on early experiences and promoting knowledge and understanding, skills and dispositions.

Interestingly, an inherent link seems to exist between creativity and science education. Science intrinsically involves inquiry and invention, which are triggered by curiosity, intuition, imagination, all of them elements closely related to creativity; it is also widely accepted nowadays that effective science education is based on inquiry, which can lead to wonderment, and is fuelled by curiosity.

Creativity has moved away from the traditional link with the arts to a focus on problem finding and problem solving. Motivation has an important role to play in creativity too.

In the teaching and learning of science, a more creative approach based on curiosity and inquiry would be beneficial, involving, for instance, opening up opportunities for children to raise questions, make decisions, and be able to take risks and unlock their creativity. Creativity, in this framework, is focused on generating and evaluating ideas and strategies in science.

There is on the whole consensus that any materials to be used by teachers should be designed in collaboration with them and with the involvement of all relevant stakeholders in order to be relevant and have the maximum potential for impact.

Collaboration between schools and higher education institutions not only improves initial teacher education but also contributes to school development and teachers' professional development.

CEYS is an Erasmus+ funded partnership that is aiming to develop a teacher development course and accompanying materials, this could also be used in professional development to promote the use of creative approaches in teaching

What is CEYS?

science in preschool and early primary education, in the frame of inquiry-based educational environments.

Participating teachers will take part in professional development workshops held in the 4 participating countries aimed at promoting the use of creative approaches in science teaching. They will have an opportunity to take part in curriculum development as co-designers in the iterative phases of development of the CEYS course, enhancing their ownership and thus facilitating their adoption of the approach through the use of action research.

CEYS project and outcomes



Creativity in Early Years Science Education

THE CEYS OBJECTIVES



Propose concrete training materials that can be used in teacher education for early years and primary teachers in order to foster their use of creative and inquiry-based approaches in science teaching.

Involve teachers as co-designers in the iterative phases of development of its interventions, sharing their ownership and thus facilitating their adoption.

Implement and validate a number of training activities at national and international levels with the scope to improve early years and primary teachers' knowledge and skills.

Develop a systematic evaluation methodology in order to identify the impact of the proposed training process and materials in terms of both effectiveness and efficiency.

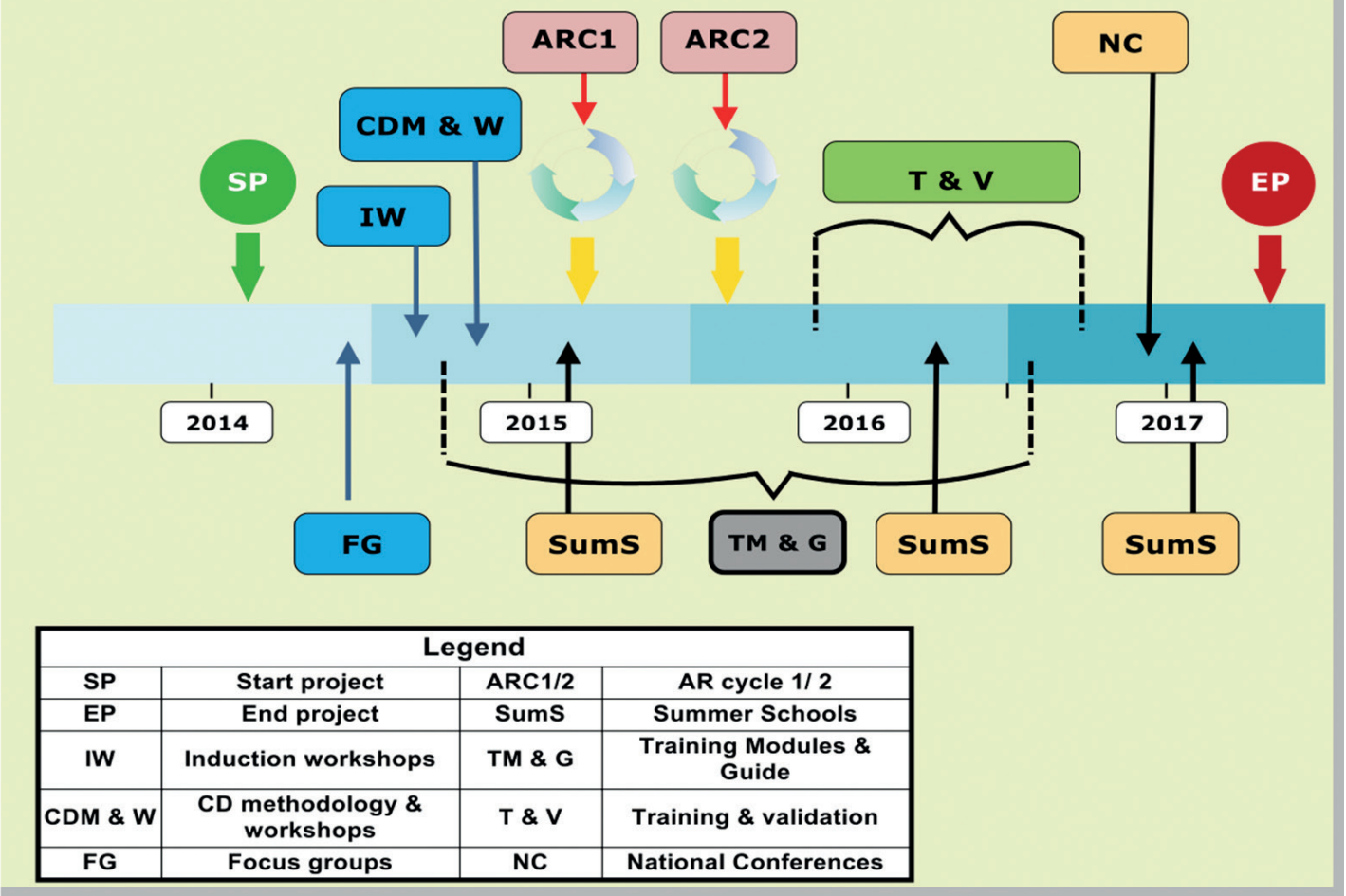


Erasmus+









The ceys project is funded by the Erasmus+ programme

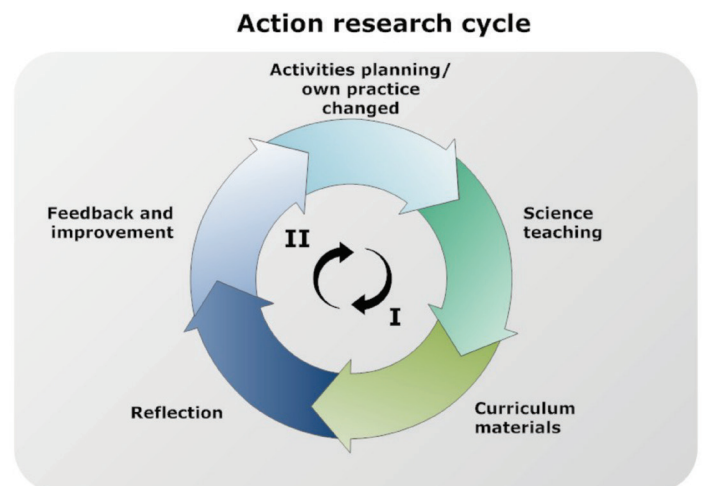


CEYS timeline 2014- 2017








CEYS project in figures

-  108 pre-school and primary school teachers participated in the initial focus groups.
-  13 induction workshops were organized in the four partner countries and 244 teachers attended.
-  25 Curriculum Development and Evaluation Workshops for 61 selected school teachers took place, running two complete action research cycles.
-  32 Curriculum Materials were produced.
-  20 Training Modules were developed for the CEYS Training Course. They were trialed in 54 training workshops in partners' countries. 900 preschool and primary teachers attended the workshops.
-  10 Curriculum Materials and 20 Training Modules translated in Dutch, Greek and Romanian are available.
-  80 pre-school and primary school teachers and teachers trainers attended the four Summer Schools.
-  Over ... participants attended CEYS national and international dissemination events.



CEYS project outcomes

-  The Training Course “CREATIVITY THROUGH EARLY YEARS SCIENCE EDUCATION”, including 20 modules and accompanied by the “Training Guide and Scenarios of Use”.
-  Curriculum Materials, which record and illustrate the learning journeys of the CEYS teachers and the children in their classes, in developing creative, inquiry-based approaches to learning and teaching in early years science. They are intended for use both in the CEYS training course modules and by individual teachers as examples of opening up practice over time to foster inquiry and creativity in varied contexts.
-  A Curriculum Development Guide aimed at schools and teacher training providers about the methodology used and lessons learned from the co-designing process of the CEYS Curriculum Materials and the potential of partnerships between school and teacher education providers in the context of continuous professional development in the field of early science education.
-  An E-twinning Tool Kit, translated in the four languages of participating countries, available to those interested to develop common project proposals targeting the development of creativity in early years education, through the inquiry-based approach.
-  Information on the CEYS project and its results can be accessed on the project web site www.ceys-project.eu and on the Scientix platform.



The Training Modules based on the Content Design Principles and Teacher Outcomes aimed at inspiring preschool and primary school teachers and their trainers can be found on the CEYS project website and seen in the table below:

For more information on the course and the project visit the official website at

www.ceys-project.eu

Or contact

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Training Modules produced by the CEYS project

Using Questions	Linking learning in and outside school
Resources and learning environment	Reflection and reasoning
Focus on the nature of science	ICT to enhance inquiry
Focus on IBSE	Planning for progression
Focus on practical investigation which fosters creativity	Interpreting policy
Collaboration and group work	Assessment for learning
Role play and exploration	Involving children in assessment
Varied modes of expression and representation	Nature of inquiry
Role of the teacher	Nature of creativity
Cross curricular project work	Structured and unstructured play and exploration

Some of the CEYS teachers' testimonials:

- "I used explicit scientific language when the children involved me in their talk and discussion and modeling this vocabulary through my prompts, as well as through asking thought-provoking 'what if...' questions to develop their ideas and extend their learning." (Heather Shann, Annan The Froebel School, UK)
- "I notice this really motivates the children. I want to address some misconceptions. The challenge will give the children the opportunity to investigate their ideas. Children will be able to connect what happened here with the challenge." (An Cordeels, Sint-Bavobasisschool, Belgium)
- "As a conclusion, through questioning and recording, I managed to realize the essence of children's actions and to promote the genesis and expression of creative dispositions. (Stella Antonakopoulou, 13th Kindergarten of Rethymno, Greece)
- "Initial discussions and questions were for me helpful in fostering children's curiosity and agency. My support was reduced during the activity and children could act following their own predictions." (Haita Marilena, Ungureanu Daniela, Manea Elena, Kindergarten Ciupercuta, Romania)
- The children became increasingly confident, building on knowledge gained from each activity, to make connections and to plan their own investigations. For example, children were able to make predictions and demonstrate their understanding of the life cycle of a frog." (Bryony Scudamore, Hill Mead Primary School, UK)
- "Children are always very enthusiastic when they can do explorations. It motivates me to try out new scientific activities. I begin to see more possibilities and more interesting starting points that spontaneously occur. I find it less difficult to see opportunities now. In the beginning I thought I had to provide complicated scientific activities, but now I know I can start from day-to-day situations. I can pick up interesting situations more easily, and use situations that occur unexpectedly." (Kelly Demeyere, Vrije basisschool De Regenboog Zingem, Belgium)
- "Children's curiosity and their involvement in doing observations was shown also by many questions they asked." (Ana-Maria Marinica, Kindergarten "SPIRIDUSII", Bucharest, Romania)
- "Although the children were diligent, enthusiastic and focused, I still needed to return to the purposes of activities, using questioning to emphasize the skills involved in scientific inquiry and what we were trying to investigate." (Clodagh Glaisyer-Sidibe, Fairlawn Primary School, UK)
- "Children showed some evidence of their growing awareness of scientific inquiry skills and processes. Activities fostered a positive attitude to science and greater appreciation of the Nature of Science." (Caecilia Tsoukala, School of Karditsa City, Thessaly, Greece)



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