

Booklet for parents

New methods for teaching STEM to young children

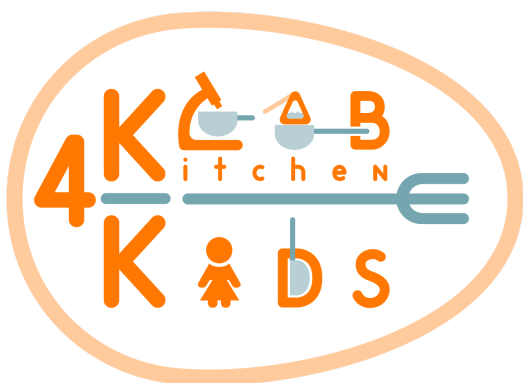




Booklet for parents

Version 1.0 - Dec 2020

New methods for teaching STEM to young children



Coordinators of this work:

Libera Università Maria Santissima Assunta (Italy)

Participants:

Akademia Ignatianum w Krakowie (Poland)

Fondazione Politecnico di Milano (Italy)

Universitat Internacional de Catalunya (Spain)

Dublin City University (Ireland)



The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

This project No. 2018-1-PL01-KA201-050857 has been funded by Erasmus + programme of the European Union.

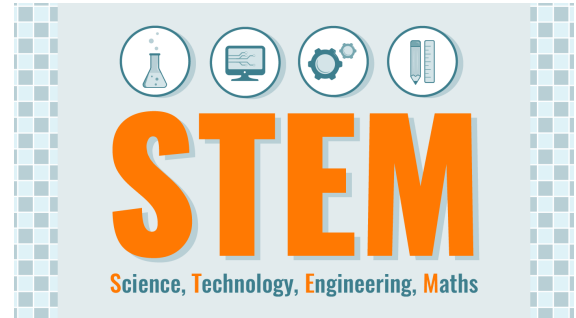
Table of content

KitchenLab4Kids	5
The project	5
Early childhood science education	6
Who is the project for?	6
Project activities	7
Parents' involvement in a community	8
Toolkit	8

KitchenLab4Kids

KitchenLab4Kids (K4K) is a project that gathers together teachers, parents and teacher trainees who are interested in new methods for teaching STEM to young children.

STEM stands for Science, Technology, Engineering and Mathematics. STEM subjects are becoming more and more important in today's world and students need to get a head start at a young age.



The project

KitchenLab4Kids is a project aimed at finding the best teaching methods for STEM subjects for children two to six years of age. The project has been in the developing stages since 2018.

The idea of the project is the result of the work of an international group of researchers from 4 different European countries: Italy (*FPM* in Milan and *LUMSA* in Rome), Ireland (*DCU* in Dublin), Spain (*UIC* in Barcelona) and Poland (*AIK* of Krakow).

The aim of the project is to **promote an international exchange of best practices and experiences in fostering active learning of science in early childhood education and care.** Researchers also aimed to involve parents in the development of the activities to stimulate children in the learning of science through the use of games and easy experiments with food.

Early childhood science education

The role of science in basic education, particularly in pre-primary schools, is fundamental to develop the child's understanding of the world around him.

Basic scientific concepts and science process skills develop as early as infancy, and this development continues throughout childhood.

Science education for very young children is certainly challenging. There needs to be established a connection between knowledge of the real world and scientific knowledge, that is, between “play” and “school learning”.



Studies have shown that early scientific experiments done in pre-school classrooms enhance the development of a child's scientific knowledge and skills.

To this aim, we need to promote science education from pre-primary school to help children acquire scientific knowledge and a scientific mind-set.

Science education encompasses not only content, such as formulas, arithmetic, the animal and mineral worlds, but also **process skills, creativity, experimentation and problem-solving**. By presenting students with interesting and compelling STEM lessons, we can support the young child's sensory explorations of his world and provide knowledge and skills for lifelong science learning and an appreciation for nature.



Who is the project for?

The *KitchenLab4Kids* project involves nursery and pre-school teacher trainees, teachers and parents who help very young children (age two to six) to connect science to the real world and to their own interests and goals. Children will be helped to connect cooking to science, using entertaining approaches to help them see food as an object of investigation.

It is important that parents take part in these activities to encourage their children to explore science concepts through a simple laboratory using things such as candles, glasses and scales, also available at home.

Afterwards, children can discuss their ideas with their parents and relate their experiences and observations in class.

Project activities



The idea is to present a series of activities, games, chants, poems, and songs to introduce children to the world of STEM.

The activities proposed have been tested by teacher trainees, as well as teachers at pre-school and primary level.

These activities can be found on *K4K* website: <http://kitchenlab4kids.eu/>

The idea of a laboratory based on food and on food transformation procedures is aimed at enhancing active learning using multisensory, multidisciplinary and hands-on approaches. This will foster critical thinking skills by addressing cultural and environmental contexts in teaching science through cooking and promote the child's love for science.

Parents' involvement in a community

By visiting the *KitchenLab4Kids* website, parents will have the opportunity to encounter other parents interested in early childhood STEM education. On the website platform, parents can find resources and additional materials and share experiences and concerns about their children's STEM education.



In addition, parents can also communicate with STEM teachers for early childhood education for suggested activities and for ways to support STEM education at home. During this time of the Covid pandemic, parents need strategies to support their children's education.

Toolkit

Researchers provided a set of documents for parents which include guidelines and recommendations for STEM activities at the preschool level. This toolkit will be available in both printed and online versions and translated into four languages (Polish, Italian, Irish and Spanish) for parents interested in developing STEM skills at an early stage of development.



Website

For further and updated information about this project please see: <http://kitchenlab4kids.eu/>

Social media

Facebook: <https://www.facebook.com/KitchenLab4Kids-109904723897139>

YouTube: https://www.youtube.com/channel/UCA7UdkiVACILTQ_hdLFJuyA

Video teaser

<https://www.youtube.com/watch?v=n-kj5XNlcvg>

Contacts

Project Coordinator

Dorota Zdybel - AIK (Poland)

Contact us

http://kitchenlab4kids.eu/?page_id=2125/#contacts



K4K - Kitchen Lab 4 Kids is an Erasmus+ KA2 project (2018-2021). The project aims at proposing interdisciplinary activities in an integrated teaching context that allows pre-schoolers to develop STEM skills while practicing exciting science at the same time.

Partnership:



The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.



Erasmus+

This project No. 2018-1-PL01-KA201-050857 has been funded by Erasmus + programme of the European Union.

Go to the website
and discover
the Teaching Set,
with resources
addressed to
preschool teachers,
University teachers
and researchers:
kitchenlab4kids.eu

This document is licensed under
a Creative Commons Attribution
4.0 International license
except where otherwise noted.

