

A bag of... Earth

ERASMUS PLUS Call 2021 Round 2 KA2 KA210-SCH - Small-scale partnerships in school education



PROJECT OBJECTIVES



- to foster primary school children interest in science
- to improve children STEM competences in order to deal with environmental issues in their everyday life with peers and families
- to promote reflection and discussion about gender stereotypes in science and in STEM education and career
- to connect the scientific knowledge to other school disciplines in a holistic approach to education



PARTICIPANTS



- Associazione Scienza Divertente Roma APS, Rome, Italy non formal science education provider
- IC via Belforte del Chienti, Rome, Italy primary school
- IC via dei Sesami, Rome, Italy primary school
- Activities fof Children s.l. (Nutty Scientists Madrid), Madrid, Spain – non formal science education provider
- Paraiso Sagrado Corazones, Madrid, Spain primary school



TARGET GROUPS



In Rome:

- 9 classes from IC via Belforte del Chienti primary school grades 2 to 4 – approximately 190 students
- 6 classes from IC via dei Sesami primary school grades 2 and 5 – approximately 130 students

In Madrid:

 12 classes from Paraiso Sagrado Corazones – grades 1 to 4 – approximately 300 students



PROJECT ACTIVITIES SUMMARY



- 1. DESIGN AND DEVELOPMENT OF SCIENCE KITS
- 2. TEST AND EVALUATION OF SCIENCE KITS
- 3. ONLINE EXCHANGE EVENT FOR CHILDREN AND DISSEMINATION ACTIVITIES



DESIGN AND DEVELOPMENT OF SCIENCE KITS

Science kits on environment-related topics are the distinctive feature of the project A bag of... Earth

> 4 kits per participating class nave been designed and developed







SCIENCE KITS TOPICS



- Biodiversity
- Renewable energy and saving energy
- Sustainable food and healthy eating
- Saving water
- Climate change
- Sustainable development and recycling



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SCIENCE KITS CONTENTS

Kits delivered to every child in each class **contained**:

- Materials for topic-related experiments. Content materials were mostly recycled or recyclable
- Additional materials among which:
 - ✓ Suggested videos and or books to additionally explore the topic
 - Brief presentation of a female scientist in the field
 - Quizzes and/or games to assess learning outcomes and a "connection map" linking the topic to other subjects (geography, history, civic education, art...)









FEMALE SCIENTISTS IN KITS

Please find below the list of female scientists presented in the kits. Sometimes the scientist is different for the same topic, because it was chosen according to age and educational needs of the classes

	ITALY	SPAIN
Biodiversity	Maria Sibylla Merian, Barbara Blanchard-De Wolff, Wangari Mahatai, Sylvia Earle	
Renewable energy and saving energy	Maria Telkes, Ann Mokosinski	Xochitl Guadalupe
Sustainable food and healthy eating	Eva Crane Ellen Henrietta Swallow	
Saving water	Gitanjali Rao	Gitanjali Rao
Climate change	Eunice Newton-Foot	Patricia Ramos
Sustainable development and recycling	Rachel Carson, Laura Conti	Greta Thunberg



TEST AND EVALUATION OF SCIENCE KITS



Science kits have been delivered to children in classes and scientific laboratories have been provided. Children and teacher(s) continued to use the kits to discuss and further explore the topics



Riservato & Confidenziale



TEST AND EVALUATION OF SCIENCE KITS

















TEST AND EVALUATION OF SCIENCE KITS







ON LINE EXCHANGE EVENT

On line exchange event for children has been a final event in which they exchanged experiences, ideas and reflections about environmental issues with students from another country who had a similar experience









ON LINE EXCHANGE EVENT







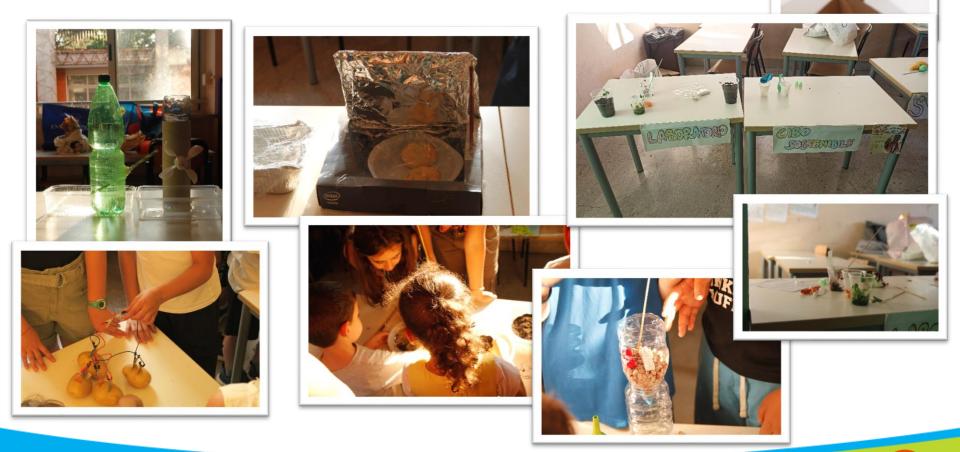






DISSEMINATION ACTIVITIES

Local final dissemination events (in Italy and Spain)





DISSEMINATION ACTIVITIES Social media communication: 15 Facebook posts with videos and photos

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Ciencia Divertida Madrid 30 novembre 2022 - 🕑

Hoy hemos dado comienzo al proyecto "A bag of... Earth" en Madrid 😂 Un proyecto en el que la UE apuesta por una educación más interactiva para los más pequeños 🔲

Investros científicos han ido al Colegio Paralso Sagrados Corazones para enseñar a los niños y niñas lo importante que es el ahorro de agua con una serie de experimentos súper divertidos

¡Ha sido un taller increíble! 🤤

Segui... Altro...

Vedi traduzione



Scienza Divertente (Roma, Lazio) 22 novembre 2022 - 🕲

Il progetto "A bag of... Earth!" realizzato a Roma in partnership con I.C. Belforta del Chienti e IC via dei Sesami, è entrato nel vivo 🗃

Ecco alcune foto dei piccoli scienziati all'opera 🔝 🌡

Il progetto è finanziato con i fondi dell'Unione Europea.

Pro... Altro...





DISSEMINATION ACTIVITIES

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Social media communication: 15 Facebook posts with videos and photos

Ciencia Divertida Madrid

Con este taller terminamos el proyecto 'A Bag Of Earth' en el colegio Colegio Paraíso Sagrados Constones

Hemos hablado sobre el cambio climático. Hoy con los niños y niñas hemos conocido términos como calentamiento global o efecto invernadero

Este proyecto 'A Bag of Earth' se ha realizado en Madrid y en Scienza Divertente 😳

Co... Altro...

Vedi traduzione





 Continuamos con los niños y niñas del Colegio Paraiso Sagrados Corazones descubriendo el mundo del reciclaje y cómo podemos separar el metal

Seguimos con 'A bag of Earth' un proyecto que se realiza en Madrid y en Scienza Divertente el que la UE apuesta por una educación muy interesante y divertida para los más pequeños 31

#cienciadivertidamadrid #madrid #colegios #abagofearth #reciclaje #niños #UE #cienciadivertida

Vedi traduzione





Primary objectives of the project were achieved

- Teachers reported an increased interest in science
- Children showed curiosity and enthusiasm towards the scientific topics
- Evaluation of competencies and knowledge in environmental issues resulted in an increased level at the end of the school year
- Teachers reported the activities about female scientists prompted interesting discussions and helped children think about women's role in science
- Teachers noticed an increased ability to make interdisciplinary connections by students and reported this specific feature was of interest to the whole school community



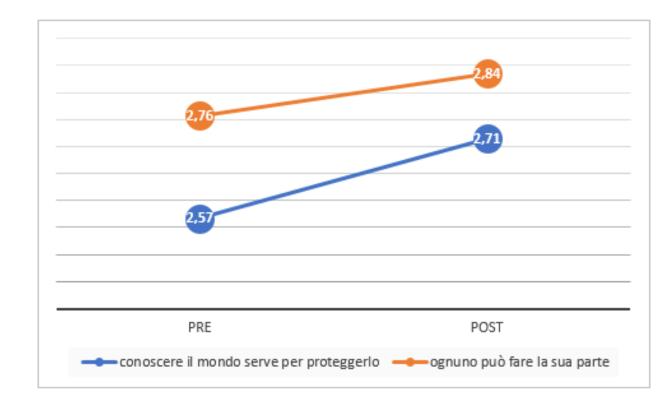
RESULTS

Self-evaluation of students before and after Changes in children's perception of science

knowing the world around us helps us take care of it (blue)

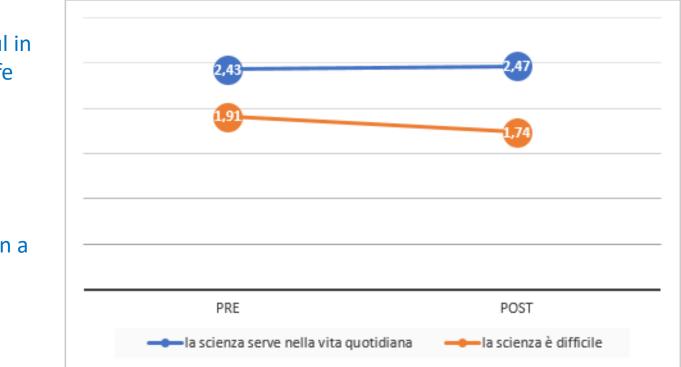
each one of us can do our part to protect the planet (orange)

(mean values on a 3points scale)





Self-evaluation of students before and after Changes in children's perception of science



science is useful in our everyday life (blue)

science is hard (orange)

(mean values on a 3-points scale)

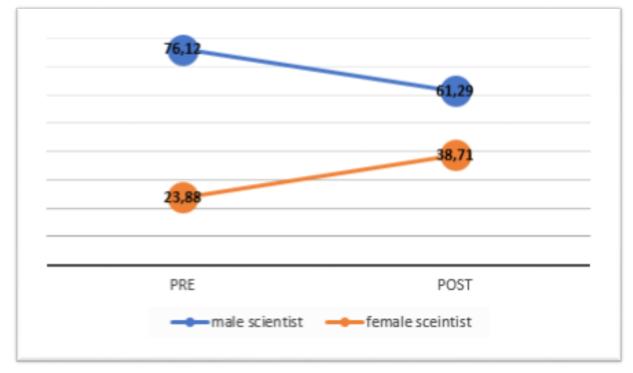


Self-evaluation of students before and after Changes of gender-based representations of scientists in children

Drawing of a scientist Sex of the pictured scientist

Male (blue) Female (orange)

(% drawings)





Self-evaluation of students before and after Changes of gender-based representations of scientists in children

Drawing of a scientist Sex of child and the pictured scientist

Same sex (blue) Other sex (orange)

(% drawings)

