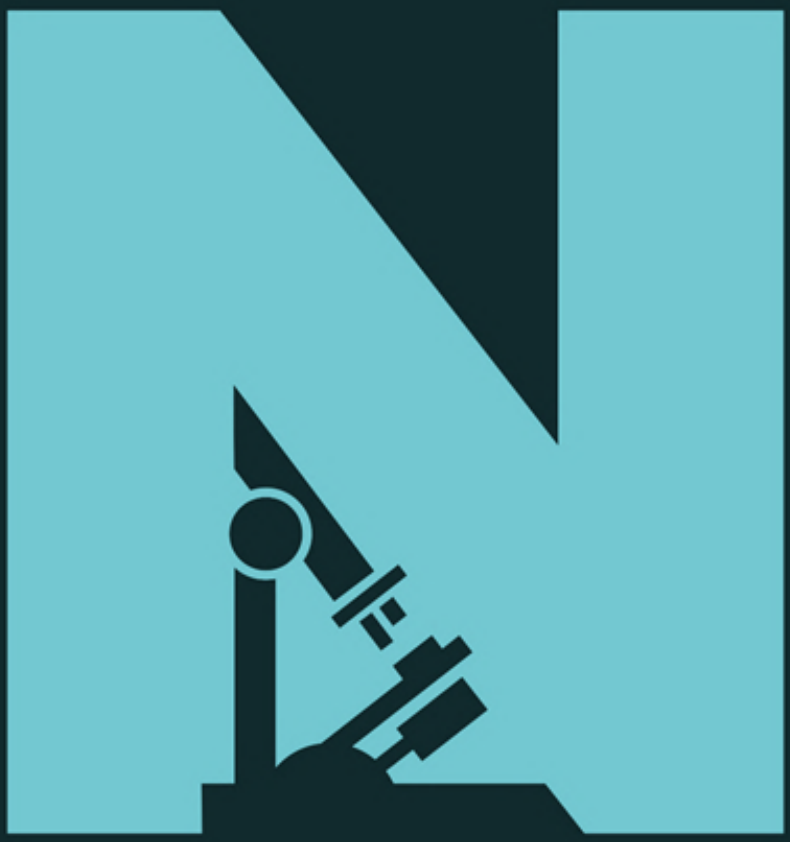
European Researchers' Night



D5.1 Researchers at Schools Activities Report

European Researcher's Night has received funding from the European Union's Horizon 2020

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PROJECT DETAILS

Project name	G9 GO FOR THE MISSIONS!
Project number	101061455
Project acronym	G9MISSIONS
Call	HORIZON-MSCA-2022-CITIZENS-01
Project starting date	Fixed date: 1 April 2022
Project duration	24 months
Project coordinator	University of Cantabria

DELIVERABLE DETAILS

Technical report	WP5. D5.1
Nature	Report

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1. INTRODUCTION CIRCULAR SCIENCE ACADEMIC YEAR 2022-2023 (FINAL RESULTS ACTIVITY PROGRAM)

As the proposal for the Circular Science activities for the academic year 2022-2023 was previously outlined in Deliverable 2.1 WP2 - D2.1 Researchers at Schools activities (Circular Science) and the mid-term results in Deliverable WP9 - D9.1 Mid-term periodic reporting, we are now presenting the comprehensive results of Circular Science at the conclusion of the academic year 2022-2023.

It should be noted that the activity Researchers at School, as described in the Work Packages, is indeed Circular Science.

Below is a list of the partners that have carried out the Circular Science program.

Number	Partner	ACRONYM
1	University of Cantabria	UC
2	University of Oviedo	UO
3	University of Castilla-La Mancha	UCLM
4	University of Extremadura	UEX
5	University of the Balearic Islands	UIB
6	University of Zaragoza	UNIZAR
7	Public University of Navarre	UPNA
8	University of the Basque Country	UPV/EHU

The Circular Science program for the academic year 2022-2023 has proven to be a cornerstone in promoting science and research among young learners. This initiative, spanning across various partner universities, has been instrumental in bringing cutting-edge scientific knowledge and research closer to schools, fostering an environment of curiosity and innovation. Through a diverse array of activities tailored to engage students, the program aimed to ignite a passion for science, technology, engineering, and mathematics (STEM) fields. The collaboration between academic institutions and schools facilitated an immersive learning experience, providing students with the opportunity to interact with researchers and gain insights into the world of scientific research.
The program's reach and impact are evident in the number of activities offered, sessions conducted, and the engagement of researchers. The participation of numerous schools and

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students underscores the program's success in inspiring the next generation of scientists and researchers. The detailed data reflects not only the program's expansive scope but also its significant contribution to educational enrichment and scientific literacy. As we analyze the outcomes and feedback from this academic year, it is clear that the Circular Science program has laid a solid foundation for future endeavors, aiming to further bridge the gap between academia and young aspiring scientists.

Below is a table of the results from the Circular Science program for the academic year 2022-2023. This table provides a comprehensive overview of the program's reach, detailing the activities offered by each partner, the number of sessions held, the distribution of female and male researchers involved, the schools engaged, and the total participant count:

Partner	Activities offered	Sessions	Female Researchers	Male Researchers	Schools	Participants
UC	13	33	7	9	18	1293
UO	36	52	24	28	22	2219
UCLM	11	13	8	7	16	240
UEX	35	54	24	17	47	3080
UIB	10	10	3	5	18	160
UNIZAR	35	38	22	17	50	3250[1]
UPNA	26	105	9	14	49	3392
UPV/EHU	16	28	25	15	37	3057
Total	**182**	**333**	**122**	**112**	**239**	**16691**

As we conclude this report, it is evident that the Circular Science initiative has made significant strides in advancing the mission of the G9 Missions project. The Circular Science Program 2022-2023 has not only achieved its goals but has set a new benchmark for what can be accomplished when academia and education converge.

The enthusiasm and engagement levels observed among students have been exceptionally high, indicating a successful penetration of scientific thought into the fabric of school education. Researchers have reported an overwhelmingly positive experience, with many noting the rewarding nature of their interactions and the profound questions posed by the students, which often led to deep reflection and discussion.

In light of these findings, we can state with confidence that the Circular Science program has yielded fruitful results. It has enhanced the visibility and accessibility of scientific research,

[1] It has been identified that in WP9 - D9.1 Mid-term period reporting there was an error in the number of participants of Researchers at School as 100, the total number of activities by Unizar at the end of the academic year 2022-2023 was 3,250.

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empowered students by equipping them with knowledge and critical thinking skills, and has laid a solid foundation for a scientifically literate society.

With continued support and enthusiasm, we are poised to explore new horizons and create even more opportunities for interaction and learning between researchers and students. The circular Science initiative stands as a shining example of the transformative power of education and the pivotal role of collaborative scientific engagement in shaping the minds of tomorrow.

1.1 RESULTS ANALYSIS CIRCULAR SCIENCE 2022-2023

The ripple effect of dedication is felt across the consortium, as each partner university echoes this commitment to educational enrichment.

We have not only met our objectives but have indeed surpassed them, fostering a generation of students who are more informed, inquisitive, and impassioned about science.

The synergy between researchers and students has illuminated the path to a brighter, more scientifically engaged society. Our initiative has shown that when academic rigor is coupled with educational outreach, the result is a potent formula for societal advancement.

In conclusion, the Circular Science program stands as a testament to the power of collective effort and shared vision. It underscores the success of the G9 Missions project and lays a robust foundation for future endeavours. As we reflect on the achievements of the past year, we are filled with optimism for the future—a future where education and research continue to evolve hand-in-hand, propelling us towards a horizon rich with discovery and learning.

● 2. CIRCULAR SCIENCE ACTIVITIES PROPOSAL 2023-2024

2.1 OBJECTIVES

The G9Missions initiative, aptly titled "Go for the Missions!", brings together scholars from the G9 University Group to highlight the personal aspect of scientific endeavours. This initiative is particularly concentrated on showcasing the connection between their research activities and the European Union's five key research and innovation missions. These missions are dedicated to addressing major societal challenges globally and include:

- Climate Change Adaptation: Aiming to assist at least 150 European regions and communities in building resilience against climate change by the year 2030.

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- Cancer: Collaborating with Europe's Beating Cancer Plan to enhance the lives of over 3 million individuals by 2030 through advancements in prevention, treatment, and supportive care for a prolonged and improved quality of life.
- Revitalization of Oceans and Waters by 2030.
- Establishing 100 Cities that are Climate-Neutral and Technologically Advanced by 2030.
- A Soil Deal for Europe: The establishment of 100 living labs and lighthouses to spearhead the shift towards healthier soil by 2030.

These five missions collectively support the objectives of the European Green Deal, Europe's Beating Cancer Plan, and the Sustainable Development Goals (SDGs). The "Circular Science" program is designed to engage schools with the following specific goals:

To boost the recognition and appreciation of researchers among students.

To inspire young individuals to pursue careers in science and demystify the scientific field.

To advocate for STEAM education, along with the application of Inquiry-Based Science Education (IBSE) and Problem-Based Learning (PBL) methodologies.

2.2 TARGET GROUPS

Circular Science targets educational institutions, educators, and clusters of school-aged children and adolescents. The primary focus is on students residing in the regions influenced by the partnering entities, with a special emphasis on those from rural areas. This includes a wide age range, specifically children and teenagers between 6 to 18 years old (belonging to Generation Alpha and Generation Z). The initiative's activities are particularly designed for this demographic. The term "Circular Science" symbolizes the concept of scientists returning to their alma maters to inspire students to pursue scientific fields, thus continuing the cycle of scientific engagement and education.

2.3 CIRCULAR SCIENCE

The activities of this programme will be carried out throughout the whole school year and it is expected more options to be added to the initial list of activities that have been recently presented.

Innovative methodology is necessary in schools to spark the students' motivation. For this reason, part of our activities includes Problem Based Learning (PBL) and Inquiry-Based Science Education (IBSE) methodologies, two inspiring ways of learning science through stimulating active thinking. Researchers have been informed about these two methodologies and they are planning activities according to them.

Some Circular Science program's initiatives, such as the star sticker album reward, essay writings, and the "Mission Book," were not implemented due to various challenges. This initiative was designed to motivate students to document their learning experiences and contributions towards these missions through essays, ultimately leading to the compilation of these contributions in both a printed and online "Mission Book." Despite its potential to

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enhance engagement and recognize the efforts of participating schools, this sticker reward system unfortunately did not come to fruition within the framework of the Circular Science program. The implementation faced several challenges that prevented its integration into the program's activities, highlighting the complexities involved in materializing such incentives in educational initiatives.

Resource reallocation likely led to shifting priorities away from these projects. Logistical and operational difficulties in implementing the sticker system and compiling essays proved too complex. Continuous feedback and strategy reassessment possibly revealed that these initiatives did not align effectively with educational objectives, leading to their discontinuation.

DYNAMIC SCIENCE ENGAGEMENT

This program's activities span the entire academic year, with expectations for augmenting the initially announced activities as the year progresses.

There's a critical need for innovative educational approaches in schools to ignite student engagement. To meet this, our program incorporates Problem Based Learning (PBL) and Inquiry-Based Science Education (IBSE) methods. These approaches are designed to encourage active and critical thinking in the realm of scientific learning. Researchers have been briefed on these methodologies and are tailoring their activities accordingly.

2.4 ACTIVITIES BY LOCATIONS

Educational institutions located across various provinces including Cantabria, Asturias, Zaragoza, Huesca, Teruel, Badajoz, Cáceres, Cuenca, Guadalajara, Ciudad Real, Albacete, Islas Baleares, Álava, Vizcaya, Guipúzcoa, and Navarra have been presented with a comprehensive set of activities for the 2023-2024 school year.

The rollout of these activities varied by region, with some commencing immediately after a key event on September 29th, while others were introduced in October or November. To captivate and involve students, a diverse array of activity formats was offered. These include hands-on experiments, casual discussions, games, quizzes, escape room challenges, and competitions. While there is a preference for in-person engagement, virtual alternatives were also being made available, especially for remote locations.

In this second edition of Circular Science has been carried out as a pilot experience as a test for the next European project Science4all, integrating regular outreach activities with the participation of pre-university students, within the framework of Circular Science through including the EU missions' message. The University of Cantabria has experimented with the activities carried out by young students at the Science Fair with a gymkhana of hidden puzzle pieces that dealt with the 5 missions of the EU. The children learned a lot with this game. There have been universities such as the University of the Basque Country and the University of the Balearic Islands that included Circular Science within the framework of the European Researchers' Night. University of Zaragoza included the missions at Unizarkids and activities

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related to the International Day of Women and Girls in Science. Or like University of the Balearic Islands with talks entitled "Science Awareness", scientific itineraries and experiments. These activities can be seen in the press releases and web pages referenced in tables 2.10 and 2.11.

The total of activities is shown in this table:

	University	Number of activities
1	**University of Cantabria (UC)**	47
2	**University of Oviedo (UO)**	29
3	**University of Castilla-La Mancha (UCLM)**	9
4	**University of Extremadura (UEX)**	40
5	**University of the Balearic Islands (UIB)**	30
6	**University of Zaragoza (UNIZAR)**	15
7	**Public University of Navarre (UPNA)**	31
8	**University of País Vasco (UPV-EHU)**	31
	Total	**232**

2.4.1 University of Cantabria (UC)

The Scientific Culture and Innovation Unit of the University of Cantabria (UC) has prepared a programme of activities addressing primary and secondary schools of the province of Cantabria.

Researcher	Activity	Age	Mission
Paula Parás Bravo	It grows	3-6	1. Adaptation to climate change 5. A soil deal 3. Restore our ocean and waters
María del Pilar Garcillán Barcía	The Safa chefs	3-6	4. Climate-neutral & smart cities
Virginia Carracedo Martín	Impact of climate change on the marine world	3-6	1. Adaptation to climate change 3. Restore our ocean and waters
Soraya Hidalgo Gallego	Simple machines and their contribution to the evolution of society	6-12	4. Climate-neutral & smart cities

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Researcher	Activity	Age	Mission
Raquel García López	What does a football field have to do with marine pollution?	6-12	1. Adaptation to climate change 3. Restore our ocean and waters 5. A soil deal
Marco Almansa Fernández	The superheroes and superheroines of Safa	6-12	4. Climate-neutral & smart cities
Rubén Castro Redondo	Sustainable cities	6-12	1. Adaptation to climate change 4. Climate-neutral & smart cities
Lorena González Sánchez	Renew your energy	6-12	1. Adaptation to climate change 4. Climate-neutral & smart cities
José Maria Fernández López	Analysis of the waters of our Santander bay	6-12	1. Adaptation to climate change 3. Restore our ocean and waters
Inés Sánchez de Movellán Saíz	In search of the alternative	15-17	1. Adaptation to climate change
Francisco Conde Oria	Zero waste. Hygiene and natural cleaning	15-17	1. Adaptation to climate change
María Victoria Biezma Moraleda	NutriTierra. Feeding the plants	15-17	1. Adaptation to climate change
Soraya Hidalgo Gallego	Paper firewood	6-12	1. Adaptation to climate change 3. Restore our ocean and waters
Raquel García López	Ukraine. One year and several centuries of history	6-12	4. Climate-neutral & smart cities
Marco Almansa Fernández	The magnets in our life	6-12	4. Climate-neutral & smart cities
Rubén Castro Redondo	The oceans, a heritage for the future	6-12	3. Restore our ocean and waters
Lorena González Sánchez	Stop Plastics: Let's save the five oceans	6-12	1. Adaptation to climate change 3. Restore our ocean and waters
José Maria Fernández López	Nanoparticles, nanorobots and Sustainable Development Goals	6-12	4. Climate-neutral & smart cities
Ana Palanca Cuñado	Has there been an increase in temperature in the Cantabrian Sea in recent years that could influence the growth of the algae Gelidium Corneum?	12-16	1. Adaptation to climate change 3. Restore our ocean and waters
Nayara Carral Saínz	Acid rain and its effects on plants	12-16	1. Adaptation to climate change
Lorena García Hevia	Reuse coffee capsules	12-16	1. Adaptation to climate change

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Jorge Ripoll Rozada	How to provide cheap and clean heating in my town	12-16	1. Adaptation to climate change
Toraya Fernández Ruíz	Production of kinetic energy from a non-fossil fuel	12-16	1. Adaptation to climate change
Iñigo Casafont Parra	The factory of life	12-16	1. Adaptation to climate change
Ana Palanca Cuñado	STOP climate change	12-16	1. Adaptation to climate change
Nayara Carral Saínz	Keeping warm	12-16	1. Adaptation to climate change
Lorena García Hevia	Clean seas	12-16	3. Restore our ocean and waters
Jorge Ripoll Rozada	Plastic pollution in aquatic systems: the impact on fish and degradation through worms	12-16	1. Adaptation to climate change 3. Restore our ocean and waters
Toraya Fernández Ruíz	Does Cantabria change color?	12-16	1. Adaptation to climate change
Inés Sánchez de Movellán Saíz	RE-groceries. Sustainable utensils	15-17	1. Adaptation to climate change
Francisco Conde Oria	NutriTierra. Feeding the plants	15-17	1. Adaptation to climate change
María Victoria Biezma Moraleda	Space scrap	12-18	1. Adaptation to climate change
Soraya Hidalgo Gallego	Paper firewood	6-12	1. Adaptation to climate change 3. Restore our ocean and waters
Cristina Sánchez Jiménez	Diving in clean seas	12-18	3. Restore our ocean and waters
Javier Sánchez Haro	Robotics and air quality in the classroom	12-18	1. Adaptation to climate change
Jorge Lanza Calderón	To infinity and beyond	12-18	4. Climate-neutral & smart cities
Javier Sánchez Haro	Superheroes in Action	12-18	2. Cancer beating plan
Jorge Lanza Calderón	Artificial Intelligence	12-18	4. Climate-neutral & smart cities
Javier Sánchez Haro	What is the weather like today at my school?	12-18	4. Climate-neutral & smart cities
Jorge Lanza Calderón	Amnigenerators, how to take advantage of air currents	12-18	4. Climate-neutral & smart cities
Daniel Sadornil Renedo	3,2,1, Ignition	12-18	4. Climate-neutral & smart cities
Francisco J. Carrera	Communication in the seas	12-18	3. Restore our ocean and waters
Diego Baragaño Coto	How to move a car using water	12-18	3. Restore our ocean and waters
Daniel Sadornil Renedo	Next stop…? Our future	12-18	1. Adaptation to climate change 5. A soil deal 3. Restore our ocean and water

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Researcher	Activity	Age	Mission
Francisco J. Carrera	Noise pollution	12-18	4. Climate-neutral & smart cities
Diego Baragaño Coto	The energetic ones	12-18	4. Climate-neutral & smart cities
Daniel Sadornil Renedo	Lightning MCQUEEN	12-18	4. Climate-neutral & smart cities
Daniel Sadornil Renedo	Next stop…? Our future	12-18	1. Adaptation to climate change 5. A soil deal 3. Restore our ocean and water

2.4.2 University of Oviedo (UO)

The Scientific Culture and Innovation Unit of the University of Oviedo has offered a diverse range of activities connected to the five missions throughout the year. Teachers have expressed their interest by filling out a form on the university's website.

Researcher	Activity	Age	Mission
Alba Ardura Gutiérrez	Identifying DNA in your kitchen	6 - 18	5. A soil deal
Álvaro Fernández Fernández	Cancer research, how is it going?	12 - 18	2. Cancer beating plan
Ana Belén Soldado Cabezuelo	Chemistry and food: Objective quality and safety in the food chain	12 - 18	5. A soil deal
Carlos López Fernández	How do you do during an earthquakes, floods and landslides	16 - 18	1. Adaptation to climate change
Carmen Rodríguez Pérez, Juan Sevilla Álvarez y Alfonso Suárez Rodríguez	Territorial recognition of the Saliencia Valley (Somiedo)	12 - 18	2. Cancer beating plan

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Beatriz Vázquez Rodríguez y Cristina Isabel López López	Sustainable Development Goals (SDG) and Agenda 2030	6 - 18	1. Adaptation to climate change
David Hevia Sánchez	Cancer: The enemy from within	12 - 18	2. Cancer beating plan
Javier de Cos Juez	Between shadows and stars. The challenge of light pollution	3 - 18	1. Adaptation to climate change
Jorge Gallastegui Suárez	Earthquakes and tsunamis	14 - 16	1. Adaptation to climate change
José Manuel Costa Fernández	Chemistry and Nanotechnology: the new revolution in health care	16 - 18	5. A soil deal
Juan Carlos Campo Rodríguez	The energy future: in treble clef	16 -18	1. Adaptation to climate change
Juan María Menéndez Aguado	Mineral raw materials in daily life	16 -18	5. A soil deal
Juan Sevilla Álvarez	Can you imagine more habitable cities for children and youth?	6 - 18	4. Climate-neutral & smart cities
Laura García de la Fuente	About fish, boats and fishermen. How much do you know about the sea and fishing in Asturias?	3 - 12	3. Restore our ocean and waters
Laura Rodríguez Rodríguez	The Cantabrian Mountains, a landscape sculpted by ice	12 - 18	3. Restore our ocean and waters
Lourdes Marcano Prieto	Nanorobots: Tiny robots for the fight against cancer	16 - 18	2. Cancer beating plan
Lucía Rodríguez-Noriega Guillén	What did the Greeks eat? Food in ancient Greece	6 - 18	5. A soil deal

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Luis Valledor	Epigenetics: How our habits and environment influence along our life	12 - 18	5. A soil deal
Mª. Ángeles Fernández González	Pollutants trapping minerals	6 - 18	1. Adaptation to climate change
María José Domínguez Cuesta	Coast of Asturias: receding cliffs?	12 - 18	3. Restore our ocean and waters
María José Domínguez Cuesta	Between sky and sea: exploring the cliffs of Asturias safely	12 -18	3. Restore our ocean and waters
Mónica Escandón Martínez	The Memory of the Forest: Trees that remember how to survive	6 -18	1. Adaptation to climate change
Pedro Farias Arquer	The relief of Asturias: formation and evolution	14 -16	5. A soil deal
Pedro González Menéndez	Diabetes and cancer. An unexpected relationship	12 -18	2. Cancer beating plan
Salvador Beato Bergua	A Yew tree told me: the magic of Asturian geography	6 - 12	5. A soil deal
Salvador Beato Bergua	What is Global Change?	6 - 12	1. Adaptation to climate change
Santiago Cal Miguel	The molecular language of cells. What happens if they don't understand each other?	12- 18	2. Cancer beating plan
Sonia González Solares	We are what we eat: investigating possible dietary carcinogens	6-18	2. Cancer beating plan
Susana del Carmen Fernández Menéndez	Planetary geology, the challenge of the search for new Earths.	12-18	1. Adaptation to climate change

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2.4.3 University of Castilla-La Mancha (UCLM)

The University of Castilla-La Mancha (UCLM) has prepared a programme of activities addressing primary and secondary schools of the province of Cuenca.

Researcher	Activity	Age	Mission
Ángel Luis Luján, Aránzazu Sanz, César Ortíz y David Moreno	The pleasure of reading	6-12	1. Adaptation to climate change
Álvaro Huerta, Daniele Padovano, Raúl Alcaraz, Roberto Zangróniz y Santiago Mula	Listening to the heart	6-12	4. Climate-neutral & smart cities
Aitor Martínez, Darío Herraiz, Ignacio Galeote, José Antonio Ballesteros y Leticia Martínez	Drawing the sound	6-12	4. Climate-neutral & smart cities
Ana Belén López Miota y Marta Torrijos Muelas	Play with your brain	6-12	2. Cancer beating plan
Lorena Mayordomo y Noelia Barroso	Live radio	12-18	1. Adaptation to climate change
Jesús González Arteaga	The health of buildings	12-18	4. Climate-neutral & smart cities
Germán de la Riva, Isis Saz, Itsaso Iribarren y Joel Escudero	Walking with artists	6-12	4. Climate-neutral & smart cities
Alberto Nájera	360 virtual tour	12-18	1. Adaptation to climate change

2.4.4 University of Extremadura (UEX)

Lectures and workshops have been organized by the Science Communication Unit of the University of Extremadura, as part of their science outreach activities in primary and secondary schools across Extremadura. In this period 40 talks and workshops have been held focusing on the contributions to the five missions of Horizon Europe.

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The development of this program follows the following steps: University researchers are invited to propose topics for this activity. Then, schools and teachers are invited to join the Circular Science project by filling out a participation form, specifying the talks or workshops they apply for. These applications are then distributed to university researchers and they are asked to agree on a convenient date to celebrate the activity with schools. All this process is monitored by the Science Communication Unit.

Researcher	Activity	Age	Mission
Alberto Giménez Bejarano	The colours of nature	6-12	5. A soil deal
Ana María Gómez Neo	Organic synthesis: the art of building molecules	16-18	1.Adaptation to climate change
Antonio González Mateos	Melatonin and the fountain of eternal youth	16-18	2. Cancer beating plan
Antonio Serrano Pérez	Gymkhana UV	6-12	2. Cancer beating plan
Diego Carmona Fernández	Design eco-products for a sustainable world	16-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
Dolores Gallardo Vázquez	Smart Cities & Sustainable Development Goals (SDGs)	12-18	4. Climate-neutral & smart cities
Carlos Fernández Bandera	Climate change and Sustainable Development Goals (SDGs)	12-18	1. Adaptation to climate change
Enrique Hernández Diez	You have the right to save the world	12-18	1. Adaptation to climate change
Eusebio López Nieto	Traveling Plants	6-12	1. Adaptation to climate change 5. A soil deal
Eva Alegre Cortés	The colors of nature	6-12	5. A soil deal
Eva María Frontera Carrión	Disease-transmitting insects	6-18	1. Adaptation to climate change
Francisco de Asís Iñesta Vaquera	How much do you know about poisons?	6-18	1. Adaptation to climate change 2. Cancer beating plan
Héctor Valentín Jiménez Naranjo	The digital future: From Business Intelligence to Smart Cities	17-18	4. Climate-neutral & smart cities
Jesús A. Gómez Ochoa de Alda	In your hands	6-12	5. A soil deal
Jesús Díaz Álvarez	Chemistry: the science of life	6-12	1. Adaptation to climate change 3. Restore our ocean and waters

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Researcher	Activity	Age	Mission
Jesús Manuel Rodríguez Rego	The value of water	6-12	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Jesús Sánchez Martín	What does it mean to be sustainable? One step beyond caring for the environment	10-12	1. Adaptation to climate change 3. Restore our ocean and waters 5. A soil deal
José Javier López Barba	The origin and adaptation of tumor cells	16-18	2. Cancer beating plan
José Manuel Ausín Gómez	Social Economy: how we can improve our future and quality of life	16-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
José Manuel Vaquero Martínez	The Sun and cosmic rays	14-18	1. Adaptation to climate change
José Sánchez González	Practical Engineering	14-18	1. Adaptation to climate change
Juan Pedro Cortés Pérez	How does digitalization affect your professional future?	16-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
Luis López-Lago Ortiz	Stories from a doctor in Emerita Augusta	10-12	2. Cancer beating plan 5. A soil deal
Luz Garcia-Longoria Batanete	mosquitoes bite	6-12	1. Adaptation to climate change
Mª Cruz Gallego Herrezuelo	The climate watchers	12-18	1. Adaptation to climate change
Mª del Pilar Alfageme García	Are we talking about sustainable and healthy footwear?	10-14	1. Adaptation to climate change
María Ángeles García Gil	EmoTech-Ment: Navigating Emotions and Mental Health in the Digital Age	15-16	2. Cancer beating plan
María Eugenia Polo García	Can you see the heat?	16-18	1. Adaptation to climate change
María Isabel Rodríguez Cáceres	Chemistry surrounds you even if you don't believe it!	16-18	5. A soil deal
María Jesús Andrade Gracia	What microorganisms are in food?	12-16	5. A soil deal

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Researcher	Activity	Age	Mission
María José Benito Bernáldez	Food Science	14-18	5. A soil deal
Miguel Ángel Bas Sánchez	Science in my hands	6-12	1. Adaptation to climate change 3. Restore our ocean and waters
Miguel Ángel Martín Parrilla	Facing cancer with Science	12-18	2. Cancer beating plan
Miguel Ángel Martín Tardío	I think, then I code!	16-18	4. Climate-neutral & smart cities
Miguel Ángel Martín Tardío	Learning Science with Arduino	14-16	4. Climate-neutral & smart cities
Mireia Niso Santano	Can royal jelly protect our neurons?	16-18	5. A soil deal
Rafael Gómez Galán	Past, present and future of epidemiology as a scientific discipline	17-18	1. Adaptation to climate change
Sara Mª Marchena Galán	The values of the European Union.	16-18	1.Adaptation to climate change 4. Climate-neutral & smart cities
Sara Morales Rodrigo	My plant has bugs...	12-18	1. Adaptation to climate change 5. A soil deal
Serafín Delgado Gil	Physical literacy for a healthy lifestyle	10-18	1. Adaptation to climate change 2. Cancer beating plan

2.4.5 University of the Balearics Islands (UIB)

The Scientific Culture and Innovation Unit of the University of the Balearic Islands (UIB) has organised the following activities through the University Orientation and Transition Program (PORT-UIB). These activities, which include conferences, visits, contests and workshops, have been adapted to different age groups ranging from six to eighteen years old. A threeway collaboration has been achieved between the Scientific Culture and Innovation Unit and the University Orientation and Transition Program, the university researchers and primary school and highschool teachers in order to put into practice this program of activities and interest young students in science, research and the university. Simultaneously these activities promote the participation of UIB's researchers in these kinds of activities designed to spread scientific knowledge and passion for science.

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Researcher	Activity	Age	Mission
Miquel Agulles Gámez	Science awareness IES Sineu, "Climate change: present and future"	16-17	1. Adaptation to climate change 4. Climate-neutral & smart cities
Àngel Miquel Amores Maimó	Science awareness IES Sineu, "Extreme Sea level phenomenon's"	16-17	1. Adaptation to climate change
Jesús Molina Mula	Science awareness IES Manacor "Avoiding drug dependencies"	16-17	1. Adaptation to climate change 5. A soil deal
Cristina Suemay Manresa Yee	Science awareness IES Ramon Llull "Artificial intelligence: challenges, opportunities and current affairs"	16-17	1. Adaptation to climate change 4. Climate-neutral & smart cities
Maria Isabel Montserrat Sánchez Escribano	Science Coffee, Artificial Intelligence	12-17	1. Adaptation to climate change
UIB Agri-Food Engineering Group / Cristina Reche Lendinez	Experiments with liquid nitrogen	10-17	1. Adaptation to climate change 5. A soil deal
Juan Francisco Nieto	Robotics demonstration	10-17	1. Adaptation to climate change 4. Climate-neutral & smart cities
Gravitational Physics Group: theory and observation (GRAVITY) of the UIB / Rafel Jaume Amengual	Black hole detection methods	10-17	4. Climate-neutral & smart cities
Innovation Unit in video games and AI (UVJIA) / Francisco José Perales	GENIUSUP Project	10-17	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Antònia Siquier Perelló	Everything behind Parkinson's disease that has not been told to you	12-18	2. Cancer beating plan
Elga Cremades Cortiella i Lluís Barceló-Coblijn	From theory to clinic: language and Williams syndrome	12-18	1. Adaptation to climate change 2. Cancer beating plan

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Researcher	Activity	Age	Mission
Joana Cursach Seguí i Joshua Borràs Riera	Pollination by deception. Sex, lies and deception	12-18	1. Adaptation to climate change
Andreu Vaquer IdISBa	Biosensors are not from another planet	12-18	1. Adaptation to climate change
Jaume Jaume Sureda IRFAP	A science dish: the conservation of the native breeds of the Balearic Islands	12-18	1. Adaptation to climate change
Rocío Zamanillo Campos IdISBa	Lab Apps	12-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Carme Garau IRFAP	A glass of science: the recovery of the agricultural varieties of the Balearic Islands	12-18	1. Adaptation to climate change
Manuel Miranda IFISC	Synchronization of complex systems	12-18	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Beatriz Guijarro COB-IEO	Sustainable fishing: Utopia or reality?	12-18	1. Adaptation to climate change 3. Restore our ocean and waters
Vicent Combes IMEDEA	Observing the ocean from space	12-18	1. Adaptation to climate change 3. Restore our ocean and waters
Mª Victòria Llull Alberti IdISBa	Margarita Salas: the history of a brave scientist	6-11	4. Climate-neutral & smart cities

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Researcher	Activity	Age	Mission
Marc Ventayol Guiraldo IdISBa	Science me a story	6-11	1. Adaptation to climate change 4. Climate-neutral & smart cities
Llorenç Huguet Rotger, M. Isabel Barceló Villanueva	Talk: Cybersecurity for adolescents and young people. Resources and good practices	10-14	4. Climate-neutral & smart cities
Orientation and Transition Program to University (PortUIB)	Science for everyone	6-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Bàrbara Montoya Boix	Ready to start the Baccalaureate Research Work (TRB)!	16-18	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Orientation and Transition Program to University (PortUIB)	Demolab virtual	6-12	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Jaume Garcia Rosselló	Arqueòdrom: Live the experience of becoming an archaeologist for a day.	10-16	5. A soil deal
Miquel Àngel Coll Ramis	Tourism in the Balearic Islands from a geographical perspective	16-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
Oriol Marimon		16-18	1. Adaptation to climate change

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Researcher	Activity	Age	Mission
	Greener chemistry for a better world		3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Margalida Monserrat Mesquida	The Mediterranean diet and false myths	16-18	1. Adaptation to climate change 2. Cancer beating plan
Enric Culat Pascual	Contest: A Sea of Science	8-16	3. Restore our ocean and waters

2.4.6 University of Zaragoza (UNIZAR)

The Scientific Culture and Innovation Unit of the University of Zaragoza, together with its campuses in Zaragoza, Huesca and Teruel, has organized 15 activities, which include 74 sessions with a programme of activities designed for primary and secondary schools. In addition, 75% of these activities are face-to-face, while the remaining 25% have been offered online, aimed specifically at students in rural Aragon.

Researcher	Activity	Age	Mission
Alejandra González Loyola	Engineering, a fundamental tool in the fight against cancer	13 - 17	2. Cancer beating plan
Gabriel Lozano Berges	Physical exercise, our warrior to fight sedentary lifestyle and obesity	9 - 17	4. Climate-neutral & smart cities
Nacho de Blas Giral	Emerging diseases, climate change and globalization	9 - 17	1. Adaptation to climate change
Ricardo López Gómez	Food and molecules. The science that eats.	9 - 17	5. A soil deal
Susana Cebrián Guajardo	A universe of radiation	13 - 17	4. Climate-neutral & smart cities
Beatriz Moya García	Living cities: how can they learn to interact with us?	9 - 17	4. Climate-neutral & smart cities

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Researcher	Activity	Age	Mission
José Manuel Nicolau	Let's take care of planet Earth and its waters. It's our house.	9 - 17	3. Restore our ocean and waters
Ondrej Kratochvíl	Act for change, improve your neighborhood MAP with us!	13 - 17	4. Climate-neutral & smart cities
María Zúñiga Antón María Sebastián López	Would you choose Zaragoza to live in 2075? The factors that make life in a city comfortable, fun and sustainable.	9 - 11	4. Climate-neutral & smart cities 5. A soil deal
Manuel Fondevila Camps	Would we prefer a worm sandwich or a cricket omelet? The consumption of insects in the diet of the future.	9 - 11	1. Adaptation to climate change
José Manuel Nicolau Ibarra	How will our home, the Earth, be environmentally friendly in 50 years? The challenge of a way of life that keeps the Biosphere healthy and healthy.	9 - 11	1. Adaptation to climate change 5. A soil deal 3. Restore our ocean and waters
Rosa Tabernero	Will books continue to hide stories? Will Siri be the one who tells them to us? The children's literature that the future will bring us	9 - 11	4. Climate-neutral & smart cities
Francisco Martínez Domínguez Piedad Garrido Picazo	Will artificial intelligences be as human as humans? This is how you will be and think in half a century	9 - 11	4. Climate-neutral & smart cities
Ginesa López Crespo Terebel Jiménez Gutiérrez.	Will we be more connected or more disconnected, more alone or more accompanied?Technological development and our mind	9 - 11	4. Climate-neutral & smart cities
22 scientific women in 2023 and 2024	Talk to the scientists' women of the campaign "I am a scientist. I live in your neighborhood"	9-17	4. Climate-neutral & smart cities

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2.4.7 Public University of Navarra (UPNA)

The Public University of Navarra (UPNA) offers several scientific talks aimed especially at students in the final years of Navarre's high schools. Interested educators must register through the website of the Scientific Culture and Innovation Unit UPNA's Scientific talks application.

Researcher	Activity	Age	Mission
Isabel Zudaire Ripa	Epigenetics: How the environment modulates our genome	14-18	2. Cancer beating plan
Francisco Javier Falcone Lanas	Manufacturing 4.0: The Digital Industrial Revolution	14-18	4. Climate-neutral & smart cities
Humberto Bustince Sola	Artificial Intelligence	14-18	1. Adaptation to climate change 2. Cancer beating plan
María Napal Fraile	Climate Change… Does it have to do with me?	14-18	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Francisco Javier Sanz Morales	Geology of Navarra, from landscapes to rock	14-18	5. A soil deal
Jorge Poveda Arias	The truth about transgenic crops	14-18	1. Adaptation to climate change
Ignacio Irigoyen Iriarte	Workshop on Circular Economy	14-18	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Iñigo Virto Quecedo	Soil quality, quality of life	14-18	5. A soil deal
Iñigo Virto Quecedo	Growing CO_2: Climate Change and the use of land	14-18	1. Adaptation to climate change 5. A soil deal

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Researcher	Activity	Age	Mission
Javier Marcos Álvarez	Renewable energy	14-18	1. Adaptation to climate change
David Astrain Ulibarrena	Energy system and environmental impact. Current status and future perspectives	14-18	1. Adaptation to climate change 5. A soil deal
Mª Cruz Arzamendi Manterola & Inés Reyero Zaragoza	Biomass and biofuels	14-18	1. Adaptation to climate change 5. A soil deal
Andrea Navarro Puyuelo & Inés Reyero Zaragoza	Climate Change… Does it have to do with me?	14-18	1. Adaptation to climate change 3. Restore our ocean and waters 4. Climate-neutral & smart cities
Iñigo Virto Quecedo	We are what we eat: from the Green Revolution to Agroecology	14-18	5. A soil deal
Rosa María Canals Tresserras	Reflecting on the human footprint on climate and ecosystem biodiversity	14-18	1. Adaptation to climate change
María Napal Fraile	Hidden diversity	14-18	5. A soil deal
Daniel Navarro Asenjo	Knowing human body	14-18	1. Adaptation to climate change 2. Cancer beating plan
Natalia Domínguez Sanz y Ana Mª Insausti Serrano.	The human body from drawing to reality	14-18	2. Cancer beating plan
María Navarro Duarte	Motor development and multisensory classroom	14-18	2. Cancer beating plan
Natalia Domínguez Sanz y Ana Mª Insausti Serrano	Sight and hearing, how do they work?	14-18	1. Adaptation to climate change 2. Cancer beating plan
Roberto Aguado Jiménez	Measuring energy expenditure	14-18	1. Adaptation to climate change

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Researcher	Activity	Age	Mission
Alazne Ruiz de Escudero Zapico	How physiotherapy becomes us the superheroes who take care of the population	14-18	1. Adaptation to climate change 2. Cancer beating plan
Ignacio Pardo Castellot	Physiotherapy in the 21st century: the sleeping giant	14-18	1. Adaptation to climate change 2. Cancer beating plan
Mª Patricia Arnedo Martínez	Introduction to Massage Therapy from Physiotherapy	14-18	2. Cancer beating plan
Luis Miguel Calvo Herrero	Sustainable design and manufacturing	14-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
María Atienza Martínez	Quality analysis of water	14-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Alberto Navajas Leon	Analysis of the acidity of a commercial milk	14-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Alberto Navajas Leon	Qualitative determination of starch in different meat products. Fraud for not accordance.	14-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal

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Researcher	Activity	Age	Mission
Inés Reyero Zaragoza y Andrea Navarro Puyuelo	Identification of plastic materials	14-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
Andrea Navarro Puyuelo	Obtaining synthetic fuels and other chemical compounds from natural gas unconventional and biogas	14-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal
María Atienza Martínez	Role of engineering professionals in protecting the environment	14-18	1. Adaptation to climate change 2. Cancer beating plan 3. Restore our ocean and waters 4. Climate-neutral & smart cities 5. A soil deal

2.4.8 University of País Vasco (UPV/EHU)

For the 2023-2024 academic year, the Scientific Culture and Innovation Unit of the University of the Basque Country has carried out a cycle of conferences and workshops aimed at students aged 6 to 18. These sessions took place from November 2023 to March 2024, within the framework of the European Researchers' Night events. All the activities are contained on the website, where schools can register and select the conferences or workshops they want to receive from the researchers in their schools.

Researcher	Activity	Age	Mission
Ibone Ametzaga Arregi	Biomimetics: the opportunity provided by nature	6-18	1. Adaptation to climate change 5. A soil deal
Miren Itsaso Martínez Santos	What does water taste like? Sensory analysis of chemical and biological water quality.	12-18	3. Restore our ocean and waters

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Researcher	Activity	Age	Mission
Teresa Campos López	Archeology and other realities: Do you dare to discover them?	12-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
Aintzane Apraiz García	Cancer and the selfishness of a few cells in the body	14-16	2. Cancer beating plan
Maite Iris García Collado	How to know what they ate in the past to eat better in the present	6-18	2. Cancer beating plan
Beatriz Apellaniz Unzalu and Edurne Rujas Díez	How are new anticancer antibodies produced?	14-18	2. Cancer beating plan
Ivan Martínez de Estibariz Royuela	Knowing the importance of our way of life in the development of cancer.	12-16	2. Cancer beating plan
Naiara Ortuzar Markes	Getting to know my brain	8-10	2. Cancer beating plan
Susana Bulnes and Cristina Miguelez	Knowing my brain: How do we keep our brain healthy?	12	2. Cancer beating plan
Virginia Guillen	Drug abuse	12-18	2. Cancer beating plan
Jose Maria Etxabe Urbieta	Noise pollution	8-10	1. Adaptation to climate change
Belén González and Juan Francisco Ayala	Household Pollution: From the Sinkhole to the Ocean	14-18	1. Adaptation to climate change 3. Restore our ocean and waters
Jose Maria Etxabe Urbieta	Sea pollution. Plastics	6-10	3. Restore our ocean and waters
María Dolores Boyano	Deciphering melanoma: Artificial intelligence in biomedical research.	14-18	2. Cancer beating plan
Cristina Penas Lago	Discovering the superpower of our skin	6-12	2. Cancer beating plan
Gorka Zubia Garea	Where is Telecommunications Engineering and what does it do?	14-18	1. Adaptation to climate change
Zuriñe Baña	The microscopic world of the oceans	6-12	3. Restore our ocean and waters
Jonatan Nicolas Pérez	Epigraphy: a way to learn about the ancient Romans	12-18	4. Climate-neutral & smart cities
Arturo Apraiz Atutxa	Experimentation with earthquakes and tsunamis	16-18	5. A soil deal

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Researcher	Activity	Age	Mission
Pello Larrinaga Alonso	Energy in History	16-18	1. Adaptation to climate change 4. Climate-neutral & smart cities
Alejandro Prieto de Dios	Prehistory of extractivism and production through everyday objects of our past	10-18	1. Adaptation to climate change
Nahiara Muguerza Latorre	Hard substrate macroalgae, key bioindicators!	12-18	3. Restore our ocean and waters
Cristina Peña Rodríguez	Plastics... good or bad?	12-16	3. Restore our ocean and waters
Harkaitz Bengoetxea Odriozola	Keeping your brain and cells healthy!	10-12	2. Cancer beating plan
Estibaliz Gutierrez Ajamil	Ont(c)ological narratives in art and visual culture: critical reviews.	14-18	2. Cancer beating plan
Ruth Prieto Montero	New Cancer Therapies: The Use of Light	16-18	2. Cancer beating plan
Rafael Morales and Carolina Redondo	Could cancer be treated with nanomagnets?	18	2. Cancer beating plan
Ekain Payán Ellacuria	Soil health awareness: a legal and ethical approach.	16-18	5. A soil deal
María Teresa Gómez Sagasti	Soils and plants to the rescue of humanity	6-10	5. A soil deal
Iñigo Martínez de Alegría	Underwater Drone Construction Workshop	12-18	3. Restore our ocean and waters
Adrián Bozal-Leorri	Wheat against environmental pollution	16-18	1. Adaptation to climate change

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2.5 PARTICIPATION

A total of 277 researchers from the 8 universities have participated in the different activities. A special effort has been made to involve female researchers and promote gender equality in science. The results are reflected in the following table:

		Number of researchers	
	University	**Female**	**Male**
1	**University of Cantabria (UC)**	14	11
2	**University of Oviedo (UO)**	16	16
3	**University of Castilla-La Mancha (UCLM)**	9	25
4	**University of Extremadura (UEX)**	19	26
5	**University of the Balearic Islands (UIB)**	13	19
6	**University of Zaragoza (UNIZAR)**	32	11
7	**Public University of Navarre (UPNA)**	14	16
8	**University of País Vasco (UPV/EHU)**	26	19
Total		**143**	**143**

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2.6 COMMUNICATION TOOLS

This section details the various communication methods employed to achieve the following aims:

- Raise awareness about the EU Missions and their goals, including how research conducted by the G9 Universities aligns with these missions.
- Encourage young students to consider careers in science by providing them with opportunities to interact with experts from various fields.
- Extend outreach to as many primary and secondary schools as possible, particularly focusing on those in rural areas that have limited access to interactions with scientific researchers.
- Guarantee extensive dissemination of the Circular Science initiative's results to the intended audience.
- Foster collaboration with international groups to promote the initiative across various countries within the European Union.

A joint communication strategy was developed by the consortium, and each member contributed additional efforts to enhance the spread of the initiative.

2.7 JOINT COMMUNICATION ACTIONS

The collective communication plan encompassed various measures to be implemented by the consortium, including:

- Displaying information about the project and all its initiatives on both the official project website and the websites of each participating partner.
- Promoting events and activities through the social media channels of the consortium.
- Each university created its own news content for dissemination to local and national media outlets, generating respective impacts. (For links to the press releases published by each partner about the Circular Science initiative, refer to section 2.11. PRESS CLIPPING OF PARTNERS)
- Engaging with international alliances like Eunice and Unita to provide online activities for schools in various European countries beyond Spain.

Additionally, partners were advised to further propagate the Circular Science initiative by:

- Posting details about Circular Science on their websites.
- Sending out recruitment emails to their research staff.
- Crafting informative emails for teachers at educational institutions.
- Including information in their monthly activity newsletters.
- Releasing their own press statement at the start of the academic year.

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- Leveraging their social media platforms to broaden the reach of the message.
- Seeking collaborative opportunities with other European projects.

Given their unique characteristics, each partner executed these activities in their own distinct manner.

2.8 COMMUNICATION ACTIONS BY PARTNER

2.8.1 University of Cantabria (UC)

In an effort to maximize outreach and engage with a wider audience, a multifaceted approach to communication was adopted. This strategy included the deployment of several key initiatives: firstly, leveraging social media platforms to create a dynamic and interactive environment for sharing updates, insights, and engaging content. Secondly, the crafting and distribution of press releases to a broad spectrum of media outlets, ensuring that our message reached a diverse audience across different channels. Lastly, the careful curation and timely update of the website served as a central hub for information, providing comprehensive details about our activities, objectives, and achievements.

2.8.2 University of Oviedo (UO)

The communication strategy of the University of Oviedo has consisted of publishing both the talks and the workshops on the website of the Regional Government of Principality of Asturias in order to reach all the school centres. The information is always available on the website of the Scientific Culture and Innovation Unit and many efforts have been made to provide maximum dissemination both through social networks: Facebook, Twitter and Instagram, as well as through the university's communication digital daily and distribution through press releases. The circular science activity appears on the University of Oviedo website.

2.8.3 University of Castilla-La Mancha (UCLM)

The communication strategy of the University of Castilla-La Mancha has consisted of publishing both the talks and the workshops through social networks of Education Council of Castilla-La Mancha in order to reach all the school centres. The information is always available on the website of the Scientific Culture and Innovation Unit and many efforts have been made to provide maximum dissemination both through social networks: Twitter and Instagram, and distribution through press releases. The circular science activity appears on the University of Castilla-La Mancha website.

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2.8.4 University of Extremadura (UEX)

The communication strategy was based on publicising the talks and workshops to primary and secondary schools so that they could opt to participate in the activity. In this regard, a press release was sent to the media with the programme and providing the link to the web site where it was published and, in turn, an email was sent to schools inviting them to participate. In addition, a communication campaign was carried out on university social networks. The awards of activities were also published on the website and in the form of a news item. Teachers have been invited to publish on the social network their development of their activity with the hashtags #CienciaCircular and #G9Missions and #EuropeanResearchersNight to boost the awareness campaign. At the end of the programme another press release will be published.

2.8.5 University of the Balearic Islands (UIB)

The communication strategy for the talks and workshops has been carried out in accordance with the University Orientation and Transition Program (Port-UIB), which depends on a Joint Commission Ministry of Education, University and Research - University of the Balearic Islands, made up of people from both institutions and whose aim is to identify shortcomings and aspects that can be improved in all matters related to information, communication, orientation and the transition to the University, especially aimed at secondary education centers. Social media publication, press releases and the publication of the different activities on the university publication and website are included in these efforts.

2.8.6 University of Zaragoza (UNIZAR)

All this scientific dissemination activity is compiled on the UCC website, as a platform for communication and consultation of online material. The impact is amplified through the social networks of both the University of Zaragoza and the UCC Unizar, as well as their social networks. The communication and dissemination plan for these activities is structured in two general lines: the first, aimed at publicizing the results of communication internally in the university community, through the iUnizar newsletter, for the university community made up of 40,000 people. And another, in parallel, of external communication to disseminate those same contents to the general media as well as digital media, as a fundamental link in the information chain to reach society in general.

2.8.7 Public University of Navarra (UPNA)

The UPNA communication strategy includes a specific newsletter to secondary and high schools in Navarra, Department of Education of Navarra and secondary teachers. Dissemination is published through social networks: Facebook, Twitter and Instagram. The activity of circular science appears on the website of the Public University of Navarra.

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2.8.8 University of País Vasco (UPV/EHU)

In our experience, communication is key to ensuring that any project runs effectively. An announcement email strategy was implemented in the first place, intended for both educational centres and own researchers but also to other stakeholders and to the general-interest media. The latter was carried out by the Communications Office of the University of the Basque Country (UPV/EHU) with the edition of press releases and a special report on the program, published on the university's newsletter and website. Dissemination has been published through social networks: Twitter and Instagram.

2.9 DISSEMINATION MATERIALS

To establish a distinct visual identity for the Circular Science project, a logo and a cohesive visual design were created.

This visual identity comprises two key elements: firstly, the iconic 'N' from the European Night of Researchers is utilized, rendered in a light blue color that symbolizes innovation, scientific progress, trust, and reliability. Secondly, it incorporates representations of the five logos associated with the European Union's five missions, effectively conveying the NIGHT's core theme at a single glance.

Following the creation of this visual identity, a range of promotional materials were developed, including:

Headers for social media platforms.

PowerPoint templates for presentations by researchers.

These promotional items have been used by partners throughout the duration of the project. As the G9Missions partners are recipients of EU funding, the European Union's emblem has

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been and will continue to be prominently featured on all outreach materials, press releases, and media communications to recognize the support granted by the EU program.

2.10 CIRCULAR SCIENCE WEBSITES

Circular Science is presented through the joint website of the G9MISSIONS project. This website is available in two languages: Spanish and English.

	Concept	Website
1	**European Researchers' Night**	https://nocheinvestigag9.es/
2	**Circular science**	https://nocheinvestigag9.es/en/circular-science/

Some of the partners include the information about Circular Science within their own Researchers' Night webpage. Others, instead, have created a new one within their university domain. Finally, in some cases the initiative has been incorporated as part of ongoing projects.

Please find the links to these web pages for each G-9 university below:

University	Website
University of Cantabria (UC)	https://web.unican.es/unidades/cultura-cientifica/Paginas/Archivo/2023/Feria-de-la-Ciencia-2023.aspx
University of Oviedo (UO)	https://ucc.uniovi.es/nocheinvestigadores/researchers
University of Castilla-La Mancha (UCLM)	https://www.uclm.es/misiones/investigacion/uclmdivulga/actividades/ciencia-circular
University of Extremadura (UEX)	https://nocheinvestigadoresuex.es/ciencia-circular/
University of Zaragoza (UNIZAR)	https://ucc.unizar.es/noche-investigadores/ciencia-circular https://ucc.unizar.es/unizar-kids https://ucc.unizar.es/11f https://ucc.unizar.es/node/25014
Public University of Navarre (UPNA)	https://www.unavarra.es/nocheinvestiga/ciencia-circular?languageId=100000 https://www.unavarra.es/unidadculturacientifica/dia-mujer-ni%C3%B1a-ciencia?languageId=100000
University of the Basque Country (UPV)	https://www.ikertzaileengaua-ehu.org/programacion-y-protagonistas-de-la-noche/ciencia-circular/

2.11 PRESS RELEASES

In this segment, we've gathered all press releases from the consortium, along with those issued by each partner referencing the Circular Science event.

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University	Press releases
University of Cantabria (UC)[2]	https://web.unican.es/noticias/Paginas/2023/04/Feria-de-la-ciencia-2023.aspx
University of Castilla-La Mancha (UCLM)	https://www.uclm.es/global/promotores/organos-de-gobierno/vicerrectorado-de-investigacion-y-politica-cientifica/novedades/uclmdivulga/nocheg9/ciencia_circular_informe
University of Extremadura (UEX)	https://www.unex.es/organizacion/servicios-universitarios/servicios/comunicacion/archivo/2023/junio-de-2023/1-de-junio-de-2023/abierta-la-convocatoria-de-ciencia-circular-de-la-uex-para-el-curso-academico-202-24 https://www.unex.es/organizacion/servicios-universitarios/servicios/comunicacion/archivo/2023/octubre-de-2023/20-de-octubre-de-2023/publicada-la-adjudicacion-de-las-actividades-del-programa-ciencia-circular-de-la-uex
University of the Balearic Islands (UIB)[3]	https://diari.uib.cat/Hemeroteca/Itineraris-de-ciencia-experiments-i-monolegs.cid753262 https://culturacientifica.uib.cat/Projectes/2024/Conscienciats-de-Ciencia/
University of Zaragoza (UNIZAR)[4]	https://ucc.unizar.es/noticia/los-escolares-aragoneses-apuestan-por-un-mundo-mas-sostenible-desde-unizar-kids https://ucc.unizar.es/noticia/la-campana-cientificaentubarrio-se-instala-en-el-parque-grande-y-se-cuela-por-todo-aragon https://ucc.unizar.es/noticia/este-ano-la-campana-cientificaentubarrio-de-unizar-se-abre-todo-el-mundo-te-sumas https://ucc.unizar.es/noticia/ven-este-viernes-al-rincon-de-la-ciencia-en-el-campus-san-francisco-10-13h-para-celebrar-la
Public University of Navarre (UPNA)	https://www.charlascientificas.com/noticias/ https://www.unavarra.es/sites/actualidad/contents/noticias/2024/02/12/entrevistas-cientificas.html
University of the Basque Country (UPV)[5]	https://www.ehu.eus/es/-/ciencia-circular-investigadoras-investigadores-upv-ehu-vuelven-cole?wkrh___tabs1=properties

[2]In the case of the University of Cantabria, a pilot experiment was carried out in which it was included the Science Fair as Circular Science for the next European Project Science4all, since it is a joint action of researchers with pre-university students showing the importance of the EU missions

[3] In the case of the University of the Balearic Islands they carried out Circular Science within the European Night of Researchers event

[4] University of Zaragoza included the missions at Unizarkids and activities related to the International Day of Women and Girls in Science

[5] In the case of the University of the Basque Country, they carried out Circular Science within the European Night of Researchers event.

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2.12 SOCIAL NETWORKS

While each G-9 University operates various social media platforms for promoting science and culture (such as Facebook pages and YouTube channels), the primary efforts to publicize the project and its related activities have predominantly been conducted through their official Twitter accounts. Below, links to each account are provided along with a tally of their total followers, aiming to estimate the potential reach of these communications. We have been and will continue to employ the hashtags #G9Missions, #NIGHTSpain, and #EuropeanResearchersNight to boost visibility of Circular Science as the means by which Researcher's Night extends its presence throughout the academic year.

	University	Twitter User	Followers (march 2024)
1	**University of Cantabria (UC)**	@UCDivulga @unican	2312 16100
2	**University of Oviedo (UO)**	@UOdivulga @uniovi_info	2436 18600
3	**University of Castilla-La Mancha (UCLM)**	@UCLMdivulga @uclm_es	2967 56500
4	**University of Extremadura (UEX)**	@UExDivulga @infouex	4351 23700
5	**University of the Balearic Islands (UIB)**	@UIBuniversitat	21400
6	**University of Zaragoza (UNIZAR)**	@UCCUnizar @UNIZAR	3454 31900
7	**Public University of Navarre (UPNA)**	@Cultupna	587
8	**University of País Vasco (UPV)**	@EHUscientia @upvehu	1390 34800
	G-9 Missions	@Night_S_Team	256
	Total		**220.753**

● 3. FINAL RESULTS CIRCULAR SCIENCE ACTIVITY PROGRAM 2023-2024

Circular Science initiative, part of the prestigious European G9 Missions project, has emerged as a significant contributor to the triumph of the Program for the 2023-2024 academic period. Circular Science underpinned by the collaborative efforts of the G9 consortium, has fostered an interactive educational environment that unites diligent researchers and inquisitive students in a joint quest for scientific exploration and understanding.

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In this academic venture, we have seamlessly integrated cutting-edge research with effective teaching methodologies, effectively empowering young minds with the skills and knowledge to navigate and contribute to the scientific realm. Our approach has been to not only impart scientific facts but also to cultivate a robust scientific temperament among students, equipping them to be both consumers and producers of scientific knowledge.

The figures presented in this report transcend traditional metrics; they narrate a story of impassioned educators and learners driven by a shared commitment to academic excellence. This narrative is a reflection of the constructive and widespread impact of the initiative, resonating well beyond the confines of individual classrooms and laboratories.

Designed with precision, the program has aimed to narrow the divide between academic research and classroom learning. We have sought to spark a lasting interest in scientific disciplines among students by bringing them face-to-face with the wonders and challenges of scientific inquiry. Our comprehensive activities have successfully drawn numerous researchers into educational settings, where they have conducted engaging sessions, provoking thought and inspiring dialogue. These sessions have not just transferred knowledge but have transformed the way students perceive and engage with science.

The outstanding engagement of researchers has resulted in a meaningful exchange of ideas, where students are encouraged to think critically, ask challenging questions, and develop a keen scientific acumen. This initiative has been instrumental in creating a culture of analytical thinking and problem-solving among students, setting the stage for future innovations and scientific breakthroughs.

Circular Science program has not only met the high standards set forth by the G9 Missions project but has also cultivated fertile ground for the continual growth of scientific literacy and inquiry. The dedication of our researchers to share their expertise has been remarkable, and their efforts have significantly enriched the educational experiences of the participating students.

As we review the positive outcomes of this year's program, we are filled with a sense of accomplishment and optimism. The initiative stands as a compelling example of the transformative potential of collaborative education and the enduring value of connecting research with learning. We move forward with the conviction that the continued synergy between academia and education will yield even greater achievements, inspiring a new generation of thinkers and innovators in the scientific community.

Across the board, the program witnessed a remarkable increase in the number of activities offered, sessions held, researchers involved, schools participating, and students engaged. This comprehensive effort brought together academic institutions, researchers, and educational bodies in a unified endeavour to foster curiosity, critical thinking, and a passion for science among the younger generation.

The collaboration among partners in the program has not only enhanced the educational experience for students but also contributed to building a stronger foundation for future

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scientific inquiry and innovation. The increased participation and the diverse range of activities provided a rich, immersive learning environment, enabling students to explore various scientific disciplines and develop a deeper understanding of their potential impact on societal and global challenges.

Overall, the Circular Science program's achievements in the 2023-2024 academic year stand as a testament to the power of collaborative educational initiatives in inspiring the next generation of scientists, researchers, and informed citizens. The positive outcomes reflect a successful integration of academic knowledge with practical learning experiences, setting a new benchmark for excellence in science education.

Below is a table displaying the results of the Circular Science program. This table outlines the diverse activities provided by each partner, detailing the number of sessions conducted, the involvement of female and male researchers, the schools engaged, and the total number of participants:

Partner	Activities offered	Sessions	Female Researchers	Male Researchers	Schools	Participants
UC	47	47	14	11	25	300
UO	29	63	16	16	55	4087
UCLM	9	27	9	25	14	450
UEX	40	48	19	26	39	1852
UIB	30	30	13	19	12	700
UNIZAR	15	74	32	11	144	8197
UPNA	31	74	14	16	43	1900
UPV/EHU	31	102	26	19	76	3585
Total	**232**	**465**	**143**	**143**	**408**	**21071**

In sum, the "Circular Science" program is a reflection of our collective ambition and vision. It is a powerful affirmation of the G9 Missions project's objectives and a clear indication of our potential to inspire and cultivate future scientists and thinkers. As we turn our gaze forward, we are buoyed by a sense of anticipation for the continued evolution of education and research, propelling us toward a future replete with innovation and learning.

3.1 CONCLUSION

The comparative between academic year 2022-2023 and 2023-2024:

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There has been a significant increase in the number of activities offered, sessions held, gender diversity among researchers, school collaborations, and overall participant engagement, showcasing an enhanced and broader educational impact at Circular Science program from one academic year to the next.

The comparison indicates growth and strengthening of the Circular Science program in terms of academic offerings and institutional commitment, suggesting a positive impact on promoting science and research among students. This increase in the program's dimensions reflects a concerted effort by the consortium partners to expand its reach and impact, significantly contributing to scientific education and the development of a culture of research and innovation.

Activities Offered: There was a significant increase in the total number of activities offered from 182 in 2022-2023 to 235 in 2023-2024. This suggests a broader engagement strategy and possibly a wider range of topics covered.

Sessions: The total number of sessions saw a substantial rise from 333 in 2022-2023 to 465 in 2023-2024, indicating an expansion in the delivery of educational content and opportunities for engagement.

Female Researchers: The involvement of female researchers increased slightly from 122 in 2022-2023 to 143 in 2023-2024, showing a positive trend towards gender balance in research roles.

Male Researchers: Male researcher involvement also saw an increase, from 112 in 2022-2023 to 143 in 2023-2024, maintaining gender parity in the participation of researchers.

Schools: The collaboration with schools increased significantly, from 239 in 2022-2023 to 408 in 2023-2024, indicating a wider reach into the educational community and possibly a more extensive impact on educational systems.

Participants: Participant numbers saw a substantial rise from 16,691 in 2022-2023 to 21,071 in 2023-2024. This growth in participation reflects the increasing interest and engagement in the activities offered by the partner universities.

Individual University Highlights: UO and UNIZAR showed remarkable increases in participant numbers, with UNIZAR's participation almost doubling, which could be indicative of specific programs or activities that attracted high interest. UPV/EHU increased its sessions substantially, more than tripling the number from the previous year, which could suggest a strategic emphasis on more frequent and diverse engagement opportunities.

The comparison between the academic years 2022-2023 and 2023-2024 reveals a comprehensive growth and dynamic evolution in the engagement strategies employed by the partner universities of the G9 group. This growth is not only quantifiable through the increased

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number of activities offered and sessions held but also qualitatively evident in the enhanced gender balance among researchers and the broader educational impact evidenced by the expanded school collaboration.

The remarkable uptick in total participant numbers — from 16,691 to 21,071 — is a testament to the successful outreach and the compelling nature of the programs offered. This escalation reflects an increased interest and engagement from the community, signifying the relevance and appeal of the activities provided. It underscores a growing enthusiasm for scientific inquiry and educational participation, which is crucial for fostering a knowledgeable society that values research and learning.

Furthermore, the concerted effort to achieve gender parity among researchers, with both female and male researchers seeing increased involvement, is particularly noteworthy. This shift towards gender balance in the academic and research fields mirrors the broader societal movement towards equality and inclusivity. It serves as an encouraging sign that the academic community is not only acknowledging but actively addressing historical gender disparities in research and academia.

The significant increase in school collaborations points to an expanding influence of these universities within their local and regional educational ecosystems. By engaging with a greater number of schools, the partner universities are effectively broadening their educational reach, potentially impacting future generations of scholars and professionals. This strategic expansion into the educational systems suggests a visionary approach to building robust and enduring educational networks that support lifelong learning and curiosity.

In conclusion, the academic years 2022-2023 and 2023-2024 showcase a vibrant period of growth, innovation, and inclusivity for the G9 partner universities. The data reflects a collective commitment to enhancing educational outreach, promoting gender balance, and deepening community engagement. These efforts are indicative of an educational philosophy that values diversity, inclusion, and the dissemination of knowledge. As these universities continue to evolve and expand their programs, they set a commendable example for institutions worldwide, demonstrating the power and importance of education in shaping a more informed, equitable, and engaged society.

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