



Barcelona Institute of  
Science and Technology

# BIST Community professionals participate in the design of science education projects

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Nearly 30 people from the BIST Community have collaborated this trimester in the design and implementation of science education projects with teachers and students from the Angeleta Ferrer Secondary School.

As the school trimester comes to an end, so do the STEAM projects the first- and second-year high school students at [Angeleta Ferrer](#) have been working on. Though the students might not be aware of it, they are enrolled in a rather special school, one that is also a [centre for innovation in science education and training for teachers in STEAM disciplines](#), possible in part through a collaboration with BIST. In the last three months, and as part of their curricular activities, the students have been working on STEAM projects, **learning about science by doing it**, accompanied by their teachers and by BIST Community researchers and outreach professionals.

## Getting to know the scientists

The 81 first- year ESO students have been discovering what it means to be a scientist, and have formulated scientific questions, designed experiments to solve them, and communicated their results in poster format in front of families, teachers and researchers.

Divided into small groups, the students visited either [IBEC](#), [IFAE](#) or [IRB Barcelona](#) and conducted interviews with researchers, such as [Jonás Chaves-Montero](#), a postdoctoral

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*very good at motivating the students,”* explains Bartomeu, who is in the last year of her PhD.



Jonás Chaves-Montero (left) and Anna Bartomeu (right) at IFAE and IRB Barcelona, respectively

The students have also learned how to script and shoot a video interview as a result of this project.

## Addressing sustainability from different perspectives

The 61 Angeleta Ferrer second-year ESO students worked on a project called “Pollution”, which allowed them to learn about contamination and tools and practices to reduce it. For this project, they counted with professionals from [ICFO](#), [ICN2](#) and [ICIQ](#).

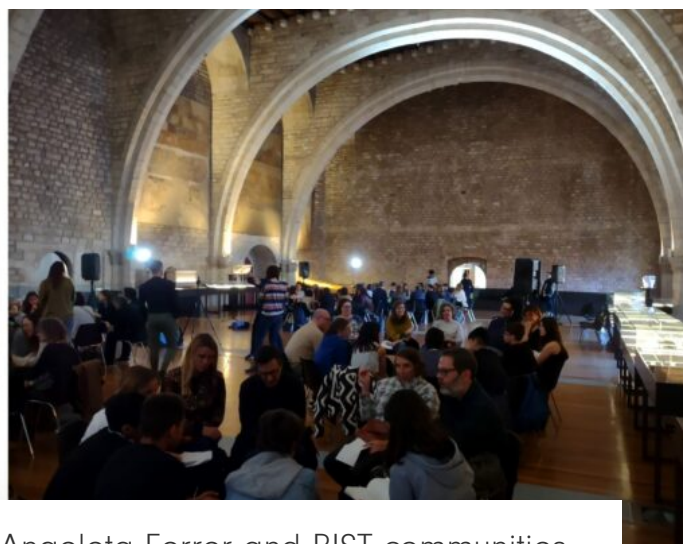
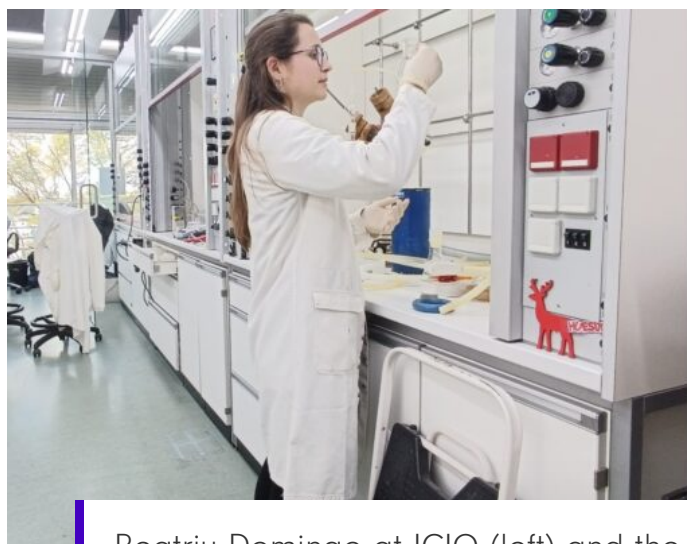
One of the project aims was to study the pollution around the institute’s premises and learn how to reduce it. For this, the students, advised by the researchers, constructed CO2 sensors and also collected data for temperature and particles in the air. In parallel, the students reviewed online resources to learn pollution reduction measures that could be applied to the institute’s surroundings. With this knowledge in hand, they produced a leaflet which was then presented to families, researchers and representatives from the Barcelona City Council

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explains Domingo. *"I had never been in a high school that works like Angeleta, and I really enjoyed the experience,"* she adds.



Beatriu Domingo at ICIQ (left) and the Angeleta Ferrer and BIST communities at the Saló del Tinell during the project presentations (right)

## New STEAM Programme in the upcoming school courses

To develop these two STEAM projects, the teachers worked hand-in-hand with BIST Community outreach staff and researchers. Both projects have allowed students to learn scientific concepts as well as to understand how science is done by experiencing the process themselves and getting to know researchers from the BIST Community. As the Angeleta Ferrer Institute grows in numbers (next year it will host students from the first to third ESO grade), the number of STEAM projects and their complexity will also grow.

With the objective of training teachers from other [Catalan secondary institutes in STEAM learning](#), the [Catalan Government approved the STEAM Programme at Angeleta Ferrer](#) this week. The programme, which will start in the 2023-2024 school year, provides the tools to structure the secondary school educative action at the Angeleta Ferrer Institute with teacher training, educational innovation, and research in science didactics.

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