

Promoting scientific and technological culture



Interview with the teachers of the course “Fun with Science and Technology”

Aitor Santamaria and Oihane Zarate. [Deusto LearningLab](#) - School of Engineering, Deusto University

What happens when we send a text message? Why does having more pixels result in a higher quality digital image? How do we perceive flavour? Is the mass of an object the same as its weight? Do batteries store a certain amount of current? These are questions that we ask ourselves and, on many occasions, we do not know the answers, even though they are questions that are close to our everyday experience.

We live surrounded by science and technology and, in the field of technology, we are often no longer just consumers; we have also become creators. Therefore, we need to understand what science and technology are, how they work, and the impact they have on our daily lives.

Through the course “Fun with Science and Technology” we want to promote the development of scientific and technological skills and competences in non-formal education. We believe that these environments, where knowledge and experiences are shared among diverse people, are also spaces where the study and dissemination of science and technology should be promoted.

There will be three sessions in which participants will have the chance to discover various aspects from the fields of science and technology that are close to them. Among these, we can highlight activities that work on computational thinking, taking the first steps in the world of research, and broadening the approach to these fields in a critical spirit.

With regard to computational thinking, the dynamics and resources that will be used involve the identification of problems and the use of tools to solve them. The foundations of the proposed activities in this field are: the importance of organising data in a logical

way and analysing them, as well as identifying and implementing possible solutions to find the most efficient and effective combination of steps and resources. For example, computational skills will be used to establish the precise instructions, in the right order, for someone to achieve a specific goal and reach the defined destination.

In the field of science and research, we will learn to understand the importance of data, observations and evidence to carry out scientifically structured projects, thus promoting research, reflection and debate on issues that affect and surround us on a daily basis.

Finally, based on a gamification approach and learning through experience, we shall use various methodological strategies. On the one hand, board games and unplugged computer activities, through which young people will learn how a computer works, coding systems, and other computer concepts without the use of technological devices. On the other hand, during the training, participants will learn about and put into practice technological tools that will allow them to interact with young people and to gamify the way they think about any subject.

The main goal of Deusto LearningLab (<http://learninglab.deusto.es/>) is to research and innovate in the teaching of STEAM (Science, Technology, Engineering, Art and Mathematics) through methodologies such as game based learning, remote experimentation, and enquiry. Along these lines, we propose the course "Fun with Science and Technology" as a meeting point with professionals to transfer the knowledge generated in the projects we develop in the School of Engineering group at Deusto University.