

INTRODUCTION

The ScienceWeek is one of the main scientific outreach events every year in Spain. The Institute of Earth Sciences Jaume Almera of CSIC (ICTJA-CSIC) participates in it since many years ago, opening its doors and proposing several activities in which it is shown what kind of multidisciplinary research is being developed at the Institute and in Geosciences too.

The ICTJA-CSIC joined Science Week 2016 in the framework of the activity entitled "What we investigate in Earth Sciences?". Between November 14th and 19th 2016, more than 100 students from four secondary schools from Barcelona area visited the Institute and took part in the Science Week.

A total of six interactive workshops were prepared showing different features of seismology, geophysical borehole logging, analog and digital modelling, paleoecology, volcanology and geochemistry.

The activities, developed as workshops, are designed and conducted by scientific and technical personnel of the centre, who participates in the Science Week voluntarily.

The activities proposed by the ICTJA-CSIC staff are designed for a target audience composed by secondary school students (12-18 years).

We show in this communication the experience of the Science Week 2016 at the ICTJA-CSIC, carried out with the effort and commitment of the Institute's personnel with the outreach of Earth Sciences research.

OBJECTIVES

- Increase the interest in scientific activity
- Promote social knowledge of Earth Sciences
- Generate new vocations in the field of the Earth Sciences among secondary school students

SCIENCE WEEK 2016, 14-18 NOVEMBER 2016

How the research in Earth Sciences is done?

In this workshop, visitors took a guided tour through the ICTJA-CSIC facilities. During this visit, in which they entered to the X-Ray Diffraction lab and labGEOTOP-Geochemistry lab, students got a wide overview of the different analitical techniques used at a multidiscilplinary research center like ICTJA-CSIC.



Exploring the subsurface: geophysical borehole logging

Students could see and touch six drilled core replicas provided by ECORD outreach program from some of the international scientific drilling projects (ODP and IODP). Moreover students were taken in a journey through the depth and time, and they could observe some of the real rock core samples obtained by scientific borehole Almera-1, which is more than 200 mts de



Back to the future: clues of the past in the sedimentary archives

Visitors were explained how the paleoclimatologists and paleoecologists work and how they are able to know how the climate was thousands of years ago. They could also see and touch a real sedimentary core taken from a lake in the Pyrenees and got and overview of the proxies used by paleocologist to reconstruct the past to understand the present and forecast the future.



The ICTJA-CSIC Science Week 2016: an open door to Earth Sciences for secondary education students

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by Marta Rejas-Alejos





by María-José Jurado





THE WORKSHOPS

How the earthquakes are recorded?

Students were given an introductory talk to the world of seismology. What is an earthquake? And a seismometer? How does a seismometer works? What kind of information can we obtain from earthquake records? These are some of the questions answered during the talk. Afterwards, visitors could also see the ICTJA educational seismometer placed at the Institute entrance door and even provoke a little human made earthquake with their collective jumps.





by Pilar Sánchez-Pastor and Jordi Díaz



Augmented Reality sandbox: the evolution of the Earth's Topography

With the combination of topography image projected on a sand surface and also a virtual water flux, visitors could understand the origin and evolution of Earth's relief. Thanks to the sandbox created last year, students could simulate the tectonic plates movement, provoke rain over the created relief and understand the erosion processes that shape our



by Daniel García-Castellanos and Ángel Valverde-Pérez



Land of volcanoes!

Students were given a talk about the basic concepts of volcanoes and volcanology. During the workshop they could touch and look some of its resulting products, like volcanic rocks. The talk included also a part dedicated to volcanic hazards. A lava lamp was created during the workshop to understand the influence of the density in the magma rise from the Earth's interior to the surface



by Adelina Geyer







PARTICIPANTS





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