

## **D 3.02 Activities for the school year 2021-2022**

This document summarises the activities developed by OceanNight within the school year 2021-2022 (May to June).

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## Activities school year 2021-2022

### Centro de Estudios Avanzados de Blanes. CEAB-CSIC

**June 14<sup>th</sup>, 2022.** Two talks to secondary school students (ESO) from INS Rocagrossa de Lloret de Mar.

**June 14<sup>th</sup> 2022.** Activity title: "*Mystery Boxes*". On the 1st day of the "synthesis project" for 2 ESO (students aged 13-14 years old) we gave a talk on how to conduct research following the scientific method. Our talk was timely as they were about to start a project on assessing the presence of plastics on their city. To do so they will follow a scientific protocol, so our objective for the talk was to explain the scientific method in a practical manner. The way we did so was through a hands-on activity called "Mystery boxes" where students have to make observations about what might be inside several boxes, using their sense (shaking the boxes, listening to the sound of what's inside, etc). Once they've gathered the observations (the evidence), they have to come up with a shared educated guess for the boxes' content. This is a metaphor of the scientific method, where evidence gathered is used to draw conclusions, but where uncertainty is always present. This activity is inspired to an activity developed at U. Berkeley (CA, USA)([https://undsci.berkeley.edu/lessons/mystery\\_boxes.html](https://undsci.berkeley.edu/lessons/mystery_boxes.html)) In this case it was adapted to the general framework of the OceanNight project and in particular to the topic of the impact of climate change on the oceans' ecosystems.

Estimated number of people reached: 80 students + 6 teachers

**Instituto de Ciencias Marinas de Andalucía. ICMAN-CSIC**

The main activity has been the design and printing of didactic material (memory cards, black boxes, mazes) that will be sent to the different Institutes participating in the OceanNight Project. This activity is expected to be completed before the end of July.

In the meantime, we have also run 9 individual school visits to present the seminar “Los Océanos. Importancia y actuales amenazas” (“The oceans. Importance and current challenges”). The visits were 1h in total with 40min for the seminar and 20min for a guided debate. The table below shows the schools where we run these short visits.

Seminarios: Los océanos. Importancia y actuales amenazas:

Instituto	Localidad	Responsable	Horario
San Severiano	Cádiz	M. Carmen Paul	Lunes 11:30
Montaigne	Jerez	Elena Martín	Martes 08:15
Padre Coloma	Jerez	Mario Barrenas	Martes 12:45
García Gutiérrez	Chiclana	Irene Marín	Miércoles 11:30
IES Sofía	Jerez	Ana Recio	Jueves 10:45
San Agustín	Chiclana	José Luis Torrero	Jueves 13:30
Muñoz Seca	Puerto de Santa María	Judith Ruiz	Viernes 09:15
Muñoz Seca	Puerto de Santa María	Judith Ruiz	Viernes 10:15
Muñoz Seca	Puerto de Santa María	Judith Ruiz	Viernes 11:45

Finally, before the end of the school year we have arranged to visit five primary schools in September (and in coordination with the other schools participating in the Project), to present marine biology workshops and themed games using the OceanNight didactic material (mazes, black boxes, Memory Card games, etc) that we are producing.

Institut de Ciències del Mar. ICM-CSIC

**May 6<sup>th</sup> , 2022. Visit students of the Autonomous University of Barcelona (UAB)**

A group of 37 students of the subject “Professional perspectives of Microbiology” of the UAB visited some of our labs (molecular biology, microscopy, virology and flow cytometry) and attended to lectures on Marine Microbial Ecology at the ICM during all the morning.

**June 8<sup>th</sup>, 2022. Oceà Barceloneta**

Oceà Barceloneta is a treasure-hunt-style series of activities for primary and secondary schools in the Barceloneta neighbourhood, which brings together different social and environmental organisations within the framework of World Oceans Day. The different organisations carried out activities for the participating pupils throughout the morning. The treasure hunt involved altogether 250 students from two primary schools (Escola Alexandre Galí and Escola Mediterrània ) and three secondary schools (INS Joncar, INS Salvat Papasseit and INS Voramar)

There were four activities included in the Ocean Night project

- **"dONes: motor de la recerca marina i ambiental"**: activity to raise awareness of the role of relevant women in the history of environmental research and activism (Lynn Margulis, Ángeles Alvariño, Marta Estrada, Josefina Castellví, Rachel Carson and Sylvia Earle).

- **"Sea Watchers: train your scientific eye"**: in this activity, participants are taught to identify the state of health of Mediterranean gorgonians and corals affected by global warming, and are offered an observation game where they can test their scientific eye.

-“Tales of the sea”: we used 3 tales as a base to talk with children about different aspects of marine microbial ecology (trophic nets, plankton, benthos and necton) and to raise awareness on the different impacts (overfishing, coastal antropization, an plastics in the sea).

“Plankton: there where the waves take you”: This activity was a workshop of observation with microscopes and magnifying glasses to get to know the plankton and its ecological importance. The workshop included books for classification of organisms and models of different organisms: virus, bacteria, microalgae, copepods, fish larvae).

The ICM selected schools aimed to participate are:

Primary schools:

- Escola Tanit
- Escola Mediterrània
- Escola Alexandre Galí
- Escola Guerau de Liost

Secondary schools:

- INS Voramar
- INS María Espinalt
- INS Joncar
- INS Papasseit
- INS Icària
- INS Quatre Cantons
- INS Front Marítim

## Instituto de Investigaciones Marinas. IIM-CSIC

### **May 27th, 2022. A sustainable and flavourful ocean**

Workshop at a primary school with students ranging from 6 to 11 years old. The activity covered information regarding tides, fish identification, and new technologies and materials for sustainable fisheries. Firstly, the IIM staff explained to students some basic information about the ocean and how it works. Secondly, in a practical session, the staff encouraged students to participate in recognizing local commercial fish species and stressed the importance of ensuring the preservation of biodiversity.

Estimated number of people reached: 150

Name of the School: CEIP Javier Sensat.

Classes: 1º, 2º, 3º, 4º, 5º & 6º Primaria

### **June 8th, 2022. Living the sea & A sea of plastics and pollutants.**

The World Ocean Day was celebrated on June 8th with a science fair called "Feira do Océano" organized by IIM-CSIC. This event had an OceanNight stand that held two individual workshops:

i) The first activity was "Living the sea", a workshop on marine species and their habitats. Students discovered and learned the marine species found in coastal areas through observation. Mock aquariums based on hand drawings show the most common marine species of fish and invertebrates in the coastal waters.

ii) The second activity was "A sea of plastics and pollutants", a workshop on bioaccumulation of pollutants. For this activity, we built special "aquariums" where the students could quantify the contamination. At the end, their findings were discussed by comparing environmental data from a variety of locations.

Estimated number of people reached: 450 in total, with pupils from Primary and Secondary schools visiting the stand as follows:

- 10:00 to 10:50 - IES Beade: 50 students, 1º ESO
- 10:50 to 11:40 - IES Beade: 50 students, 2º ESO
- 11:40 to 12:30 – CEIP Javier SensaT: 25 students, 5º Primaria
- 11:40 to 12:30 - Colegio Atlántida: 55 students, 1º & 2º ESO
- 12:30 to 13:30 - CEIPs Virxe Do Rocío: 26 students, 6º Primaria
- 12:30 to 13:30 - Mestre Manuel García: 28 students, 5º & 6º Primaria



## **Instituto Mediterraneo de Estudios Avanzados. IMEDEA-CSIC**

### **Month of June 2022. Planning with the local educational services of the Balearic Islands.**

IMEDEA has been in contact with the Balears Environmental Educational Service in order to launch through this service the activities programmed and reach the largest possible number of schools in September. This follows a local change in the planning and delivery of school modules in the Balearic Islands that, for what pertains the OceanNight project, require us to structure the school outreach activities as teaching modules. So far, we have already created three projects and plan to add more. Details below.

### **May 17th-June 6th, 2022. Aquí comença la mar**

Outreach project organised by the municipality of Esporles and to which we contributed by providing the scientific content. A route across the different bridges over the creek in Esporles, where the schools discovered 8 different marine ecosystems. The last one is the trash ecosystem, created by the floating plastics in the oceanic garbage patches. This is accompanied by an art display created by the local primary school and a display of the garbage recovered by cleaning the local creek. The key message to be conveyed is that what we do to lakes and rivers ends up affecting the marine ecosystems.

Estimated number of people reached: 500 pupils between the local primary and secondary; unknown number of the general public (the activity is ongoing).

URL: <https://sites.google.com/espores.cat/aquicomencalamar/inici>

### **June 3rd (recording) and 4th (broadcasting) Interview IB3 Nautilus**

Interview for the local radio IB3, program "Nautilus", host Cristina Amanda Tur. We talked about the OceanNight project, the Researchers Night Project and the first activity we are doing in Esporles (Aquí comença la mar).

Estimated number of people reached: From Cristina Amanda Tur, the journalist in charge of the program: audience of aprox. 42000 people