



## **Of course we play... ..**

### **Background scenario of classroom visit**

In the context of the "Science inspired" EU project and game based tours, the activity Of course we play is proposed... which is addressed to secondary school students, is implemented in the Noesis technopark with the help of tablets and the appropriate Action Bound software.

Students come into contact with the scientific language of Physics and problem-solving methodologies. The selection of activities was based on the following axes:

- Coverage of different and varied topics of Physics (Energy, Magnetism, Engineering, Waves)
- Approaching science through everyday examples and interpreting them with scientific methods and using scientific vocabulary.
- Causing students' cognitive conflicts (prior knowledge-scientific knowledge) in order to be led to scientific knowledge.
- Development of critical thinking.
- Entertainment
- Acquiring motivation for learning.

The reflection and the feedback that the student will receive together with the classmates and teachers after the elaboration of the activity is considered important. Because the activity is carried out as an educational activity, it will be good to be connected with the curriculum but also with other extracurricular activities.

Thus in the classroom the teacher will have the opportunity to use the activity as an occasion but also as a tool for interpreting natural phenomena, as well as examples of connecting science with everyday life.

The high school curriculum contains the concepts of power, energy, thermal energy and its transmission. Issues of electricity, sound waves and more are also studied. In high school, the concepts of mass and weight, circular motion (centripetal and centrifugal force), energy and electromagnetism are studied. The teacher can use the activities and the interaction with the exhibits to deal with any misunderstandings that the student may have, to connect the scientific knowledge with the daily life of the students but also to make the learning process more attractive and efficient.

The teacher can also use the activity in the context of extracurricular activities such as European programs with corresponding topics, eg Sustainable Development and STEM and Digital Storytelling.

More specifically, after visiting the Physics II High School lesson in chapter 6.2 Heat: A form of energy and 8.1 Heat dissipation with treatment can be used Riddle 1 (Exhibit: Hot or Cold) of the activity by asking questions such as (What did you notice, interpret the phenomenon, because the phenomena were observed during the interaction, in our daily life, when and where did you observe corresponding phenomena)

Respectively, in the 3rd Gymnasium, in the chapter ENERGY TRAVELS 5.1. Mechanical waves 5.2. Wave and energy 5.3. Characteristic wave magnitudes 5.4. Sound Riddle 4 (Exhibit: Enhance it) can be used to interpret some of students' misunderstandings about sound and to interpret difficult phenomena such as tuning. Here again, the activity will be used to interpret well-known everyday phenomena.

The visit and the activity can be combined with some research work prepared in the Lyceum during the year with the theme: Science in everyday life. The results of the research work are posted on the school website and presented to the class plenary.



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