OPEN DISCOVERY SPACE

Summer School 2015 Mati, Greece, July 12-17

UDLnet
Universal Design for Learning

Basic info on the scenario:

- Name of participant: Maria Eleftheriou
- School: Lyceum of Tzermiadon
- Country: Greece

- Title of scenario: Landing on a comet!

- Short description/ main idea: Pupils will enter to the magical world of astrophysics and space science. Astrophysics is not included in Greek curriculum thus is a great opportunity to connect comets with physical laws and to learn about them through diferent activities.

Educational objectives and pupils' competences targeted:

- Inquire based learning
- Collaboration of pupils, working into teams.
- Searching on the web, learn to find the correct-reliable sources.
- Playing and learning through ICT tools: Tracker, craters simulation, Interaction Physics software
- Working as a researcher

Pupils' ages:

- The scenario can be applied in two different interval of ages: 13-15 or 15-18 with some changes. Here we apply the scenario to the second interval of ages.

Curriculum areas/ domains involved:

Physics (mechanics, astrophysics)
Informatics
Mathematics
Chemistry
Technology

Which school needs does your scenario address?

Our school each year set an action plan.
Early school leaving is a real phenomenon in our school. Teaching
Using different methods such as inquiry based learning helps pupils
To follow more easily the difficult Greek curriculum. On the other
Hand we want to inspire all the levels of pupils and this can be
Achieved with this type of scenarios.

Innovative characteristics

- Interdisciplinary
- Inquiry based learning
- ICT tools

Parental engagement

Parents:

- be informed about the project
- can participate in the laboratories of the project
- be informed about the improvement of their child and their skills.

- The role of parents is collateral

School:

- To avoid early leaving
- To give new perspective to pupils.

Parental engagement

- Parents support the work of teachers.
- Parents learn from their own what their children have to change.

- Administration of the school is more powerful.

Equal learning opportunities

- The pupils of low grades are proved to be very skilful in ICT tools.
- The collaboration between the pupils gives the opportunity to learn one from the other.

Game-based learning

- Several activities in the present scenario are based in a game-based learning: Tracker, craters simulation, rockets construction

Phase 1: Preparation

- Organize the class into teams
- Find the specific materials for the laboratory
- Preparing working sheets
- Preparing assesment sheets

  Activities:
- Tracker activity
- Comet laboratory (simulation & construction)
- Interactive physics
- Rocket laboratory

Phase 2: Implementation

- Depends on the activity, please see last slide

Phase 2: Assessment

- Depends on the activity. Please see last slide

Resources

1. Tracker software, Community on ODS “ΓΕΛ Τζερμιάδων”: http://portal.opendiscoveryspace.eu/edu-object/how-study-free-fall-tracker-software-831834
2. Craters simulator: http://simulator.down2earth.eu/
3. Interactive physics: http://portal.opendiscoveryspace.eu/sites/default/files/ws_ip_0.pdf
4. How to construct a comet, Community on ODS “Chasing Comets”:

http://portal.opendiscoveryspace.eu/edu-object/cooking-comet-805425

5. How to construct a rocket: coming soon.....