Project ICAROS Report Code	[GR-EA-2018-03-08]
Title	**Teaching "Risk awareness and analysis" with ICAROS**
Start/End Date	1 – 31 March 2018
Coordinator name and email	Georgios Mavromanolakis (gmavroma@ea.gr)
Name of teachers	GM
Number and age of students	10 students, 16-18 years old
Description of activities	In this activity students learn the basic concepts and notions of risk, risk awareness, risk analysis, precautions measures, safety regulations etc. Their main task is to go around in various places inside and outside their school where they could possibly fly ICAROS and then identify the risks that these pauses to themselves, to other persons, to the environment like nearby vehicles and buildings. They can categorize each risk according to a 3-point scale from Red (high risk), Yellow (medium risk), Green (low or no risk). The activity is divided in 4 main tasks and is done by students split into groups of 2 or 3 persons. Task 1 – Preparation All student groups familiarize themselves with the procedure they have to follow, the places where they have to go and survey, and the table (attached below) where they have to report each risk level. Task 2 – Field survey In this task each student team goes around to different places inside and outside the school and identify the risks according to the table. The proposed places are: 1. Parking of school buses, 2. Outdoor sports field, 3. Indoor sports stadium, 4. fiel students collect sensor data (gyroscope values at X, Y, Z axis; accelerometer values at X, Y, Z axis; Task 3 – Presentation of findings In this task each student group presents its findings and discusses its point of view and rationale. Task 4 – Discussion and conclusion In this task all students discuss, collaborate and agree on a common risk table for the various places they surveyed. They also discuss and propose precaution measures and safety regulations to minimize risk.

Learning outcomes	Through this activity students learn the basic concepts and notions of risk, risk awareness, risk analysis, precautions measures, safety regulations etc. Students learn also to use common spreadsheet and presentation software tools to report data, to make graphs, to present their findings. Also, as they work in groups to perform the assigned tasks they practice and develop their skills of collaboration, communication, presentation.
Photos or other relevant material	See below Report Table and Instructions

Place:

Instructions: Fill the risk level you think is more appropriate in each of the 10 grey boxes. Report each risk according to a 3-point scale from Red (high risk), Yellow (medium risk), Green (low or no risk).

In box MU you must report the risk that the machine/drone poses to the user/pilot.

In box EU you must report the risk that the environment (e.g. trees, stairs, buildings, vehicles etc) poses to the user/pilot.

In box OU you must report risk that other people poses to the user/pilot.

In box UM you must report the risk that the user poses to the machine/drone.

In box EM you must report the risk that the environment poses to the machine/drone.

In box OM you must report risk that other people poses to the machine/drone.

In box UE you must report the risk that the user poses to the environment.

In box ME you must report the risk that the machine/drone to the environment.

In box UO you must report risk that the user to other people.

In box MO you must report risk that the machine to other people.

	USER	MACHINE	ENVIRONMENT	OTHER PEOPLE
USER		UM	UE	UO
MACHINE	MU		ME	MO
ENVIRONMENT	EU	EM		
OTHER PEOPLE	OU	OM		