

. 8th JUNIOR HIGH SCHOOL OF PIRAEUS.

In an effort to raise sensitivity of students towards issues concerning the environment and recycling of materials (which are re-used and transformed into something new and useful) in the school and social life, we have created a site that provides students of different levels with the ability to participate, cooperate and create without geographical or social restrictions.

This is achieved during the educational procedure through games using new technologies (computers, web, microcontrollers, sensors, automation and robotics). Therefore, the construction of our recycling game machine is included in our school's educational activities.

RECYCLE ARCADE

The project consists of two main stages:

The stage of the construction of a recycling game machine and the stage of the creation of the website which will support the venture in all aspects.

More specifically all school participating teams should firstly construct a recycling game machine and at this stage they will be helped in their attempt by the material included in the website (different cabin designs adapted to the school unit needs and by the materials we want to be recycled by this game machine, connection of circuits and controls, programming and connection of the Arduino developing system) as well as through the forum they can ask for help from secondary school students' teams with knowledge on electronics (such as students from Technical and Professional Lyceums) and talk about possible improvements.

Especially, the primary education students who lack specialized knowledge should interact with higher grade students through a cooperative concept. At the same time teams will have been created who will be able to solve such problems both with personal contact and through the forum. The design of the machine and its connection with the internet and the scratch environment offers the ability of participation to all students from the age of 5 to ..., who will be able to interact with each other, exchange opinions and experiences and also program through the educational environment of scratch which was created by the MIT university.

Obviously this website is not addressed only to teachers who want to teach only basic programming (game creation learning), but also to teachers of other subjects through their approach to nursery school students up to students of higher levels of education. Their participation is ensured, apart from the construction of the machine, the division and modification of the games, by the possibility of creation, project and sharing videos coming from all participants of different ages and knowledge.

The use of new technology offers the opportunity for participation, sharing and co-organization of works by single individuals or teams without any geographical limits. All this effort involves the environmental consciousness, which is created and expands in the long run through the procedure of learning and playing.

Each team makes an entry of the amount of items which are recycled every day in this website, monitors the other teams as far as the rate of achievement of the common target

is concerned, and realizes the positive results a whole effort can have through the graphs of recycled items according to the materials and presented on this website.

At this stage of achievement of the whole attempt the role of the organization which will take over the collection and management of the recycled materials in various regions is very important.