ROBOSTEM Project

Agreement no: 2019-1-RO01-KA202-063965

Lesson Plan "Platform Arduino – Using Buttons"

Topic: Platform Arduino – Using buttons
Subject: ICT

Target Group:
VET students, aged between 12 - 15.

Objectives:
Obj1. To provide a basic understanding of using buttons in Arduino
Obj2. To practice how to use a push button to turn on and off a LED in Arduino Platform

Approach/Methodology used: This lesson focuses on teaching VET students about using buttons in Arduino. The teacher will use a PowerPoint presentation to lecture on the explanation of using buttons in Arduino, showing how to use a push button to turn on and off a LED. Next, the students are involved in a problem-based learning activity where they put into practice what they have learnt.

Means/Tools/Educational technology
- A projector or interactive whiteboard and a computer with the software needed for running the PowerPoint presentation.
- Problem-based learning (PBL) template
- Computers and Arduino SW
- Arduino Board
- Breadboard
- 330 Ohm Resistor
- Button
- Wires
- LED
- USB Cable

Plan for work

Time	Activities	Methods/ means
10 min.	Use a PowerPoint presentation to introduce explanation of using buttons in Arduino, showing how to use a push button to turn on and off a LED.	Lecture / Projector or interactive whiteboard

20 min.	Prepare the students for the problem-based activity. Form teams of 3-4 students, hand them the PBL template. Ask the teams to use buttons in Arduino. Supervise and support the teams while they are using buttons in Arduino SW.	Collaborative work; PC/Arduino SW / PBL template/ usb cable, led 3v, 33OΩ resistor, button and wires
15 min.	Ask the teams to either present their results to the class or to another team.	Classroom discussion

Assessment/Feedback:

The teacher will evaluate the results prepared by students as well as the presentations of the buttons used by them in the last part of the lesson.

Bibliography:

- https://www.arduino.cc/