LESSON PLAN

Student age (13-15)

Stem class

Previous knowledge (basic physics -waves, electicity- and basic experience with arduino projects)

A.BE AN INVENTER (THE ART OF AN INVENTOR)

Talk about characteristics of an inventor (20 minutes)

Link: <https://www.invention-info.com/characteristics-of-the-best-inventors>

B. HOW TO MAKE A “PATENT”-ULTRASONIC REMOTE CONTROL - BY A MODIFIED ELECTRONIC DEVICE

1) UNDERSTANTING THE HC-SR04-MAKING THE BASIC DISTUNCE DETECTION CIRCUIT (1-2 HOURS)

TUTORIAL: <https://create.arduino.cc/projecthub/Isaac100/getting-started-with-the-hc-sr04-ultrasonic-sensor-036380> OR <https://www.instructables.com/id/Distance-Detector-1/>

OPTIONAL USE THE PRESENTATION (POWER POINT)

2) UNDERSTANTING OUR NEEDS-ACTIONS

First we need a transmitter that produces a signal constantly-see this instructable (20 minutes)

Second we need a receiver. Talk about the modification of hc sr04, covering the receiver module in order to receive only and not transmit, and construction-code etc -see this instructable (1 hour)

Possibilities i.e. –next project <https://github.com/nektarios25ma/GYMNASIO-BRYSWN2>