## Lesson Plan - Physics

**Topic/Subject:** Water Sensor

**Target Group:** 10th grade students

**Objectives:**
Obj1.   Raising student motivation and awareness through usage of modern technology
Obj2.   Stimulating cognitive curiosity
Obj3.   Developing microcontroller programming skills
Obj4.   Learning how water sensors work
Obj5.   Learning about connecting water sensor to Arduino

**Approach/Methodology used:**
Lecture, explication, presentation, demonstration. Students learn about simple Arduino commands by connecting a temperature sensor to Arduino by themselves.

**Means/Tools/Educational technology**
1 × Breadboard
1 × Arduino Uno R3
1 × Water Sensor
1 × led
1 × 330 ohm resistor
**Plan for work**

| Time | Activities | Methods/ means |
|---|---|---|
| 5 minutes | Recall of the previous lessons | Lecture |
| 5 minutes | Preparing and explaining all the tools needed | Explication/demonstration |
| 10 minutes | Explaining how the water sensor works | Lecture |
| 10 minutes | Device construction | Explication/demonstration |
| 10 minutes | Device programming | Explication/demonstration |
| 10 minutes | Testing the functionality of the device | Presentation/demonstration |
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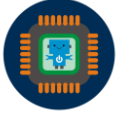
**Assessment/Feedback:**
The assessment is based on how active the students are during the presentation, how many questions they ask and how interested they are in this specific area of knowledge and how well they do during the programming and constructing the device.

**Bibliography:**
**For a tutorial on how to construct this project, visit the link below:**
https://www.tutorialspoint.com/arduino/arduino_water_detector_sensor.htm