

## LESSON PLAN

Subject: ICT

Topic: Internet of Things

Age of students: 15/16

Language level: B1

Time: 45 minutes

### **Content aims:**

**After completing the lesson, the student will be able to:**

Explain the term Internet of Things.

Describe how Internet of Things functions.

List the principles of work for Internet of Things.

Discuss how Internet of Things changes our life.

Analyze the way Internet of Things will change the way of life in the future.

### **Language aims:**

**After completing the lesson, the student will be able to:**

Use new vocabulary about the Internet of Things.

Express a personal opinion about the Internet of Things.

### **Pre-requisites:**

Pupils have learned about Internet, computer networks and how it all works.

Materials:

Materials needed:

Computer or tablet for each pupil.

Procedure steps:

1. Make copies of the handouts for each learner in the class
2. Start this lecture by doing a quick recap of lessons on Internet and computer networks with students. After finishing with all the standard terms of those 2 lessons ask students if they know what INTERNET OF THINGS is?(IoT-Internet of Things)



3. While discussing this topic with students, start small...try explaining the concept of IoT on smaller scale, lets say the classroom they are in. Talk with them on topic of what devices are currently connected into computer network of this classroom.
4. After students understand the concept on such a small scale discuss with them and try to guide them into a larger picture, and ask them on how IoT would work in a house or a city.
5. During this section of lesson talk to students and explain to them the concept of a Smart House, how it works and what are the benefits of them. While talking to them discuss all the applications they see of living in a smart house. Automated heating, lightiing regulation via sensors or controled from a tablet or mobile phone. Dissscuss with students and try making a list of smart things they would like to have in their own houses
6. Remainder of class disscuss and explain to students how IoT would function on a large scale, in a city. Explain to them how Smart Citys function. Talk to them about live examples of smart cities and what were the benefits. Tell your students how Barcelona implemented IoT and became one of the first European Smart Cities. Show them statistics on it, how much money was saved by making public lights sensor regulated, or how less water was used to irrigate town parks. Explain them how water irrigation works when made smart. Barcelona implemented sensors into their irrigation system, so city parks dont get watered every day they get watered only if soil moisture gets under certain levels, and also if weather forecasts dont predict rain in next 2 days. So basicly what they did there was save alot of water and with it alot of money just by conecting small moisture sensors into their parks. Same thing can be done with any part of city infrastructure.
7. Talk to your studetns about examples of Smart Cities and IoT technologies implemented in Croatia. For example City of Dubrovnik will have Smart Parking, Smart Irrigation and Smart Street projects done or in final stages of development by the end of 2016.
8. For the last part of the class ask your studetns to write down a list and explain why and how would they implement certain IoT smart technologies that they think would be good, and we did not discuss them during class.