

TITLE: IoT household appliances

LEARNING SCENARIO	
School:	Duration (minutes): 90
Teacher:	Students age: 11

Essential Idea:	IoT devices: benefits and disadvantages
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Topics:

- Internet of things and wearable technology devices, benefits and disadvantages, use in everyday life.

Aims:

- Pupils design and create simple internet of things and wearable technology devices and at the same time learn to express themselves through design and creation.

Outcomes:

- Pupils are encouraged to look for ways of expression that are suitable for collaboration.
- Pupils are encouraged to use their imagination to find creative solutions.

Work forms:

- individual work
- work in pairs
- group work

Methods:

- presentation
- discussion
- interactive exercise

ARTICULATION**Course of action (duration, minutes)****INTRODUCTION**

Teacher explains and starts discussion with pupils:

What devices do we use to connect to the Internet?

Besides computers, tablets, smartphones and similar devices – are there any other devices in modern homes which also connect to the Internet?

MAIN PART**Topics for discussion**

„Internet of Things“ (IoT) is a name for all of our appliances which we use at home and which also connect to the Internet, although we don't usually use them for searching the Internet.

Their number is increasing every year, and some estimates suggest that by the year 2025 each of us will have around a dozen devices which connect to the Internet.

Besides connecting to the Internet, IoT devices regularly combine that possibility with built-in sensors and software that make our lives easier.

The difference compared to our usual devices is also that IoT devices can get new options through the Internet – meaning they can be updated.

Some of the benefits of IoT devices are:

Different household devices can connect to each other.

Everything in our house becomes more automatic – it saves our time.

More time also means more time to do other things – so IoT devices also save us money.

Devices can be updated, which makes them last longer.

Some disadvantages of IoT devices are:

More complex devices result in higher chances of failure.

They are more prone to security threats.

There is no international IoT standard – every manufacturer is making devices by their own standards.

Time saving stops being a factor if we need to take care of the devices themselves.

Scenarios for discussion

After you have learned what IoT devices are, can you now name some that you have at home, or that you have seen somewhere?

Some of the most popular IoT devices are:

Amazon Echo dot controller
 Nest smoke detector (alarm)
 Philips Hue light system
 Roomba robot vacuum cleaner

Presented examples discuss with pupils.

Task

Design your ideal home.
 What IoT devices would you use?

Teacher explains and give instructions how to solve tasks. Pupils can create a poster.

Pupils solve tasks and present their solutions.

Pupils and teacher discuss and evaluate the presented solutions.

CONCLUSION

Besides connecting to the Internet, IoT devices regularly combine that possibility with built-in sensors and software that make our lives easier.

Methods

presentation
discussion
work on the text
graphic work
interactive exercise /simulation on the computer

Work forms

individual work
work in pairs
group work
frontal work

Material:

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Literature

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PERSONAL OBSERVATIONS, COMMENTS AND NOTES