



Topics of six lessons as part of the *FCHgo! Discover hydrogen energy* project in Polish primary school (pupils aged 12-14)

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Lesson 1

A few words about electric current

- What is electricity in simple words?
- How does electricity flow?
- Make a simple electrical circuits.

Lesson 2

Safe use of electrical devices

- Which materials conduct electricity?
- How electricity affects the human body,
- Technical innovations providing electrical safety.
- Rational use of electricity and the benefits of it.

Lesson 3

Energy and its sources

- Definition of energy, types of energy and their sources.
- Natural energy sources (how energy is produced and how it affects our climate?)
- Renewable Energy Sources (RES) - what it is and why we should invest in modern technologies?

Lesson 4

Energy from the sun.

- Energy and its transformations.
- How do solar panels work?
- Introduction to photovoltaic.
- Positive and negative aspects of photovoltaic technology.
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Lesson 5 and 6

Hydrogen and fuel cells.

- What fuel cell and hydrogen technology is?
- How does the fuel cell works?
- Characteristic of hydrogen.
- How to build a fuel cell?
- Why do we need such technologies?
- The future of hydrogen.
- Fuel cell benefits, environmental impact and application.

Notes: I wrote the content suggestion based on the most frequently asked questions during my physics and technology lessons: pupils in elementary school do not understand problems of electricity. (Changes are welcome.)

You can also create a learning machine about alternative energy sources.

Lessons 1 and 2 can be conducted in (Polish) class 6 (12 yrs old) in technical lessons, while lessons 3,4,5,6 in classes 7 and 8 (13-14yrs old in Poland).

Toruń, September 2019.