

Learning Tool Code	Title
--------------------	-------

SDG7-SDGfP

**Energy types and ecological footprint**

### Objectives

- Students will learn to distinguish between renewable and non-renewable sources;
- Students explore global problems (using deep understanding and different values and worldviews);
- Students work goal-directed;
- Students improve cooperation and presentation skills;
- Students are able to make smart and informed decisions;
- Students respond positively towards achieving SDG7;
- Students share openly their opinions and beliefs in class;

### Activity details

- Material - see annex
- Duration – 2 h 10 min
- Group number – 4 groups, 4-5 students each (7<sup>TH</sup> grade, age 13-14)

### Instructions

#### **Lesson one (30 min)**

The teacher begins the lesson by asking students different questions.

*What types of energy do you know?*

*What types of energy do you use at home?*

*What types of energy do you think is used in your school? Are they renewable or not?*

*What is renewable energy?*

*How many different types of renewable energy are there?*

*How can renewable energy benefit the environment?*

The teacher asks as many students possible and writes their answers on the board.

The teacher plays different short videos to the students about different renewable energy resources. (links in references)

#### **Lesson two (1 hour)**

The teacher divides students into 4 groups.

Group one – wave energy

Group two – wind energy

Group three – solar energy

Group four – geothermal energy

Each group has time to discuss the pros and cons on each energy resource. After the groups discuss they present their findings in front of the whole class.

### **Lesson three (40 min)**

The teacher asks the students if they know the term “ecological footprint” and its meaning. If the students are unsure the teacher gives an explanation or plays a short video. After that the teacher shows students the following website

<https://data.footprintnetwork.org/#/>. The teacher asks different students to:

- find the ecological footprint per person in their country
- compare today's footprint to the footprint in the years they were born and discuss the changes
- compare today's footprint of their country with today's footprint of countries from three different continents discuss the differences.

### **Tips for the facilitator**

- 1) The teacher asks questions on types of energy, what they use at home, etc...
- 2) The teacher shows short videos on renewable energy and divides students into groups
- 3) The teacher explains about ecological footprint and asks students to do a research and answer questions

### **Debriefing**

Students can present their group findings in a form of a PowerPoint presentation or create a Story Jumper book.

### **Follow-up/Inspiration for the future**

As a homework or additional activity, the educator can assign the students to follow the changes on the website <https://data.footprintnetwork.org/#/> and write a short essay on how to reduce our "ecological footprint".

### **References/Further reading**

[https://www.youtube.com/watch?v=8miW/W2QyN\\_4&ab\\_channel=OurFuture.Energy](https://www.youtube.com/watch?v=8miW/W2QyN_4&ab_channel=OurFuture.Energy)  
[https://www.youtube.com/watch?v=BrDua3j1U3M&ab\\_channel=AdamDanyal](https://www.youtube.com/watch?v=BrDua3j1U3M&ab_channel=AdamDanyal)  
[https://www.youtube.com/watch?v=xy9nj94xvKA&ab\\_channel=TED-Ed](https://www.youtube.com/watch?v=xy9nj94xvKA&ab_channel=TED-Ed)  
[https://www.youtube.com/watch?v=b7\\_ix42ghCQ&ab\\_channel=BongBajo](https://www.youtube.com/watch?v=b7_ix42ghCQ&ab_channel=BongBajo)  
[https://www.youtube.com/watch?v=sZuc4LMtHoY&ab\\_channel=Xiaflame](https://www.youtube.com/watch?v=sZuc4LMtHoY&ab_channel=Xiaflame)  
[https://www.youtube.com/watch?v=HciKU63dLtA&ab\\_channel=SolarBuddy](https://www.youtube.com/watch?v=HciKU63dLtA&ab_channel=SolarBuddy)  
[https://www.youtube.com/watch?v=xKxrkht7CpY&ab\\_channel=TED-Ed](https://www.youtube.com/watch?v=xKxrkht7CpY&ab_channel=TED-Ed)  
[https://www.youtube.com/watch?v=y\\_ZGBhy48YI&t=6s&ab\\_channel=U.S.DepartmentofEnergy](https://www.youtube.com/watch?v=y_ZGBhy48YI&t=6s&ab_channel=U.S.DepartmentofEnergy)

## Annex