Solar education tools for Romanian and Swiss scouts

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Content

- Introduction
- Developing the concept and the educational tools
- Implementing the concept at RoJAM
- Conclusions
## Degree Programmes Offered

<table>
<thead>
<tr>
<th>Degree Programme</th>
<th>Courses Offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bachelor</td>
<td>Engineering, Computer Science, Architecture, Building, Planning</td>
</tr>
<tr>
<td>Master</td>
<td>Engineering, Computer Science, Architecture, Building, Planning</td>
</tr>
</tbody>
</table>
Bachelor of Science FHO in...

Engineering, Computer Science

- Electrical engineering
- Renewable energies and environmental engineering
- Computer science (IT)
- Mechanical engineering | Innovation
- Industrial Engineering
Bachelor of Science FHO in...

Architecture, Building, Planning

- Civil engineering
- Landscape architecture
- Spatial planning
MSE Master’s degree

- Consecutive UAS Master’s degree course
- Acquisition of in-depth specialist knowledge
- Close contact with lecturers
- Opens up new career perspectives
- Fundament for management positions
Student Numbers Are Growing

CSE Conference, Brasov, 19-21 October 2017
Solar education tools

- **Switzerland:**
  - Concept development, 2 students, one semester project
  - Testing the concept with one class (about 15 children) from a local primary school

- **Romania**
  - Adapt and apply the concept at RoJAM
Concept development - Solar fountain
5 Educational tools

Introduction
A crucial part of this project, besides building the unit, was to develop educational tools for the young generation. The aim of doing it is to increase the public awareness of available solar technologies. To achieve it, a workshop (attachment 1) for young people has been developed in addition to videos and a construction manual.

5.1 Workshop booklet

Introduction
The solar spring fountain workshop booklet consists of theoretical and practical parts. It starts with a story to check the basic knowledge about energy production and continues with learning by playing with the unit.

Story
The story talks about a trip of two children in Europe. During the trip they see different methods to produce energy. To check the basic knowledge, the participants must think alone, which of them are based on renewable. The advantages and disadvantages are being mentioned as well.
Solar workshop - Wagen Primary School
Solar workshop - Wagen Primary School
Implementing the concept at RoJAM. Green Energy Workshops
Implementing the concept at RoJAM. Green Energy Workshops

La Energie verde și Panourile solare termice se vorbește despre surse alternative de energie. Copiii stau uimiți în soare cu câte o jucărie în mână. După un minut se pun în mișcare elice, scrieți și roți cu ajutorul unor micro panouri solare. După asta, fiecare copil primește câte o cutie de carton și învață cum să construiască un panou termic. Partenerii de la Asociația Tot mai verde, Universitatea Transilvania din Brașov și Institutul de Tehnologii Solare SPF de la Universitatea de Științe Aplicate HSR din Elveția (Hochschule für Technik HSR) s-au pregătit termenic. Alături mai puțin la dispoziția participanților un atelier de reciclare bazat pe reacții chimice. Ați văzut vreo dată polistiren expandat dizolvându-se într-un pahar?

http://rojam.ro/stem-la-rojam/amp/
Green energy Workshop – producing flat plate collectors
Solar heated water for RoJAM participants
Conclusions

- Different solar education tools are developed by an international team of students from University of Applied Sciences Rapperswil HSR (CH) and Transilvania University of Brasov TUB (RO) for training Scouts members.

- Using the concepts Learning by doing and Learning by playing, the solar energy conversion into heat/electricity is explained into a creative and attractive way to children aging 12 to 20 years old.

- The training instruments are tested locally in St. Gallen (CH) and in Brasov (RO) among selected groups of Swiss and Romanian teenagers.

- Several mobile solar educational tools are included in the training activities from RoJAM 2.017, a Scout conference where more than 1800 children and youth are learning about ways to use the solar energy and develop sustainable communities.

- During this project, students learned new concepts about solar energy and how to apply them in their daily life.
Thank you for your attention!