

Lesson Plan Green Energy Fantasy Factory



Class: Primary and secondary schools.		Date: 1/9/16	Teacher: STEM teacher
Title of Lesson Green Energy Fantasy Factory			
Duration of STEM lesson Approximately 6 hours. It is easy to adapt the level to the target group age. It is advisable to do this lesson/activity in one session.			
Objectives 1) Lesson to be accessible/engaging and fun! 2) To introduce working with green energy 3) To practise hands on with solar cell kits 4) To get children to think creatively			
Description of Learning Activities Every year we use up what nature stored in one million years. In this process CO ₂ is released which heats the planet. We have to do something against that. You can do that by converting solar energy into electricity. With the electricity you can make an engine run. This is what you are going to see and experience in this lesson. We challenge you to use your creativity in this STEM lesson. 1. Attach the solar panels to the engine 2. See how much light you need to get the engine running 3. Build something. Use your imagination. 4. Make a presentation about your machine. 5. The best story/product will be awarded first price. a. Is it useful? b. Does it save the planet? c. Is it cheap? d. Quality of the presentation	Assessment Methods Informal Discussion Exercise Feedback Group work Coach the groups, let the fantasy of the children run.	Materials Power point presentation Green Energy Fantasy Factory. After an short introduction, show the children the slides from the presentation to give them some examples. Small solar panel kits Simple electrical engine http://www.conrad-electronic.co.uk/ce/en/overview/2420130/Solar-Power-Assembly-Kits The materials used in the examples shown in the power point presentations were collected by children and brought to school. Use simple materials that are available in your art- or technical classrooms.	
Stretch and Challenge and Extension Activities : See if you can do the math: How much energy can your solar cell deliver? How many would you need to make a cup of tea? What machines in everyday life can you provide with solar cells?			
Learning outside the classroom: Groupwork: <ul style="list-style-type: none"> Decide on a something in your house or garden that does not need much electricity Calculate how much energy this needs to operate Google which solar cells could best be used to let your something run on solar energy Make a business like proposal of you invention and share it in class, and with as many people as possible 			