



MAKE YOUR SOLAR ENERGY DRAGSTER

Physics | Chemistry | Technology

ENERGY :
PRODUCTION AND
RESOURCES



PEDAGOGIC CONTENT:

- Sustainable development
- Renewable energy
- Solar energy
- Energy chain

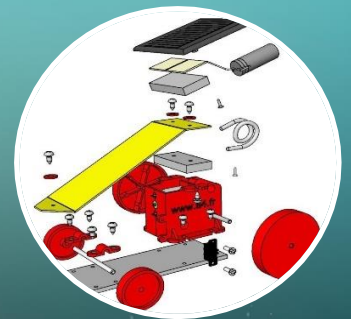
PRE-REQUISITES:

Introduce the different renewable energies using document O1 and other resources.

NEW COMPETENCIES TARGETED/LEARNING OUTCOMES:

STUDENTS WILL BE ABLE TO:

- Create an electric vehicle that works with renewable energy
- Understand how solar panels and energy transmission work
- Identify different sources of energy




MAKE YOUR SOLAR ENERGY
DRAGSTER


DESCRIPTION:


PREPARATION


Get the Soldrag® kit or similar material to build solar energy dragster.


IMPLEMENTATION


 #1: The teacher introduces the activity presenting the electric vehicle and how it works thanks to his different elements corresponding to the different sources of energy.


 #2: The teacher divides students in 2-scholars groups and distribute one kit per group. The kit contains all parts of the dragster and they are grouped by type. It is important to not loose parts so avoid detaching them from the Propulso injection bunch before the use.


 #3: The teacher lets students start by the first step: 'Power supply' which goal is to assemble the elements that supply the energy through the autonomous system (photovoltaic panel).










 #4: Then, students carry out the second step: "Storage unit" which consist in assembling the elements that allow the storage or the accumulation of energy (capacitor).

 #5: The next step is called "Distribution part" and scholars have to associate elements that allow to manage the provision of energy (switch, solenoid valve (electric tap), dimmer light...).

 #6: Then, there is the "Convert part" which consists to manipulate elements that allow the transmission, sometimes adapting it, of the energy that has just been converted (gears + plate + chain + sprockets + pipe).

 #7: Finally the "Transmission part" corresponds to assemble elements that allow the transmission, sometimes adapting it, of the energy that has just been converted (gears + plate+ chain+ sprockets+ pipe).

 #8: The teacher concludes the activity talking about the following concepts: "sustainable development", "renewable energy", "solar energy" and "energy chain".

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|----------------------|---|
| Type of activity |  Experimental activity |
| Target audience |  From 12 years old |
| Place |  Technology class |
| Material needed |  Soldrag Kit® and documentation, engineering/technology classroom |
| Duration of activity |  Implementation : 2-4 hours |
| Authorship |  Purchase of equipment from A4 Compagny 8 rue du Fromenteau – 91940 Gometz le Châtel www.a4.fr Phone : 01 64 46 31 19 |
| Links |  No authorization or registration required  KIT: http://www.a4.fr/base-documentaire-a4/index.php/TRANSPORTS-ET-MOBILITE/%5BK-SLD%5D-SolDrag/Documentation (technical file, factory file, images): http://www.a4.fr/base-documentaire-a4/index.php/TRANSPORTS-ET-MOBILITE/%5BK-SLD%5D-SolDrag/ |
| Notes by author |  None |



BASTIA GOLO
MEDITERRANEE



Departament de
Sostenibilitat i
Medi Ambient
Consell de Mallorca

