Renewable Energy Sources

Re-Energy
Learner Worksheet
Grade Level 7-12

You will need to complete the following tasks:

1. Choose a topic from the list below to research.
2. Decide whether you will complete the research individually or work together with one other person. Both class time as well as homework time will be needed for completion.
3. Research your topic, using at least three reliable sources of information, as part of your homework. Be prepared to bring your research resources with you and to complete your research in class. Reminder: the sooner you have gathered your resources, the earlier you can use class time and homework time to work on this project. Keep a list of all of your resource material.
4. Once you have gathered your resources, set up your notes so you have each one of the evaluation topics as a header on a series of separate pages. Record your research information by means of written notes (point form is allowed), categorizing it according to the headings.
5. Draw a flow chart of the energy conversions from the energy source to usable energy.
6. Present your knowledge to your peers (PowerPoint, posters, displays, your model and/or handouts).

Possible Topics

- Solar Heat & Electricity
- Wind Energy
- Hydro Energy
- Biomass Energy
- Geothermal Energy
- Hydrogen Fuel Cells
- Heat Pumps

Evaluation Criteria

Through your research ensure that you address the following issues in your model, presentation (PowerPoint, posters, handouts, etc.) and written notes.

For your research topic, ensure you answer or include the following information:	**Mark**
Describe how the energy source derives its energy from the sun.	/5
How is this energy converted to useable energy? Draw a diagram that shows the energy conversion process from the source to useable energy. Label it with numbers to demonstrate the flow of the process.	/15
Provide a historical overview of the energy source. How has it been used in the past? How has its usage changed over time?	/10
Where (in Canada, as well as other places) is it actually used? (Or, where does it have the potential to be used?) How much energy is produced at a specific site?	/10
What costs are involved in setting up the technology to be used?	/10
What are the costs and benefits of using this energy compared to other energy sources?	/10
What are its drawbacks, its dangers, its environmental impacts?	/10
Other interesting facts.	/5
Reference list	/10
Presentation and display	/15
Total	/100