

iCONN Learning Activity **Solar Energy**

Level: Middle School

Task: The school is planning to install an indoor swimming pool and there is a proposal to use solar energy to heat the water. Students are asked to research various factors related to the use of solar energy, compare solar heating to conventional heating methods, and make a recommendation as to whether solar energy should be given serious consideration.

Research Question: Is solar energy a realistic choice for heating the school's swimming pool?

Content Area(s): Science, Technology Education

State Content Standard(s):

Science:

Standard 1 Scientific Inquiry: Scientific inquiry is a thoughtful and coordinated attempt to search out, describe, explain and predict natural phenomena.

- Seek relevant information in books, magazines and electronic sources of information
- Search the web and locate relevant science information

Technology Education:

Standard 4. Problem Solving/Research and Development

Students will recognize technology as the result of a creative act, and will be able to apply disciplined problem-solving strategies to enhance invention and innovation

iCONN Database(s): *InfoTrac Junior Edition, Discovering Collection, InfoTrac Student Edition, Kids InfoBits*

Search Strategy:

1. Go to <http://www.iconn.org/>
2. If the list of databases is not already showing, click on "Select iCONN resources"
3. Open *InfoTrac Junior Edition*
4. Enter *your subject* in the search box (e.g., *solar energy*)
5. Click *Find*
6. Click on *View* to see an *Encyclopedia* article on your topic for background information
7. Click on *Back to... Subjects* to return to the *Subjects results*
8. Click on "*See also*" *subdivisions* to narrow the topic
9. Click on *View* next to the topic of interest to you (e.g., *design and construction*)
10. If more than one result is presented in a citation list, click on the title of an article to read it; if there is only one result, you will immediately be shown the article
11. Click on *Browser Print* at the end of the article to print it out or email it to yourself

Alternate Search Strategy:

1. Go to <http://www.iconn.org/>

2. If the list of databases is not already showing, click on “Select iCONN resources”
3. Open *Discovering Collection*
4. Enter *your topic* (e.g., *solar energy*) into the search box
5. Click *SEARCH*
6. The results list contains *Reference* resources (Note: the *type of resource* is described to the right of the title. (For example, *Topic Overview*) Also, note the indication of the *reading level* to the left of each title.
7. Click on a title to read the article
8. Page through results, if necessary
9. If appropriate, explore the *Related Subjects* by clicking on one of the subjects listed under *Subject Guide* in the left column
10. Look at other active (highlighted) tabs, if any, for additional resources

Adaptations for Differentiated Learning:

Search Strategy:

1. Go to <http://www.iconn.org/>
2. If the list of databases is not already showing, click on “Select iCONN resources”
3. Open *InfoTrac Student Edition*
4. Click on *Subject Guide Search* from the search path bar
5. Enter *solar energy* in the search box
6. Limit the search to *documents with full text*
7. Click *Search*
8. Click on *Solar Energy* or *See also* for articles –OR–
9. Click on *Narrow by subdivision* under *Solar Energy* for more precise information on different aspects of the subject
10. Click on a subject for citations
11. Click on the titles or *Full-text* or *Full-text with graphics* to read articles

-- OR --

1. Go to <http://www.iconn.org/>
2. If the list of databases is not already showing, click on “Select iCONN resources”
3. Open *Kids InfoBits*
4. Enter *solar energy* in the search box
5. Click *SEARCH* (or hit ENTER)
6. Click on *VIEW* under the topic *Solar Energy* to *view the articles* (NOTE: you can explore related subjects by clicking on *SEE ALSO*)
7. When you click *VIEW*, *Reference* articles are usually returned first
8. Click on the title to read the an article
9. Click on other *active (highlighted) tabs* (such as *Magazines, Newspapers and Images*) for additional resources (NOTE: there is an indication of the *reading level* to the left of the title)
10. Print articles, as appropriate

Updated by Gale Cengage, July 2008