



Physics 220 Research Guide  
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### Project:

Use a variety of scholarly materials to complete a comprehensive topic search for a poster project.

### Reference Materials:

Explore your topic in the REF Q section encyclopedias and dictionaries. Use these general materials to create list of search terms. Some references sources to use are:

*McGraw Hill Encyclopedia of Science & Technology* REF Q121 .M3 2003  
*Encyclopedia of Physical Science & Technology* REF Q123 .E497 2002  
*Macmillan Encyclopedia of Physics* REF QC5 .M15 1996  
*Twentieth Century Physics* REF QC7 .T84 1995

### Physics by topic in Library of Congress Classification:

Q: General Science  
QB: Astronomy  
QC: Physics  
T: Technology

TA: General Engineering  
TK: Electrical and Nuclear Engineering,  
Electronics

### Finding Books:

Use search terms in **ALiCat** and also in **I-Share**, the catalog for 69 academic libraries across Illinois. Use the Request button at the top of the item record screen to borrow it from another library. These books arrive within 3-5 days.

### Databases:

Augustana has 100 electronics indexes to locate specific articles. Start your search under Sciences or Full Text Periodicals on the Library Page. A few databases to start with are:

- Academic Search Premier
- Applied Science & Technology Abstracts
- General Science Abstracts
- Science Direct
- GeoRefS
- PROLA

## Evaluating Materials: Use CARE

**Currency:** Is this information current and relevant now?

**Authority:** Who is the author, and his/her/their credentials? Is there an organization sponsoring this resource?

**Reliability:** Is the information correct? Can you verify it independently?

**Expert Opinion:** This would be the literature search that went into preparation of study. Have reputable researchers been cited in the work and bibliography? Do other experts agree with these conclusions?

Be familiar with a topic before using Internet web pages. Be prepared to defend the resources you use. These are just a few suggestions:

- **The Scout Report:** <http://scout.cs.wisc.edu> offers reviewed web resources; use your search terms in the advanced search function
- **American Institute of Physics:** <http://www.aip.org/> important web site to search when searching for Physics topics.
- **Institute of Physics:** <http://www.iop.org> can see abstracts of articles
- **The Internet Pilot to Physics:** <http://physicsweb.org> "...comprehensive and searchable physics sites and physics institutes listing."
- **Physics 2000:** <http://www.colorado.edu/physics/2000/index.pl> journey through modern physics
- **How Stuff Works:** <http://www.howstuffworks.com>
- **National Institute of Advanced Industrial Science & Technology:** <http://www.aist.go.jp> covers about 30 very specific topics, bi-lingual.

## Some Last Suggestions:

- Research is a non-linear, recursive process. Start broad, then narrow. Experiment with your search terms, synonyms, and follow interesting descriptors.
- Use the citations from useful resources to lead you to more information.
- Keep careful notes as you work. It's easier than trying to recreate something later.
- Finally, ask for help if you hit a roadblock in your research. There are many ways to approach research and there is no one right way. Librarians are here to help. Call us at the Ref Desk at -7206.