

Electromagnet Webquest

****This should be done in teams of 2-3****

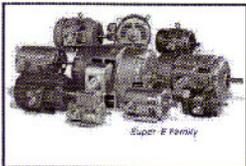
Part I

You have learned a little about electromagnets. Now, as a scientist, you must decide on the applications of this wonderful experiment. Not only that, but you are going to be a teacher! Choose one of the following inventions, and write to explain to your peers how that invention works. Use diagrams and pictures from the web, but write up in your own words how your invention works.

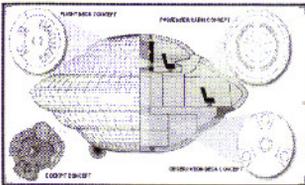
**note: some of these links include information about alternatives to electromagnetic devices. Use only the electromagnetic types!*



MRI MRIs are a way of looking inside a body without surgery!



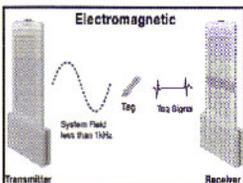
Motors Motors are used in many things around you....from a hairdryer to a remote control car!



Engine Alternatives Traveling through space may never be the same!



Mag-lev Trains A train that floats? You bet!



Anti-shoplifting Devices Ever wonder why that alarm goes off when exiting a

store?



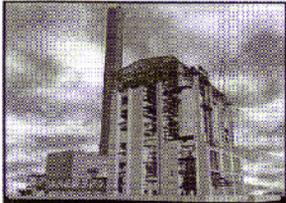
Speakers Want to increase the BOOM in a car stereo? Electromagnets definitely help!



CDs Tapes , , DVDs Various sound recording and play back devices also depend on electromagnets!



Car alarms blup-blup-blup! Electromagnets can protect your most valued possessions!



Power Plants Many power plants use some kind of motion to turn magnets in electric coils to create current. This current is transformed to the electricity that we use in our homes!

Part II

Electromagnets are useful on other ways, too. Many experiments done inside a magnetic field have different results from experiments done without a strong magnetic field. Much of this research is done at the National High Magnetic Field Laboratory here in Tallahassee.



View of the Mag Lab
from the air

[Click to tour the lab via computer](#)

Your task is to email a scientist at the lab and find out about his or her research at the laboratory. You may be surprised to find out exactly just how much is researched at the lab! Make sure that in your email, you explain the following:

1. Who you are and where you go to school.
2. Why you are emailing them.
3. Make sure that you thank them for their time!

With the information you receive, you will make a poster of that scientist. Find a picture on the directory for the lab and include that in your display. Also, you may be able to find pictures of their research!

[Dr. Vincent J. Salters](#) Geochemist (studies the chemistry of the earth)

[Dr. John R. Miller](#) Creation of super-strong electromagnets

[Dr Timothy A. Cross](#) NMR - Nuclear Magnetic Resonance (imaging of the inside of humans and animals without surgery)

[Personnel Directory](#) Use this link for pictures and descriptions of your scientist

For questions and comments concerning this webquest, please email [David Lang](#)

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