

## Investigation 7: Using Energy Resources Wisely

### This investigation will help you to:

- Learn more about heat transfer.
- Learn more about conduction.
- Learn more about convection.
- Learn more about radiation.
- Learn more about insulators.
- Learn more about ways to conserve energy.
- Learn more about transportation issues

To learn more about heat transfer, visit the following web sites:

#### Why is heat transfer important to XMM?, **Astrophysics and Space Research**

Explore conduction, convection, and radiation in relation to Earth Systems at this site. It provides graphics and real world examples to aid in your understanding of heat transfer

To learn more about conduction, visit the following web sites:

#### Conduction, **University of Winnipeg**

This web page provides a good introduction of conduction and offers annotated graphics to aid your understanding.

To learn more about convection, visit the following web sites:

#### Convection, **Univeristy of Winnipeg**

This web page provides a good introduction of convection and offers annotated graphics to aid your understanding.

#### 3D Movie of Convection, **University of Chicago**

This movie is a 3D animation of convection. The animation shows the temperature fluctuations in a layer of unstable, turbulent gas.

To learn more about radiation, visit the following web sites:

#### Radiation, **University of Winnipeg**

This web page provides a good introduction of radiation and offers annotated graphics to aid your understanding.

To learn more about insulators, visit the following web sites:

#### Insulators, **Macmillan Encyclopedia of Physics**

This site offers a more-detailed look into insulators.

#### Insulators, **University of St. Andrews, Scotland**

Explore the characteristics of insulators that give them their unique properties.

To learn more about ways to conserve energy, visit the following web sites:

Energy Efficiency and Renewable Energy Network (EREN),

**Dept of Energy**

This site reviews technologies to improve energy efficiencies in a variety of sectors:

- Buildings
- Transportation
- Industry
- Power

Energy Savers - Tips on Saving Energy and Money at Home, **EREN - DOE**

This site provides information on home use, insulation and weatherization, heating and cooling, water heating, and more. Plus, you can request a free Energy Savers booklet and learn about other products, including Spanish Energy Savers at this site.

Energy Use FAQs, **Snohomish P.U.D.**

Get easy-to-do tips that will save energy and money!

To learn more about transportation issues, visit the following web sites:

How environmentally friendly are natural gas vehicles?,

**Natural Gas Foundation**

Learn where and why these natural gas vehicles's are most beneficial.

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