

Dear Families,

Our class is beginning the Science Companion® Energy Unit, filled with hands-on experiences to make the abstract, but immensely relevant, concept of energy accessible to students.

Through a variety of explorations, students will discover that energy is at the root of all change occurring in the world around them. As they observe, describe, and experiment, children hone their science process skills and begin to discover the forms energy takes, how energy transfers from one object to another, and how it is harnessed in everyday machines.

During the Energy Unit, the students will:

- Discuss what they think energy is, where it is found, things it does, and how it is used.
- Search for examples of each form of energy on an “Energy Walk” on the school grounds.
- Operate a variety of “energized” toys and identify the forms of energy that make them run.
- Build three different types of boats, each employing a different type of energy transfer.
- See how warmer objects that are close to or touching cooler objects transfer some of their heat energy until both objects are the same temperature.
- Investigate how heat energy is conducted through different materials at different rates.
- Attempt to limit heat energy transfer by designing and testing insulation for water bottles.
- Compare the light and heat output of incandescent light bulbs and compact fluorescent light bulbs to understand the concept of energy efficiency.
- Develop and illustrate ideas for their own inventions, showing how a collection of ordinary objects interacting in a chain-like reaction could perform a task they decide on.

You and your child can explore this rich topic together at home by:

- Reading energy-related science books together that your child checks out from the class Science Center or the local library.
- Visiting the web site at [www.ScienceCompanion.com/Links](http://www.ScienceCompanion.com/Links) to find a list and descriptions of recommended web sites about energy.
- Perusing the *Energy Student Reference Book*, which provides readings, pictures, and other resources designed to enhance what your child learns in class.