



Fernbank Science Center

Title:	ENERGY TRANSFORMATIONS (4842)	Type:	Outreach
Level:	8th Grade	Length:	60 minutes
Location:	Local School	Limit:	1 class/period

Program Description

In this exciting program on energy transformations, students will discuss The Law of Conservation of Energy which states that energy cannot be created or destroyed. Through teacher demonstrations and hands-on student activities, students will explore where energy comes from and where it goes as it transforms between types of energy.

Georgia Performance Standards Addressed

S8P2 Students will be familiar with the forms and transformations of energy.

S8P2(a) Explain energy transformations in terms of the Law of Conservation of Energy.

S8P2(b) Explain the relationship between potential and kinetic energy.

S8P2(c) Compare and contrast the different forms of energy (heat, light, electricity, mechanical motion, sound) and their characteristics.

S8P2(d) Describe how heat can be transferred through matter by the collisions of atoms (conduction) or through space (radiation). In a liquid or gas, currents will facilitate the transfer of heat (convection).

Vocabulary

energy	potential energy	kinetic energy	thermal energy
chemical energy	electrical energy	conduction	convection
radiation	law of conservation	of energy	

Pre-Visit Activities

Discuss renewable and non-renewable energy sources. Identify the major source of electrical energy in Georgia.

Post-Visit Activity

4842 Energy Transformations Post-Visit Activity covers the following standards: S8CS1a,b, S8CS4b and S8P2a,c,d.

Resources

Georgia Science, Grade 8. New York, New York: Glencoe/McGraw-Hill, 2008. pp. 372-395.