

GETTING STARTED

AN INTRODUCTION TO E-FACTOR

Article # 1 –
Power Generation

Article # 2 –
Energie Café

Article # 3 –
Fuel for Thought

Article # 4 –
Budget Blues

Article # 5 –
The Cycle of Life

Article # 6 –
Load Warriors

Article # 7 –
Bright Minds Challenge

Science Alberta Foundation is pleased to make *E-Factor* one of our *Science-In-A-Crate* programs, available in your community!

E-Factor focuses on the Science 24 Understanding Common Energy Conversion Systems curriculum unit. Students participate in seven hands-on activities that focus on a common energy conversion experienced in their daily lives. Students collect and interpret data to determine how energy can be used more efficiently and evaluate the benefits of alternative forms of energy.

The activities in *E-Factor* include:

Demonstrating the ways we convert natural energy to electricity.

Discovering the energy content in foods and how we use it to do our daily activities.

The process of refining crude oil into gasoline and comparing three alternative energy vehicles.

A game about how energy costs can drain our pocket book and how energy conservation can stretch your budget.

Demonstrating the relationship between the processes of Photosynthesis and Cellular Respiration.

Demonstrating how the weight of a vehicle affects its fuel efficiency.

A contest challenging students to invent a new product that uses energy conversion to perform a useful function.

This activity guidebook outlines information beyond what is presented to the students so you are aware of the science behind these activities. At the end of each activity in this guidebook an **Optional Challenge Question** has been posted. These questions can be used with your entire class or with students who show a particular interest in that topic.