TEACHER GUIDE
SOCIAL RESPONSIBILITY STATEMENT

BACKGROUND

As your students have learned, many of the products we use each day come from petroleum and natural gas products. At the very least, most all of these items have been created using power, or shipped to us using petroleum and/or natural gas. We are a consumer society, and by consuming and using so many different products, we are also contributing to the use of fossil fuels. In this lesson, share the information with students about energy and consumption and ask them to take a personal inventory of their products and create a social responsibility statement to encourage them to think more critically about their consumption.

OBJECTIVEVS

- Students will be able to define the term hydrocarbon as chains of hydrogen and carbon molecules used to create chemicals and synthetic materials in everyday products.
- Students will be able to explain that hydrocarbons make up petroleum and natural gas, and these products are common sources for many of our chemical and synthetic products.
- Students will be able to list ways they can employ social responsibility in relation to their energy use and product consumption.

MATERIALS

- Internet access

PREPARATION AND PROCEDURE

TIME: 30 MINUTES, PLUS ADDITIONAL TIME FOR RESEARCH.

- Ask students to create a list of 30 items they use each day (clothes, phone, pencil, paper, car, paper plates, etc.) Have students discuss their lists with a partner or small group, looking for similarities, differences, and forgotten items.

- Ask the class how many items their list might contain if they weren't capped at 30. Ask the class how many of these items are essential to their day. Direct the class to discuss/debate in small groups what might be essential, and what it means to be an "essential."

- Ask students to highlight on their list any item that involves hydrocarbons in some way (material makeup, transportation, energy to create, etc.), and then again discuss in their small groups. ***Hint: students should have almost everything highlighted!***

- Read the Energy and our *"Stuff"* article below, or copy and share with students. Ask students to consider how much "stuff" they use each day, and what they could do without. Charge students with writing an essay describing how they currently reduce, reuse, recycle, and repair when it comes to their consumption of goods and products. Students should also make a statement identifying ways they could do more reduce, reuse, recycle, and repair, when it comes to their consumption of goods and products.

- Ask each student to complete the Shell Energize Your Future Personal Energy Audit by following the instructions on the following website: **www.shell.us/sustainability/energize-your-future-with-shell/stem-classroom-activities.html**.

TEACHER GUIDE (CONTINUED)
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ENERGY AND OUR STUFF

Many of our goods today contain products produced from petroleum and natural gas, nonrenewable fuels. Manufacturing the goods we use every day also consumes an enormous amount of energy, often in the form of petroleum and natural gas. These fuels are used just to power the facilities and manufacture the products. Industry consumes a little more than one-fifth of the energy used in the U.S. Petroleum is also used to transport the products to us as consumers. Manufacturers know that they must keep their costs low to compete in the global economy. Since energy is one of the biggest costs in many industries, manufacturers must use energy efficient technologies and conservation measures to be successful. Their demand for energy efficient equipment drives much of the research and development of new technologies.

Individual consumers can, however, have an effect on industrial energy use through the product choices we make and what we do with packaging and products we no longer use. So how can we help?

A CONSUMER SOCIETY

Every American produces almost 1,600 pounds of trash a year. The most effective way for consumers to help reduce the amount of energy consumed by industry is to decrease the number of unnecessary products produced and to reuse or repair items whenever possible. Purchasing only those items that are necessary, while also reusing and recycling products can reduce energy use in industries.

The four "**R's**" of an energy-wise consumer are easy to put into practice. Reducing, reusing, repairing, and recycling help protect the environment and save money, energy, and natural resources.

REDUCE

Buy only what you need. Purchasing fewer goods means less to throw away. It also results in fewer goods being produced and less energy being used in the manufacturing process. Buying goods with less packaging also reduces the amount of waste generated and the amount of energy used.

REUSE

Buy products that can be used repeatedly. If you buy things that can be reused rather than disposable items that are used once and thrown away, you will save natural resources. You'll also save the energy used to make them and reduce the amount of landfill space needed to contain the waste.

REPAIR

Many people throw away products when they break and buy new ones. Many of these products could be easily and cheaply repaired. Always consider repairing a product before throwing it away. It saves energy, money, and natural resources.

RECYCLE

Make it a priority to recycle all materials that you can. Using recycled material almost always consumes less energy than using new materials. Recycling reduces energy needs for mining, refining, and many other manufacturing processes.

Efficiency and conservation are key components of energy **sustainability**—the concept that every generation should meet its energy needs without compromising the energy needs of future generations. Energy sustainability focuses on long-term energy strategies and policies that ensure adequate energy to meet today's needs, as well as tomorrow's. Sustainability also includes investing in research and development of advanced technologies for producing conventional energy sources, promoting the use of alternative energy sources, and encouraging sound environmental policies.