

## SAVE THE WORLD!

### Energy efficiency

Energy efficiency is all about the amount of fuel you use to do what you want to do. To heat up food efficiently means to do it with as little fuel as possible. Some ways of making useful energy are much more efficient – less wasteful – than others. Most power plants are about 35% efficient. That means that for every 100 units of fossil fuel energy that go into a plant, only 35 units of are converted to usable electrical energy. The rest is lost as heat.

A three-stone fire is less efficient than an improved wood burning stove which is less efficient than an improved charcoal stove. A kerosene pressure burner is more efficient than all of these, and a LPG gas stove is even better.

### Eco-friendly electricity?

Electricity can be supplied from many different sources: solar, fossil fuels, nuclear, wind, batteries or biomass. The source will affect how your use of electricity affects the world. When you flick that switch, you are setting in process a whole chain of reactions which could damage the world. Best to choose the cleanest source. How do the sources of electricity weigh up in eco-terms?

Scientists still debate, but broadly speaking, these ratings are agreed:

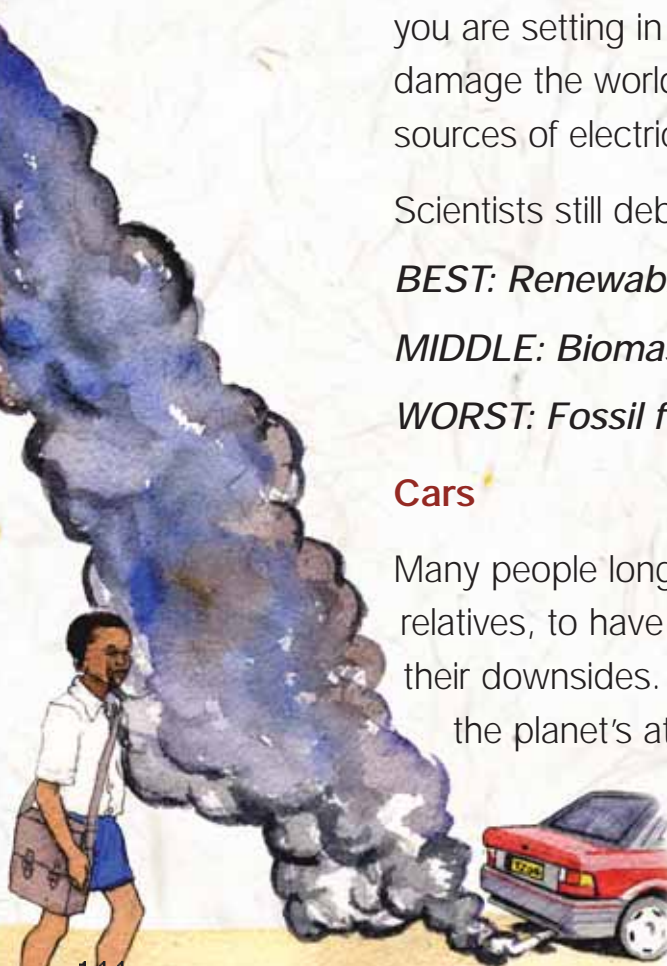
**BEST: Renewables: Solar/wind/micro-hydro**

**MIDDLE: Biomass and biofuels**

**WORST: Fossil fuels, Nuclear**

### Cars

Many people long for a car to drive their goods to market, to visit relatives, to have fun in. Cars are wonderful technology, but they have their downsides. The more people own their own car, the worse for the planet's atmosphere. 630 million motor vehicles were on the world's roads in 1994; one billion motor vehicles are expected to be on the world's roads by 2025. 50 million new cars roll off the assembly line





each year. 27 tons of waste are produced in the manufacture of the average new car. 12,000 pounds (5.4 tons) of carbon dioxide are emitted by the average car each year. This causes global warming. Perhaps the bus is quite nice after all?

If you live in a developed area with electricity supplied to your home, there are lots of ways you can reduce the amount of energy you use, to save the planet! If you've got an electric kettle, boil only as much water as you need. If you've got a fridge, keeping the back of it clean allows the cooling coils to work more efficiently. If you've got a washer-drier machine, fill it as full as possible, use the lowest temperature setting possible, and then hang your clothes out to dry with solar and wind power. Don't tumble-dry them with fossil fuels! Same for the dishwasher – if it's got an economy setting, use it!

Some like it hot, so shut the curtains to stop that precious heat escaping! The amount of energy needed to heat your house is affected by its INSULATION. Like a person a house can keep warmer if it is wearing warmer clothes. Houses can be insulated with sheep's wool, newspaper bricks, straw and other cheap materials. Your water bottle, teapot and water tank can all wear jackets to keep warm. All electrical appliances have energy efficiency ratings – nag your parents and schools to buy the best. You may be even able to persuade them to install a renewable energy system or solar water heater, or perhaps you can buy RENEWABLE ENERGY from the national grid.

### **SAVE ENERGY!** Turn off the lights!

Get switched on to switching off! Leaving things like TVs, computers and hi-fi equipment on stand-by uses 1% of all the electricity in many industrialized countries. Leaving your mobile phone charger switched on at the wall when you are not charging your phone wastes energy, all of which you have to pay for. Half of a school's fuel bill is often lighting! Turn off the lights when rooms are empty. If a classroom is empty for more than one minute, there's no reason to leave lights on.

**Citizens of rich countries consume around 30 times as much energy and resources as those in the rest of the world. The 1990s were the hottest decade in recorded history.**

### **SAVE YOUR ECONOMY!**

Energy self-sufficiency: When oil and gas prices go up, developing countries are often hit much harder than the industrialised countries. Increasing fuel prices can send a country's economy reeling, making life much harder for everyone. Increasing the amount of renewable energies like wind, solar and biomass that a country uses can help stabilise the economy, reducing the effects of currency exchange rate fluctuations. In Brazil, South America, the use of biofuels has made the whole economy richer by reducing their dependence on the import of oil. Zimbabwe has annual production of 40 million litres of cheap biofuel, made using locally manufactured equipment.