

# Reading About Recycling:



Every machine has moving parts that move against one another. Between these parts friction creates heat, wastes energy, and can cause damage. Lubricants reduce the friction when a machine runs, lowering the temperature and maintaining the parts.

You may have read stories of the voyages of whalers like Moby Dick. Two centuries ago, the oil from whales was the main lubricant used in early machines. Today, most of the oil that makes our machines, like cars, run smoothly comes from fossil fuels like oil.

Most cars run on fossil fuels, too. Even though some newer cars run on electricity and other biofuels, most of the older cars that we recycle contain gasoline or diesel when and oil when it's time for them to be recycled. Oil, gasoline, and diesel are toxic to humans, most other living things and to the environment.

There are other toxic chemicals in vehicles, too. Antifreeze is a chemical often mixed in the water that's used to cool most cars. This keeps the water in the radiator and cooling lines from freezing in the winter. The most common antifreeze is ethylene glycol made from natural gas. It is also toxic by itself. After it has been used in a car, it can also contain additional toxic metals accumulated as the car runs.

So the first step in recycling a car or bus is to carefully remove the fluids. Holes are drilled in the tanks and lines. Then workers collect the fluids and separate them. They can often be used again because they have value. Used oil can be processed and used again in cars. It's just as effective in keeping the parts running smoothly. It can also be burned in furnaces for heat, too. Used antifreeze can be purified and re-used too.

## Comprehension Questions:

1. Name two fossil fuels: \_\_\_\_\_  
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2. What does the term toxic mean? \_\_\_\_\_  
\_\_\_\_\_
3. What do gasoline, diesel fuel and oil have in common? \_\_\_\_\_  
\_\_\_\_\_
4. Why do machines need lubricants? \_\_\_\_\_  
\_\_\_\_\_
5. Use the diagram as the basis for a logo that explains why automobile fluids should be recycled.

