**SECTION 3 CONSERVATION OF ENERGY**

1. friction

2. a) largest, b) less, c) less

3. thermal energy

4. Energy cannot be created or destroyed.

5. Light and heat energy are given off from the light bulb to the air outside the bulb.

6. Machines must have a constant supply of energy.

7. Car A

Review

1. No, the law of conservation of energy says that energy is not created or destroyed. The mechanical energy is converted into thermal and sound energy.

2. middle row of ovals, left to right: tracks, cars bottom row of ovals, left to right: thermal, kinetic

3. friction

**SECTION 4 ENERGY RESOURCES**

1. energy resources that can never be replaced or are replaced more slowly than they are used

2. the sun

3. coal, natural gas, oil (petroleum)

4. The number of barrels of oil produced will decrease.

5. thermal, chemical, kinetic

6. nuclear fission

7. converts solar energy into electrical energy

8. middle column, top to bottom: rivers, wind right column, top to bottom: sun, atoms in the rock, sun

9. It does not produce a lot of energy.

10. It’s renewable, inexpensive, and not polluting.

Review

1. A nonrenewable energy resource gets used up or doesn’t replace itself as quickly as it is used. A renewable energy resource is replaced as quickly as it is consumed.

2. Fossil fuels are energy resources that come from dead plant and animal material. These plants used the sunlight to store energy, and the animals ate these plants.

3. The nucleus of a uranium atom is split in two by a process called nuclear fission. This process generates thermal energy. The thermal energy is used to boil water and make steam. The steam turns a turbine of a generator. The generator changes the kinetic energy into electrical energy.

4. geothermal energy

5. It works well only where it is sunny and works only when the sun is shining.