**PFC2 Chapter 8 Section 1 Guided Reading**

1. The\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ available to a system determines how much the system can change.
2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy is the energy an object or system has due to its motion or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy is also known as electromagnetic energy.
4. Give three examples of electromagnetic waves.
5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy is carried by the flow of electric current.
6. Gasoline and food are common sources of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy, which is energy stored in the bonds that join atoms.
7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy results from splitting large atoms like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or fusing small atoms like \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
8. Heat is a form of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ energy.
9. Energy stored in and resulting from the pressure of a fluid is known as energy of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
10. In the system pictured below, which one of these energy transfers does *not* occur? (*Hint*: Do not forget about friction in the system.)

a. mechanical to thermal
b. electrical to chemical
c. mechanical to electrical
d. electrical to mechanical
e. electrical to thermal
11. A group of students build a solar car to race in a competition. A solar panel on top of their car charges a battery which powers the motor that turns the axles to move the car down the track. Draw an energy flow diagram for the solar car.