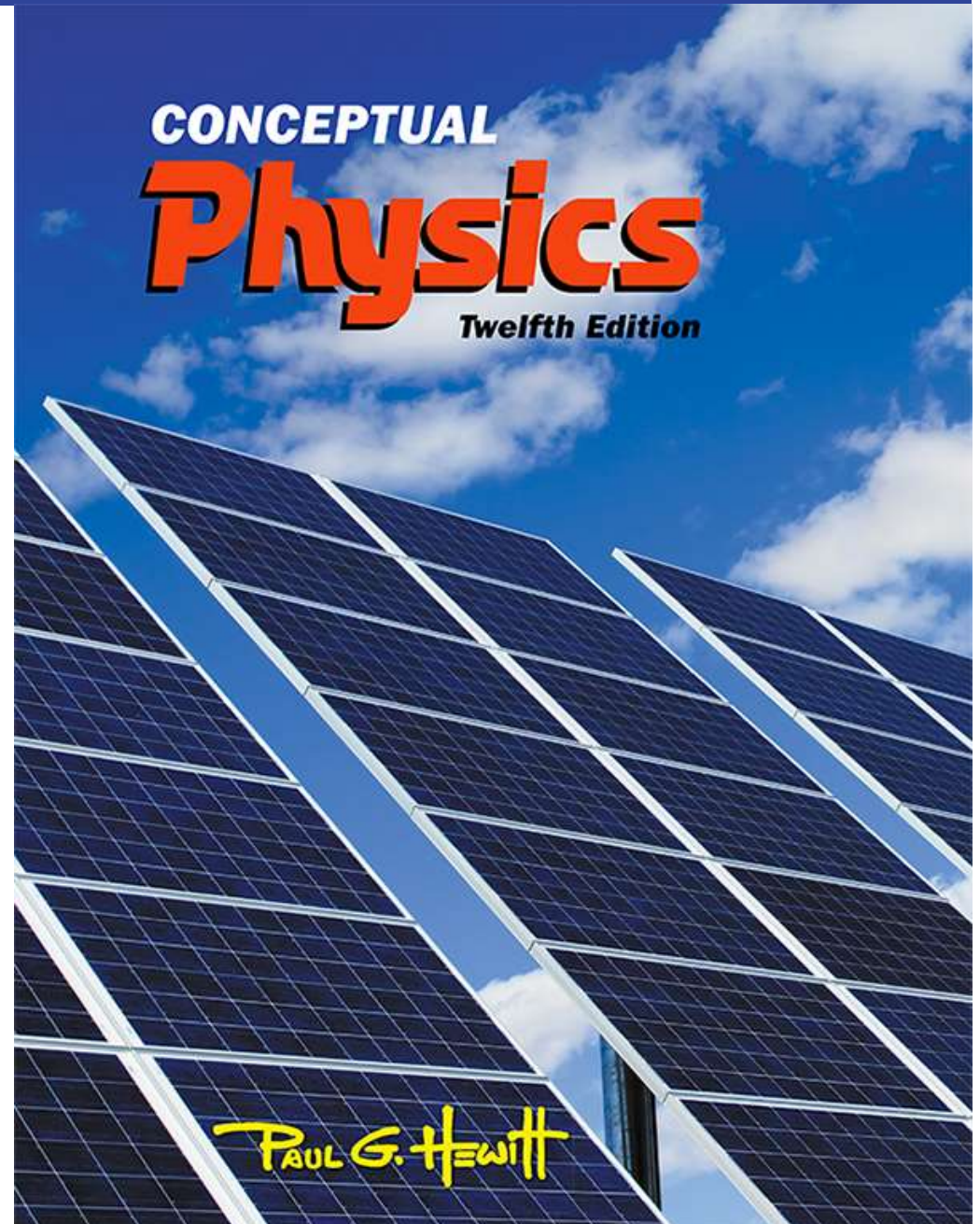


Lecture Outline

Chapter 7: Energy



Energy

- A combination of energy and matter make up the universe.
- **Energy** is the ability to do work or cause a change
 - Mover of substances
 - Both a thing and a process
 - A conserved quantity (cannot be created or destroyed, only transformed)
 - Anything that can be turned into heat
 - Example: Electromagnetic waves from the Sun

Matter

- Matter
 - Substance we can see, smell, and feel
 - Occupies space
 - Solid, liquid, gas

Work

- Work
 - involves force and distance.
 - is force x distance.
 - in equation form: $W = Fd$.
- Two things occur whenever work is done:
 - application of force
 - movement of something by that force

Work

CHECK YOUR NEIGHBOR

If you push against a stationary brick wall for several minutes, you do no work

- A. on the wall.
- B. at all.
- C. Both of the above.
- D. None of the above.

(explain your answer)

