KEY CONCEPT

The central nervous system interprets information, and the peripheral nervous system gathers and transmits information.
The nervous system’s two parts work together.

- The CNS includes the brain, brain stem, and spinal cord.
- The PNS includes four systems of nerves.
• The CNS and PNS pass signals between one another.
  – Sensory receptor generates impulse.
  – PNS passes impulse to CNS.
  – CNS interprets impulse.
  – CNS passes impulse to PNS.
  – PNS stimulates a response.
The CNS processes information.

- The brain has three parts.
  - cerebrum controls thought, movement, emotion
  - cerebellum allows for balance
  - brain stem controls basic life functions
The brain stem has three parts.
- midbrain controls some reflexes
- pons regulates breathing
- medulla oblongata controls heart function, swallowing, coughing
29.4 Central and Peripheral Nervous Systems

• The spinal cord controls reflexes.
  – sensory neuron sends impulse to spinal cord
  – spinal cord directs impulse to motor neuron
  – does not involve the brain
The PNS links the CNS to muscles and other organs.

- The somatic nervous system regulates voluntary movements.
- The autonomic nervous system controls involuntary functions
  - sympathetic nervous system: “fight vs. flight”
  - parasympathetic nervous system: calms the body, conserves energy