

Chapter 7

Use with Section 3

REINFORCEMENT

● **Newton's Third Law**

Complete the table by naming the action and reaction forces in the following examples.

Example	Action Force	Reaction Force
1. A flying bird		
2. Two bumper cars collide		
3. Holding your hand out the window of moving car		
4. Walking		
5. Touching your finger to your nose		

Supply the missing word or phrase in the following statements.

- Newton's third law states, "For every action, there is an equal but _____."
- There is no _____ in time between the action and the reaction.
- One reason why it's often easy to miss an action-reaction pair is because of the _____ of one of the objects.
- Action-reaction forces are always the same _____ but are in opposite _____.
- When you swim in water, your arms push the water _____. The water reacts by pushing _____ on your arms causing your body to accelerate _____.

Answer the following questions in complete sentences.

- How could the action force of a canoe moving through water be increased?

- If there were no action-reaction forces in effect, describe what would happen as you walk down a sidewalk.

- How does Newton's third law explain the forces involved when a car hits a concrete barricade?
