

**Lesson Outline**

**LESSON 1**

**Position and Motion**

**A. Describing Position**

1. A(n) \_\_\_\_\_ is a starting point you choose to describe the location, or position, of an object.
2. A(n) \_\_\_\_\_ is an object's distance and direction from a reference point.
3. A complete description of a position includes a distance, a(n) \_\_\_\_\_, and a reference point.
4. A good choice for a(n) \_\_\_\_\_ is something that is easy to find.
5. If a reference point changes, the description of an object's \_\_\_\_\_ will also change.
6. Changing a reference point does not change the actual \_\_\_\_\_ of an object.
7. When you describe an object's position, you compare its location to a reference \_\_\_\_\_.
8. A reference direction can be described as a(n) \_\_\_\_\_ direction. The opposite direction is the \_\_\_\_\_ direction.

**B. Describing Position in Two Dimensions**

1. When you describe position using two directions, you are using two \_\_\_\_\_.
2. Examples of \_\_\_\_\_ directions in two dimensions include "north and east" and "right and forward."
3. To find a position in two dimensions, first choose a reference \_\_\_\_\_. Next specify reference \_\_\_\_\_. Then determine the \_\_\_\_\_ along each reference direction.

**C. Describing Changes in Position**

1. \_\_\_\_\_ is the process of changing position. It is always described relative to a(n) \_\_\_\_\_.
2. It is possible to move with regard to one \_\_\_\_\_ and stay motionless with regard to another \_\_\_\_\_.

Copyright © Glencoe/McGraw-Hill, a division of The McGraw-Hill Companies, Inc.

### Lesson Outline continued

3. \_\_\_\_\_ is the length of the path an object moves along.
4. \_\_\_\_\_ is the difference between the initial position and the final position of an object.
5. Distance and displacement are equal only if the motion is in one \_\_\_\_\_.