|  |  |
| --- | --- |
| **1.1 An Object in Motion Changes Position** | |
| **Question** | **Answer** |
| 1. Why do you need to discuss two locations to describe the position of an object? |  |
| 1. What would you call a location with which other locations can be compared? |  |
| 1. Compare and contrast the two ways of describing the location of Santiago as show in the two maps found on page D10. |  |
| 1. List two ways to measure distance. |  |
| 1. How does the picture on page D11 of the jumper show time passing? |  |
| 1. How is the picture on page D11 of the jumper different from a snapshot? |  |
| 1. What determines how quickly or slowly a moving object changes position? |  |
| 1. One observer may see a motion differently than another observer. What idea does this statement express? (pg D13) |  |
| 1. Describe the motion of an object on a moving bus to both a person on the pus and a person on the sidewalk. (pg D13) |  |
| 1. How does your observation of motion depend on your own motion? |  |
| 1. What information do you need to describe an object’s location? |  |
| 1. If you sit on a moving bus and toss a coin straight up into the air, where will it land? |  |

|  |  |
| --- | --- |
| **1.2 Speed Measures how fast position changes.** | |
| 1. How are speed and position related? |  |
| 1. What two measurements do you need to calculate speed? |  |
| 1. Looking at the picture found on page D17, how far will each rider travel in five seconds? |  |
| 1. What is the formula used to calculate speed? |  |
| 1. What is the standard unit for speed? |  |
| 1. If two runners cover the same distance in different amounts of time, how do their speeds compare? |  |
| 1. What is instantaneous speed? |  |
| 1. How can you calculate average speed? |  |
| 1. What kind of graph shows how both distances and speed change with time? |  |
| 1. What is the slope of a line? |  |
| 1. Using the graph and picture found on page D21, how do the distances change over each 10-second time interval? |  |
| 1. What is velocity? Give an example of velocity. |  |
| 1. What does velocity have that speed does not have? |  |
| 1. A vector has a direction. What else does it have? |  |
| 1. Carlos lives 100m away from his friend’s home. What is his average speed if he reaches his friend’s home in 50 s? |  |

|  |  |
| --- | --- |
| **1.3 Acceleration measures how fast velocity changes** | |
| 1. What is the relationship between velocity and acceleration? |  |
| 1. Does acceleration mean “speeding up” or does it refer to any possible change in velocity? |  |
| 1. How does acceleration affect velocity? |  |
| 1. Which two things do you have to know to measure acceleration? |  |
| 1. What is the formula used to measure acceleration? |  |
| 1. What would be true of the values for initial velocity and final velocity if the acceleration were zero? |  |
| 1. What happens if an object positively accelerates a little over a long time? |  |
| 1. What does a flat line on a velocity-time graph represent? |  |
| 1. A car goes from 20m/s to 30m/s in 10 seconds. What is its acceleration? |  |