

Name _____ Date _____ Hour _____

Physical Science Guided Reading 2-2

Velocity and Momentum

1. What is velocity?

2. Besides speed, what other information is helpful when predicting the path of a weather event?

3. Why does the velocity of a racecar change as it drives around the track?

4. Examine figure 10, why are the velocities of the people different?

5. Why do we use units of cm/y to describe the motion of different tectonic plates?

6. Define momentum.

7. What is the formula for calculating momentum? What units do for momentum?

8. A car and a semi-truck are traveling down the highway at the same velocity, which vehicle has the greater momentum, why?

9. Two identical cars are traveling west on a highway, one car has a velocity of 50mph, the other has a velocity of 75mph, which car has the greater momentum and why?

10. Why do streets and highways have speed limits instead of velocity limits?

11. Think about the following statements, decide whether the statement is describing speed or velocity

- a. The world record for the hundred-meter dash is about 10m/s _____
- b. The wind today is blowing at 30km/hr from the north west _____
- c. A 200000 kg train was traveling north at 70km/hr when it derailed _____
- d. Car was issued a ticket for traveling at 140 km/hr _____

12. Calculate the momentum of a 100kg football player running north at a speed of 4m/s.
