



Motion and Energy Test

Study Guide



Read Chapter 9 (Motion and Energy) – All Sections – Pages 338 through 367

Chapter 9 Study Guide: Page 364 – **Big Idea, Key Concepts, and Key Terms**

Study textbook homework questions:

- Chapter 9, Section 1 Assessment – Page 341
- Chapter 9, Section 2 Assessment – Page 347
- Chapter 9, Section 3 Assessment – Page 355
- Chapter 9, Section 4 Assessment – Page 363
- Review and Assessment – Page 365 (1 – 10)
- Standards Practice – Page 367 (1 – 7)

Study homework worksheets:

- Speed Problems
- Speed Machines
- It's About Time
- Tricycle Days

Study Classroom Notes:

- Speed vs Velocity
- Acceleration
- Kinetic vs Potential Energy

Student Activity:

- The Traveling Washer
- Measuring the Speed of the Buggy
- Recording Timer: All Parts
- Acceleration and Slope
- Tricycle Days: All Parts

Know the following key terms:

Acceleration	Instantaneous speed	Slope
Average Speed	Kinetic energy	Speed
Displacement	Motion	Vector
Distance	Potential energy	Velocity
Energy	Reference Point	

Be able to use formulas and calculate word problems for the following: (use correct units)

- average speed
- speed
- velocity
- displacement
- slope
- acceleration
- potential energy
- kinetic energy
- Know that changes in velocity may be due to changes in speed, change in direction, or both
- Know that acceleration includes a change in speed (increase or decrease) and/or a change in direction
- Be able to determine the slope of a line on a distance-versus-time graph (Slope = Rise/Run)
- Be able to calculate the period of a timer when given the number of dots created for a specific time
- Be able to calculate speed by using the period of a timer and the number of dots for measured distance
- Know the relationship between spacing on a timer ticker-tape and the speed of a moving object
- Know the difference between gravitational potential energy and elastic potential energy