Chapter 11: Forces and Motion Study Guide

Test: Wednesday, Feb 01

Text Book Pages 432-459

Here are the key vocabulary terms that the students need to know:

Position Motion Speed Distance

Force Gravity Weight Friction

Work Energy Kinetic Energy

Potential Energy Magnetic Force Contact Force

Key Concepts:

Lesson 1- How can you tell an object changed position? What are words used to describe position?

Lesson 2- How can forces affect an object?

Lesson 3- What is energy? How can energy change?

Don't forget that you can go to:

http://www.macmillanmh.com/science/2011/student/#

for more review activities. The link is available on our school website as well.

Lesson 1 Test

Name _____ Date _____

Circle the letter of the best answer for each question.

1. What does the word *position* mean?

A the speed of an object
B the location of an object
C the amount of space between objects
D how an object moves

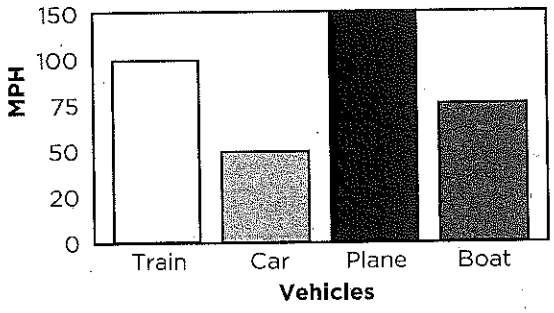
2. What two things must be known to measure speed?

A how far an object traveled and how long it took to go that distance
B how much an object weighs and how far it traveled
C how dense an object is and how far it traveled
D how long an object took to go a certain distance

3. What do the words *over*, *under*, *left*, and *right* give clues to?

A speed
B distance
C position
D balance

4. At the speed shown, which vehicle would travel 10 miles in the least amount of time?



A train
B car
C plane
D boat

Critical Thinking A student is asked to run 50 yards. He can choose to run it in a straight or zigzag course. Which course would allow him to reach his destination first?

He would reach his destination first by using the straight course because the fastest distance between 2 points is a straight line.

Name _____ Date _____

Lesson 2 Test

Circle the letter of the best answer for each question.

1. What causes a magnet to attract and repel?

A magnetic force
B contact force
C gravity
D friction

2. What is gravity?

A the pulling force between two objects
B the weight of an object in space
C the changing state of an object
D the weight plus the mass of an object

3. All of the following will increase friction except

A sandpaper.
B rough stones.
C oil.
D rubber.

4. Study the chart. Which object has the greatest weight?

Object	Amount of Gravity
skateboard	7
scooter	15
bicycle	30
canoe	75

A canoe
B bicycle
C scooter
D skateboard

Critical Thinking Suppose you lost an iron key in the sand. What could you use to help find the key?

I would use a large magnet to help me find the key because the iron key is magnetic and the magnet would attract the key and pull it from the sand.

Lesson 3 Test

Name _____ Date _____

Circle the letter of the best answer for each question.

1. What makes changes in motion possible?

A energy
B work
C gravity
D weight

2. Which activity requires the most work?

Activity	Amount of Energy Used
Jumping rope	moderate
Lifting a book	light
Hammering a nail	heavy
Reading a book	none

A jumping rope
B lifting a book
C hammering a nail
D reading a book

3. What happens when a force changes an object's motion?

A the object changes state
B work is done
C gravity is interrupted
D a machine is being used

4. What are the two main forms of energy?

A energy of speed and energy of sound
B energy of motion and potential energy
C energy of force and energy of motion
D energy of speed and potential energy

Critical Thinking Explain why kicking a soccer ball is work.

Work is done only when a force changes an object's motion. Work is being done when a ball is kicked because the object's motion is changed.