

## Guided Reading – Final Review

### Chapter 1 – (p.11) –

- 1) The factors that affect the results of an experiment are called: \_\_\_\_\_.
- 2) In an experiment, how many variables should you change at a time?
- 3) The variable that changes is called the: \_\_\_\_\_.
- 4) The variables that do not change are called the: \_\_\_\_\_.
- 5) Why is it important that you use good experimental technique?

### Chapter 2 – (p.32) –

- 6) What is the difference between average speed and instantaneous speed?
- 7) If you were accelerating from rest at 10 mph/sec. How fast would you be going in 1 sec? \_\_\_\_\_  
How fast would you be going in 2 sec? \_\_\_\_\_ How fast in 5 secs? \_\_\_\_\_

### Chapter 3 (p. 45)

- 8) Write the three Laws of Newton:
- 9) A \_\_\_\_\_ is an action that has the ability to change motion.
- 10) (p. 48) \_\_\_\_\_ is the property of an object that resists changes of motion. It is dependent on \_\_\_\_\_.
- 11) (p. 51) Acceleration is caused by a \_\_\_\_\_, not just a forces.
- 12) (p.59) How does a rocket or jet airplane move?
- 13) (p. 66) Explain the difference between input and output forces:
- 14) If a machine can lift a very heavy object with very little input force, we say that it has a big:

### Chapter 5 (p.80)

15) If I pull on a pulley with 100 N of force, can I ever get out 100 N of force? Why or why not?

16) (p.83) What is energy:

17) (p.86) If I seem to lose some energy while something is moving, where did the energy go?

#### Chapter 6 (p.103)

18) Positive forces want to attract \_\_\_\_\_ forces so that an object becomes: e \_\_\_\_\_  
n \_\_\_\_\_. This is how electricity moves (which is just m \_\_\_\_\_ e \_\_\_\_\_).

#### Chapter 7 (p.114)

19) Where do the charges (electrons) actually come from?

20) (p. 116) What is AC current? Where is it found?

#### Chapter 8 (p.136)

21) (*Background: We know that electricity comes from moving \_\_\_\_\_. And f \_\_\_\_\_ opposes motion and causes h \_\_\_\_\_. That means that electricity causes h \_\_\_\_\_.*) If you want to put more electricity (current) through a wire what kind of wire do you want (size-wise).

#### Chapter 9 (p.146)

22) Why aren't birds electrocuted:

#### Chapter 10 (p.156)

23) Draw the three interactions of magnets:

24) Just like in electric charges, in magnets: opposites \_\_\_\_\_ and like charges \_\_\_\_\_.

25) Do magnets have positives and negatives? (top of p.157)

26) (p. 161) Draw a simple electromagnet, but make sure it can work by giving it a source of electricity.