Name: _____ N.B. p. _____

Chapter **3 Study Guide** Single/Science

1. Name & describe 6 types of energy:

Type	Description

2. Name 6 types of electromagnetic energy.

3. Why is nuclear energy potentially dangerous?

4. What is the source of nuclear energy?

5. Describe the difference in potential & kinetic energy.

6. Kinetic energy is directly proportional to _____ & _____.
   This means as _____ increases, _____also increases. Or as
   _____ increases, _____ also increases.

7. List & describe 3 types of potential energy. Also, describe what makes it increase.

Type	Description	Increases with…

8. Gravitational potential energy is directly proportional to _____
   & _____.

9. Describe how you could increase elastic potential energy.

10. The amount of chemical energy stored in a molecule is directly proportional to its _____.

11. Give 2 examples of how potential & kinetic energy transform as follows:
    PE→KE→PE

    KE→PE→KE

12. The Law of Conservation of Energy states that energy cannot be _____ or _____ but _____ from one form to another.

13. True or False: The **TOTAL** amount of energy can never change between transformations.

14. A measure of USABLE energy after a conversion is _____.

15. Give 2 examples of how energy may be converted into unwanted forms.
    --
    --

16. Why are LED lights efficient?

17. List 3 alternatives to fossil fuels:
    --
    --
    --

18. Solar cells convert sunlight into _____ energy.

19. Why don't we use more solar energy?

20. Why don't we use more windmills as a source of energy?

21. Write a paragraph describing the path of sound as it travels through the ear. Underline all organ names in your explanation.

22. Write the formula for kinetic energy.

23. Write the formula for gravitational potential energy.

24. Which would have greater gravitational potential energy?
    --a 10 kg object sitting on a ledge 4 m from the ground
    --a 10 kg object sitting on a ledge 6 m from the ground

25. Which would have greater kinetic energy?
    --a 100 pound person running 20 mph
    --a 200 pound person running 20 mph

26. Which would have greater gravitational potential energy?
    --a 100 kg object sitting on a ledge 4 m from the ground
    --a 10 kg object sitting on a ledge 4 m from the ground

27. True or False: Sound can travel through empty space.