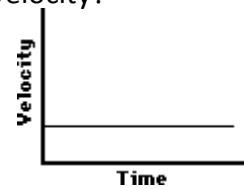


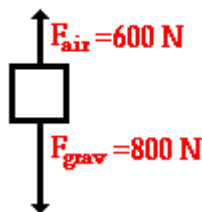
1. Give an example of gravitational potential energy.
2. Use Newton's 2nd law to solve for the mass of the object: Force = 10N Acceleration = 2 m/s/s
3. If the net force acting upon an object is greater than 0 N, then is the object accelerating? Why or why not?
4. Is this object in the graph balanced, unbalanced, or moving in a constant velocity?



5. Is this object in the graph balanced, unbalanced, or moving at a constant velocity?



6. What is the net force in the diagram?



7. How does a wind turbine transform energy?
8. Wind, solar, geothermal and hydroelectric are all examples of what type of energy?
9. What type of energy transfer would occur with a person running a marathon?

10. What is the energy transformation of a frog jumping from the ground and reaching its highest point?
Draw and label!
11. Give an example of work in the scientific sense.
12. A ramp in a building is an example of which simple machine?
13. On what point does a lever pivot?
14. How do simple machines make work easier?
15. The efficiency of a simple machine is always _____ because of _____.
16. Roller skates are an example of what type of simple machine?
17. The bottom of a light bulb is an example of what type of simple machine?
18. If the output force is greater than the input force when using a simple machine, what is achieved?
19. If you kick a bowling ball and a tennis ball with the same amount of force, what will happen according to Newton's second law of motion?
20. Reactions always go in the _____ direction of the action.
21. Use Newton's 2nd law to solve for the force exerted on an object: Mass = 10Kg Acceleration = 2 m/s/s

22. What is an example of an outside force that slows down a moving object?

23. What is inertia?

24. What is velocity?

25. Draw a distance/time graph that shows an increase in speed.

26. Draw an example of a series circuit.

27. In a series circuit, what happens if one bulb goes out?

28. What device is used to open and close a circuit?

29. Draw an example of a closed circuit with a battery, lightbulb, and wire indicating that the bulb will light

30. Give an example of Newton's 1st Law of Motion in real life.

31. Give an example of Newton's 2nd Law of Motion in real life.

32. Give an example of Newton's 3rd Law of Motion in real life.

33. Give an example for each of the following energy transformations:
 - a. Electrical to thermal
 - b. Chemical to electrical
 - c. Chemical to mechanical
 - d. Gravitational potential to kinetic
 - e. Electrical to radiant