Work Power and Machines Unit:

Objectives:

1. Describe the conditions that must exist for force to do work on an object.
2. Calculate work done on an object.
3. Calculate power and describe what variables affect power and how.
4. Recognize units for power and work.
5. Describe what a machine is and how it can make work easier
6. Compare and contrast work input and work output and describe what effects each
7. Compare actual to ideal mechanical advantage
8. Calculate actual and ideal mechanical advantage
9. Calculate efficiency and explain why efficiency is always less than 100%
10. Name describe and give examples of six different types of machines
11. Draw, label and give an example of three different classes of levers
12. Compare and contrast the three different classes of levers in terms of mechanical advantage and why
13. Describe how to determine mechanical advantage of different machines
14. Define and identify compound machines
15. Compare and contrast different types of pulleys and their corresponding mechanical advantage

Vocabulary:

1. work
2. power
3. joule
4. watt
5. machine
6. work input
7. work output
8. input distance
9. input force
10. output distance
11. output force
12. mechanical advantage
13. AMA
14. IMA
15. efficiency
16. lever
17. fulcrum
18. input arm
19. output arm
20. wheel and axle

21. incline plane
22. wedge
23. screw
24. pulley
25. compound machine

Assessments:

1. power lab
2. pulley lab
3. lever lab
4. open notes quiz 1
5. open notes quiz 2
6. castle learning
7. 1 other homework assignment (take notes, worksheet, book work, etc.)
8. test