Name: _____

Period:_____

HW Unit 8:1 — Guided Reading
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B-day: Due Thurs., 2/15 (Assig: 2/13)
A-day: Due Fri., 2/16 (Assig: 2/14)

Find the chapter on Work and Energy

1. Give the formula for work:
2. What are the units for work?
3. (*Looking on the side*). Work is how forces transfer e_____.
4. If you push on something and it doesn't move, did you do work?
5. Why?
6. Why, then, do you get tired when pushing on an object that doesn't move (look on the side)?
7. If a 6 N force pushes on a 2 kg object for 10 m, find the work done on the object. *(Show your work.)*
8. If there is no friction in the previous problem, how much energy was transferred to the object?

Not from the book (from "Simple Machines"):

9. Going up the stairs what is your input distance?
10. What is your output force?
11. (*From book*) Does the work change if you run or walk up the stairs?
12. What does change depending on how fast you go up the stairs?

13. How fast you do work is called p_____.
14. Give the equation for power:
15. What are the units for power?
16. Motor A does 24 J of work in 12 seconds, how much power did it use? (*Show work.)*
17. Motor B does 24 J of work in 6 seconds, how much power did it use?
18. Which motor did more work?
19. Which motor was more powerful?
20. So, true or false: A more powerful motor can do more work?
21. Why?
22. Try this: If E_k is kinetic energy and $E_k = (1/2)mv^2$. Calculate the kinetic energy of a 2 kg object going 3m/s. (Careful v^2 means v times v.)