

PHYSICS 151 READING ASSIGNMENT FOR OCTOBER 22 SECTIONS 10.1-10.3

Please notice that this file is two pages long.

10.1 - The Basic Energy Model

- I find this section to be very interesting, but I think it relies too much on you already knowing what energy is. Still, it's a good summary of the different types of energy and how it can change between them.

10.2 - Work

- We'll spend a lot of time in lecture on work. It's a physical quantity that we can calculate.
- For a force parallel to displacement, work is force times distance. Its unit is Joules ($J = N \cdot m$). Work is a scalar quantity.
- When force and displacement are in different directions, only the component of the force parallel to the displacement does work.

10.3 - Kinetic Energy

- Kinetic Energy, $K =$ energy of motion.
- $K = \frac{1}{2}mv^2$.

- The book doesn't quite make this clear, but the *total work* done on an object is what equals the change in its kinetic energy.
- Skip the section on rotational kinetic energy. It will make more sense when we go back and do chapter 7.