**Unit 3: Energy, Work and Power**

1. Work W = Fd cosθ (J) {know when zero work is done and negative work}

{be able to convert to kWh}

2. Power P = W/t (W) {be able to convert to horse power}

3. Gravitational Potential Energy Ep = mgh (J)

4. Kinetic Energy Ek = mv2/2 (J)

5. Total Mechanical Energy ET = EK + EP (J)

6. Temperature ≠Heat ≠Thermal Energy {know all definitions and differences}

7. Methods of Heat Transfer; conduction, convection, radiation {explain with an example}

8. Specific Heat Capacity ΔEH = mCΔT where ΔT = Tf - Ti

9. Latent Heat of Fusion E = mLf

10. Latent Heat of Vaporization E = mLv

11. Conversion between Celcius, Fahrenheit and Kelvin

12. - ΔEH Lost = ΔEH Gained

**Types of Problem Solving Questions:**

projectiles

throwing things off cliffs

sledding

crashing

heating bath water

heating curves

minimum velocity to stop at the top of a swing