PENANG SANGAM HIGH SCHOOL
YEAR 11 PHYSICS
WEEK 10

Strand	ENERGY
Sub Strand	Work Power And Energy.
Content Learning Outcome	At the end of the lesson students should be able to • define energy and distinguish it from the concept of work.

Lesson Notes

Energy

Energy is the capacity to do work. Energy is a scalar quantity as it only has size and no direction. It is measured in Joules, J.

Forms of energy

Sound Energy- is produced when an object is made to vibrate. Sound energy travels out as waves in all directions. Sound needs a medium to travel through, such as air, water, wood, and even metal! Examples: Voices, whistles, horns and musical instruments.

Chemical Energy - is really a form of potential energy and is the energy stored in food, gasoline or chemical combinations.
Examples: Striking a match, combining vinegar and baking soda to form CO2 Gas.

Radiant Energy - is a combination of heat and light energy. Light energy, like sound energy, travels out in all directions in waves.
Examples: A light bulb, the glowing coils on a toaster, the sun, and even headlights on cars.

Electrical Energy - Energy produced by electrons moving through a substance is known as electrical energy. We mostly see electric energy in batteries and from the outlets in our homes. Electrical energy lights our homes, run motors, and makers our TVs

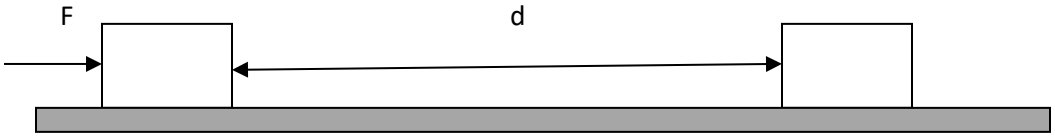
and radios work.
Examples: CD players, TVs and Video games.

Atomic Energy - is produced when you split atoms. A tremendous amount of energy is released when this happens.
Examples:Atomic bombs, nuclear power plants, nuclear submarines, and the sun.

Mechanical Energy – is possessed by a body due to its motion or due to its position. Mechanical energy can either be kinetic energy (energy of motion) or potential energy (stored energy
Examples: a rolling bicycle, moving gears, and running cars.

Work done

a. when the force is constant



Work done by a force is given by the formula

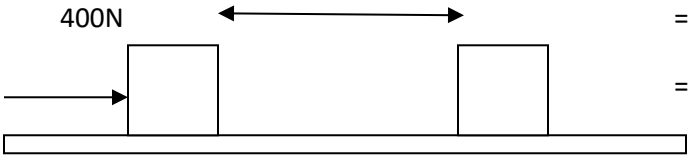
W = F x d (the force and the distance substituted must be in the same line)

Find the work done

eg 8m W = F x d

400N = 400 x 8

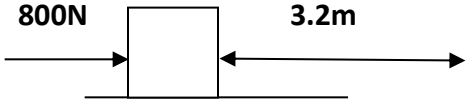
= 3200N



Find the work done for the following

1.

800N **3.2m**



2.

9m

150N