Planet Holloway **websheet 5.1**
Cp Physics Energy
You may print this out and write on it or work on your own paper.
Show all work.

1. A car traveling at 100 km/s takes 40 m to stop. How far does the car take to stop if traveling at 50 km/s?

2. When a car's speed is doubled, what happens to its kinetic energy?

3. How many Joules of work are done on a box of jellyfish with a mass of 16 kg being pushed for 2.5 m by a force of 72 N?

4. How much power is required to raise a 4 kg object 3 m in 6 seconds?

5. Sarah carries a 4 kg box horizontally across a 5 m room at a constant speed. How much work does Sarah do?

6. Phil throws a 3.5 chunk of pineapple at 12 m/s. How much kinetic energy does the pineapple have?

7. A pumpkin pie (1.4 kg) is dropped from a height of 3.5 m. Other than being a waste of an amazing pie, what is the kinetic energy of the pie when it strikes the unsuspecting freshman below?

   ¡Bonus!

8. A 6 kg penguin slides across frictionless ice at a speed of 14 m/s and encounters a section of ice angled up at 25 degrees like an inclined plane. How far along the inclined piece of ice does the penguin continue to slide before stopping?

Answers:

1. 10 m
2. its kinetic energy quadruples
3. 180 J
4. 20 Watts
5. 0 J (a = 0 therefore the force in the x is also zero)
6. 252 J
7. 49 J
8. 23.2 m