Physics 11

**Unit 7 – Energy**

**Section 7.1: Work**

Energy is something which cannot be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, only

 transferred from one \_\_\_\_\_\_\_\_\_\_\_\_\_ to another or from one \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to another.

Energy is also the ability to do \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

Work is a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, but it can be \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ if \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

When you hold an object in the air, do you do work?

**Example:** If you lift a 30 kg weight from the ground to a height of 1.5 m at constant velocity, how much work do you do on the weight?

How much work does gravity do on the weight?

**Example:** A stubborn poodle refuses to walk. His frustrated owner drags the dog back home along the 11 m driveway by its leash. If the leash makes an angle of 35 degrees with the horizontal and has a tension of 90 N, how much work does the person do on the poodle?