

Name:

Date:

Class:

Power Drag Lab Sheet

Objective: To measure the amount of work done on an object and the corresponding power that is used in moving an object a certain distance.

Materials: wooden plank, spring scale, known weights, ruler or meter stick, timer

Procedure:

1. Set the wooden plank on the table or on the floor and place a 1-kg steel block on top of the wooden plank.
2. Attach the spring scale to the wood using the hook provided on the wood.
3. Measure 0.5 m from the front of the wood and mark it.
4. Start pulling the wood with the 1-kg weight using the spring scale at constant speed.
5. Measure the force on the scale and record it.
6. Keep moving until you reach the 0.5 mark. Measure the time pulling it the whole length.
7. Compute for the work done using $W=F \times d$.
8. Compute for the power using $P=W/t$.
9. Repeat Steps 3-8, but this time pull the spring scale faster (constant speed).
10. Record your measurements and computations.
11. Add another 1-kg block on the wooden plank.
12. Repeat Steps 2-8.
13. Record all your measurements and computations.

Data:

Trials	Force (N)	Distance (m)	Work (J) $W= F \times d$	Time (s) Slow	Time (s) Fast	Power (W)