**Simple Machines Study Guide**

Define the following terms:

Simple machine

Effort force

Resistance force

Fulcrum

Actual Mechanical Advantage

Axle

Torque

Efficiency

Power

Give the unit used when measuring the following:

Work

Force

Distance

Mechanical advantage

Power

Give examples of each of the following:

1st class lever

2nd class lever

3rd class lever

Wheel and axle

Inclined plane

Wedge

Screw

If an effort force of 50N is needed to lift a rock with a lever and the rock weighs 70N, what is the AMA of the lever?

If the distance from the wheel of a wheel barrow to the handle is 1.3 meters and the distance from the wheel to the bed is 0.4 meters, what is the IMA of the wheelbarrow?

Describe the types of pulleys. Which type requires the least force to pull?

A water spigot has an axle of radius 2 cm and an attached wheel of radius 22 cm. What is the IMA of the spigot?

An inclined plane 3 ft tall has a length of 10 ft. What is the IMA of the ramp?

You have two screws, both two inches long. One has twice as many threads as the other. Which will be easier to insert into some wood? Why?

Describe an Archimedes Screw.

What is the purpose of a wedge? What wedge device might be best for shaping a piece of wood?

If the work put into a lever is 400J and the work that comes out is 390J, how efficient is the lever?

Ronald pushes a 40N box 20m in 10s. What was his power during this period?