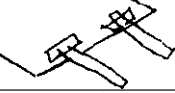



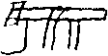



Name \_\_\_\_\_

## Lifting the Load

Build the pulley system and compare the force needed to lift items without a pulley to the force used with a pulley.

How to build the pulley system:

	1. Tape the pencils to the desk.
	2. Tape the strings to the cups and tape the ends together.
	3. Tape the ends of the ribbon to the cup handles.
	4. Tape one end of the 6 in. string to a pencil, thread the spool on it, loop a set of cups over it, tape the other end.
	5. Loop the other set over the other pencil.
	6. Experiment and record results.

	Items needed to lift 5 off the ground (no pulley)		Items needed to lift 5 to the top (no pulley)		Items needed to lift 5 off the ground (with pulley)		Items needed to lift 5 to the top (with pulley)	
	Predict	Actual	Predict	Actual	Predict	Actual	Predict	Actual
<b>Marbles</b>								
<b>Paper Clips</b>								

Look at the results of your experiment. Which set of cups required more force or weight to move?

Explain in your own words how a pulley works to make mechanical work easier.