

Pulley

GLE 0707.11.1 Identify six types of simple machines.

GLE 0707.Inq.1 Design and conduct open-ended scientific investigations.

GLE 0707.Inq.2 Use appropriate tools and techniques to gather, organize, analyze, and interpret data.

paper clip pulley ...adapted from **MACHINES #22**
by TOPS Learning Systems

1. Bend 2 paper clips like this:

2. Build a *combination pulley system*, with 4 strands of thread to lift a battery from floor to table.

3. To raise the battery 1 handspan, how far must you raise your hand? Can you feel a force advantage?

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Construct the paper clip pulley as shown in the diagram. Using your answers to the questions in step 3, by how much does the pulley system shown multiply the force you apply to raise the object?

How would you calculate the work you have done?

Describe another experiment you could conduct using a paper clip pulley. Hint: What variables can you change? Try out your experiment and record the results.

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