



a WOW Lab
BLUEPRINT
Pulleys and Mechanical Advantage

Time / Cost Estimate

Time: Prep - 30 min to 1 hr 30 min / Active - 45 min

The prep time varies depending on how quickly the knots can be learned. Prep time can also be reduced by buying a swing seat instead of constructing one, but this will increase the cost slightly. The active time in the classroom is approximately 45 minutes. This includes allowing two students to try lifting the teacher using the two different pulley systems, followed by each student attempting to lift him or herself with the two different pulley systems. The active time also includes students filling out the *Student Handout*.

Initial Cost: \$144.00 - \$164.00

The cost of this activity is fairly high, but once all the materials are purchased, it can be used for several years and shared by different classes. Almost all the materials used are basic climbing materials so it may be possible to borrow the materials from a friend or parent if any of them rock climb, which would eliminate all costs except for the swing base.