

Student Name:

Pencil Sharpener Key

This assignment is offered as a choice, as not every one may have access to an old-fashioned style pencil sharpener. The student will probably find that it takes less effort to lift the books if they are attached to an axle and wheel system, because the student is not directly holding the weight of the books. For #4, it should be quite difficult to turn the crank toward the middle. The length of the crank is the distance that, when increased, allows the force needed to decrease. The longer this distance, the greater the mechanical advantage, and the more torque results.