

Pulleys Science Project Idea

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Science project idea on why pulleys are used.
Pulleys Science Project Idea

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Why pulleys are used. We can raise a window fitted with weights any distance and it stays there. The pulley reduces the friction. If the cord supporting the weight ran through the opening in the window casing, without the pulley, would the window move so easily, and what would be the condition of the rope and the edge of the opening in a short time? Frequently, clothes lines extend from windows of an apartment building to a pole or to the opposite side of a courtyard. Explain how the clothes may be hung on the line for its whole length though it is far above the ground. What is the advantage of using a pulley in this case? Explain the importance of a pulley in raising a flag to the top of a pole. If a pulley were not used, how could the flag be placed in position? In these cases where a single fixed pulley is used, is there any gain in force applied or distance covered?

{mosloadposition advert3} Use of Pulleys in Hoisting Heavy Objects Science Project Idea

We have all seen pianos being raised to the upper windows of buildings. It seems rather easy, one man being able to raise one, although we know that lifting a piano is difficult even for several men, without some kind of apparatus. In the same way, heavy blocks of stone or steel girders are lifted into place during the construction of a building. Observation will show that pulleys are used, usually in the form of what is known as a block and tackle. The value of the pulley can be understood by an examination of the diagrams and by a few experiments. Pulley Science Experiment

In both A and B if the weight is 10 pounds, what does the spring balance register?

To raise the weight 6 inches, how far must the cord to which the spring balance is attached be pulled? In this respect compare work done by pulley with work done by lever, and by wheel and axle. What is the purpose of using the fixed pulley?

In the block and tackle represented in the diagram, how many sets of pulleys are there? How much force must be exerted in using this machine to lift a weight of 300 pounds if the weight of the pulley itself is ignored? How far will the rope have to be pulled to lift the weight 10 feet? In lifting heavy weights, the power rope is usually connected with a wheel and axle. Explain the reason for this. Where have you seen sets of pulleys such as this used?

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