

# Simple machines essay



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Engineers and scientists use scientific knowledge to design and build machines that make our lives easier. The machines they build today started off with the basics, which are known as Simple Machines. Simple Machines are defined as the simplest mechanisms that use mechanical advantage to multiply force. These machines have either few or no moving parts, and use energy to work. This term is usually referred to the six classical simple machines; lever, wheel and axle, pulley, inclined plane, a wedge and a screw.

They make work easier for us by allowing us to push or pull over increased distances, and each have had an enormous impact the course of human civilization. Simple machines are the elementary basics of all complicated machines. For example, wheels, levers, and pulleys are all used in the mechanism of a bicycle. Things as simple as a knife can also be classified as a simple machine, specifically, a wedge. A knife is a cutting tool, composed of a blade and a handle. A wedge is basically an inclined plane, that can be used to penetrate or split objects, or to stop them from moving, and reduces the force needed to cut through those objects.

When the knife is used for food preparation, the main uses are slicing (which involves cutting, by drawing the blade across the food, applying light pressure). Since the knife was among mankind's earliest inventions, the answers to who invented it, and what time it may have been invented may not be accurate, and varies among different sources. However, it is believed that it was first used by the cavemen during prehistoric times, who made crude knives from pieces of obsidian.

The knife can be used in many different ways, mostly depending on the type of knife that is being used, whether the knife is being used as a weapon, as utensils, as tools, or as a traditional or religious implement. The tool itself does nothing, but in the hand of the user it transmits the pressure of the hand and the arm. Knives concentrate a large amount of force on a very small area. The pressure from the arm down upon the sharpened edge, driving it into (for example), a tomato. The force between the food and the knife is normal force (the force of a surface acting on an object).

When the right amount of force is applied, the knife overcomes the normal force of the food and cuts through. The blades of a knife nowadays can be manufactured from a variety of materials, ranging from flint to steels, to stainless steel, to aluminum alloy, cobalt alloy, molybdenum, titanium, tungsten, chromium and other assorted metals with a relatively high melting point. In the old days, knives used to be made of stone and other materials as technology back then was not as advanced when compared to today. Knives nowadays are better, and are more durable as they use stronger metals and sharper edges.

Unlike knives in the olden days, which blades made of stone were too rough and coast, and could only chop and not cut. This meant that foods and another things could not be cut at a precise angle or shape. Today, with a more defined blade, foods like sashimi can be cut at a more precise angle, therefore creating a different dimension of taste and texture to the fish. In most cases, knives are effective to its cause, as mentioned above, although there are also side effects to it, regardless of what material for the blade is being used.

Using a blunt knife to cut things with is extremely dangerous, and is considered to be the most common side effect to this tool, as they require more pressure to cut. This increased pressure and the inability of the knife to cut into the object increases the likelihood of the knife slipping, therefore cutting a finger or perhaps stabbing a hand. Also, some knives (ceramic knives in particular) require high abilities to sharpen as they are dangerous, and therefore can only be done by professionals. They can also cause damage to dinnerware cause of their sharpness, and that knives can be light weight, making it difficult to handle and control.

Furthermore, they can be used as a weapon, and can be used for assassins and/or heavy injuries alike. In spite of all the negative impacts of knives mentioned above, there are also many positive impacts that follow them. Stainless steel is the most widely used material for the blade as it requires less maintenance and include very sharp edges, therefore making them easier to use. They don't impart any kind of "metal" flavor and are corrosion resistant. Stainless steel knives do not catch rust or stain, and do not require frequent sharpening.

The knife has made a huge impact on humans in many ways, especially in ethical and cultural factors. As mentioned above, knives were the first among mankind's earliest inventions, meaning that many cultures have made and attached spiritual and religious significance to the knife. In many cultures, knife symbols can be found to symbolize stages in life. For example, the Anglo-Axons included knife symbols so that the dead would not be defenseless in their next world. Another example, is that they would stick a knife into headboard of a cradle to protect the baby.

In Greece, a black-handled knife would be placed under the pillow to keep away nightmares. However, in other cultures, knives can be classified and recognized as a weapon, and is something that should be kept clear of. All traditions and customs aside, there are more to just cultural impacts. The art of “cutting” comes with a whole lot of opportunities, like fruit crafting, which helps people express themselves in cultural activities, and that the cutting function of the knife and also helped these people express themselves.

Ethical impacts to the knife itself has caused people to use a knife to do and “promote” unethical things, like knife killings, robberies, stealing, raping, committing a crime and threats etc. Sadly, the amount of knife injuries have been soaring in many countries since 2008; Accident and emergency departments in seven major countries have needed to deal with 900 people with knife injuries during the first half of the year.

No matter in the kitchen, police department, camping sites etc, a knife may always come in handy. The knife has made remarkable impact in human lives, like the six classical simple machines alike, though only one example a wedge has been thoroughly explained. Without knives, food would have to “cut” with raw hands, as a result of “imprecision”, though there could be less assault. Nobody would have ever realized that simple machines like a knife would have been affected so much my human society!