

Wheel and Axle

Could you insert a screw into a piece of wood using nothing more than your fingers? You would find it almost impossible. But with a screwdriver, you can turn the screw with ease.

A screwdriver makes use of a simple machine known as the wheel and axle. A **wheel and axle** is a simple machine made of two circular or cylindrical objects that are fastened together and that rotate about a common axis. The larger object is called the wheel and the smaller object is called the axle. In a screwdriver, the handle is the wheel and the shaft is the axle.

Every time you turn a doorknob, you are using a wheel and axle. The knob is the wheel and the shaft is the axle. The water wheel of a mill, the steering wheel of a car, and the handle of an eggbeater are also examples of a wheel and axle.

Advantage of a Wheel and Axle How does a wheel and axle make work easier? You apply an input force to turn the wheel, which is larger than the axle. As a result, the axle rotates and exerts an output force to turn something such as a screw. The wheel and axle multiplies your force, but you must exert your force over a longer distance—in this case a circular distance.

In You

Imagine
person v
using a s
of the co