

Name _____

Rolling Through Life: The Marvels of the Wheel and Axle

Short Answer Key

1. The mechanical advantage of a wheel and axle is determined by the size of the wheel relative to the axle. A larger wheel relative to a smaller axle provides a greater mechanical advantage.
2. An example of a machine or tool that uses a wheel and axle for mobility is a skateboard. When the rider pushes off the ground with one foot, the force is applied to the skateboard's wheels, turning the axle and propelling the rider forward.
3. Wheels and axles make it easier to move heavy objects by reducing the amount of force needed to rotate the axle, allowing for more efficient movement.
4. The axle in a Ferris wheel serves as the central axis around which the wheel rotates. It ensures the wheel's stability and allows it to spin smoothly.
5. The primary function of the spindle in a doorknob is to connect the knob to the door and serve as the axle, allowing the knob to rotate and open or close the door.

