

Name \_\_\_\_\_

## Mechanics of an Inclined Plane

### Short Answer Key

1. When using an inclined plane, you trade a smaller force exerted over a longer distance for lifting an object. This means that you need to push or pull the object along a longer path, but you don't have to exert as much force as lifting it straight up.
2. An inclined plane is used in a wheelchair ramp to enable people with wheelchairs or strollers to move between different levels without the need for lifting.
3. The angle of an incline affects the effort required to move an object. A steeper angle reduces the mechanical advantage, making it necessary to exert more force, while a shallower angle increases the mechanical advantage, reducing the required force.
4. An inclined plane would not be effective for a task that involves lifting an object straight up, as its primary advantage lies in reducing the force required to move an object along the plane.
5. Boat ramps at lakes or marinas use inclined planes to allow boaters to launch their boats into the water without the need for heavy lifting.

