

Name _____

Historical Examples of Simple Machines

Short Answer Key

1. The wheel and axle combination revolutionized transportation in ancient Mesopotamia by reducing friction, enabling heavy loads to be rolled instead of dragged or lifted.
2. Levers were used in the construction of the Great Pyramid of Giza to move and position massive stone blocks. Workers inserted wooden beams under the blocks and applied force to the other end of the beam, leveraging the mechanical advantage of the lever.
3. The Archimedes screw solved the problem of raising water from lower levels to higher levels, particularly for irrigation. It works by rotating a cylindrical tube coiled around a central axis, trapping water in the spiral grooves and pushing it upward.
4. Pulleys were commonly used in ancient construction, particularly in Greece and Rome, for lifting heavy stone blocks. These ancient cranes consisted of wooden frames with multiple pulleys and ropes, allowing for precise placement of massive stones.
5. Leonardo da Vinci contributed to the understanding and development of simple machines through his sketches and inventions, which explored the use of inclined planes and screws. His work laid the groundwork for future innovations in engineering and mechanics.

