

Simple Machines¹

Grade Level: 9-12

Overview	Students should learn what the six simple machines are and how they affect our daily lives.												
Objectives	<p>Given the information students will be able to:</p> <ul style="list-style-type: none"> • identify the six simple machines with 100 percent accuracy. • explain why some people believe there are less than six. 												
Materials	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; border: none;">Wooden wedges</td> <td style="width: 50%; border: none;">Wheel and axle</td> </tr> <tr> <td style="border: none;">2 Ramps</td> <td style="border: none;">A piece of paper</td> </tr> <tr> <td style="border: none;">A set of pulleys</td> <td style="border: none;">String</td> </tr> <tr> <td style="border: none;">Light weight fish scale</td> <td style="border: none;">Piece of 2x4</td> </tr> <tr> <td style="border: none;">Screw</td> <td style="border: none;">Powerpoint presentation</td> </tr> <tr> <td style="border: none;">Vi.sualize.us</td> <td style="border: none;"></td> </tr> </table>	Wooden wedges	Wheel and axle	2 Ramps	A piece of paper	A set of pulleys	String	Light weight fish scale	Piece of 2x4	Screw	Powerpoint presentation	Vi.sualize.us	
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Procedures	<ol style="list-style-type: none"> 1. Ask the students if they know what a simple machine is and what it does. Using vi.sualize.us the teacher will show different real world applications of simple machines. 2. Give the students the following background information: <ul style="list-style-type: none"> • A simple machine is a device or machine that makes everyday life easier. • Explain what mechanical advantage is. • Explain and give visual examples of each of the six simple machines. <ol style="list-style-type: none"> 1. Lever 2. Pulley <ul style="list-style-type: none"> • Using the pullies, string, and fish weight show how using more pullies increase mechanical advantage. 3. Wheel and Axle 4. Screw 5. Incline plane 6. Wedge 												

¹ <http://physics.about.com/od/physicsintherealworld/p/simplemachines.htm>

Simple Machines Lesson Plan

	<p>3. Talk about the controversy on how many simple machines there are.</p> <ul style="list-style-type: none">• A wedge is two inclined planes put together.• A screw is an incline plane that is twisted.
Standards	Standards for Technological Literacy: <ul style="list-style-type: none">• Tools, Machines, Products, and Systems use energy to do work.• Transportation Systems.
Evaluation	Students do projects using the simple machines to make a rube goldberg system.

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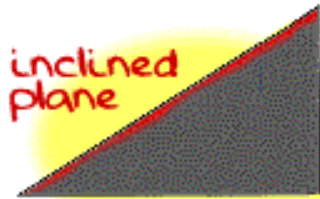


Image from:

www.ri.net/.../garden/simplemachines.gif