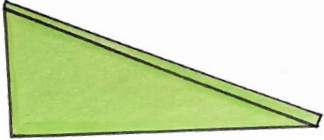
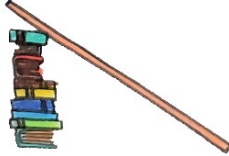

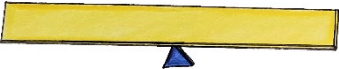




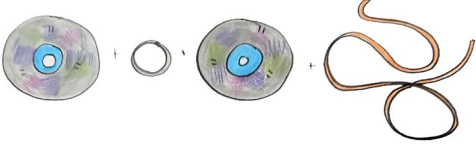



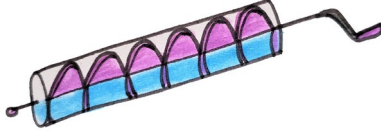





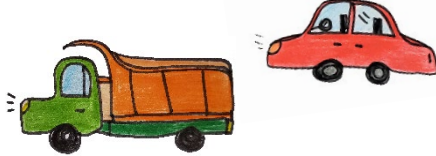

The world of hilarious invention!

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**Instructions:** Use this sheet as a guide to construct your own Rube Goldberg Machine. These ideas can help you get started, but the possibilities are endless! What will you build? (More simple machines are listed on the next page!)

Simple Machine	Description	Inspiration for a Rube Goldberg Machine	
<p><b>Inclined Plane</b></p> 	<ul style="list-style-type: none"> <li>• A plane inclined at an angle to the horizontal</li> <li>• Sloping ramp up which heavy loads can be raised</li> <li>• <b>Synonyms:</b> ramp, slant, gradient</li> </ul>	<p>Create a ramp by stacking books and laying a board across one edge</p> 	<p>Make a zipline that descends along a slope using string or yarn</p> 
<p><b>Lever</b></p> 	<ul style="list-style-type: none"> <li>• A rigid bar resting on a pivot (fulcrum)</li> <li>• Used to help move a heavy or firmly fixed load with one end when pressure is applied to the other</li> <li>• <b>Synonyms:</b> crowbar</li> </ul>	<p>A water bottle and a ruler can be used to make a seesaw.</p> 	<p>Did you know that a boat oar and the claw of a hammer act as levers too?</p> 
<p><b>Pulley</b></p> 	<ul style="list-style-type: none"> <li>• Wheel with a grooved rim around which a cord passes</li> <li>• Acts to change the direction of a force applied to the cord</li> <li>• Is mainly used to raise heavy weights</li> <li>• <b>Synonyms:</b> sheave, drum</li> </ul>	<p>Use an old fishing rod reel OR a sailboat block (used for rigging) to make an easy to use pulley.</p> 	<p>Create your own pulley by gluing an empty tape reel between two compact discs. Add a rope &amp; you're ready to go!</p> 

Simple Machine	Description	Inspiration for a Rube Goldberg Machine	
<p><b>Screw</b></p> 	<ul style="list-style-type: none"> <li>• Short, slender, sharp-pointed metal pin with a raised helical thread running around it and a slotted head</li> <li>• Used to join things together by being rotated so that it pierces wood or other material and is held tightly in place</li> <li>• <b>Synonyms:</b> bolt, fastener</li> </ul>	<p>Engineer an Archimedes screw from recycled materials</p> 	<p>Open a jar lid – the rim is a screw!</p> 
<p><b>Wedge</b></p> 	<ul style="list-style-type: none"> <li>• Piece of wood, metal, or some other material having one thick end and tapering to a thin edge</li> <li>• It is driven between two objects or parts of an object to secure or separate them</li> <li>• <b>Synonyms:</b> doorstep, chock</li> </ul>	<p>Wedges include scissors, shovels, and arrows.</p> 	<p>Even staples are a type of wedge!</p> 
<p><b>Wheel and Axle</b></p> 	<ul style="list-style-type: none"> <li>• A simple lifting machine consisting of a cylindrical drum or shaft joined to the wheel to provide mechanical advantage</li> <li>• <b>Synonyms:</b> axis, shaft</li> </ul>	<p>Toy cars and trucks have wheels and axels.</p> 	<p>Doorknobs, pinwheels, and old-fashioned kitchen hand mixers all contain a wheel and axle, also.</p> 

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