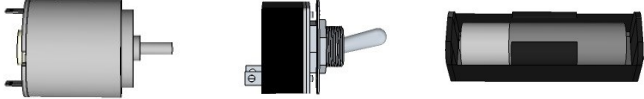
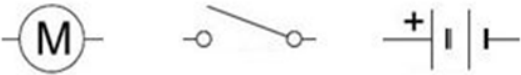




# Fairground Rides Worksheet



Name(s).....

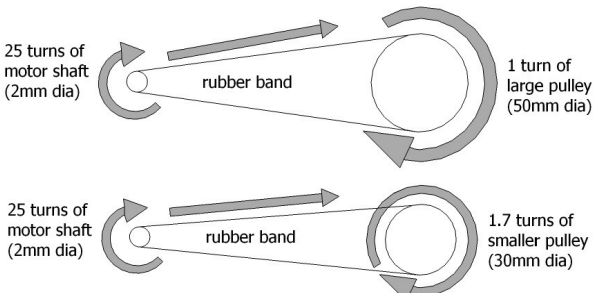
<p>Name these electrical parts:</p> 	
<p>Draw your circuit using these circuit symbols, and using lines to represent the wires. Label the components.</p> 	
<p>Is metal an insulator or a conductor?</p>	
<p>Is plastic an insulator or a conductor?</p>	
<p>What could happen if you short circuit your battery?</p>	
<p>What will happen if you leave the circuit switched on for a long time?</p>	
<p>Why does the pulley need to be a tight fit on the rotating wooden rod (or shaft)?</p>	
<p>Which of your items are acting as bearings?</p>	
<p>Which item is acting as a drive belt to turn the wooden rod?</p>	



# Fairground Rides Worksheet

## Suggested answers continued



<p>Does a fairground ride with a larger pulley rotate faster or more slowly than one with a smaller pulley?</p>	
<p>Which forces are slowing your fairground ride down?</p>	
<p>Which tools did you use to make your fairground ride?</p>	
<p><b>Extension questions</b></p>	
<p>Calculate the speed of your passengers as follows: Time 10 rotations Calculates number of revolutions per minute (rpm) Estimate diameter of circle travelled by passengers Calculate distance travelled in one revolution Calculate distance travelled in one minute Calculate distance travelled in one hour Convert to miles per hour</p>	
<p>If you were designing a real rotating fairground ride, suggest some safety aspects you would consider.</p>	
<p>Explain why the size of the pulley affects how fast your fairground ride rotates.</p>  <p>25 turns of motor shaft (2mm dia) → rubber band → 1 turn of large pulley (50mm dia)</p> <p>25 turns of motor shaft (2mm dia) → rubber band → 1.7 turns of smaller pulley (30mm dia)</p>	