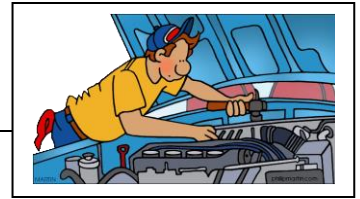


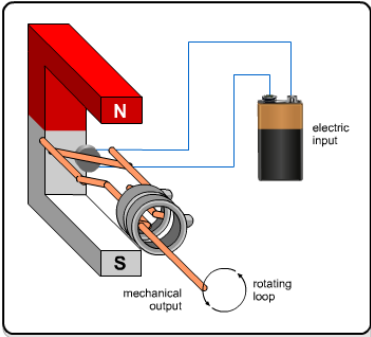
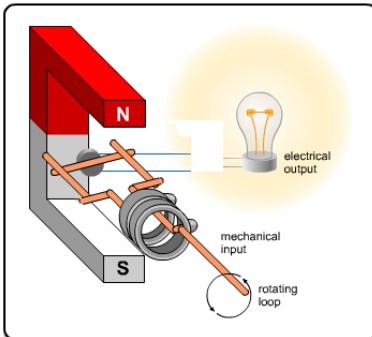
Week 37 – SCIENCE NOTE PAGE

Motors & Generators



Electricity and Magnetism are Linked TOGETHER!

- **Moving magnetic fields** can produce **electricity**, which is easily transported to **wherever** we need it!
- Then, we use electricity to generate moving magnetic fields, which can make stuff move and do **work** for us 😊

Electric Motor (Motion from electricity)	Electric Generator (Electricity from motion)
<ul style="list-style-type: none">• Motor - a machine that converts electrical energy into mechanical energy• Electrical → Mechanical  <p>The diagram shows a cross-section of an electric motor. It features a central coil of wire labeled 'rotating loop' that is positioned between two magnetic poles, 'N' (North) and 'S' (South). The coil is connected to an external circuit that includes a battery labeled 'electric input'. A curved arrow next to the coil indicates its rotation, labeled 'mechanical output'.</p> <p>Examples: fans, power tools, washing machine, dishwasher, blow dryer for hair</p>	<ul style="list-style-type: none">• Generator – a machine that converts mechanical energy into electrical energy• Mechanical → Electrical  <p>The diagram shows a cross-section of an electric generator. It features a central coil of wire labeled 'rotating loop' that is positioned between two magnetic poles, 'N' (North) and 'S' (South). The coil is connected to an external circuit that includes a glowing light bulb labeled 'electrical output'. A curved arrow next to the coil indicates its rotation, labeled 'mechanical input'.</p> <p>Examples: power plants (turbines), gas generators used in emergencies</p>