

Elizabethtown Area School District
Scope & Sequence - Quick Reference



Department: Applied Engineering & Technology Education, 18 Weeks

Course: Energy, Power, & Transportation

Grade Level(s): 10-12

<i>Unit Title</i>	<i>General Topic(s)</i>	<i>Pacing</i>
1. Transportation: Model Rocketry	<ul style="list-style-type: none">• Newton's Laws of Motion• Forces Acting On An Object• Mass & Weight• Acceleration• Action & Reaction• Model Rocketry	3 Weeks
2. Energy: Solar Sprint Car	<ul style="list-style-type: none">• Forms of Energy• Renewable & Nonrenewable Energy Resources• Laws of Energy Conservation• Photovoltaic Cells• Solar Angles & Tracking Systems• Gears & Gear Ratios• Chassis Strength To Weight Ratio	4 Weeks
3. Power: Catapult	<ul style="list-style-type: none">• Work, Energy, & Power• Force & Distance• Mass vs. Weight• Speed vs. Velocity• Horsepower• Simple Machines• Mechanical Advantage• Efficiency	5 Weeks

4. Electricity & Electronics	<ul style="list-style-type: none">● Safety & Electrical Shock● Nature of Matter● Electron Theory● Conductors, Insulators, & Semiconductors● Schematic Diagrams & Electrical Components● Voltage, Amperage, & Resistance● Series & Parallel Circuits● Ohm's Law● Watt's Law● Soldering● Magnetism & Electrical Motors● Sources of Electricity (Batteries)	6 Weeks
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