

Conceptual Physics Scope and Sequence

Days	Unit	Standard(s)/Outcome(s)	Essential/Guiding Questions
10	Driving Cars <ul style="list-style-type: none"> ● Position/ Distance/ Displacement ● Speed/Velocity ● Acceleration/Freefall 	HS-PS2-1 HS-PS2-2 HS-PS2-3	<i>What do we need to know to safely operate a vehicle?</i>
15	Car Accident Safety <ul style="list-style-type: none"> ● Mass ● Newton's 1st Law ● Newton's 2nd Law ● Momentum ● Impulse 	HS-PS2-1 HS-PS2-2 HS-PS2-3	<i>How can you best protect yourself in a car accident?</i>
15	Life in Space <ul style="list-style-type: none"> ● Newton's 3rd Law ● Apparent Weight ● Net Force ● Friction & Air Resistance ● Universal Gravitation ● Kepler's Laws ● Circular Motion 	HS-PS2-1 HS-PS2-4 HS-ESS1-4	<i>How do astronauts handle the challenges of life in space?</i>
15	Roller Coasters <ul style="list-style-type: none"> ● Potential and Kinetic Energy ● Energy Transformation 	HS-PS3-1 HS-PS3-2 HS-PS3-3	<i>How do roller coasters work?</i> <i>How is energy transferred and conserved?</i>

	<ul style="list-style-type: none"> • Thermal Energy • Energy Conservation • Work and Power 		
20	<p>Cell Phones</p> <ul style="list-style-type: none"> • Wave • Sound • EM Waves • Photoelectric Effect • EM Radiation 	<p>HS-PS4-1 HS-PS4-2 HS-PS4-3 HS-PS4-4 HS-PS4-5</p>	<p><i>How do cell phones work?</i></p> <p><i>How are waves used to transfer energy and send and store information?</i></p>
15	<p>Electric Boats</p> <ul style="list-style-type: none"> • Basic circuits • Ohm's Law • Coulomb's Law • Electric Fields • Magnetic Fields 	<p>HS-PS2-4 HS-PS2-5 HS-PS3-2 HS-PS3-3 HS-PS3-5</p>	<p><i>How can I get an electric boat to win a race?</i></p>