

# Grade 11 Physics

## Year-at-a-Glance 2020-2021

### Fall Semester 2020

1 <sup>st</sup> Grading Period (26 Days)	2 <sup>nd</sup> Grading Period (24 Days)	3 <sup>rd</sup> Grading Period (25 Days)
<p><b>Safety (2 Days)</b></p> <p><b>Metrics (1 day)</b></p> <p><b>Linear Motion (13 Days)</b></p> <ul style="list-style-type: none"> <li>○ distance + speed and graphs (Test)               <ul style="list-style-type: none"> <li>○ use SI in calculations and measurements</li> <li>○ calculating speed</li> <li>○ calculating average speed</li> <li>○ graph interpretation</li> </ul> </li> <li>○ displacement + velocity and graphs (Test)               <ul style="list-style-type: none"> <li>○ use SI in measurements and calculations</li> <li>○ calculating Velocity</li> <li>○ graphing velocity</li> <li>○ graph interpretation</li> </ul> </li> </ul> <p><i>TEKS: P.1A, P.2A, P.2B, P.2C, P.2D, P.2E, P.2F, P.2G, P.2H, P.2I, P.2J, P.3A, P.3E, P.4A, P.4B</i></p> <p><b>Linear Motion ( 10 Days)</b></p> <ul style="list-style-type: none"> <li>○ Acceleration (Test)               <ul style="list-style-type: none"> <li>○ calculating x acceleration</li> <li>○ graphing acceleration</li> <li>○ graph interpretation</li> </ul> </li> </ul> <p><i>TEKS: P.1A, P.2A, P.2B, P.2C, P.2D, P.2E, P.2F, P.2G, P.2H, P.2I, P.2J, P.3A, P.3E, P.4A, P.4B</i></p>	<p><b>1D motion II (11 Days)</b></p> <ul style="list-style-type: none"> <li>○ Vertical Acceleration (Test)               <ul style="list-style-type: none"> <li>○ calculations in the y directions                   <ul style="list-style-type: none"> <li>▪ freefall</li> <li>▪ throw up                       <ul style="list-style-type: none"> <li>● position</li> <li>● acceleration</li> <li>● time</li> <li>● velocity</li> </ul> </li> </ul> </li> <li>○ Moving object's falling from height</li> <li>○ graphing gravity</li> <li>○ free fall graph interpretation</li> </ul> </li> </ul> <p><i>TEKS: P.1A, P.2A, P.2B, P.2C, P.2D, P.2E, P.2G, P.2H, P.2I, P.2J, P.3B, P.3E, P.4A, P.4B, P.4C</i></p> <p><b>2 D Motion (13 Days)</b></p> <ul style="list-style-type: none"> <li>○ Horizontal projectiles               <ul style="list-style-type: none"> <li>○ calculate position vertically, range and time to fall</li> </ul> </li> <li>○ Projectiles with angles &amp; Vectors (Test)               <ul style="list-style-type: none"> <li>○ <math>V_x = V \cos \theta</math></li> <li>○ <math>V_{iy} = V \sin \theta</math></li> <li>○ calculate (draw and label a model)                   <ul style="list-style-type: none"> <li>▪ launch angle</li> <li>▪ max height</li> <li>▪ range</li> <li>▪ time of flight</li> <li>▪ <math>V_x</math> and <math>V_y</math> at a time</li> <li>▪ <math>D_x</math> and <math>D_y</math> at a time</li> </ul> </li> </ul> </li> <li>○ Vectors</li> </ul> <p><i>TEKS: P.1A, P.2A, P.2B, P.2C, P.2D, P.2E, P.2G, P.2H, P.2I, P.2J, P.3B, P.3E, P.4A, P.4C</i></p> <p><b>Start UCM Earth</b> <b>CBA #2 Dates</b> <b>Test 1: Oct 9</b> <b>CBA 2: Oct 23 (test 2)</b></p>	<p><b>UCM ( 4 Days)</b></p> <ul style="list-style-type: none"> <li>○ Intro to forces- Earth- quiz               <ul style="list-style-type: none"> <li>○ calculate <math>V_t</math>, <math>a_c</math>, <math>F_c</math>, frequency and period</li> </ul> </li> </ul> <p><b>Forces ( 11 Days)</b></p> <ul style="list-style-type: none"> <li>○ Multiple Forces (2 Tests)               <ul style="list-style-type: none"> <li>○ Newton's 3 Laws (1 test)                   <ul style="list-style-type: none"> <li>▪ ID laws</li> <li>▪ draw and label FBD</li> </ul> </li> <li>○ <math>F = ma</math> math and FBD (2nd)</li> </ul> </li> </ul> <p><i>TEKS: P.1A, P.2A, P.2B, P.2C, P.2D, P.2E, P.2G, P.2H, P.2I, P.2J, P.3E, P.4A, P.4D</i></p> <p><b>Fundamental Forces ( 10 Days)</b></p> <ul style="list-style-type: none"> <li>○ Gravitational, Magnetic, and Electrostatic Force (Test)               <ul style="list-style-type: none"> <li>○ <math>F_g = GMM/d^2</math></li> <li>○ <math>F_e = KQQ/d^2</math></li> <li>○ draw pictures</li> <li>○ What if questions</li> </ul> </li> </ul> <p><i>TEKS: P.1A, P.2A, P.2B, P.2C, P.2D, P.2E, P.2G, P.2H, P.2I, P.2J, P.3E, P.4D, P.5A, P.5B, P.5C, P.5D</i></p>

## Spring Semester 2021

4 <sup>th</sup> Grading Period (29 Days)	5 <sup>th</sup> Grading Period (29 Days)	6 <sup>th</sup> Grading Period (30 Days)
<p style="text-align: center;"><b>Energy (18 Days)</b></p> <ul style="list-style-type: none"> <li>● Kinetic Energy, Potential Energy, &amp; Conservation of Energy Test</li> </ul> <p><i>TEKS: P.2A,P.2B, P.2C, P.2D, P. 2E, P.2F, P.2J, P.6A, P. 6B, P.6C, P.6D</i></p> <p><b>Work, Power, and Thermodynamics (10 Days)</b></p> <ul style="list-style-type: none"> <li>● Work, Power and Thermo Test</li> <li>● Work Energy Theorem</li> <li>● Power</li> <li>● Laws of Thermodynamics</li> </ul> <p><i>TEKS: P.2A,P.2B, P.2C, P.2D, P. 2E, P.2F, P.2J P.6A, P. 6B, P.6C, P.6D, P.6E</i></p>	<p style="text-align: center;"><b>Momentum ( 14 Days)</b></p> <ul style="list-style-type: none"> <li>● Momentum &amp; Impulse Test</li> <li>● Impulse</li> <li>● Conservation of momentum</li> </ul> <p><i>TEKS: P.2A, P.2B, P.2C, P.2D, P. 2E, P.2F, P.2J, P.3B, P.3C, P.3F, P.6C, P.6D</i></p> <p style="text-align: center;"><b>Circuits ( 15 Days)</b></p> <ul style="list-style-type: none"> <li>● Electricity Test</li> <li>● Conductors and Insulators</li> <li>● Ohm’s law, and power</li> </ul> <p><i>TEKS:P.2A, P.2B, P.2C, P.2D, P. 2E, P.2F, P.2J, P.3B, P.3C, P.3F, P.5E, P.5F</i></p>	<p style="text-align: center;"><b>Waves ( 8 Days)</b></p> <ul style="list-style-type: none"> <li>● Sound &amp; Behavior Test</li> <li>● Wave Behavior</li> <li>● Wave Formula</li> </ul> <p><i>TEKS: P.1B, P.2A,P.2B, P.2C, P.2D, P. 2E, P.2F, P.2G, P.2J, P.3E, P.7A, P.7B,P.7C, P.7D</i></p> <p style="text-align: center;"><b>Optics ( 15 Days)</b></p> <ul style="list-style-type: none"> <li>● Light and Optics Test</li> <li>● Optics</li> </ul> <p><i>TEKS: P.1B, P.2A,P.2B, P.2C, P.2D, P. 2E, P.2F, P.2G, P.2J, P.3E,P.7A, P.7B,P.7C, P.7D, P.7E</i></p> <p style="text-align: center;"><b>Modern ( 5 Days)</b></p> <ul style="list-style-type: none"> <li>● <math>E = mc^2</math></li> <li>● Fission and fusion</li> <li>● Dual nature of light</li> <li>● Photoelectric effect</li> </ul> <p><i>TEKS:P.1B, P.2A,P.2B, P.2C, P.2D, P. 2E, P.2F, P.2G, P.2J, P.3E, P.8A,P.8B, P.8C, P.8D</i></p>