

	SE Physics - Daily Activities	Content Covered - Unit Plan
M O N D A Y	<p>Review: HW 113 #1-5 Velocity Transformation Introduce: SR - Mass Expansion - Momentum Assign: HW 114 #6-16 Mass Expansion Remind: Quiz Special Relativity - Length, Time & Velocity for Tuesday</p>	<p>Proficiencies addressed:</p> <p>31. Demonstrate an understanding of the conflicting evidence [Michelson-Morley Interferometer, Photoelectric Effect and Blackbody Radiation] regarding light, its interaction with the environment and the resulting wave-particle duality theory. (CCCS #5.2)</p> <p>32. Demonstrate an understanding of the application of Special Relativity and its resultant effects on time, length, mass & energy. (CCCS #5.2), (CCCS#5.7)</p> <p>30. Demonstrate an understanding of ray optics in both lenses and mirrors including: (CCCS#5.7) a. the qualitative determination of the position of real and virtual images through ray diagrams. b. the quantitative prediction of the position and magnification of real and virtual images. c. determining the focal lengths of mirrors and lenses [including the lens maker's formula].</p>
T U E S D A Y	<p>Review: HW 111 #1-7 Length Contraction HW 112 #8-12 Time Dilation HW 113 #1-5 Velocity Transformation Give: Quiz Special Relativity - Length, Time & Velocity Collect, Grade & Return: HW 111-113 Length, Time & Velocity Review: HW 114 #6-16 Mass Expansion Introduce: SR - Energy Assign: HW 115 #1-9 Energy</p>	<p>Written assignments: Special Relativity HW 111 #1-7 Length Contraction HW 112 #8-12 Time Dilation HW 113 #1-5 Velocity Transformation [1st quiz on relativity - Length, Time & Velocity] HW 114 #6-16 Mass Expansion HW 115 #1-9 Energy HW 116 #1-16 All Together [2nd quiz on relativity - Mass & Energy] Written Assignments: Mirrors & Lenses HW 10:1 #1-21 Ray Optics - Mirrors HW 10:2 #1-23 Ray Optics - Lenses</p>
W E D N E S D A Y	<p>Review: HW 115 #1-9 Energy Announce: Quiz Special Relativity - Mass & Energy for NEXT Monday and Test Special Relativity next Thursday Introduce/Demonstrate: Mirrors - Plane, Convex, Concave: focus, principle axis, secondary axis, etc. Assigned Reading: Mirrors & Lenses 10:1a-c Ray Optics – Plane Mirrors 10:2a-g Ray Optics – Concave Mirrors 10:3a-c Ray Optics – Convex Mirrors 10:4a-b Ray Optics – $1/d_o + 1/d_i = 1/f$ 10:5a-f Ray Optics – Problem Solving Prep: Lab 10:1 Mirrors to begin tomorrow Assign: HW 116 #1-16 All Together for Friday</p>	<p>Assigned Reading: Special Relativity Derivation of Special Relativity Time Travel: http://www.cix.co.uk/~antcom/welcome.html http://www.lifesci.sussex.ac.uk/home/John_Gribbin/timetrav.htm GPS Time Correction: http://www.kowoma.de/en/gps/errors.htm</p> <p>Assigned Reading: Mirrors & Lenses 10:1a-c Ray Optics – Plane Mirrors 10:2a-g Ray Optics – Concave Mirrors 10:3a-c Ray Optics – Convex Mirrors 10:4a-b Ray Optics – $1/d_o + 1/d_i = 1/f$ 10:5a-f Ray Optics – Problem Solving 10:6a-n Ray Optics - Lenses 10:7a-e Ray Optics - Corrective Lenses</p>
T H U R S D A Y	<p style="text-align: center;">Double Lab - Period 2</p> <p>Give: Test - Wave & Particle Properties of Light Begin: Lab 10:1 Mirrors</p>	<p>Evaluations: Wave-Particle Duality Test - Wave & Particle Properties of Light Evaluations: Special Relativity Quiz Special Relativity - Length, Time & Velocity Quiz Special Relativity - Mass & Energy Test Special Relativity Evaluations: Mirrors & Lenses Quiz 10:1 Ray Optics - Mirrors Quiz 10:2 Ray Optics - Lenses Test - Mirrors & Lenses</p>
F R I D A Y	<p>Review: HW 116 #1-16 All Together Continue/Complete: Lab 10:1 Mirrors Assigned Reading: Mirrors & Lenses 10:1a-c Ray Optics – Plane Mirrors 10:2a-g Ray Optics – Concave Mirrors 10:3a-c Ray Optics – Convex Mirrors 10:4a-b Ray Optics – $1/d_o + 1/d_i = 1/f$ 10:5a-f Ray Optics – Problem Solving 10:6a-n Ray Optics - Lenses Assign: HW 10:1 #1-21 Ray Optics - Mirrors Remind: Quiz Special Relativity - Mass & Energy for Monday and Test Special Relativity next Thursday</p>	<p>The primary goals this week will be to:</p> <ul style="list-style-type: none"> ▪ Complete Wave-Particle Duality ▪ Continue the development of Special Relativity ▪ Introduce Mirrors & Lenses