

Mr. Schneider presents...

Special Relativity Topics

- Uniform motion
- Reference frames (esp. inertial reference frames)
- Speed of light
- Ether hypothesis
- Einstein's postulates
- Time dilation
- Length contraction
- Mass increase
- Simultaneity
- Space-time intervals
- Past/elsewhere/future
- East/elsewhere/west
- Light cones
- Energy has mass
- Mass is energy

$$\Delta t|_{\text{moving}} = \Delta t|_{\text{observer}} \sqrt{1 - \frac{v^2}{c^2}}$$

$$L|_{\text{observer}} = L_{\text{no}} \sqrt{1 - \frac{v^2}{c^2}}$$

$$m|_{\text{observer}} = \frac{m_0}{\sqrt{1 - \frac{v^2}{c^2}}}$$

$$STI = \sqrt{c^2 \Delta t^2 - \Delta x^2 - \Delta y^2 - \Delta z^2}$$