Theory of Relativity

The theory of relativity, developed by Albert Einstein in the early 20th century, revolutionized our understanding of space, time, and gravity. It consists of two main parts: Special Relativity and General Relativity.

Special Relativity:
- Introduced in 1905, it focuses on the physics of objects moving at constant speeds, particularly near the speed of light.
- Key concepts include time dilation, length contraction, and the famous equation E = mc^2.

General Relativity:
- Published in 1915, it extends relativity to include acceleration and gravity.
- Describes gravity as the curvature of spacetime caused by mass and energy.

Impact:
The theory of relativity has profound implications for cosmology, GPS technology, and our understanding of black holes and the universe's expansion.