Introducing the Universal Law of Gravitation class 9

Sir Isaac Newton formulated the Universal Law of Gravitation in 1687. This groundbreaking theory described the fundamental nature of gravitational forces between any two objects in the universe. The law states that every particle of matter attracts every other particle with a force that is directly proportional to the product of their masses and inversely proportional to the square of the distance between them.

Mathematically, the Universal Law of Gravitation class 9 can be expressed as:

$F = G * (m_1 * m_2) / r^2$

In this equation:

- F represents the gravitational force between two objects.
- G is the gravitational constant, a fundamental constant that determines the strength of gravity (approximately 6.67430×10^{-11} N m²/kg²).
- m_1 and m_2 are the masses of the two objects involved.
- r represents the distance between the centers of the two objects.