Gravitation - Lesson 1
A Brief History

4th Century BC, Greece

The first description of bodies falling downwards towards the centre was related to their nature was documented by the Greek philosopher Aristotle. This nature of objects getting attracted was due to their gravitas or heaviness.

3rd Century BC, Greece

Archimedes discovered the centre of mass of a triangle and postulated the centre of mass of 2 equal weighing objects.

7th century AD, India

Brahmagupta called this invisible force of attraction *“gurutvaakarshan”*.

1589 - 1592 AD, Italy

Galileo Galilei showed that gravitational acceleration is the same for all falling objects. In short, all objects would fall at the same rate, if not for air resistance. He did that by dropping balls from the leaning Tower of Pisa.

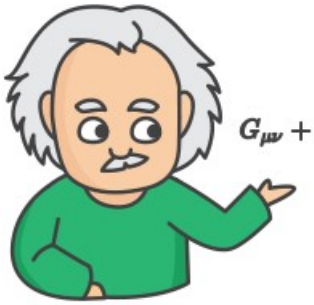
$$F = G\frac{m_1 m_2}{r^2}$$

1687 AD, England

Sir Isaac Newton derived the Universal Law of Gravitation in "Principia".

1915 AD, Germany

Albert Einstien used the equivalence principle to develop the General Theory of Relativity, which remains the most extraordinary feat of human thinking about nature as summarised by Max Born.



$$G_{\mu\nu} + \Lambda g_{\mu\nu} = \frac{8\pi G}{c^4} T_{\mu\nu}$$

Unknown, Unknown

Integration of Quantum Mechanics and General Relativity to form the Theory of Everything.

Note to Teacher

The text is aims to inform the vibrant and active history of gravitation. Although, the events listed here are limited, the teacher can give information about other important scientists such as Nicolaus Copernicus or Tycho Brahe. This lesson is inted to give an overvie of the past and can be used as a great tool to instill enthusiasm in the students.