



WELCOME,
STUDENTS!



LESSON FOR THE DAY

GRAVITATION

Demo class for byju's

THE UNIVERSAL FORCE OF ATTRACTION ACTING BETWEEN ALL MATTER IS CALLED GRAVITATION

Gravitation is the acting force between two bodies. The best example will be falling an apple from the tree. Here the apple and earth are considered as two bodies and so the force of attraction acts . The gravitation or gravitational pull that attracts the apple towards the ground.


Some other examples will be -


- A car that is parked at the top of a hill.
- A yoyo before it is released.
- River water at the top of a waterfall.
- A book on a table before it falls.
- A child at the top of a slide.



WHAT IS GRAVITY?


The answer is gravity: an invisible force that pulls objects toward each other. Earth's gravity is what keeps you on the ground and what makes things fall. Anything that has mass also has gravity. Objects with more mass have more gravity.

DIFFERENCE BETWEEN GRAVITATION AND GRAVITY 



GRAVITATION

GRAVITATION IS THE FORCE OF ATTRACTION ACTING BETWEEN ANY TWO BODIES OF THE UNIVERSE.



GRAVITY

GRAVITY IS THE EARTH'S GRAVITATIONAL PULL ON A BODY, LYING ON NEAR THE SURFACE OF EARTH.

STATE THE UNIVERSAL LAW OF GRAVITATION

The universal law of gravitation states that every object in the universe attracts every other object with a force called the gravitational force. The force acting between two objects is directly proportional to the product of their masses and inversely proportional to the square of the distance between their centers.

REQUIRED FORMULA:

Consider F as the force of attraction between an object on the surface of earth and the earth

Also, consider ' m ' as the mass of the object on the surface of earth and ' M ' as the mass of earth

The distance between the earth's centre and object = Radius of the earth = r

Therefore, the formula for the magnitude of the gravitational force between the earth and an object on the surface is given as:

$$F = \frac{GMm}{r^2}$$

CLASS RECAP



Gravitation :

Gravitation is the force of attraction between any two bodies.



Gravity

Gravity is a force that attracts a body towards the centre of the earth, or towards any other physical body having mass



Formula

$$F = \frac{GMm}{r^2}$$

EXERCISE

Observe and write more examples of gravitation .

Rewrite the gravitation formula .



THANK
YOU