

Motion and gravity



**ASSIGN
BUSTER**

Motion and Gravity Since few decades, there has been significant advancement in the field of science and technology; however, even after huge innovative developments, some rules have remained intact and have been the fundamental basis of science. From this aspect, motion and gravity are the two imperative conceptions of science that provide comprehensive understanding of other scientific theories. In specific, Newton's first, second, and third laws of motion are the true framework of understanding motion that then allows understanding of gravity as well. The first law says, "An object in motion tends to stay in motion, and an object at rest tends to stay at rest, unless the object is acted upon by an outside force" (Croce, pp. 38). From this explanation, it is an understanding that a body remains in motion unless some other force stops it down. From this definition, this other force can be either friction or gravity, and thus, understanding of motion itself is an efficient way of understanding the force of gravity.

The second law says, "Acceleration of an object is dependent upon two variables - the net force acting upon the object and the mass of the object" (Quah, pp. 57). This law explains that mass and force are the two indicators that decide the rate with which the body slows or accelerates. Thirdly, Newton stated, "Every action has an equal and opposite reaction" (Quah, pp. 57). In this regard, these three laws of motion are the best ways of defining and understanding motion. Specifically, from these understandings, motion is any change that occurs in the location or place of a body with regard to time and space. In addition, it is an observation that in physics, scientists always define and explain motion with respect to different references, such as friction, gravity, time, velocity, etc.

However, without gravity, there can be no definition of motion. In particular,

<https://assignbuster.com/motion-and-gravity/>

gravity is the most fundamental concept of nature that allows objects and bodies with any mass to interact, and more specifically, attract each other (Garnow, pp. 23-25). In addition, gravity enables the objects and bodies with masses to acquire weight that results in their falling on the ground. In this regard, gravity or gravitation is the basic force that keeps existence of sun, earth, moon, etc in the universe in balanced manner, whereas, its absence would have caused irregularity in orbits of the universe. Therefore, gravity is the fundamental force that directs and manages motion of bodies and objects in the time and space (Garnow, pp. 41-46).

In conclusion, motion and gravity are two concepts that relate with each other significantly, and absence of one results in lack of understanding of the other. In the past, a number of scientists have endeavored to understand these two notions of physics. For instance, "Newton's law of universal gravitation" (Garnow, pp. 52-56) is famous for defining and explaining gravity. On the other hand, the paper has already included "Newton's three laws of motion" (Croce, pp. 19-21) to understand the fundamental concept of motion. This practice has continued until today, as modern physicists have also continued to define these concepts. For instance, "general theory of relativity" (Garnow, pp. 47-50) is another instance that explains gravity as an outcome of the bend of time and space that rules the motion of inertial bodies.

Works Cited

Croce, Nicholas. Newton and the three laws of motion. The Rosen Publishing Group, 2005.

Garnow, George. Gravity. Courier Dover Publications, 2003.

Quah, Julie. Physics expression. Panpac Education, 2008.

<https://assignbuster.com/motion-and-gravity/>