

Importance of Physics in our Daily Life

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Introduction

We are living in the era of science and technology, and the inclusion of science and technology in our everyday lives has greatly improved our lives. When individuals had no notion about science after then their lives were ruled by the values of many branches of science. While we light a fire, a chemical process takes place; while we take food and digest it, it is a biologically based process; when we walk on the ground, it is directed by the universal laws of physics; when an Earth-quake happens, it's a seismic action; while we talked around many lands and gems of the surface of Earth surface, it is linked to Geology. There is not a single action in our everyday lives that defines our one or other arena of science. Likewise, physics rules our daily lives and is elaborate in many actions that we perform and things that we use in our everyday lives. In this paper, we will deliberate how physics plays an important role in running our daily jobs and supports us in doing our chores, errands, and obligations easily and efficiently.

Applications of Physics in Daily Life

Physics is deliberated as a natural science as it compacts with the elements like substance, energy motion, and force. As all of these are linked to duty associated with daily life, hence, we could say that physics deals with how the cosmos, universe, and earth work, how the planet Earth moves around the sun, how lightning strikes the earth, how our fridge works, and much more. In brief, physics describes how the whole thing works near us. When we could not distinguish everything from science and, our world could not detach itself from the miracles of Physics. When we look around us, we can see several elements that work on the philosophies of Physics. We could enlighten our numerous actions by making the usage of the information of Physics. Here, we would deliberate certain instances, which would assist us in studying how physics plays an important role in our lives every day(Kumahara, Tanaka, & Schutz, 2004).

Walking

Many Principles of physics are elaborated in the simple action of walking. It includes the notions of mass, Newton's 3rd laws of motion, gravitational law, friction, kinetic, and potential energy. When we used to have a walk, we basically acted like an overturned pendulum. When we place the foot on the ground, it turns out to be our axis, and our weight is pinpointed in our abdomen, relating to the figure of an arc. While we set up our feet on the earth, we basically put the weight that is $w=mg$ and apply a retrograded energy on the ground; as the reply to our mass, the earth retorts by an opposite force

which is perpendicular in nature, on the leg which decelerates us and this decelerating method endures until our leg comes adjacent to our tummy. While the leg is stirring, K.E (kinetic energy) is at the extreme, and P.E (potential energy) is at zero value; however, when the leg extends close to the arc or belly, the P.E (potential energy) reaches its extreme value. When the further step is engaged, the store P.E (potential energy) is transformed into the K.E (kinetic energy), and this procedure carries on. We act as an imperfect pendulum, as all of the P.E (potential energy) is not transformed into the K.E (kinetic energy). Only 65% of the power is delivered by the stored P.E. to take to the next step, while the remaining 35% of the energy is delivered by the biochemical procedures(Hunt & Minstrell, 1994).

While we used to walk, we are doing certain work in terms of physics; since $W=F \cdot S$, when we exert certain forces, and as a consequence of it, we cover certain distances, we do some work. While walking, the 3rd law of motion of Newton is applied. The 1st law of motion deliberates that, an object continues to remain in the state of rest or motion until an external force is exerted on it. While we are in the rest position, inertia is at an extreme value. The object requires a large quantity of power to come out from the state of inertia that is when we start to walk. While we take the 1st stage, the power is transmitted from our foot to the upper part of the body, and we start to move; in this procedure of walking, the inertia retains on varying upsurges when we put the foot on the ground and reduces when we moved the foot in the up direction. Newton's 2nd law of motion deliberates that $a=F/m$ (stands for acceleration, F for force, and m for mass). That is, acceleration has a direct relationship with the force that we use or exert while we are walking; hence if we apply further force, our acceleration will also increase. Newton's 3rd law of motion is the action and reaction of the object; It states that every action has an equal and opposite reaction.

Cooking

Thermodynamics is a branch of physics that deals with temperature, heat, and the amount of work that is completely due to it. Hotness or heat is a type of energy that can be moved from one medium to another medium. That is the transfer of heat. For heat transfer, heat moves from the hotter surface to the colder surface. When we place the pan, with liquid or anything new in it, on the red-hot cooktop, the energy in the flame of the stove traces the cold pan, it starts to transfer the heat to the pan, and therefore, it makes it hooter. This process is known as conduction. Convection is a method of motion of particles in a liquid state and a gas state. While we heat up the pot, the molecules on the base of the pan start to heat up; after a while, when the molecules have sufficient energy and turn out to be more and hotter than the particles nearby, they start to move toward the surface of the water. These molecules of water that come to the surface are cooler and weightier as compared to hot water because of the lesser heat energy. Hence it starts moving downwards; this procedure lasts till all of the water molecules reach at a similar temperature("Role of Physics in our daily," n.d.).

The cooking method is an open system, as in this, together with the mass the energy is lost. Zeroth law of thermodynamics says that energy must be preserved; in our circumstance, the energy loosed

by the flame is being used by the pot to heat the water, and therefore the sum of energy continues to be preserved. If we use the pressure oven, it usages the heat energy to carry impulsive variations into the food with the help of K.E. of the particles to carry chemical variations in food items; therefore, sustaining the laws of thermodynamics that impulsive works are finished because of the work energy.

Cutting Vegetables and Fruits

When we cut vegetables and fruit, we certainly do not understand that physics can be included in this modest job; then, certainly, it is. To cut vegetables, fruits, or whatever, we must apply force on the knife. When we raise the force, we can cut a fruit or vegetable simply. Force is reliant on pressure and area that has a direct relation between force and inversely relation with the area. In short, we could say that when we apply further force, we could cut any object simply; however, if a similar force is being executed with the help of a knife with thicker edges, we could not do it. From these practices, we have learned that the knife, which has edges with a smaller surface area, could assist in cutting any object simply. Likewise, we could cut simply with a knife that has Sharpe edges rather than that of a blunt. The blunt-shaped knife has more resistance or friction, which is because of its uneven edges and hence makes it harder to cut any item(Kumahara et al., 2004).

Closing and Opening of Doors

Physics is also applied in the closing and opening of the hinged gates or doors. The method involved in the closing and opening of the door is known as torque. Torque is defined as the force that is required to twist anybody around an axis or fulcrum. When we open a gate or door with the help of a handle, at the furthest place from the hinge, we can easily open the gate by making the torque.

Conclusion

Here, we have observed a limited instance of physics; however, our lives are ruled by physics and other branches of science. Physics rules several natural actions and also describes a variety of [human-made](#) items like vehicles, fridges, escalators, and microwaves. Therefore, we could say that physics and Physics govern our lives, making our lives easy and modifying our way of life.

References

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