

Department of Physics

(Shri Lal Bahadur Shastri Degree College, Gonda)



A One Day Workshop

Under MoU

Between

Department of Physics, Kisan P.G. College, Bahraich and

Department of Physics, S. L. B. S. Degree College, Gonda

Organized

By Department of Physics

Shri Lal Bahadur Shastri Degree College, Gonda

On

Some Experimental topics on Physics in Daily Life

August 27, 2023

[Seminar Report]



SHRI LAL BHADUR SHASTRI DEGREE COLLEGE, GONDA
श्री लाल बहादुर शास्त्री डिग्री कॉलेज, गोंडा
(An Affiliated College of Dr Ram Manohar Lohiya Avadh University, Ayodhya, (U.P.))

Department of Physics

One Day Workshop Under MoU

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Some Experimental topic on Physics in Daily Life

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Workshop & Lecture

By

Dr. Kisun Bir

(Department of Physics)

(Kisan P.G. College, Bahraich, U.P.)

(10:00 AM to 12:30 AM)

High Tea

(12:30 AM to 01:00 AM)

Venue

Conference Hall Department of Physics, S. L. B. S.
Degree College, Gonda

Chief Patron Varsha Singh (Vice-President)	Patron Shri Umesh Shah (Secretary)
President Prof. R.K. Pandey (Principal)	Convener Prof. Jitendra Singh (Head, Department of Physics)
Organizing Secretary Dr. Santosh Kumar Srivastava (Assistant Professor, Department of Physics)	Organizing Secretary Dr. Dev Narayan Pandey (Assistant Professor, Department of Physics)
Organizing Secretary Dr. Avneesh Mishra (Assistant Professor, Department of Physics)	

Organizing Committee:

Mr. Shobhit Maurya	Miss Anuradha Gupta
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On

“Some Experimental topics on Physics in Daily Life”

The objectives of this workshop were to study the current applications related to the various topics on Physics in daily life developed and needs for future human wellbeing. The other purpose is to developed interest in physics for final year under graduate students of Shri Lal Bahadur Shastri Degree College, Gonda. This workshop report is based on experimental techniques as per expertise of speakers. Existing reports related to electrical, biological, optical requirements of human in present and future were discussed. It offers deep knowledge about the experimental uses of electrical, biological, optical, magnetic and other physical laws in our daily life and find out the scope for improvement of welfare of the society. The workshop attempts to understand the important role of Physics in development of new generation technology for students, staff and teachers in our country. This work is original and could be further extended.

Introduction

Physics in daily life to describe the motion, forces, and energy of the ordinary experience. Physics is at work in tasks such as walking, driving a car or using a phone laptop/tablet etc. Knowledge of physics is helpful in everyday life.

For example, physics helps us understand:

- Why a radiator helps to dissipate the heat of a car engine, and
- Why a white ceiling helps to keep the inside of a house cool.

Hundreds of such questions can be answered and explained via physics.

Physics is the base of many critical scientific disciplines, such as chemistry is rooted in quantum physics which describes the study of atoms and molecules. Physics is also applicable in many branches of engineering. **In architecture, physics is pivotal to determining structural stability, acoustics, heating, lighting and cooling systems for buildings. In Geology, physics helps to the study of non-living parts of the Earth, such as atmosphere, lithosphere, hydrosphere, earthquakes, storms, volcanoes, and other natural disasters, such as floods, droughts, and extreme heat on the Earth's surface.** Chemical electrodynamics, optics, thermodynamics and modern physics, are important branches of physics for studying natural phenomena. Physics also describes the chemical processes in the human body through biophysics. **Physics is also involved in medical diagnoses, such as X-rays, magnetic resonance imaging (MRI), and ultrasonic blood flow measurements.** Physics can also explain what we perceive with our senses, such as how the ear detects sound or how the eye detects colour.

Examples of Physics in daily life:

1. Alarm Clock Ringing: The alarm clock's buzz helps us wake up in the morning according to our schedule. Sound is something that we cannot see but can hear or feel. Physics studies the origin, transmission, and properties of sound. Here the concept of quantum mechanics is applicable.

2. Electricity: Electricity is one of physics most important applications in people's lives. The importance of electricity can be understood when electricity is disconnected from their houses. All the electrical appliances stop working and life becomes difficult.

3. The Density of Seawater and Swimming in it: The density of seawater is higher than normal water, so it is easier to swim in it. In dead sea people never drown and remain above the surface of the water because of its water's density.

4. Mobiles: Mobiles have become like oxygen in modern social life. It is used to send an important message, chat constantly, talk on video calls, send money or do any other important work, mobiles are everywhere. But do you know how mobile works? It works on the principle of electricity and the electromagnetic spectrum, the wavy patterns of electricity and magnetism.

5. How does the Washing Machine dry the Clothes? The dryer of a washing machine is a rapidly rotating container that applies centrifugal force to its contents. It throws water molecules radially outward on the fabric during the washing machine's spin cycle.

6. Why are cars facilitated with Seat belts & Airbags? When the brakes are applied on a moving car, the lower parts of the vehicle and the passengers attached to the car stop immediately, but their upper parts tend to fall forward due to inertia. This is first law of motion.

7. How does a Pen write? Whether at your college, the ballpoint pen is your weapon. If there were no physics, you would hardly be able to write with a ballpoint pen. Here the concept of gravity comes into play. As your pen moves over the paper, the ball turns, and gravity forces the ink down onto the top of the ball, from where the ink continues to transfer to the paper.

It is hard to imagine life without physics. Many other examples are available; you only need an eye to spot them. Our expert do some experiments in our labs.

CONCLUSION: This workshop is highly knowledgeable, inspiring and motivate for Under graduate students. Other subject teachers and staff was aware about the uses of physics in our daily life. Students was gaining more theoretical and practical knowledge about the use of physical science in daily appliances. Overall, this workshop was completely adopt there objectives.



Photo1. Lecture by Dr. Kishun Bir (in left) & Students in Conference Hall (in right).



Photo2. B.Sc Students acquiring practical knowledge on physics in daily life by Dr. Kishun Bir.