



PRESENTS

53rd Fortnightly Workshop
on

THE EVOLUTION AND IMPORTANCE OF SI UNITS IN METROLOGY

By: **Dr. Poonam Arora**

(Senior Principal Scientist and Head, IST Division, CSIR - NPL
Joint Secretary, Indian Women Scientists Association (IWSA))

For Students from Classes 6th to 12th

(Parents/Teachers can also Participate)

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**MAY 30TH,
04:00 PM IST**



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KNOWLEDGE AND AWARENESS MAPPING PLATFORM

KNOWLEDGE SESSION 2024: EPISODE 53

Organized By: Knowledge & Awareness Mapping Platform (KAMP)
In Knowledge Alliance with CSIR -NIScPR and M/s NCPL

Topic: The evolution and importance of SI units in Metrology

Category: Scientific and Life Skills

Speakers/Presenters: Dr. Poonam Arora

Organized for: Students

Date: May, 30th, 2024

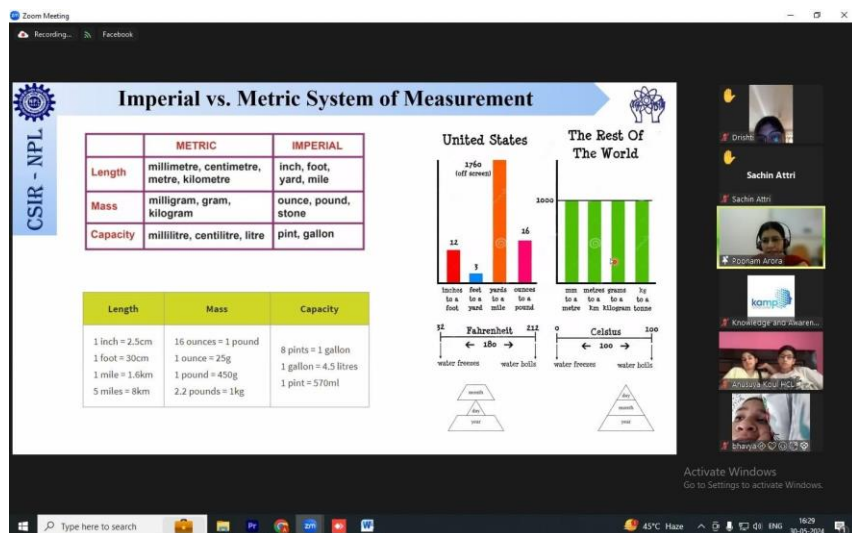
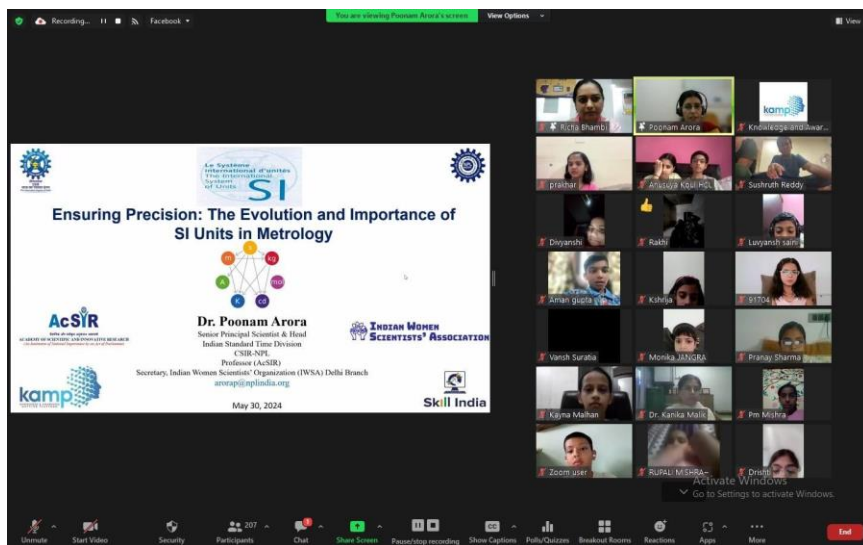
No. of Participants: 500+ Students from different schools across India

Overview:

On 30th May, 2024 Knowledge and Awareness Mapping Platform (KAMP), together with the Council of Scientific and Industrial Research - National Physical Laboratory (CSIR-NPL) conducted its 53rd knowledge-sharing session, titled "The evolution and importance of SI units in Metrology" for classes 6 to 12th school students. This session attracted over 500 students from various schools across India, reflecting the growing interest and need for emotional regulation strategies in educational settings.

The session was conducted by Dr. Poonam Arora, who holds multiple prestigious positions including Senior Principal Scientist and Head of the Indian Standard Division (IST) at CSIR -

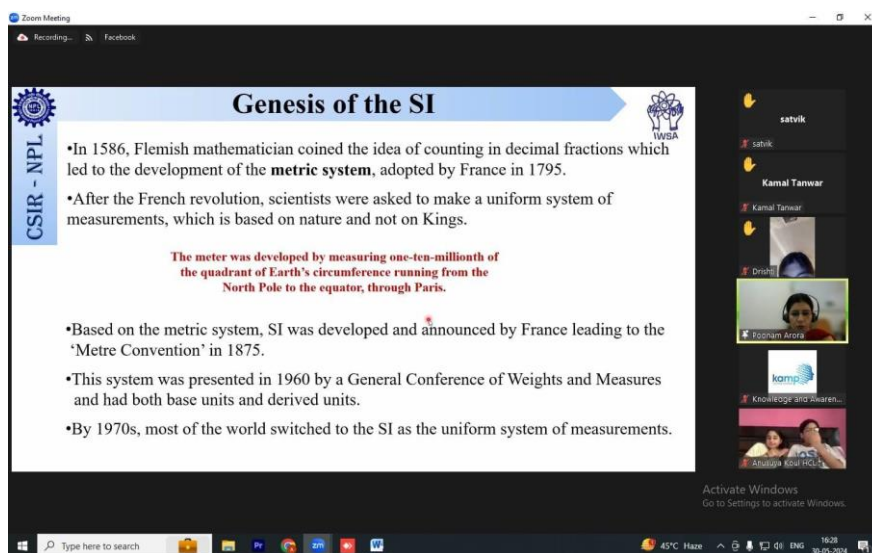
NPL, Professor at the Academy of Scientific and Innovative Research (AcSIR), and Secretary of



the Indian Women Scientists Association (IWSA), Delhi Branch. This virtual workshop was designed to introduce more than 1000 students from across India to the fascinating world of measurement science and to underscore its critical role in everyday life.

Dr. Arora began the interactive workshop by highlighting the significance of metrology, the science of measurement, which she emphasized as foundational to advancements in science, technology, and industry. She provided an insightful historical overview of measurement methods, tracing their evolution from ancient techniques to contemporary practices. This journey included references to the development of measurement systems in India as well as in other developed nations, showcasing the global progress in this field.

She then shifted focus to modern measurement techniques, explaining various methods and their practical applications. Dr. Arora used real-life examples to illustrate how metrology impacts diverse sectors, including healthcare, where accurate measurements are vital for diagnostics and treatment; environmental sciences, where precise data is crucial for monitoring and addressing climate change; aviation, where measurements ensure safety and efficiency; and consumer goods, where consistency and standards are necessary for quality assurance.



Dr. Arora also delved into several key topics within metrology:

- **The Purpose of Measurement:** She discussed why measurements are essential in various aspects of life and industries.
- **The Need for Metrology:** She explained the critical role that metrology plays in ensuring accuracy and reliability.
- **Measurements and Calibrations:** Dr. Arora emphasized the importance of regular calibrations to maintain the precision of measurement instruments.
- **The Genesis of the International System of Units (SI):** She provided a historical context for the development of the SI system, which is the most widely used system of measurement today.
- **Imperial vs. Metric System:** Dr. Arora highlighted the differences between these two systems, discussing the advantages and challenges associated with each.
- **Consequences of Accurate Measurement Communication:** She underscored the importance of clear and precise measurement communication in various fields, noting how inaccuracies can lead to significant consequences.

Throughout the session, Dr. Arora engaged the students with interactive discussions and encouraged them to ask questions. The students were highly responsive, demonstrating their interest by asking numerous questions to deepen their understanding of the topics discussed.



This level of engagement indicated that the students thoroughly enjoyed the workshop and found the content both enlightening and stimulating.

KAMP's fortnightly workshops aim to help students develop creativity, meaningful learning, and critical reading and thinking skills, bringing out their inherent abilities. The vision of KAMP is to identify and capture the Scientific and Technological temperament in students, contributing to making

India a Global Leader in the fields of science, technology, and the humanities.

These workshops, conducted by KAMP, cover various topics falling under the categories of science, technology, and innovation, Scientific and Life Skills, Career and Professional Development, Academic development, and training trainers and teachers.

KAMP believes that exposure to such topics from experts within specific fields helps students become aware of real-life situations and challenges, develop a problem-solving nature, understand their core values and personal interests, evaluate their skills within the given area, and achieve their best in their most desirable way.

Organized By:
Knowledge and Awareness Mapping Platform
(KAMP Operations and Coordination Office)

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