



“बेटी बचाओ, बेटी पढ़ाओ”

JAYOTI VIDYAPEETH WOMEN'S UNIVERSITY, JAIPUR

(Format for Preparing E Notes)

Faculty of FEM

Faculty Name- JV'n Dr. Priya Gothwal (Associate Professor)

Program- B.Sc. B.Ed-V sem / 2023-2024

Course Name - Pedagogy of Physical Science

Session No. & Name – 1.5/ Nature of Science (Unit-I)

Academic Day starts with –

- Greeting with saying ‘**Namaste**’ by joining Hands together following by 2-3 Minutes Happy session, Celebrating birthday of any student of respective class and **National Anthem**.

Lecture Starts with-

Review of previous Session-

- Topic to be discussed today- Today We will discuss about –

Use of language in science and science society

- Lesson deliverance (ICT, Diagrams & Live Example)-
 - PPT (10 Slides)
 - Diagrams
- University Library Reference- Journal
 - Online Reference if Any

- Suggestions to secure good marks to answer in exam-
 - Explain answer with key point answers
- Questions to check understanding level of students-
- Small Discussion About Next Topic-
- Academic Day ends with-
National song' **Vande Mataram'**

Topic: Use of language in science and science society

- Language plays a crucial role in science and scientific society.
- It serves as a medium for communicating complex ideas and discoveries, facilitating collaboration, and enabling the dissemination of knowledge.
- Precision and clarity are essential in scientific language to ensure that concepts and findings are accurately conveyed.
- Moreover, in the scientific community, the use of standardized terminology and technical jargon helps to establish a shared understanding among experts.
- This specialized language allows researchers to discuss intricate details, methodologies, and results with precision, fostering a cohesive scientific culture.
- Furthermore, effective communication of scientific findings to the general public necessitates the use of accessible language that can bridge the gap between technical knowledge and public understanding.
- Simplifying complex concepts without compromising accuracy is crucial for promoting scientific literacy and encouraging public engagement with scientific advancements.
- **In the context of global scientific collaboration:**
- The use of a common language, often English, serves as a lingua franca, enabling researchers from different linguistic backgrounds to communicate and collaborate seamlessly.

- Overall, the use of language in science and scientific society is instrumental in advancing knowledge, fostering collaboration, and promoting public understanding of scientific developments.

➤ **In the scientific domain:**

- The use of precise and unambiguous language is crucial for establishing reproducibility and credibility.
- Rigorous documentation of methodologies, results, and conclusions allows for the replication of experiments and the validation of scientific claims.

➤ **Scientific language evolves with advancements in research:**

- Often leading to the creation of new terminology to describe emerging phenomena and concepts.
- This dynamic aspect of scientific language reflects the ever-evolving nature of scientific understanding and the continuous expansion of knowledge.
- Furthermore, within the broader scientific community, the use of language also extends to academic publishing, where adherence to specific writing conventions and styles, such as the use of the passive voice and the third person, is common.
- This standardization ensures objectivity and clarity in scientific publications.
- Moreover, effective communication within the scientific community contributes to the peer-review process, enabling experts to critically evaluate research and provide constructive feedback.
- The use of clear, concise, and well-structured language in research papers, conference presentations, and academic discussions is essential for fostering a robust and collaborative scientific environment.

Topic: Use of technology there in science on school curriculum-

The integration of technology in science education has become increasingly prevalent in school curricula. Technology serves as a valuable tool for enhancing the learning experience, fostering scientific inquiry, and promoting critical thinking among students.

Incorporating technology in the science curriculum offers several benefits:

- **Access to Information:** Technology provides students with access to a wealth of scientific information, research data, and educational resources, enabling them to explore diverse scientific concepts beyond traditional textbooks.
- **Virtual Laboratories and Simulations:** Virtual labs and simulations allow students to conduct experiments in a controlled digital environment, offering a hands-on experience without the constraints of physical lab setups. This fosters a deeper understanding of complex scientific phenomena.
- **Data Analysis and Visualization:** Technology facilitates the analysis of scientific data through software tools, enabling students to interpret and visualize complex datasets, thereby enhancing their analytical skills and understanding of scientific processes.
- **Collaborative Learning:** Digital platforms and tools facilitate collaborative learning, enabling students to engage in group projects, online discussions, and shared research activities, fostering teamwork and communication skills.
- **Multimedia Learning:** Integrating multimedia elements such as videos, animations, and interactive presentations in the science curriculum can enhance student engagement and comprehension of abstract scientific concepts.
- **Adaptive Learning and Personalization:** Educational technology can be utilized to provide personalized learning experiences tailored to individual student needs and learning styles, thereby promoting a more inclusive and effective educational environment.

- **Real-World Applications:** Technology allows students to explore real-world scientific applications, current research developments, and the practical implications of scientific knowledge, fostering a deeper appreciation for the relevance of science in everyday life.
- **By integrating technology** into the science curriculum, educators can create a dynamic learning environment that nurtures a deeper understanding of scientific principles, encourages exploration and experimentation, and prepares students for the demands of the modern scientific landscape.
- The integration of technology in the science curriculum also facilitates the development of crucial 21st-century skills, including digital literacy, problem-solving, and adaptability.
- Students learn to navigate various scientific tools and software, preparing them for future academic and professional pursuits in science, technology, engineering, and mathematics (STEM) fields.
- Furthermore, the use of educational technology in the science curriculum enables teachers to implement innovative teaching strategies, including flipped classrooms, blended learning models, and differentiated instruction.
- This approach encourages student engagement and participation, catering to diverse learning styles and abilities.
- Moreover, the inclusion of technology in the science curriculum promotes interdisciplinary learning, allowing students to explore the interconnectedness of scientific disciplines and their intersection with other fields such as engineering, technology, and environmental studies.

Additionally, the integration of emerging technologies such as :

- virtual reality (VR),
- augmented reality (AR), and

- 3D printing in the science curriculum offers immersive and experiential learning opportunities, enabling students to visualize complex scientific concepts and phenomena in a more interactive and tangible way.

Overall, the strategic use of technology in the science curriculum empowers students to become proficient in utilizing digital tools for scientific inquiry, problem-solving, and data analysis, thereby preparing them to be critical thinkers, innovators, and contributors to the ever-evolving landscape of scientific research and discovery.