Setting-up of Science Laboratories at Upper-primary Schools – Need of the Hour

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One child, one book and one teacher can change the world.

We are residing in post-modern era where every walk of life undergone tremendous transformation due to advancement in the field of science and technology. Life become easier and comfortable now as compared to past era. Cancer like fatal diseases is treatable now. Internet, Digital banking, and digital marketing empowered modern generation. All the essential facilities and basic amenities are available round the clock. Innovations in every sector of life transformed the world into a Global House.

Now a question arises that students of today are best considered as little scientists, but on the other side they should be trained at upper-primary stage. Due to paucity of science laboratories at upper-primary schools they would get such brilliant momentum to excel in their future endeavours. This is the core of our policy makers and resource persons to think over the setting up of science laboratories to realize the set targets.

Once I raised this question before science experts and resource persons of education department, but they responded through other way by giving the reference of science kits provided by the department for the said purpose.

Curiosity is the mother of science. Our budding scientists have got great talent so if they get opportunity to utilize that potential, they would be our future scientists and engineers.

Laboratories are important in upper-primary education because they provide students with hands-on experience and opportunities to learn through experimentation.

Develops scientific reasoning:
Students can develop scientific reasoning skills and a better understanding of the nature of science.

Enhances science literacy:
Students can improve their science literacy and understanding of complex scientific concepts.

Increases interest:
Students are more likely to be interested in science when they can perform experiments and observe them live in the laboratory.

Develops practical skills:
Students can develop practical skills and learn how to conduct research.

Improves teamwork:
Students can improve their teamwork abilities.

Enhances learning rate:
Students can learn more information at a faster rate.

Develops cognitive abilities:
Students can develop cognitive abilities that are useful for more advanced study or research.

To be most effective, laboratory experiences should be designed with clear learning outcomes and integrated into the classroom science instructions. In addition to the above advantages, establishing laboratories at upper primary schools is crucial and handy for more several reasons:

1. Hands-on Learning: Laboratories provide students with practical, hands-on experiences that reinforce theoretical knowledge. This active learning approach helps students understand scientific concepts better than through lectures alone.

2. Encourages Curiosity: Laboratories stimulate curiosity and foster a sense of inquiry. When students can experiment and observe firsthand, they are more likely to ask questions, explore ideas, and develop a scientific mindset.

3. Promotes Critical Thinking: Lab activities require students to think critically, make observations, hypothesize, test, and draw conclusions. This enhances their problem-solving skills and develops logical thinking.

4. Prepares for Future Education: Early exposure to laboratory work prepares students for higher education and careers in science, technology, engineering, and mathematics (STEM). It provides a foundation for more advanced studies in secondary school and beyond.

5. Improves Retention: Active participation in experiments and activities helps students better retain information. The sensory experience of doing experiments makes learning more memorable and engaging.

6. Fosters Teamwork: Laboratory work often involves group activities, which teach students collaboration, communication, and teamwork—important skills for both academic and professional success.

7. Promotes Safety Awareness: Learning in a lab environment allows students to understand the importance of safety protocols and responsible behaviour, which is essential when working with equipment and chemicals in future education or careers.

Incorporating laboratories into upper primary schools provides students with essential skills and a deeper understanding of the world around them, which can ignite a passion for learning and science.

As a science educator, mentor and facilitator, I always give importance to conducting science practical and observations because science without proof and practice is incomplete and confusing. I make good use of science kit while teaching and showing practical to upper-primary students in classrooms where one feels the need of laboratory so that the little budding scientists can feel that they are experimenting in a unique place and the outcomes would remain surprising and fascinating at the conclusion. Although one manages everything such that learners realize the set objectives, yet queries get raised over time due to nonavailability of science laboratory.

I suggest is that our Policy Makers must think over this visible issue so that in future little buddy scientists would start flourishing from upper-primary stage. This is really need of the hour and need of the era to make our country a developed country.

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