Hands-On Learning?

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Have you ever wondered why India does not produce many Nobel Prize winning scientists? It's not our genes that are to blame. Indians are widely acclaimed as being some of the most intelligent people in the world. The fault really lies with our education system. Most developed nations, including the ones that give the world our Nobel laureates, adopt an activity based approach to education. Rote learning kills a child's creativity and lays undue emphasis on grades. Activity based learning, on the other hand, helps children connect their learning to real life and encourages them to innovate. In the end, it is only creativity that leads to path breaking discoveries and inventions in the world. Activity based learning, therefore, holds the key to better and more relevant education.

What is Hands-On Learning?

Hands-on learning is learning by doing. Hands-on learning involves understanding things while doing and experiencing them which as we know is the highest form of understanding. This can be done through simple activities and toys based on elementary scientific principles which closely simulate real-life scenarios, give enough scope for innovation and challenge and make learning science fun and exciting.

Vocational education has always understood that if you want someone to learn to repair an automobile, you need an automobile to repair. If you want to teach someone to cook, you put them in a kitchen. Did anyone hear of teaching someone to swim in a traditional classroom? Likewise, We do believe we are learning that in order to truly teach science, we must "do" science.

Hands-on learning means many different things to different people. It has become a slogan and is often used to describe any activities in classrooms that use materials. Hands-on learning, however, is not simply manipulating things. It is engaging in in-depth investigations with objects, materials, phenomena, and ideas and drawing meaning and understanding from those experiences. Other terms for this are inquiry learning, hands-on, and minds-on learning.

Advantages of Hands-On:

1. Students in a hands-on science program will remember the material better, feel a sense of accomplishment when the task is completed, and be able to transfer that experience easier to other learning situations. When more than one method of learning is accessed as in hands-on learning, the information has a better chance of being stored in the memory for useful retrieval. Students who have difficulty in the learning arena for reasons of ESL barriers, auditory deficiencies, or behavioural interference can be found to be on task more often because they are part of the learning process and not just spectators.

2.Learning by well-planned activities and experiences in a well engineered program is a quality instructional approach. It causes students to rely on the evidence instead of upon authority (encyclopaedia, minister, doctor, text, teacher, parent). Most students live in an authoritarian world with little or no opportunity to practice decision-making because nearly everyone tells students what to do and when to do it. We continually graduate students who do not yet have the ability to set up a simple experiment with controlled variables, collect and interpret evidence, or make correct interpretations based upon that evidence.

3. provides students with a similar set of experiences so everyone can participate in discussions on a level playing field regardless of their socio-economic status. In this way, special benefits are not awarded to those who, by virtue of their wealth or background, have a greater number of experiences under their belts.

4. Forces student thinking by requiring interpretation of the observed events, rather than memorization of correct responses.

5. Messages the learner that they, as well as the instructor, can interpret data, and that various interpretations are possible and often probable. e.g. When a text or teacher tells students that plants need only sunlight to grow (an untruth) students simply memorize this without question and are hampered by the falsehood for a lifetime. However, when a student personally germinates seeds inside a room in presence of electric lights and finds that they grow taller than seeds grown in the sunlight, it has irrefutable evidence from a personal experience that plants do not need sunlight to grow. This information seldom comes from K-6 texts or teachers , yet is a logical interpretation by 10 year old students if they conduct the experiments. It encourages questioning of the observed events and the resulting data. When students carry out their own experiments, they become very familiar with the events and the variables involved.

6. Promotes cause and effect thinking.

7. Reduces dependence upon authority. Practical experiences in generating hypotheses and planning experiments now, will make the students more independent later when they no longer have authorities standing by at every turn of their lives.

Our activities and workshops are programmed to equip children with an open mind, strong reasoning, independence of thought, and self confidence to create their future with their own hands.