



USE OF SCIENCE SUBJECT FOR SUSTAINABLE PRACTICES IN B.ED. COLLEGE

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Introduction

The main aim for the 21st century is “sustainable development”. Sustainable development seeks to reunite environmental protection and development, it means nothing more than using resources, no faster than they can regenerate themselves, and releasing pollutants to no greater extent than natural resources can assimilate them. The 2030 plan, with its Sustainable Development Goals (SDGs), is the roadmap to global well-being for current and future generation. The SDGs indicate the directions towards better education opportunities, gender equality, clean water, affordable and clean energy, and a healthy environment, among other things. Basic sciences can help identify mechanisms to correctly use knowledge and carry out technology transfer. They can also enable international research cooperation and dialogue across disciplines and across countries, including developing countries. Sustainable development is development that meets the needs of the present scenario without compromising the ability of future generations to meet their own needs. It contains within it two key concepts.

- 1) The concept of 'needs' in particular the essential needs of the world's poor, to which principal priority should be given.
- 2) The idea of limitations imposed by the state of technology and social organization on the environment's ability to meet present and future needs.

For To Complete such task in Indian Constitution Special Article is also included which is as follow.

- Article 21 conferring the Right to Life encompasses right to clean environment, right to livelihood, right to live with dignity and a number of other associated rights.
- The Directive Principles of State Policy often referred to as the ‘conscience’ of the Constitution are intended to ensure ‘distributive justice’ and that political democracy in India is accompanied side by side with social and economic democracy

For to complete the task in time, proper planning required, planning commission also focuses on Such Task in 7th Five Year Plan as per the plan. If the gains in productivity are to be sustained, resources must also continue to be available over time. This requires that, while providing for current needs, the resources found be managed so as to enable sustainable development.”

From above information we will see that to develop sustainable development Indian Constitution and planning commission do multiple efforts. These Efforts can't be fulfill in time if students can't know about it. For to complete these task school, teachers, and student also plays an important role.

Day Today Use Of Science

The basic sciences in education sector have implied that the children and teachers are actively involved in teaching and learning processes. Theories of Piaget and others have helped to understand children thinking and its interaction with the environment. Scientific development like these helps the teacher to modify the way of their thinking and evolve curiosity which may lead to sustainable solutions.

We use very basic science results every day without even realizing it." Our smart phone alone contains a battery, which would not exist without a basic understanding of electrochemistry; a touch screen and a slew of transistors, which rely on our understanding of electron movement in solid materials; applications powered by mathematical algorithms, and so on. And where clean water is guaranteed at the tap, you can thank chemists and microbiologists,"

For advances in areas like medicine, agriculture, water resources, energy, and the environment, basic science research is essential. These same areas cover the spectrum of the UN sustainable development goals as well. While all the goals require scientific inputs to varying degrees, some goals, such as health and well-being, affordable and clean energy, and climate action, are directly linked to scientific advances. Increased awareness of basic sciences is expected to lead to increased opportunities for new discoveries which can improve human well-being within the framework of sustainable development.

Currently, 50 science academies and networks, including 28 Nobel laureates and Fields Medalists, have expressed support for the initiative. There are several possible ways to achieve environmental compatibility in lifestyles and economies. Technical and scientific innovations provide excellent prospects for environmental protection. As we approach the end of the 20th century, industrial society is becoming a knowledge-based society. It is vital that we use our growing knowledge and capabilities responsibly, and that we use them in the interest of environmentally appropriate development. Science must play an important role in the pursuit of sustainable development, especially in the following categories:

Energy use:-

The key technologies of sustainable development include new energy and propulsion technologies that will help reduce emissions of climate-damaging greenhouse gases. Simply to stabilize atmospheric greenhouse-gas concentrations at twice their preindustrial levels, we will have to reduce current global greenhouse emissions by over 50%. Achieving this goal involves focusing on improved thermal insulation in buildings, on the use of heat/power cogeneration, and on efficient support for the use of renewable energies. Currently the most progress is found in the area of wind energy; in the medium term, the use of solar energy, with photovoltaic technology, will continue to grow in significance. An honest consideration of our options indicates that we cannot afford to discontinue peaceful use of nuclear energy.

Teacher can give such project to complete the task of energy use with less in week, month which student can complete

Closure of substance cycles:-

Modern micro systems and control technologies are also providing new opportunities to design environmentally friendly production processes. While filter and waste water-treatment technologies have considerably enhanced



air and water quality in recent years, they are never more than the second-best solution, and have been surpassed by integrated environmental technology, that is, technology that optimizes the use of materials and energy. This involves material-efficient, energy-efficient production processes as well as the manufacture of environmentally compatible products, especially those that generate little waste. We have created the necessary framework for this with the Closed Substance Cycle and Waste Management Act, which came into force in 1996. Instruments such as eco-audits, which help identify the saving potentials from environmental protection investments, also promote development of such “clean” technologies.

Teacher can give project on compulsion for doing Waste Management other such subject to student.

Environmentally compatible mobility:-

Environmentally compatible traffic concepts are a particularly important category for innovation. In Germany, the automobile industry now accounts for about 20% of all industrial investments in research and development. “Three-liter cars” (that is, cars consuming less than 3 liters of gasoline per 100 km), natural-gas engines, electric cars, hydrogen engines, and fuel-cell engines can all play a role in eliminating motor-vehicle emissions. Telematics can enable traffic to move more efficiently. Information and communication technologies can eliminate the need for physical transports in some areas, and computerized logistics in goods transports can reduce total transport distances.

Teacher can conduct events for increase mobility.

Biotechnology:-

Biotechnology is expected to bring important advances in medical diagnosis and therapy, in solving food problems, in energy saving, in environmentally compatible industrial and agricultural production, and in specially targeted environmental protection projects. Genetically altered microorganisms can break down a wide range of pollutants by being used, for example, in bio-filters and waste water-treatment facilities, and in the clean-up of polluted sites. Genetically modified organisms can also alleviate environmental burdens by reducing the need for pesticides, fertilizers, and medications.

Teacher conduct and tell students to organize or participate in such events to get more information.

Basic sciences provide the essential means to meet crucial challenges such as universal access to food, energy, health coverage and communication technologies. They enable us to understand the impact of people on the planet, like depletion of ozone layer, climate change, depletion of natural resources, and extinction of living species.

Use of basic sciences in agriculture has not only increased profits and yield but also helped to make environment clean and green use of drones for crop health monitoring, techniques like water sampling and use of HYV seeds and genetically modified seeds strived for sustainability and more eco-friendly lifestyles. Environmental protection will play a central role in the 21st century and will be a major challenge for politicians and scientists alike.

UN has given a unique opportunity to all the stakeholders that through a basic understanding of nature, actions taken will be more effective, for the common good.



Above all points tell us about different scientific thing which we use in our day to day life. Sustainability, as a strategic aim, involves optimizing the interactions between nature, society, and the economy, in accordance with ecological criteria. Political leaders and scientists alike face the challenge of recognizing interrelationships and interactions between ecological, economic, and social factors and taking account of these factors when seeking solution strategies. To meet this challenge, decision-makers require interdisciplinary approaches and strategies that cut across political lines.

For to generate such habit in Human being from School life we have to do proper planning, to complete such task proper planning can be done by school or college Teachers. At the time of teaching for B.Ed. Course if proper planning done by college professor, science student teacher can use different projects, teaching strategies for sustainable development through school syllabus. We need clearer standards for orienting and assessing our environmental policies.

Sustainable development can succeed only if all areas of the political sector, of society, and of science accept the concept and work together to implement it. A common basic understanding of environmental ethics is needed to ensure that protection of the natural foundation of life becomes a major consideration in all political and individual action. A dialogue among representatives of all sectors of society is needed if appropriate environmental policies are to be devised and implemented.

Closure:

Above discussion tells us about how teaching is useful in our day to day science teaching, being science teacher student and teacher both can help others to complete the task with proper planning.

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