

Charak Vigyan Manch

Dr. Seema Shukla

Coordinator, Charak Vigyan Manch (CVM), CIE

Charak group was established in 1984 by the great visionary Dr. Ratan Singh. The primary aim of the group was to provide high quality health services to the masses and contribute towards the health of the society.

In due course of time it was realized that the true benefit of Government/Non-Government schemes for the healthcare could be achieved only when people are adequately educated. To impart quality education to the deprived and poor sections of society. Dr. Ashwani Singh, son of Dr. Ratan Singh and the current chairman of the Charak Group, established the "Charak Group of Professional Studies (CGPS)" in Maura, Lucknow. The "Charak Institute of Education (CIE)" is one of the constituents of CGPS, which is managed by the "Charak Health Care and Rural Development Society", Lucknow.

CIE was established in 2009 and presently B.Ed, B.A, B.Com, B.Sc courses are conducted there. CIE is affiliated to the University of Lucknow. A highly competent faculty and modern infrastructure are the hallmarks of CIE.

The Faculty of Science at CIE was established in 2014 and consists of Departments of Chemistry, Botany, Zoology, Physics, and Mathematics. All the faculty members have a rich experience of teaching in their respective subjects.

CHARAK VIGYAN MANCH (CVM) is a platform established by the Faculty of Science at CIE which aims at promoting the knowledge of science in the society. It was inaugurated on the occasion of National Science Day, 28.02.18 by Dr. Daya Nandan Mani, Principal Scientist and Head, Herbal Medicinal Product Department (HMPD), CSIR-CIMAP, Lucknow. On the occasion, Dr. Mani delivered the first lecture under the auspicioes of CVM. He also inaugurated the CHARAK HERBAL GARDEN by planting a bottle brush plant.

The objectives of CVM are:-

(1) To organize science promotion activities for scholars.

(2) Inculcate scientific temperament and thinking among students.

(3) To enable scientific skill development in students.

(4) Societal Mission: To educate and empower women and weaker sections of society.

The various activities being undertaken by are -

* Establishing and managing a Herbal Garden on the CIE campus.

* Organizing National Science Day events.

* Organizing invited lectures on different subjects by renowned scientists and academicians.

* To organize student tours to scientific organizations of repute in Lucknow and adjacent areas.

* To organize faculty - student interaction programs with cross disciplinary approach.

* To help and advise students in career building and placements.

* To organize science quiz, painting, debate, essay writing collage making programs and presentations for students.

* To work harmoniously in consonance with other scientific organizations.

* Inter departmental co-curricular activities.



NATIONAL SERVICE SCHEME UNIT CHARAK INSTITUTE OF EDUCATION

Dr. SATISH CHANDRA
Programme Officer
NSS, CIE

INTRODUCTION

In India, the idea of involving students in the task of national service dates back to the times of Mahatma Gandhi, the Father of the Nation. National Service Scheme provides diversified opportunities to students in colleges and universities to develop their personality through community services. Community services rendered by University level students have covered several aspects like adoption of villages for intensive development work, mass tree plantation, various training programmes for self-help groups and rural youth.

OBJECTIVE

The overall objective of NSS is Personality Development through community service.

Understand the community in which they work.

Understand themselves in relation to their community.

Identify the needs and problems of the community and involve them in problem solving process.

Develop among themselves a sense of social and civic responsibility.

Utilize their knowledge in finding practical solutions to individual and community problems.

Develop competence required for group-living and sharing of responsibilities. Gain skills in mobilizing community participation.

Acquire leadership qualities and democratic attitude.

Develop capacity to meet emergencies and natural disaster and Practice national integration and social harmony.

MOTTO

The NSS is "Not me but you". It underlines that the individual is ultimately dependent on the welfare of society, expresses the essence of democratic living and upholds the need of understanding of the other man's point of view and also consideration for fellow human beings.

SYMBOL

The symbol of the National Service Scheme is 'Kath' Wheel of the Konark Sun Temple of Orissa. These giant wheels of the sun temple portray the cycles of creation, preservation and release and signify the movement in life across time and space. The design of the symbol, a simplified form of the Sun Chariot wheel primarily depicts movement. The wheel signifies the progressive cycle of life. It stands for continuity as well as change and implies the continuous striving of NSS for social transformation and enlistment.

BADGE

The NSS symbol is embossed on the NSS badge. The NSS volunteers wear it while undertaking any programme or community service. The konark wheel in the symbol has eight bars, which represent the 24 hours of the day. Hence, the badge reminds the wearer to be in readiness for the service of the nation round the clock i.e. for 24 hours. The Red Colour in the badge indicates that the NSS volunteers are full of blood i.e. lively, active energetic and full of high spirit. The Navy Blue Colour indicates the cosmos of which the NSS is a tiny part, ready to contribute its share for the welfare of the mankind. NSS DAY NSS was formally launched on 24th September 1969, the birth Centenary year of the Father of Nation. Therefore, 24 September is celebrated every year as NSS Day with appropriate programmes and activities.

TYPES OF ACTIVITIES :

1. Regular Activities
2. Special Camping Programme

ANNUAL ACTIVITIES

1. VOTING AWARENESS 2019

Vote of confidence procedure used by members of a legislative body (generally the lower house in a bicameral system) to remove a government (the prime minister and his cabinet) To be successful, the procedure, which does not apply to the removal of heads of state in Presidential and semi presidential forms of government, typically requires a majority of legislators to voted as a vote of confidence. Many other countries with parliamentary forms of government allow for formal votes of confidence or censure.

2. TREE PLANTATION.

Tree Plantation held on 1st March 2019 in Charak Institute of Education. NSS Volunteers planted trees during the camp on 1st March 2019

3. EDUCATION AWARENESS PROGRAMME

Education is precious gem, This programme aims to educate the adopted slum area and carries out distribution of books.

4. VACCINATION AWARENESS PROGRAMME

An awareness programme was carried out in adopted slum areas and awareness about deadly diseases was imparted. A list was prepared including names of those persons and children who were not vaccinated. This list was send to by concerned doctors team.

5. VOTE AWARENESS DAY

Vote Awareness Day, one day programme was organized in the Charak Institute of Education which was highly successful.

6. CLEAN AND GREEN PROGRAMME

One day programme for tree plantation in institutional area. Trees are very important and produces enormous amount of life saving respiratory gas called Oxygen' Without oxygen we cannot survive. So they are very important for us'

7. Best Volunteer

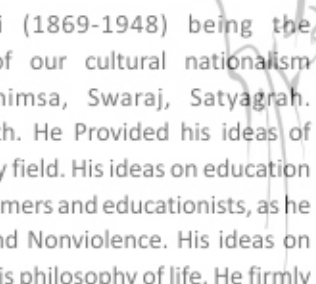
- A. Vijay Kumar
- B. Juhi Singh

Mahatma Gandhi's Ideas On Education

Megha Negi

Asstt. Prof.

Department of English, CIE



Mahatma Gandhi (1869-1948) being the protector and preserver of our cultural nationalism provided a legacy of Ahimsa, Swaraj, Satyagrah. Nonviolence, Truth and Faith. He Provided his ideas of Gandhian Philosophy in every field. His ideas on education are different from other reformers and educationists, as he was the follower of Truth and Nonviolence. His ideas on education were inspired by his philosophy of life. He firmly believed that the goodness of an individual formed the consistant part of the goodness of the society, He considered 'Man' is the most imperative to bring about a peaceful and harmonious society.

Meaning of Education according to Mahatma Gandhi was an overall development of a being, getting the best in child and man- body, mind and spirit. Literacy is not the end of education and not even the beginning. It is one of the means whereby men and women can be educated. Literacy itself is not education, the ordinary meaning of education is knowledge of letters, to teach reading, writing and arithmetic is primary education. According to Gandhiji, education is closely associated with the socioeconomic development of the society, Mahatma Gandhi talked about basic education in which vocational training or work experience is the most important aspect about of education. It stimulates the mind for creative thinking or dignity of manual labour, Such creative thinking should be from the primary level till higher level of education.

The aim of education according to Mahatma Gandhi is the type of education which should not be limited to earn money but to improvise oneself and serve the country. Education is a means which is accompanied by truthfulness, firmness and practice, The main aim of education is development of person's personality. He expanded fourfold personality in the individual that is body, mind heart and sprit. True education stimulates the spiritual, intellectual and the physical strength of an individual. Education must help in realisation of ones own responsibilities and discipline.

I am a Woman A Phenomenal Women

Dr. Iram Diva

Dept. of Botany, CIE

I laugh, I sing, I dance, I scream loud, I enjoy drive, I speak without hesitation.

I have the courage and I dare to dream.

I have the confidence that makes me shine as bright as the sun.

Because I am a woman, a phenomenal woman

Criticism and taunt's don't bother me at all,

I know how to stand up on my own when I fall.

I have the confidence that makes me shine as bright as the moon,

Because I am a woman, a Phenomenal woman.

Life for me, is all about compassion and care,

It gives me success a combination that's rare.

I have the confidence that makes me shine as bright as fire,

Because I am a woman, a Phenomenal woman.

I don't believe in a pretentious, nature.

To be a real person is always a treasure.

I have the confidence that makes me happy shine as bright as the stars,

Because I am a woman, a phenomenal woman.

This the way I am, and this is for the entire world to see.

We should have enough confidence to shine as bright as the sun, moon, fire and stars,

Because we are woman, phenomenal woman.



Green Chemistry The need of the day

Dr. Seema Shukla

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The term "Green Chemistry was coined by Paul T. Anastas, while serving in the United States Environmental Protection Agency (EPA). It literally meant, adopting sustainable chemistry for industrial waste processes that are known to produce hazardous products, which are harmful for the environment. The twelve principles of green chemistry (Anastas and Warner, 1998) are as follows :

1)Prevention (is better than Cure) :

It is good idea to prevent waste generation rather than to clean it up once it has been produced.

2) Economics of Atoms : It is better to use up all the raw material in the final product rather than generating a lot of waste.

3) Less Hazardous chemical Synthesis

As for as possible, synthetic methods must employ safest and least toxic materials.

4) Designing safer chemicals : The produced chemicals should be designed in a manner so that they possess the desired functionality with minimal toxicity.

5) Solvent and Auxiliary Safety : The auxiliary substances including solvents must be sparingly used and should be harmless wherever in avoidable.

6) Energy Efficient Designs : The energy requirement for the chemical precesses should be minimized and wherever possible, synthesis should be at ambient temperature and pressure.

7. Renewable Feedstocks / Raw materials :

The input raw material / feedstock should be renewable so as to prevent its depletion.

8. Reduction of Derivatives :

Derivatization reactions must be carried out only when they are necessary as they tend to increase synthetic steps thereby escalating cost as well as environmental impact.

9. Catalysis : Catalysts should be preferred over stoichiometrically consumed reagents.

10. Design for Degradation : The chemicals produced should be safely degradable once their function is achieved without harming the environment.

11. Pollution Prevention in Real time : Real time monitoring to prevent formation of hazardous substances is very much needed.

12- Inherently safer chemistry for Accident Prevention :

The substances employed must be in a form that minimizes risks of accidents.

Green chemistry implies taking care across the life cycle of a produced chemical from its production to disposal after its use. For a layman, it means a win-win situation where economic growth is coupled to environmental protection. It could easily be applied in day to day life, as well. For example, replacing hazardous perchloroethylene (PERC) $\text{Cl}_2\text{C}=\text{CCl}_2$ for dry cleaning of clothes, with the safer option of liquid CO_2 and a surfactant is a good application of green chemistry. Likewise, use of traditional "donas" and "pattals" for food consumption will reduce chemicals and energy required to manufacture utensils. Solar cells that directly convert solar energy into usable form of energy is another good application of green chemistry. Agricultural waste products like tamarind seed kernel powder could be employed in place of alum (which is detrimental for health in the long term run) for water turbidity removal. Using renewable sources of energy also falls in the domain of green chemistry.

Nowadays, many institutes / Universities across the globe are offering courses in the realm of



green chemistry. Students aspiring to seek job opportunities in the chemistry-based industry must be well aware about the scope and implications of green chemistry.

Reference :

1- Anastas, P.T., Warner, J.C. Green Chemistry : Theory and Practice, Oxford University Press : New York, 1998, P.30, Retrieved on 13.09.2018 from American Chemical Society website

1.(https://www.acs.org/content/acs/en/greechemistry/what_is_green-chemistry/principles/12-principles-of-green-chemistry.html).

2 . E P A website (<https://www.epa.gov/greenchemistry>)

Application of Matrix

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The matrix in Mathematics is a rectangular or square array of numbers or variables, arranged in the form of rows and columns.

The size of matrix is determined by some rows and columns. Matrix with m rows and n columns is read as $m \times n$ matrix where m and n are its dimensions.

For Example

$$A = \begin{pmatrix} 1 & 2 & 3 \\ 3 & 4 & 6 \\ 2 & 3 & 5 \end{pmatrix} 3 \times 3$$

The matrix is 3×3 .

Application of Matrix

In Physics related application matrices are applied in study of electrical circuit quantum mechanics and optics.

One of the most important usage of matrices in computer side application are encryption of message codes. Matrix and their inverse matrices are used for a programmer for coding or encrypting a message.

A message is made as a sequence of numbers in a binary format for communication and it follows code theory for solving.

For example,

The encoding matrix

$$\begin{pmatrix} 1 & 0 & -1 \\ 0 & 1 & 0 \\ 0 & -1 & 1 \end{pmatrix}$$

S U B M I T - H E R - Y O U R - P L A N S

19 21 2 13 9 20 27 8 5 18 27 25 15 21 18 27 16 12 1 14 19

We are using a 3 by 3 matrix, we break the enumerated message above into a sequence of 3 by 1

$$\begin{pmatrix} 19 & 13 & 27 & 18 & 15 & 27 & 1 \\ 21 & 9 & 8 & 27 & 21 & 16 & 14 \\ 2 & 20 & 5 & 25 & 18 & 12 & 19 \end{pmatrix}$$

Now $\begin{pmatrix} 1 & 0 & -1 \\ 0 & 1 & 0 \\ 0 & -1 & 1 \end{pmatrix} \begin{pmatrix} 19 & 13 & 27 & 18 & 15 & 27 & 1 \\ 21 & 9 & 8 & 27 & 21 & 16 & 14 \\ 2 & 20 & 5 & 25 & 18 & 12 & 19 \end{pmatrix}$

This gives

$$\begin{pmatrix} 17 & -7 & 22 & -7 & -3 & 15 & -18 \\ 21 & 9 & 8 & 27 & 21 & 16 & 14 \\ -19 & 11 & 3 & -2 & 3 & -4 & 5 \end{pmatrix}$$

The columns of matrix give the encode message. The message transmitted in the following linear form

17, 21, -19, -7, 9, 11, 22, 8, -3, -7, 27, -2, -3, 21, -3, 15, 16, -4, -18, 14, 5

The inverse of the encoding matrix should be found and multiply the inverse encoding matrix, i.e decoding matrix with the encrypted number write the answer in linear form.

The inverse of decoding matrix should be taken

$$\begin{pmatrix} 1 & 1 & 1 \\ 0 & 1 & 0 \\ 0 & 1 & 1 \end{pmatrix}$$

Thus decode the message, perform the matrix multiplication

$$\begin{pmatrix} 1 & 1 & 1 \\ 0 & 1 & 0 \\ 0 & 1 & 1 \end{pmatrix} \begin{pmatrix} 17 & -7 & 22 & -7 & -3 & 15 & -18 \\ 21 & 9 & 8 & 27 & 21 & 16 & 14 \\ -19 & 11 & 3 & -2 & 3 & -4 & 5 \end{pmatrix}$$

and we get the matrix

$$\begin{pmatrix} 19 & 13 & 27 & 18 & 15 & 27 & 1 \\ 21 & 9 & 8 & 27 & 21 & 16 & 14 \\ 2 & 20 & 5 & 25 & 18 & 12 & 19 \end{pmatrix}$$

The columns matrix written in linear form

19 21 2 13 9 20 27 8 5 18 27 25 15 21 18 27 16 12 1 14 19

S U B M I T - H E R - Y O U R - P L A N S

THINK GREEN

(Environmental Issues and Awareness in India)

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The prosperity and well being of a nation depends on the effective utilization of human and physical resources through industrialization based on science and technology. But there is a perennial controversy between development and environment. The question is whether we shall go for industrial modernization or we shall protect the environment.

On one hand, we know that development of nation depends on industrialization and on other hand, rapid industrial and agricultural development entails much adverse effect on the environment of the countries concerned. So we have to apply our wisdom in striking a balance between these two contradictory factors. Development and environment are concerned with global ecology. We should, therefore, clearly know the basic concepts of environment or ecology and its relation with our developmental activities at macro as well as micro level.

"The earth is what we all have, in common."

Everything that surrounds us and on which our life depends is our environment. Our room, our home, our village or town, our family and friends, the air we breathe, the water we drink, the sun shine, and the rain- all are part of our environment. Even the environment of two individuals is different. But these environments are inter-related so closely that in sense, we all belong to the same environment.

This inter relatedness is a matter of ecology. Ecology is literally, the science that deals with a home condition of all living beings. Ecology deals with the inter relationship between living beings and their environment.

Previously, in old days, a natural balance was maintained between all living beings including men and plants. They were living together in harmony and in natural setting. Human beings live in harmony with nature including the forest which

was providing most of the necessities for living. But over the recent years, due to rapid industrialization, organization, the nature has been adversely affected.

The environment is seriously degraded and there is imbalance and disharmony. The water and the air has been polluted to a great extent because of the destruction of the vast forest on the earth. Because, forest plays an important role in conservation of water, purification of air and supplying many useful things to the human beings.

Another disaster which is posed before us, is that due to rapid growth of urbanization, the living condition of the people in the cities and towns has deteriorated. There is pollution of water, air, noise, etc. Due to rapid expansion of industries, power stations, motor vehicles, etc everywhere, there is pollution. It has proved harmful for the physical and mental health of the people.

The various environmental factors are inter related. The physical environment includes the living and the non living, the geographical landmarks, topography and climatic conditions, the man made features like buildings, roads, transports, and other facilities like health, sanitation, nutrition aspects. The social environment consists of the family and community life, fairs and festivals, modes of production and supply of essential commodities.

"Earth provides enough to satisfy every man's need but not every man's greed" - Mahatma Gandhi

Role of Education:

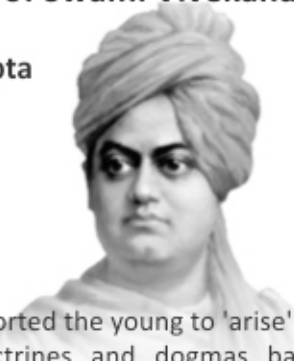
Education is regarded as an important instrument and means for generating proper awareness and adequate knowledge and skills regarding environmental protection. It is, therefore, felt essential to develop education about the environment, education for the environment and education through the environment. So as a whole, it will be environmental education. Environmental education should be integrated into a whole system of formal education at all levels.

Environmental education adopts a holistic perspective which will examine the ecological, social, cultural and other aspects of particular problems.

Philosophy of Swami Vivekananda

Anup Kumar Gupta

Asst Prof B.Ed, CIE



Environmental education should be centered on practical problems related to the real life.

Environmental education should aim at building up a sense of values.

However it is universally agreed that wing from biological, sociological, anthropological, economic, political, and human resources. It is also agreed that conceptual approach in teaching environmental education is the best.

It involves decision making and development strategies for promoting environmental protection. Environmental education is treated as a discipline in which various subjects like zoology, botany, chemistry, mathematics and physics are included. This makes it imperative to train specialists in environmental education for planning management, development and remedial measures for solving the problems.

The NCERT developed the guidelines for the school curriculum on the basis of the education commission 1964 -66. It has also prepared a resource material on the use of environment as a basis for meaningful learning in primary education.

The national policy on education 1986 has also given a special place of significance to education and environment. So a great need is being felt to create an awareness for the protection of the environment by redesigning the objectives, methods, and curriculum in the field of education.

"Treat the Earth with Heart so the World doesn't fall apart."

Vivekananda exhorted the young to 'arise' 'awake' to reject all doctrines and dogmas based on superstition and prejudice. Instead, he encouraged youngsters to adopt the wisdom of ancient philosophy and tradition.

Swami Vivekananda considered our great national sin as the neglect of the masses. "No amount of politics would be of any avail until the masses in India are once more well-educated, well fed and well-cared for" This assertion provided the foundation for the present scheme of universal philosophy education. **Sarva Shiksha Abhiyan** with mid day meal.

* The educational philosophy of Swami Vivekananda is a harmonious synthesis between the ancient Indian ideals and modern western beliefs. We not only stressed upon the physical, man, moral, spiritual and vocational development of the child but also advocated women education as well as education of the masses.

*The essential characteristics of the educational philosophy of Swami Viveknanda are idealism, naturalism and pragmatism.

*Vivekananda stressed the need for the physical education in curriculum. He said, "You will be nearer to heaven through football than through the study of Gita. You will understand Gita better by your biceps, your muscles a little stronger. You will understand the Upanishads better and the glory of Atman when your body stands firm on your feet and you feel yourself as man"

*Vivekananda appreciated the greatness of Sanskrit. he said that it is the source of all Indian languages and a repository of all inherited knowledge. Therefore without Sanskrit, it will be impossible to understand the Indian culture.

*Self education is the self knowledge, that is, knowledge of our own self is the best guide in the struggle of our life.

Role of Natural Products in Drug Discovery:

Mrs. Monika Saini

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Charak Institute of Education.

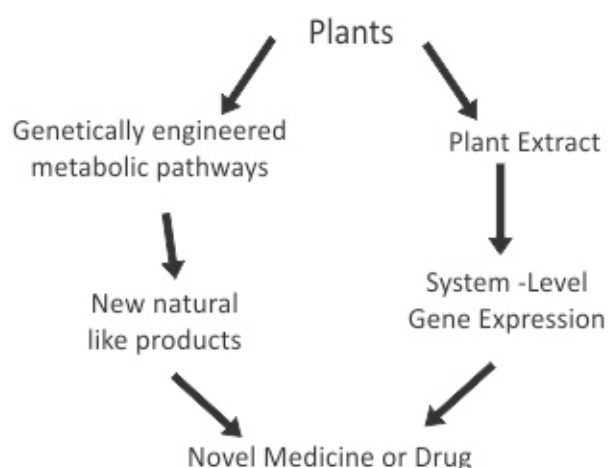
Introduction:

Natural products derived in natural form are known as secondary metabolites. They have been potential source of drug origin because natural products provide unique structural diversity in comparison to standard combinatorial chemistry.

Natural products have pharmacological activity that can be useful in treating various kinds of diseases. They may act as active components not only for traditional medicine but also for modern medicines. These natural products often used as starting points for drug discovery in the chemical synthesis from which synthetic analogs can be prepared with improved efficacy, potency, safety and purity.

Explanation of natural products include compounds from plant (including Olliptinium, Galantamine, & Hyperzine), microbes (Daptomycin) and animals (Exenatide and Zinconotide) as well as synthetic or semi-synthetic compounds based on natural products (e.g- Tigecycline, Everolimus, Telithromycin, Micafungin, & Caspofungin).

Flow Diagram



Medicinal uses:

The various plants and animal parts are studied in order to know what biological activity might be present it has been found that these crude drugs have healing power in healing the diseases. These extracts of crude drugs may lead to the discovery of other active ingredients and eventually lead to the development of chemically pure drugs which have real beneficial effects. Now a days, these drugs are directly derived

from natural products. Some of the examples of natural product based drugs are analgesics where the bark of the willow tree had the effect of pain relieving properties, this is due to salicin natural product hydrolyzed into salicylic acid.

Acetylsalicylic acid (Aspirin) a synthetic derivative used as pain reliever. The first antibiotic Pencillin acts as a anti-infective which is natural product obtained from the mold of *Penicillium notatum*.

Importance of Physical Activity

Karan Vishnoi

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Physical activity provides long term health benefits for everyone. By being active, you will burn calories that you store from eating throughout the day and it can be as easy as walking the dog or as rigorous as running a marathon. Providing opportunities to children to be active early on puts them on a path to better physical and mental health. It is never too late to start a healthy lifestyle.

The youths of our society today eat a lot of junk food and look old before time. Their poor health is also one of the social problems. People without good health cannot live happily and also cannot contribute to the growth of our nation. Therefore to overcome all these problems not only youth of the society should do exercises in order to stay fit and healthy but also to contribute to the growth of our nation.

Exercises are really important for students and therefore nowadays in every school and college, special classes are organized for physical exercises. Exercises for students are as important as their studies.

Physical exercise training opportunities are also nowadays offered in offices to provide rest to the mind of the workers of their organization and to make them work without feeling any stress. Exercises are of great importance to us.

Food Adulteration Article

The adulteration is defined as to make something impure by addition of another thing. In relation to food we can take this to mean the addition of foreign substances, being contaminated by chemicals or animal.

The most common food adulteration include milk and milk products, aata, dal, oils, ghee, cereals, spices, pulses, coffee, honey, etc. The table here highlights dangerous adulterants found commonly in food stuff.

Adulteration in food stuff and its harmful effects

Food Article	Adulterant	Harmful Effects
Tea	Used tea leaves processed and coloured	Liver Disorder
Coffee Powder	Tamarind seed, date seed	Diarrhoea
Milk	Unhygienic water and starch	Stomach Disorder
Chilli Powder	Brick Powder, saw dust artificial colours	Stomach problems, Cancer
Turmeric Powder	Yellow aniline dyes	Carcinogenic
Pulses (Green Peas and Dhal).	Coaltar Dye	Metanil Yellow is Toxic and carcinogen
Edible Oil	Argemone Oils	Loss of eye sight, heart disease and tumor,
Khoa	Starch less fat content	Less Nutritive Value

1. Milk-adulteration :

In India, which is the land of cows, large quantities of milk are adulterated. Milk adulteration involves adding water to milk and removing the beneficial fats from milk, often soya milk, starch, ground nut milk and wheat, flour are added to milk. This makes the milk less nutritious and it results in milk being useless for the consumer.

2. Adulteration of fats and oils:

It is easy to adulterate oils and fats. But it is difficult to detect such adulteration . Ghee is often mixed with hydrogenated oils and animal fat. Synthetic colours and flavours are added to other fats to make them appear like ghee.

3. Food Grain Adulteration:-

Grain is often mixed with brick, sand or crushed stones to increase the weight of food grains. Cereals grains and pulses mixed with plastic beads that resemble grains in colour and size very often, water is also sprayed on grains to increase the weight.

4. Other Adulteration:-

Chilli powder is often mixed with brick powder, while tea leaves are often mixed with used tea leaves. These adulterations are very harmful to the consumer and they should be addressed by consumer organizations and consumer seriously.



Detection of adulteration :

Objective:-

To detect various adulterants present in milk using specific biochemical tests:-

Theory:-

Quality Control Test for milk are very important to assure adulterants free milk for consumption. Adulteration of milk reduces the quality of milk and can even be hazardous. Adulterants like soap, acid, starch, table sugar and chemical formalin may be added to the milk. Most of the chemicals used as adulterants are poisonous and cause health hazards. Adulterants are mainly added to increase the half life of milk. Some of the preservatives like acid and formalin are added to milk as adulterants thereBy increasing the storage period of milk. Generally water is added to milk to increase the volume content of milk. Some of the common adulterants there by increasing the storage volum period of milk and their detection is discussed.

ii)-Table Sugar:- The common sugar present in lactose. The fat content of milk is more as compared to the protein content. Table sugar like sucrose is added to milk to increase the carbohydrate content of milk and thus the density of milk increases. So the milk can then be adulterated with water and it would not be detected during the lactometer test.

Ketose sugar reacts with the resorcinol to give a red coloured precipitate indicating the table sugar in milk.

ii)-Acids:- Generally acids like benzoic acid and salicylic acid is used as a preservative in food industry. It is added to milk and thus increases the shelf life of milk. Presence of these acids can be detecting by adding concentrated sulphuric acid and ferric chloride which when reacts with benzoic acid and salicylic acid gives buff coloured and violet coloured reaction products.

iii)- Formaline:- Formaline is a preservative and can preserve milk for long periods of time. Due to high toxicity, it is considered to a cause liver and kidney damage. Formaline reacts with sulphuric acid and ferric chloride to give a pure purple colour at ring of the junction of milk layers there by indicating the presence of formaline aduletration in milk.

Conclusion:-

- i)- Fight against food adulteration
- ii)- Presevention of food adulteration - ACT 1954

Shivam Singh
B.Sc II (ZBC)

Let Bygones Be Bygones.!

(Jo Beet Gayi So Baat Gayi. !) is my favourite hindi poem. I remember reading and memorizing it when i was a kid. I was in class 7th or 8th that i don't remember. But I remember that I loved it. That time we just learned it and memorized. Message was inspirational. It looks more meaningful and inspirational to me. Now then when I read it is a child. It is written by Shri Harivansh Rai Bachhan and is one of the most loved Hindi poem in India. So, here i am presenting the original Hindi Version:

Jo Beet Gayi So Baat Gayi (Let Bygones Be Bygones)

LETBYGONESBE BYGONES!

In your life, there was a star
It's ok, if it was close to your heart
What if, it has faded
Look at the face of sky
Many of it's star fell away
Many of it's loved ones went away
Those who left, never come back
But when does the sky give over the
fallen star !

Pooja Tripathi

I Am Proud To Be Girl

I am Proud to be a girl
Who is now ruling over the whole world.
Earlier the world used to chase her.
But now they are ready to praise her.
She, by her power, solves every situation.
She is strong and has determination.
She Plays different role in life.
She is a daughter, a sister and a wife.
Still the society tries to dominate her
Only because she bears every things for others.
Praising girls will always be less.
I Thanks God for giving me this happiness.
Happiness, forever to rule the world
As I am proud to be a girl

Khushboo Rani
(B.Ed.)

LETBYGONESBE BYGONES!

In your life, was a glass of wine
It was your life & soul ok, that's fine
What if, it has broken
Look at the courtyard of a wine house
Many glasses are always shaken
Feel & away are they taken
Those who feel, never got up
But when does the wine house repent
over those wine glass

LETBYGONESBE BYGONES!

In your life, there was a flower
Over it, you had your life to shower
What if, it has dried down
Look at the heart of garden
Many buds dried and died
Many saplings withered away
Those who dried, never bloomed again
But when does the garden shriek over
the dried flowers.

PoojaTripathi
B.Ed.

GRAMMAR IN A POEM

A noun is the name of thing. A school garden, kite or King. Adjective tells the kind of noun. As small, Pretty, Pink or brown, verb tells of some thing being done, To read, spread throw or learn. How thing are done adverb tells As immediately, slowly, will or well. Instead of nouns, pronouns, stand, Her lips his arms and your hand these are articles A, An and The conjunction join words together, the interjection show surprise. As How pretty! How wise! These are all of the parts of speech to write, read, speak and teach

Saif Shekh
B.Sc -II

Science

Our Mysterious Brain:

interesting facts (Health)

The brain is mostly water :

Our brain is made up mostly of water by weight. It is approximately 75 per cent water. This is precisely why people often feel dizzy, light headed, or can't remember anything when they are dehydrated.

Our brain can think quicker than a computer :

Our brains can complete 10 to the 13th and 10 to the 16th operations per second is capable of solving and computing problems much quicker than a computer.

Our brain produces enough energy to illuminate a light bulb :

Our brain consists mostly of electrical impulses. If we were to harness those electrical impulses, we would discover that our brain consumes about watts of power while you are awake.

Our brain contains about 100bn neurons:

Our brain contains close to 100 billion neurons this number is about 16 times larger than the amount of people that there are on the planet. Each of these neurons can link to as many as 10,000 other ones.

Our brains pumps a log of blood per minute:

The human brain is capable of pumping more than 20 percent of the blood flow from your heart, if we had to round that off into a number that would be equal to our brain pumping about 750ml of blood every minute.

God's Pharmacy is Amazing :

A sliced carrot looks like a human eye and it greatly enhances blood flow to the eyes.

A tomato has 4 chambers and is red just like the heart. A tomato is loaded with Lycopene that is pure heart & blood food.

A walnut looks like the brain and helps develop more than 3 dozen neurotransmitters to enhance brain function.

Beans are kidney shaped and they heal and help to maintain our kidney functions.

Pooja Mishra
B.Ed.

My Mother :

The Most Important Influence In My life



It took me a few years to realize what an extraordinary influence my mother has been on my life. She's the kind of person who always has time for kids, always interested in learning something new, would sacrifice herself for her family, and is easily the strongest woman in my eyes, I know haven't been the best daughter in the world but if you were to ask her, she would say otherwise looking back, my mom is the most positive and important influence on my life.

My mother actually is an ordinary woman but in her tiny appearance shines an extraordinary fortitude, perseverance, an altruistic soul and is very kind hearted. She is kind of a mother who brought me up with her whole kindly heart, the kind of persistent woman with strong willpower who had to face the toughest challenges in life.

A person who always demonstrated great zeal for every unlucky lives without requiring anything in return. she has a great willingness to help everyone's misery though she did not have much, my mother taught me more than anyone, not only inspired me to have

Mom

"you make the sunshine on a cloudy day when I'm sick you kiss the pain away"

Your tender voice took away my fears, your hand that wiped away my tears

You make flowers bloom in the spring. It was you who fixed my broken wing.

Mom because of you, I now know love my guardian angel from above.

Sana Saewar

Importance of Sports in Student life

Importance of Sports in students Life. Sport Play a very vital role in the development of mental strength and physical fitness of our body. Being a student one gets tired of daily routine hectic work and needs recreation as well which is best attained in the form of sports Only Education does not fulfill the criteria of being well organized social member of society.

Importance of sports in life cannot be ignored. It can be best described by the following Characteristics.

Physical fitness : Sports like tennis, Baseball and Basket Ball require lot of physical fitness that helps in proper grooming and growth of body.

Team Spirit : Sports like hockey, cricket etc develops a sense of team Spirit and building strong relations with others as well.

So, a judicious combination of intellectual and physical activity contribute to the intellectual & Physical growth of a student and there will be no fear of jack becoming a dull boy.

Mental Strength :
Gayatri

Life

Life is the name of purpose. struggle, love, dedication and a number of feelings and emotions. Life shows its true colors with time. It depends upon you that how you look towards life, and what is your strategy of leading an ideal life.

Life takes a number of turns during its whole span, life may not be kind to you all the times. There are tough time which test your courage and your capabilities of facing unfavorable situations. How will you tackle these adverse conditions and prove your credibility. People who close their eyes to avoid facing the hardships and stamina to stand firm in front of life's demon.

"Life is different for a teacher because teacher teaches a lesson and takes the exam but life takes exam first and then teaches a lesson."

Do not waste your life. life should have some purpose. Identify your aim, towards your destiny and spend your entire life in achieving your goals.

This is what we call "life"

Vaishali
B.Ed.

Clean India (Poem)



To Clean entire environment world citizens should try ;
Polluted earth and firmament will make all one day
cry!

Most rivers formed from melted snow of mountain
pretty high.

Are source of drinking water,
Oh ! Without which people die!

All rivers are sacred too,
why dirty them in ways ?

all lands need irrigation due.

To rains crops with sun's rays.

The filth in holy rivers founds, Defines

All cleaning modes;

Carcasses, Corpses, urus abound.

Whose stench the water loads!

when lanes with garbage littered Stare,

With civic sense all gone.

Made nature calls in open air.

Disease new are born!

The air we breathe, be better clean.

And smoke and smog be less.

And public places must be green,

And wear a beauteous dress!

Keep houses, neighborhoods too neat,

keep tidying all the time,

like separating chaff from wheat,

Do this in every clime!

Effluent should net rivers reach,

causes harm to fishery,

let clean be every road and beach

life should not be misery!

Yet, cleans your hearts and minds and souls.

Avoiding heinous sins,

Renew your aims, ambitions, goals.

Keep clean, with common-sense.

Shivani Yadav
B.Sc -II

Why Not A Girl

People Pray for a boy, not for a girl.
They desire a boy . not a girl.
Blessing of elders are for males, not for females.
They love to love a. boy, not a girl .
But

In the need of wealth,
They pray to goddess laxmi.
In need of courage,
They pray to Goddess Durga.
In need of Education.
They pray to Goddess Saraswati.
Now, tell me why do they hesitate?
TO have a goddess in their family.
God has Created all beings equal.
Can there be no civilization.
Where a boy and a girl are not equal partners.
Shower your blessings on both.
Be it a boy or a girl.

Mahvish Khan
B.Sc. II

Women are to be Respected.

When I was born
A woman held me in her arms.
Nursed me cared me.
I grew up firm and strong
She was my Mother
When I was growing up,
A women stood beside me.
I felt warm and strong.
She was my sister.
When I went to school.
A woman taught me to learn
Solved my problems, helped me out.
I felt wish and strong.
she was my Teacher.

When I Become depressed and become sad.
I learnt to share my secret, my suffering
I become happy and strong.
She was my Friend.

When I Die I know there will be.
A woman to absorb me in its element,
She would shed a tear and miss me too.
And make me stand before God, high and Strong.
She will be my Motherland.

Satish Kumar
B.Sc. II

Time

When we lose time,
There is something we loss,
Once it has gone,
It Never comes back again.
Time take a man, from rags to riches,
It also throws a man,
from thrones to ditches,
Time makes people happy.
It also makes people, happy.
Time is good.
And is Some times bad,
So, my dear friend,
Don't let it go in vain,
I remind you of this,
Again and again.

Upasna Singh
B.Sc. - I



Value of Time

To Realize the value of any year.
Ask a student who has failed in his exams.
To realize the value of one month .
Ask a mother who has given birth
to a premature body.
To realize the value of one day
Ask a daily wage labor.
To realize the value of an hour
Ask the friend who are waiting to meet.
To realize the value of one minute.
Ask a person who has missed the train
to realize the value of one second.
Ask a person who has survived an accident.

Garima Yadav
B.Ed.



The Unconditional Love ...

No no I am not talking about human tendency of falling in love with someone of other gender. It is all about the most loving pets around the globe and in our lives. Most of us have pets with their cute nick names in our home but have you ever felt that how much thy love you back ?

Yes, exactly I am telling about their feeling towards you.

There are our pets who wait for us in our homes by sitting nearly the doors and they starts making sad noises when they found you way from them for a long time

When my dog Tommy "was alive and I was in my school times when in those days he always heads closure to the doors at that certain time when I usually comes back from school to home, just to welcome me by wagging his tails rapidly and yes this was his unconditional love towards me. If I have to say about love, the most secret love is what we get from our pets. They didn't demand anything in return. They get happier when they see you coming home. They start jumping over you and those big wagging tails are the proof of their happiness.

And They have those same emotions like us. If you are not treating them in loving manner, they will surely be on a hunger shrine and for sure they will not eat anything until you passe and love them...

They show anger by throwing away the food from their nose again and again until it falls on the floor....

Mahvish Khan

B.Sc. II

OIL EATING BACTERIA

Introduction

There are some smallest living things on earth, they can have a powerful impact. The bacteria occurs naturally in water and when they can come in contact with oil, they eat it. Producing the by products carbon di oxide and water.

After the spill all bacteria must work together to efficiently degrade oil. The scientists even found that some bacteria might assist with "Cleanup after Cleanup" meaning they also could eat what humans pour into the water to clean up the oil. These dispersants can cause environmental problems themselves.

What created oil eating bacteria?

"Alcanivorax Borkumensis" is a rod-shaped that relies on oil to provide it with energy. Relatively rare in unpolluted seas it quickly comes to dominate the marine microbial ecosystem after an oil spill, and it can be found throughout the world's oceans.

Bacteria used to clean up oil spills

The last (and only) defense against the ongoing deep water horizon oil spills in the Gulf of Mexico is tiny billions of hydrocarbon chewing microbes, such as - Alcanivorax borkumensis.

Oil Spills

An oil spill is the release of a liquid petroleum hydrocarbon into the environment especially the marine ecosystem, due to human activity and is a form of pollution. The term is usually given to marine oil spills, where oil is released into the ocean or coastal waters, but spills may also occur on land.

How can bacteria can help clean an oil spills in the ocean?

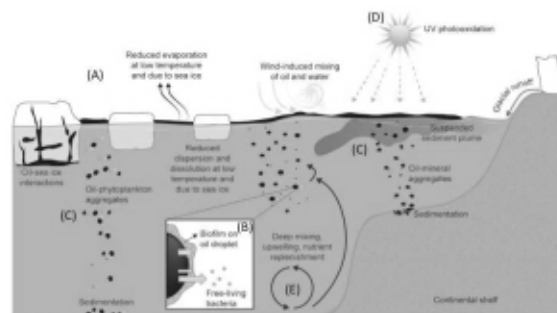
Plants, bacterial decomposes or enzymes are used to remove contaminants and restore the balance of nature in the wake of pollution incidents. When we clean up after an oil spill of a given size, such as along our shore lines, we start by applying mechanical methods using spades and brooms, combined with chemicals.

Oil Spills Prevention

1. To prevent the spill from reaching shore.
2. To reduce the impact on marine life, and
3. To speed the degradation of any unrecovered oil.

Oil Spills occur mostly in:-

The report identifies these "hot spots" for oil spills from vessels.



- Gulf of Mexico (267 Spills)
- Northern U.S (140 Spills)
- Mediterranean sea (127 Spills)
- Persian Gulf (108 Spills)
- North Sea (75 Spills)
- Japan (60 Spills)
- Baltic Sea (52 Spills)
- United Kingdom & English Channel (49 Spills)



How does bacteria break down oil in the ocean?

The ocean is home to many groups of bacteria that can break down the chemicals found in crude oil. Some like Alcanivorax, are oil eating specialists that are usually found in low numbers, only to bloom when oil spills provide them with a sudden banquet. That's exactly what has happened in the "Gulf of Mexico"

What happens to the oil after the microbes degrade it?

Oil does not build up in a microbe any more than salad oil build up in our stomachs. Just as our digestive tracts break food down, microbes break oil down into simple carbon compounds that are used to make the sugars, fats and proteins needed for growth and energy production, with the ultimate by products being carbon dioxide and water. The simple carbon compounds are incorporated into new cellular constituents- in other words, they are used to make more microbes.

The new microbes continue eating oil, unless they themselves are eaten by natural predators.

What happens to the microbes when the oil is all gone?

The microbes that degrade oil are part of the local food web, they are consumed by other microbes that are, in turn, consumed by large predators. When the oil is gone, the oil degrading microbes with less food available. Stop dividing so rapidly and eventually return to pre abundance.

Farheen Mehadi Rizvi
B.Sc II Year

True Words

The end of education is character.
There is only one caste- "The caste of Humanity"
There is only one language- "The language of Heart"
There is only one religion- "The religion of Love"
There is only one God- "He is omnipresent"
Be Good, See Good, Do Good- That is the way to God.
All are one: Be like to Everyone.
God+Desire = Man
Man-Desire = God
Time wasted is life wasted
Love is truth and truth is Love- Live in Love
Money comes and goes. Morality comes & grows.
The true dwelling place of God is the heart of Man.
Love all Secure All.

Astha Maurya

B.Ed

Dedicated to my Teachers

You asked me to help all.
Never told me, no body will help me.
You asked me to trust my friend,
Never told me my trust will get broken.
You asked me to be kind and humble,
Never told me, people might take it
as my weakness.
You asked me to do my best,
Never told I will still be criticized.
You asked me to be bold,
Never told me, people don't accept leaders.
You asked me to spread peace,
Never told me what should peace.
Never told what would do when I see fight.
You said all the nations are to be loved,
Never told me a bomb might blast.
You said that truth always wins,
Never told me that this is always doubtful.
But i still don't ask what you told me
Because I know
One day I have to only change the world.

Astha Maurya

B.Ed

I Love my India

Punjab for fighting
Bengal for writing
Delhi for duty
Kashmir for beauty
Rajasthan for history
Maharashtra for victory
Mysore for silk
Gujarat for milk
Haryana for peace
Assam for brains.
U.P. for sugarcane
Himanchal for peace
Orissa for temples
M.P. for tribal
Bihar for minerals
State of unity
India for Integrity

Goldi Yadav

B.Com II

What are Teacher?

Teacher are th knowledge books.
They help in our work not in books.
they give is knowledge.

Whether it is the college.
They teach us how to be Smart.
They teach us discipline chart.
What they say is always right,
The teacher is always,
Bright they consol the child who cry.

They speak the truth and do not lie.
They make the college a good
and what can we say
about the teachers.

They are greatest education preachers.

Goldi Yadav

B.Com II

DIGITAL INDIA

Introduction:

Digital India is a campaign launched by the Government of India to ensure the Government's services are made available to citizens electronically by improved online infrastructure and by increasing internet connectivity or by increasing internet connectivity or by making the country digitally empowered in the field to technology.

The initiative includes plan to connect rural areas with high-speed internet networks. Digital India consists of three core components. The development of secure and stable digital infrastructure delivering government services digitally, and universal digital literacy.

Digital India LOGO

Motto	Power to Empower
Country	India
Prime Minister	Shri Narendra Damodardas Modi
Ministry	Ministry of Electronics & Information Technology
Launched	1st July 2015, 3 years ago
Status	Active
Website	www.digitalindia.gov.in
Launched on 1st July, 2015 by Prime Minister Shri Narendra Modi	

Digital India Initiative

The Government of India entity Bharat Broadband Network Limited (BBNL) which executes the Bharat Net project is the custodian of Digital India project Implementation

New Digital Services: Some of the facilities which will be provided through this initiative are Bharat Net, Digital Lockers, E-Education, E-Health, E-Sign, E-Shopping, and national scholarship portal.

- i). E-Sign Frame Work: allows citizens to digitally sign a document online using Aadhaar authentication
- ii). E-Hospital Application: provides important services such as online registration, payment of fees and appointment, online diagnostics reports, enquiring availability of blood online.
- iii). Digital Attendance: attendance.gov.in was launched by PM Narendra Modi on



1st July, 2015

iv). Black Money Eradication: The 2016 union budget of India announced 11 technology initiatives including the use of data analytics to nab tax evaders, creating a substantial opportunity for IT companies to build out the systems that will be required.

v). BPO & JOB Growth: The Government is planning to create 28000 seats of BPOs in various states and set up at-least one common service center in each of the gram panchayats of the state

Kaneez Abid

B.Sc II Year



Friendship is Like Commerce

Your love is "Debit" for me.

My heart is "credit" for you.

Friends are the "Asset" of my life.

We will start our "business" of friendship

All of us are like a "joint stock" company

I want my friends as "share holder's of my life.

I am issuing the "Prospectus of friendship.

I am giving my life as a Debenture in return.

Friends are the "Company Manager"

I am the "sole proprietor"

Love and quarrels are "News Terms"

All right Shall we start our "Venture"

Goldi Yadav

B.Com. I