

INDEX

Sl.No.	Content	Page No.
1.	Introduction of Environmental Education (meaning, definition and importance of Environmental Education).	3
2.	Objectives of Environmental Education and guidelines of Environmental Education.	13
3.	Environmental degradation - Impact on land, Air, water, food and Health.	23
4.	Recent Environmental threats around the World.	37
5.	School Environmental Survey.	49
6.	Activities done in college and school practice related to Environmental protection in the Academic year.	53

INDEX

Page No.

Sl.No.

Content

7. Environmental awareness slogan.

79

8. Conclusion

81

Signature of the
guide teacher

R. TANIL PONNI, M.Sc., B.Ed., M.Phil.,
P.G. Asst. in Botany,
Govt. Hr. Sec. School,
KRISHNARAYAPURAM,
KARUR Dt - 639102

Signature of the
Head Master

தலைமை ஆசிரியர்,
அரசு மேனிகைப்பள்ளி,
கிருஷ்ணராயபுரம் - 639 102.
கருர் மாவட்டம்.

ENVIRONMENTAL EDUCATION

INTRODUCTION :

* Environmental Education enables learners to develop a structure of knowledge about the world and seek knowledge that they can use and develop throughout their knowledge lives. Environmental Education empowers learners by enabling them to participate in a sustainable future. Thus the foundation for a life long learning is laid by the environmental education.

ENVIRONMENTAL EDUCATION :

Meaning :

* Environmental Education is a integral process which deals with man's interrelationship with his natural and man-made surroundings, including the relation of population growth, pollution resources allocation and depletion, conservation, technology and urban and rural planning to total human environment.

* The term environment has been derived from a French word "Environia" mean to





surround. It refers to both abiotic and biotic environment. The word Environment means surroundings, in which organisms live.

* Environment and the organisms are two dynamic and complex component of nature. Environment regulates the life of the organisms including human beings. Human beings interact with the environment more vigorously than other living beings. Ordinarily environment refers to the materials and forces that surround the living organisms.

DEFINITION:

* According to UNESCO, "Environmental Education is a way of implementing the goals of environmental protection. It is not a separate branch of sciences but the life long interdisciplinary field of study. "It means Education towards protection and enhancement of the environment and Education as an instrument of development for improving the quality of life of human communities."



D. Gipebert :

* "Environment is anything immediately surrounding an object and exerting a direct influence on it."

E.T. Ross :

* "Environment is an external force which influences us."

Tbilisi Declaration 1978 :

* Environmental Education is a learning process that increases people's knowledge and awareness about the environment and associated challenges, develop the necessary skills and expertise to address the challenges and fosters attitudes, motivations and commitments to make informed decisions and take responsible action.

IMPORTANCE OF ENVIRONMENTAL EDUCATION :

* Every human on this Earth has a role to play for the environment, and it gives us everything we need - shelter, food, water, recreation etc.. The point given below will help in understanding the importance of environmental Education.

* Environmental education is one of the subjects in the curriculum in schools. When children study the environment and its functions, they develop a sense of understanding of the environmental in the early stage of their life.

* It is important to increase the awareness of individuals about the environment. With the help of environmental education, people's knowledge about the environment is instilled into every country citizens.

* There are a lot of environmental issues that the world is facing.

* To avoid them in the future, people need to understand the environment and take proper care of it. It can only be done with the help of environmental education.

* Environmental Education polishes various other skills of an individual. The ability to make decisions is strengthened with environmental education as people become more responsible and aware.

* Individuals can deal with any environmental problems through environmental education. This in turn increases problem-solving skills.

* One develops sensitivity towards the environment because of the environmental issues that have been happening for a long time.

* In this way, each individual takes any action by keeping in mind the harm it can cause to the environment.

* There is no particular viewpoint that is advocated through environmental education. All the aspects are taken into consideration to reach an informed decision.

* Just no one can solve the issues that arise in the environment.

* Environmental Education makes an individual sick in the knowledge of the environment so that the best possible solutions can be provided for even the smallest of situations the environment faces.

- * The impact of human activities on the environment.
- * The comparison between different environments both in the past and present.
- * Environmental issues such as.
 - ⇒ The greenhouse effect
 - ⇒ Acid Rain
 - ⇒ Air Pollution.
- * Local, national and international legislative controls to protect and manage the environment.
- * How policies and decisions are made about the environment.
- * How human life and livelihood are dependent on the environment.
- * The conflicts which can arise about environmental issues like river water sharing.
- * The importance of planning and design on esthetic consideration.
- * The importance of effective action to protect and manage the environment.



I. OBJECTIVES OF ENVIRONMENTAL EDUCATION:

* The following are the objectives of environmental education:

- ⇒ Awareness
- ⇒ Knowledge
- ⇒ Attitudes
- ⇒ Skills and capacity building
- ⇒ Participation
- ⇒ Creating new patterns

Awareness :-

* To help the social groups and individuals to acquire knowledge of pollution and environmental degradation.

Knowledge :-

* To help social groups and individuals to acquire knowledge of the environment beyond the immediate environment including the distant environment. As a basis for making informed judgement about the environment people should develop knowledge and understanding of the natural processes which take place in the environment.

Attitudes:

* To help social groups and individuals to acquire a set of values for environmental protection. Promoting positive attitudes towards the environment is essential if pupils/students are to value it and understand their role in safeguarding it for the future.

* Encouraging the development of attitudes in the personal qualities listed below will contribute to the process.

* Appreciations of care and concern for environment.

* Concern for other living things on earth.

* Independent thought on environmental issues.

* Repeat for others opinion.

* Respect for national argument and evidence.

* Tolerance to face others views.

Skills and capacity building:
* To help social groups and individuals to the develop skills required for making

* Environmental Education to be interdisciplinary in the approach.

* Examine major approach environmental issues from local, national and international point of views.

* Environmental Education to focus on the current and potential environmental situations. Promote the values and necessity of local, national and international cooperation in the prevention and solution to environmental problems.

* Explicitly consider environmental aspects of plan for development and growth.

* Enhance the position of learners in making decision concerning their environment and accept responsibility.

* To provide facilities for displays and exhibitions of the work carried out.



discrimination, in form shape, sound, touch, habits and habits. Further, to develop the ability to draw unbiased inferences and conclusions.

Participation :-

* To provide social groups and individuals with an opportunity to be actively involved at all levels in environmental decision making.

Creating new patterns :-

* With increased awareness of the harm that man's actions are causing to the environment, environmental education aims to create a new behaviour pattern and attitude towards the environment. This results in less harm as the new pattern is aimed at being environmentally friendly.

Guidelines of Environmental Education :-

* Consider the environment in its totality, natural and built technological and social structures.

* Environmental Education to be a continuous life saving process.



III. ENVIRONMENTAL DEGRADATION - IMPACT ON LAND, AIR, WATER, FOOD AND HEALTH:

ENVIRONMENTAL DEGRADATION:

* Environmental degradation is the deterioration of the environment through depletion of resources such as quality of air, water and soil, the destruction of ecosystems; habitat destruction; the extinction of wildlife; and pollution.

* Environmental degradation is defined as any change or disturbance to the environment perceived to be deleterious or undesirable.

* It occurs when the earth's natural resources are depleted, and the environment is compromised in the form of extinction of species, pollution in the air, water and soil, and rapid growth in population.

* Environmental degradation is one of the largest threats that are being looked at in the world today. The United Nations International Strategy for Disaster Reduction characterizes



environmental degradation as the lessening of the limit of the earth to meet social and environmental destinations and needs.

Causes of Environmental degradation:-

- ⇒ Land disturbance
- ⇒ Pollution
- ⇒ Overpopulation
- ⇒ Landfills
- ⇒ Deforestation
- ⇒ Natural causes

*The gradual degradation of the environment is due to many factors. There are mainly 3 types. They are

- * Land degradation (soil degradation)
 - * Water degradation
 - * Air degradation
- up of oil spills on the ocean surface is not an easy task and if delayed can lead to the death of numerous aquatic life forms.

Drought



Impacts of land degradation:-

Drought and acidity:-

* Drought and acidity both are problems highly influenced and amplified by soil degradation.

* The contributing factors to soil quality decline such as overgrazing and deforestation are the leading causes of desertification.

Loss of arable land:-

* Soil degradation contributes to land degradation, it means that it creates a significant loss of arable land.

Increase Flooding:-

* The land is normally altered from its natural landscape when it loses its physical composition from soil degradation.

* For this reason, the transformed land is unable to soak up water, making flooding frequent.

Pollution and clogging:-

* Most of the soil eroded from the land together with the chemical fertilizers utilized in agricultural fields is discharged.



Impact of Air Pollution:

Hazardous to Human Health:

* Air pollution threatens the human health in various ways. It causes lung disease and other respiratory problems.

* According to world health organization (WHO) report in 2012, it postulates that air pollution causes about two million premature deaths annually.

Acid rain:

* When the particles, chemicals and pollutants gases present in the atmosphere chemically react with water molecules oxygen, they form acidic compounds.

* These acidic compounds cause damage to vegetation, buildings and environmental problems.

Ground level of ozone:

* Ground level of ozone, unlike the commonly known good protective ozone layer in the atmosphere refers to harmful ozone layer.

* It created by chemical reactions between nitrogen oxides (NOx) and volatile organic compounds (VOCs) catalyzed by the presence of heat and sunlight.



Impact of water degradation:-

- * Water degradation is mostly caused by the release of harmful material into water bodies.

Human Health:

- * Water pollution kills 1.8 million of people in 2015 because of contaminated water to drink.

* Waterborne pathogens, in the form of diseases causing bacteria and viruses from human and animal waste are major causes of illness from the contaminated water.

Depletion of drinking water supplies:

- * As the contamination of our lakes, reservoirs and other water ways means that there is a decreasing the amount of drinking water.

Eutrophication:-

- * chemicals in a water body, encourage the growth of algae. These algae form a



layer on top of the pond (or) lake. Bacteria feed on this algae and this decreases the amount of oxygen in the water body. severely affecting the aquatic life there.

Affects marine animals:-

* Build up of organic particles in an aquatic environment can affect the availability of oxygen. making it difficult for the animals to breathe, leading to suffocation and death of the inhabitants.

* Water contamination has significant impact on aquatic life.

Impact on food and Health:

* Environmental degradation has profound effects on the quality as well as quantity of food and also risk factors on health extremely varied and complex in both severity and clinical significance.



Impact on Food:

Environmental impacts of food production:

* The environmental damage of food production from conventional agriculture is no limited to deforestation and pollutants associated with crop growth.

Environmental impacts on food security:

* unsustainable agricultural practices may also leads to direct environmental feedbacks such as soil erosion and loss of pollinators.

Impact on Health:

* All types of pollution and environmental concerns are interlinked to influence on another, hence need to be tackled all together. various stakeholders along with the community have to work together to reduce environmental impact on public health.

Pollution:

* polluting and degrading air, soil and water quality along with global warming and climatic change has detrimental effect on public health.

Hazardous waste:

* Toxic wastes are poisons, even in very small or trace amounts. They may have acute effects, causing death or violent illness, or they may have chronic effects, slowly causing irreparable harm.



iv) RECENT ENVIRONMENTAL THREATS AROUND THE WORLD:

* The important global Environmental issues are,

- ⇒ Global warming
- ⇒ Green house gas effect
- ⇒ oil spills
- ⇒ Forest fire
- ⇒ Desertification
- ⇒ Storm

Global warming:

* Global warming is a gradual increase in the earth's temperature generally due to the green house effect caused by increased levels of carbon dioxide CO_2 s, and other pollutants.

Recent Environmental issues due to global warming:

- * Due to global warming, changing rainfall pattern. (Pakistan flood: August, 2022, 30)
- * The Pakistan fatal flooding has hallmarks of global warming.
- * The flooding has all the hallmarks of a catastrophe fueled by climate change.

* It is too early to formally assign blame to global warming. Several scientists tell the associated press. It occurred in the country that did little to cause the warming, but keeps getting hit, just like the relentless rain.

* Climate minister Sherry Rehman said, "It is been a catastrophe of unprecedented proportions."

* Pakistan is considered the eighth most vulnerable country to climate change", said Moshir Haqeez, a Lahore-based climate scientist at international water management institute. Its rain, heat and melting glaciers are all climate change factors scientists warned repeatedly about.

Global warming from fossil fuels:-

* As of May 2008, CO₂ ppm (parts per million) is at 480.00 and the global temperature rise is 1.15°C compared to pre-industrial levels.

About 5% increase in rainfall for every degree Celsius of warming.



ii) Green house gas effect:-

* The green house effect is the rise in temperature that the earth experiences because certain gases in the atmosphere trap energy that comes from the sun.

Recent Environmental Issues due to green house gas effect:-

* WMO's Greenhouse Gas Bulletin reported the biggest year on year jump in methane concentration in 2021.

* WMO's UN climate change conference.

COP27 in Egypt from 7-18 November.

* WMO measures atmospheric concentrations

of greenhouse gases - what remains in the atmosphere after gases are absorbed by sinks like the ocean and biosphere. This is not the same as emissions.

11) Forest fire

* Wildfire also called forest, bush or vegetation fire can be described as any uncontrolled and non-predicted combustion (or) burning of plants in a natural setting such as a forest, grassland, bush, land or tundra and spreads based on environmental conditions.

Recent Environmental threats due to forest fire:

* Boreal forests in regions all over the world have been experiencing the worst wildfire in record history in 2023.

* In Canada, which broke the record in late June for wildfire smoke emissions released in a single year, wildfire began raging in May, long before the start of the fire season. The total wildfire emissions for 2023 is estimated to be almost 410 megatonnes, the highest on record for Canada by a wide margin, according to the Copernicus Atmosphere Monitoring Service dataset, which provides information on the location, intensity and estimated emissions of the wildfires around the world.



iii) Oil Spills:

* An oil spill is the release of liquid petroleum into the environment especially in marine areas. It is a manmade disaster and oil spill involves the accidental release of oil into the water body.

Recent Environmental threats due to the oil spills:

* On June 6, 2003, the US District court for the Eastern District of Louisiana ended the consent decree finalizing settlement between NOAA and HOG Exploration off shore, LLC, valued at 13.1 million, to resolve their liability for natural resource injuries resulting from a pipeline spill the discharged oil into the deep waters of the Gulf of Mexico approximately 70 miles southeast of Venice Louisiana.

* On the evening of December 31, 2003, Enmore, a city 85 km from Tonle Sap's delta, and its near-by villages have been dealing with a new problem the spill happened from the refinery of Chevron Petroleum Corporation Ltd (CPCL) over a week ago. Reports say that the damage to Chevron's eco sensitive Enmore Creek is only getting worse.

Desertification:

* Desertification is the degradation process by which a fertile land changes itself into a desert by losing its flora and fauna. This can be caused by drought, deforestation, climate change, human activities (or) improper agricultural practices. Desertification is a process of degradation of land.

Recent news about desertification:

* UN issues global alert to combat severe sand and dust storms.

Storm:

* A low-pressure atmospheric disturbance resulting in strong winds accompanied by rain, snow or other precipitation and often by thunder and lightning. A wind with a speed from 103 to 117 km (64 to 73 mi) per hour, rating " on the Beaufort scale.

Recent news about storm:

* The severe cyclonic storm reaching over west central Bay of Bengal, along and off south coastal Andhra Pradesh, moved northwards with a speed of 10 km/hr during the past 6 hours and lay centred at 11.30 a.m on December 6, 2023.



1) SCHOOL ENVIRONMENTAL SURVEY :

Environmental Survey in Government Higher Secondary School, Kavalur, Rayachoti Taluk, Kanyakumari District

1) Classroom :

Classroom	Excellent	Very good	Good	Average	Poor
Neat		✓			
Ventilation			✓		
Class Size		✓			
Furniture		✓			
Student discipline			✓		

2) Library :

Library	Excellent	Very good	Good	Average	Poor
Neat and tidy			✓		
Ventilation		✓			
Arrangement of Books			✓		
Silence and discipline		✓			



3. Laboratory:

Laboratory	Excellent	Very good	Good	Average	Poor
Neat	✓				
Ventilation		✓			
Arrangement of chemicals Apparatus	✓				
Discipline		✓			

4. Playground:

Playground	Excellent	Very good	Good	Average	Poor
Neat		✓			
Size of ground			✓		
Student discipline		✓			



1) Activities Done in College and School
practice related to environmental protection
in the academic year:

Activity : 1

WORLD ENVIRONMENT DAY

Theme : "Only one Earth."

Date : 05 June 2023

* The World Environment Day was celebrated by the college premises on 4th June 2023. The program was organised on the theme "only one earth" which is the campaign slogan of this year's world Environment Day festival by Sweden. The Program started with a brief awareness meeting to spread the importance of conserving planet Earth, which is our only true home. The principal of the college, Dr. R. Nagarajan spoke about the significance

of tree plantation for preserving biodiversity and climate control beside providing the basic needs of life on earth.

* The chairman of the college, Dr. P.S.K.R. Poigaswamy inaugurated the plantation drive by planting a neem sapling at our college premises. The program continued with plantation of other tropical tree saplings by NSS programme officers and faculty members and students of the college. All together more than fifteen saplings had been planted. The program followed by an "on the spot writing competition" on the theme of the day among the students. After that various events conducted such as poster making drawing, debate and slogans.

* In the end, we all took a promise that no one will pollute the environment and will not allow anyone to do so and plant more and more trees.



Activity :

VAN MAHOTSAV TREE-PLANTING

Theme : Help us plant a tree and build a better world.

Place : Balasambudam, Tiruchirappalli District

Date : 06/07/2023

Time : 10.00 AM.

"People who will not sustain trees will soon live in a world that will not sustain people. Let's start planting more trees before it's too late."

* Van Mahotsav "Grow more trees" is a programme patronised by the Indian Government. Under this programme, people plant

new trees every year. This scheme has a great significance. Every year man has thoughtlessly cut down forests and other trees for his needs, this has resulted in the imbalance of environment.

* To keep the air clean and full of oxygen, plants and trees are needed to make up the shortage of greenery. "Grow more trees" movement is started in all parts of India. This is an important programme and every citizen should take part in it in order to eradicate the environmental pollution.

* The Van Mahotsav tree plantation was celebrated in Balasamudram village on July 2003. The Mahotsav started at 10.00 AM. At first all the guest were welcomed with garlands. Then the Kainee presented the poem based on the importance of trees. Some Kainees had the posters and the banner.



Activity : 3

TREE PLANTATION

School Name : Government Higher Secondary School, Krishnaratnapuram.

Place : School campus

Date : 25th September 2023.

* Everyone knows that trees are a very important part of life but often that, the same humans are destroying trees all over India in the name of infrastructure and development. Trees gives us oxygen to breathe and to live a healthy life in a healthy atmosphere. The tree provides us a disease-free atmosphere. Although trees are taking nothing in return, still human beings don't think about it. Start tree plantation with Save Green India.



in their hands that gave messages about tree awareness. In that workshop about 150 saplings of different types were planted by the learners, staffs and village peoples along the village. The trainees showed great enthusiasm in planting saplings. Everyone did hard work for making the workshop successful.

* Thus the workshop ended at 4 PM.

It was very successful. Finally the NSS Programme Officer Dr. D. Krishna Rao thanked to all those who participated in this plantation programme. The village people also encouraged our team spirit and involvement as well as coordination.

* planting and tending of trees in preventing global warming, reducing pollution and promoting rainfall.

* We as a school pledged to plant as many trees as possible near our areas so as to create a very healthy environment and contribute in minimising the climate changes. We hope that everybody plants a tree in their lifetime and contribute in conserving the nature. I thank our headmaster and school staff in supporting us for this noble cause.

* Lastly, a group photograph was taken with everyone present at the event on the plantation. These pictures were also spread on social media to give a valuable message to society.

Activity : 4

PLASTIC FREE ENVIRONMENT

School Name : Government Higher Secondary
School, Kizhuvannayapuram
Place : School campus.

Date : November 2023

“ plastic plastic
go away ;
we want our
Earth to play ! ”

“ plastic products are
harmful for our
health. ”

“ For a better tomorrow,
say no to plastic ”



* Plastic has become an integral part of our daily lives. We begin our day using mugs and buckets made of plastic for bathing. Further, as we trace back our activities throughout the day, we use plastic in the form of water bottles, combs, food packaging, milk pouches, straws, disposable cutlery, carry bags, gift wrappings, toys etc.. The wide use of plastic has resulted in a large amount of waste generated. Plastic has been so much used that plastic pollution has become one of the environment, our health and well being. We have all contributed to this problem, and now it's our responsibility to work towards it to reduce and ultimately end plastic pollution.

* The Programme was started. Headmaster of our school. The Headmaster too expressed the importance of reduce the plastic usages. In this programme we distributed "cotton cloth bag" to the students to promote a plastic free environment. The students learned more information to protect our environment by reducing plastic. This programme created more enthusiasm to maintain our environment as healthy and hygiene.

* By reducing our plastic footprint, we can contribute to a cleaner and healthier world. The power is in our hands!

Activity is

NATURE WALK

Place : Krishnagangapuram

Date : November 2023

* Nature walk are the pleasurable thing which enriches our soul through it gorgeous greenery ^①view. The place where we visited are provides on harmonious peace to our heart.

* It reduces our stress. When we reached that greeny environment, it feels like a children crawling on mother lap. The leisure earth gives a keen observation and glints our soul with its beauty.



* The environment which flourishes to our youth mind that to keep our surrounding us greenery. It cherish our mind to bloom and gives creative ideas. This nature walk created more enthusiasm to maintain our environment as 'greenery' in school, colleges, house garden and their surroundings. The day of 'Nature walk' was fulfilled with harmonious satisfaction in life.

“ Take a quiet walk
With mother Nature.
It will nurture your
mind, body and soul ”



vi) Environmental Awareness Slogan:

- * If you save water, you can save your future.
- * The best solution of pollution is green revolution.
- * Go green and save green.
- * Our duty is save our environmental beauty.
- * There is an opportunity to save the environment.
- * Today's plantation is tomorrow's forest.
- * If we reduce the plastic, we must recycle it.
- * Today's environment is depends on tomorrow's future.
- * Stop deforestation and start afforestation.
- * If you never save earth then you can never save future.
- * Don't destroy nature, because it create future.

Conclusion :

* Environmental Education provides an impact on our surrounding through the various facts of life. It includes the threats which are around our current situation in world, instead of regarding the current affairs on science, the needs and destruction of environment is leaved in sake of awareness. The survey that we took in our school gives several knowledge about the convenient surroundings of education. Through the awareness programme like tree plantation, plastic free environment and nature walk, cognition to prevent our environment is leaved and created by us and thus, the environment ^{will be} ~~relieve~~ ^{will be} ~~safe~~ ^{will be} through this education.

"The Natural Environment sustains
the life of all beings universally"

completed

Signature of the

R. TAMIL PONNI, M.Sc., B.Ed., M.Phil.,
grade 1st teacher
Govt. Hr. Sec. School,
KRISHNARAYAPURAM,
KARUR Dt - 639102.

Signature of the
Headmaster

தலைமை ஆசிரியர்,
அரசு மேனிலைப்பள்ளி,
கிருஷ்ணராயபுரம் - 639 102.
கருர் மாவட்டம்.

Dr. D. KRISHNAMOORTHY,
M.Sc., M.Ed., M.Phil., (Edn.) Ph.D.
ASSISTANT PROFESSOR
KONGUNADU COLLEGE OF EDUCATION
THOLURPATTI, THOTTIYAM (Tk.)
TRICHY (DL) - 621215