UNIT 2 : METHODS OF ENVIRONMENTAL EDUCATION

UNIT STRUCTURE

2.1 Learning Objectives

2.2 Introduction

2.3 Teaching of Environmental Education

2.4 Different methods used in Environmental Education

- 2.4.1 Discussion Method
- 2.4.2 Project Method
- 2.4.3 Problem Solving Method
- 2.4.4 Observation Method
- 2.4.5 Dramatization
- 2.4.6 Fieldtrip

2.5 Let Us Sum Up

2.6 Further Reading

2.7 Answer to Check Your Progress

2.8 Model Questions

2.1 LEARNING OBJECTIVES

After going through this unit, you will be able to-

- describe the different methods of environmental education.
- discuss the various methods of environmental education.

2.2 INTRODUCTION

In the Unit 1, we have discussed about environmental education and its related concepts. We have also put light on the objectives as well as the importance of the environmental education. To minimize the environmental degradation it is essential to make people aware about the factors responsible for such degradation. Besides having knowledge of environmental education, as a student of education, it is essential for you to know how environmental education is imparted or can be imparted among

the laymen. In this unit, we will discuss about different methods of environmental education.

2.3 TEACHING OF ENVIRONMENTAL EDUCATION

Environmental education is considered as most significant programme for making people aware of the environmental degradation. People can be made aware through teaching and organization of different programme. Teaching of environmental education involves both practical (hands-on) and theoretical (understanding) aspects. The major objectives of environmental education are creating awareness, changing attitude and bringing people into action towards environmental conservation and protection. It covers cognitive, psychomotor and affective domains of teaching-learning. The strategies of teaching and learning are wide ranging, based on its contents and components, levels of education and the objectives of environmental education. For teaching environmental education, the different methods may be very helpful.



LET US KNOW

Teaching of environmental education covers cognitive, psychomotor and affective domains of teaching-learning. The strategies of teaching and learning are wide ranging, based on its contents and components, levels of education and the objectives of environmental education.

2.4 DIFFERENT METHODS USED IN ENVIRONMENTAL EDUCATION

Teaching of environmental education is a not an easy task. It is as complex as teaching other significant topics or discussing some serious issue. To discuss such critical issue, it is essential to adopt significant means by the teachers. There are different methods of teaching, the teacher can follow different methods for imparting knowledge on environmental education to the students. The methods used by the teachers are discussed here-

2.4.1 Discussion Method

Discussion is one of the simple forms of group-based learning method. This method can be used in a variety of situations in both secondary and higher education level. The strength of discussion lies in broad participation of members of the group. It is the responsibility of the teachers to encourage the students to participate in discussion. For effective utilization of this technique, the teacher should give sufficient background information about the subject so that the students are ready to use it in discussion. This is a primary requisite for a discussion because a discussion cannot operate in a vacuum. The teacher can easily arrange discussion on any topic based on the curriculum of environmental education. It can develop higher cognitive abilities effectively apart from reinforcing knowledge. In this method, students can involve in actively. It is a kind of interaction method which makes the classroom more lively and strong. There are four types of interaction in discussion. They are- Teacher -learner Interaction, Learner-learner Interaction, Teacher-material Interaction, and Learner-Material Interaction. Environment is a serious issue. Therefore the use of discussion method can make the issue more clear among the students.

For teaching environmental education, the teacher can discuss some environment related issues like-scarcity of water in the cities, water pollution in sea, disposal of garbage etc.



LET US KNOW

It is a kind of interaction method which makes the classroom more lively and strong. Discussion is one of the simple forms of group-based learning method.



CHECK YOUR PROGRESS

Q 1: What are the types of interaction involved in discussion method?

.....

.....

2.4.2 Project Method

Another important method of environmental education is Project Method. It is any purposeful activity. Project is an activity undertaken by the pupils for the solution of a problem. The activity undertaken leads to learning. Some basic principles of the project method are:

- **Activity:** The project should involve activity which is either mental or motor.
- **Purpose:** Activity should be purposeful; it should be a felt need of the pupils.
- **Experience:** Project undertaken should provide varied type of experience to the pupils- manipulative, concrete, mental etc.
- **Reality:** Project undertaken should provide real experiences.
- **Freedom:** The pupils should be free to undertake the different activities connected with the project.
- **Utility:** The activity undertaken should be useful.

Project method helps the students to acquire knowledge about particular topic through their active involvement. It not only help them to gather knowledge but also ensures self-learning. Basically in project method, students are given some particular topic or area to work on. Through observation, interview and other means students gather data on the selected theme and prepare their project followed by analysis. The report may be hand-written or typed, or it may include charts, models, pictures etc. They can take help of their teachers as well as parents to accomplish the project.

The role of the teacher is to help the students throughout the project, although the main responsibility of carrying out the project work lies with the students. The teacher should help the students in selecting an appropriate subject; formulating objectives of the project, checking students' progress regularly, suggest modification etc. In the teaching of environmental education, this method can be best used. A number of environmental projects can be assigned to students in school situations, such as, plantation in school campus, visit to the places of pollution, trip to wild life sanctuary, agricultural practices in rural areas, disposal of houses etc.



ACTIVITY - 2.1

Prepare an outline of a project on any environmental issue.

2.4.3 Problem Solving Method

This is another significant method used in environmental Education. Environmental degradation which is a main theme of the program, is a problem itself. To address the issue of environmental degradation, it is essential to make people aware with the problem. This is only possible when the students are encouraged to take active part in the program. Problem solving method is a method that is used by the teacher to help the students to solve problems by themselves. In this method, students learn by working on problems. This helps the students to learn new knowledge by facing the problems. In problem solving method, the students are expected to observe, understand, analyze, interpret and find solutions, and perform applications that lead to a holistic understanding of the concept. This method develops scientific process skills. This method helps in developing brainstorming approach to learning concepts.It is a process from practice to theory not vice versa. Students live in

the real world and like to deal with concrete things where they can touch, feel, manipulate things, then the method is useful in igniting the process of science learning.

Problem solving is the act of defining a problem, determining the cause of the problem, identifying, prioritizing and selecting alternatives for a solution and implementing a solution.Problem-solving method that aims at presenting the knowledge to be learnt in the form of a problem. It begins with a problematic situation and consists of continuous, meaningful, well-integrated activity. The problems are test to the students in a natural way and it is ensured that the students are genuinely interested to solve them.

In this method, students are given some problem, which they need to solve by finding alternative solutions. The report is presented followed by the solutions. In environmental education, the students can be given some problems like-water pollution, noise pollution, the students through finding alternative solutions to this problems, can gain depth of the such serious problems. Therefore, in environmental education teaching, problem solving is considered the most important.



LET US KNOW

Problem solving is the act of defining a problem, determining the cause of the problem, identifying, prioritizing and selecting alternatives for a solution and implementing a solution.



CHECK YOUR PROGRESS

Q 2: Write three characteristics of problem solving method.

.....

.....

2.4.4 Observation Method

Another method used widely in environmental education is Observation Method. Though observation method is the most commonly used method especially in studies relating to behavioural sciences but in environmental studies too, this method can be used. Environment implies our surroundings. When we observe our surrounding, it helps us to know better as well as to establish a harmony with the nature. This will help the young students to realize the importance of environment and how can we save it from disasters. The information obtained under this method relates to what is currently happening which helps in finding out the factors of environmental degradation and assist in finding solutions to it.

It is rightly believed that direct experiences are more effective in the processes of learning and are retained for a longer period of time. Therefore a student should be allowed and asked to observe simple phenomena of the earth and the sky so that he/she acquires awareness about living and non-living components and develops awareness about his/her wellbeing in the context of social and natural environment. The child gradually begins to form positive feelings and attitudes of environmental protection. He may utilize this awareness, skills, attitudes in his actions as personal habits. Personal habits can contribute in improving the quality of the environment. Observation under the careful guidance of teacher, on the immediate natural surroundings, geographic facts and relationships prove invaluable for the teaching of environmental education.



LET US KNOW

Observation under the careful guidance of teacher, on the immediate natural surroundings, geographic facts and relationships prove invaluable for the teaching of environmental education.

2.4.5 Dramatization

Drama, as we all know, is primarily a living experience. It helps the child to expand the boundaries of his life space, enables him to express his imagination, concepts and feelings about events and happenings. Acting is a wonderful way of learning.Dramatic teaching is integrated into many different types of curriculum especially in the lower level of education. It is a method which refers to a collection of teaching tools that include traditional drama techniques like improvisation, storytelling, role playing and games. Dramatization technique emphasizes on engaging students through interactive activities. There are many ways to use dramatization teaching methods in the classroom. Teachers can use it to help students gain deeper insights into topic, build on concepts and themes. Moreover it is also used as a means to test student knowledge. A dramatic performance unfolds with a plot. The enactment of a play illumines the responsibilities of democratic citizenship; provide children with an understanding of the problems of community living, and a realization of the importance of participating in community activities. It can convey the concepts of good environment and the abuse of environment.

The role of a teacher is very significant in using dramatics as a method of teaching environmental education. He/she may ask his students to prepare scripts on environmental problems, prepare costumes, do the art work necessary for staging, plan a programme and send invitations and make all necessary arrangements. Thus, by engaging in a play, children explore in their own way, the activities and relationships of human living and acquire the much needed information and skills. Environment is a serious issue, and it's very essential to make children from grassroots level. Dramatization technique helps the children to realize its importance.



LET US KNOW

Dramatization is a method which refers to a collection of teaching tools that include traditional drama techniques like improvisation, storytelling, role playing and games. Dramatization technique emphasizes on engaging students through interactive activities.



ACTIVITY - 2.2

Play a drama in the class on awareness towards deforestation.

2.4.6 Fieldtrip

Environment itself means our surroundings. To know the environment, to maintain the ecology, we must explore our environment. Only bookish knowledge cannot help in developing a sense of belongingness towards the environment among the students. When they get the opportunity to explore nature they learn and develop the sense of attraction towards the same.The best way of giving them an opportunity to explore nature through education is Fieldtrip, which is an essential part of school education. Generally a fieldtrip is a trip made by student and teachers to see and study something naturally, culturally, socially or geographically significant. Environmental education can be taught effectively with the help of field trips or educational excursion method. This is the most practical method of teaching environmental education. This method provides the real awareness through local observation, regional and national observation, geographical conditions observation, observation of historical places and remains, industrial area, natural vegetation which is the major components of the school subjects related to environment.

In the observation method, awareness of the environment is provided through the perception of the students. It involves the

observations, imagination and ability of discovering the cause and effect relationship among environmental components. Thus, it provides the learners a real exposure to environmental education. Field trips also develop the ability to appreciate natural environment and the ability to interpret one's own experiences and observations. For developing feelings of co-operation, group activities or team work etc., fieldtrip is one of the best methods of teaching environmental education.While organizing field trips, certain points should be considered important to make teaching learning effective. They are as follows:

- the specific objectives should be formulated
- to realize these objectives, ways and means should be identified
- a schedule containing date, time, number of students, duration and financial aspects should be finalized
- the means of transportation and time schedule should be finalized
- the visiting organizations should be contacted for the necessary arrangement

The success of field trips depends upon the selection of places and schedule of observation by the students. Every student should prepare a report about his observations. Every field trip should be followed by group discussion to highlight the environmental components.

LET US KNOW



Field trips is a method which develops the ability among students to appreciate natural environment and the ability to interpret one's own experiences and observations.



CHECK YOUR PROGRESS

Q 3: What are the things to be considered while planning fieldtrip?

.....

.....

Besides the above mentioned methods, the teacher can organize lectures, debates, seminars, and workshops on environmental issues. It is the teacher who can sensitize his students for developing positive attitude towards environment, develop emotional commitment for improving the quality of environment which will ultimately motivate the citizens to work towards the solution of environmental problems.



2.5 LET US SUM UP

On the basis of the above discussion held so far on methods of environmental education we can summarize the unit as follows-

- Teaching of environmental education involves both practical (hands-on) and theoretical (understanding) aspects.
- The major objectives of environmental education are creating awareness, changing attitude and bringing people into action towards environmental conservation and protection.
- A teacher can adopt different methods for imparting knowledge on environmental education to the students. Some of the methods are- Discussion method, Project method, problem-solving method, Fieldtrip etc.
- Discussion is one of the simple forms of group-based learning method.
- There are four types of interaction in discussion. They are- Teacher

-learner Interaction, Learner-learner Interaction, Teacher-material Interaction, and Learner-Material Interaction.

- For teaching environmental education, the teacher can discuss some environment related issues like-scarcity of water in the cities, water pollution in sea, disposal of garbage etc.
- Project Method is a purposeful activity. Project is an activity undertaken by the pupils for the solution of a problem.
- Some basic principles of the project method are- Activity, Purpose, Experience, Reality, Freedom and Utility.
- The role of the teacher in project method is to help the students throughout the project by selecting an appropriate subject; formulating objectives of the project, checking students' progress regularly, suggest modification etc.
- In problem solving method, the students are expected to observe, understand, analyze, interpret and find solutions, and perform applications that lead to a holistic understanding of the concept.
- In this method, students are given some problem, which they need to solve by finding alternative solutions. In environmental education, the students can be given some problems like-water pollution, noise pollution, the students through finding alternative solutions to this problems can gain depth of such serious problems.
- Observation method helps us to know better as well as to establish a harmony with the nature. This will help the young students to realize the importance of environment and how can we save it from disasters.
- Observation under the careful guidance of teacher, on the immediate natural surroundings, geographic facts and relationships prove invaluable for the teaching of environmental education.
- Dramatic teaching is integrated into many different types of curriculum especially in the lower level of education.
- It is a method which refers to a collection of teaching tools that include traditional drama techniques like improvisation, storytelling, role playing and games.

- Fieldtrip is a trip made by student and teachers to see and study something naturally, culturally, socially or geographically significant.
- Field trips also develop the ability to appreciate natural environment and the ability to interpret one's own experiences and observations.



2.6 FURTHER READING

1) Bhattacharya K, Bhattacharya R and Sharma S (2012): Environmental Education, Assam Book Depot.
2) Sharma P.D (1990): Ecology and Environment, Rastogi Publishers, Meerut.
3) Sharma R.A (2010): Environmental Education, R.Lall Book Depot.
4) Sigh S and Dubey A (1989): Environment Management, Allahbad University.



2.7 ANSWERS TO CHECK YOUR PROGRESS

Ans to Q No 1: The interaction involved in discussion methods are- Teacher -learner Interaction, Learner-learner Interaction, Teacher-material Interaction, and Learner-Material Interaction.

Ans to Q No 2: Three characteristics of problem solving method are--

1. Problem solving is the act of defining a problem, determining the cause of the problem, identifying, prioritizing and selecting alternatives for a solution and implementing a solution.
2. Problem-solving method aims at presenting the knowledge to be learnt in the form of a problem.
3. It begins with a problematic situation and consists of continuous, meaningful, well-integrated activity.

Ans to Q No 3: The things to be considered while planning fieldtrip are-

- the specific objectives should be formulated.