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As teachers we are responsible for giving students the skills, knowledge and critical thinking skills and caring attitudes that will enable them to respect and care for our planet home.

As teachers we have the opportunity to guide young people to become informed, healthy, responsible, caring citizens of the future.

As teachers we have the chance to participate in the fun and wonder of young people as they learn about this wonderful world, and also the opportunity to make a difference.

8.1

By now you would have gone through this Module and got a broad idea of what it means to take on the role of an environmental educator. You would have gained a general understanding of what EE is all about and how to incorporate this into all aspects of your profession and place of work. You would also have had a chance to review the menu of possibilities available to you to do this.

As you read, you may surely have come across several things that you already know and do. Other parts may have sparked off new ideas, while still others helped in practical planning and implementation of those ideas. We are sure that often, along the way, you would have stopped to reflect and ponder, and think about what you were reading in the context of your own work.

This part of the module tries to recapitulate all this. The exercise is an attempt to place you in a situation which you are likely to be in real-life, and to invite you to tackle these “scenarios”. To do this you will get a chance to go back over what you have read in this module as well as place yourself and your responses in a “context”. We also hope that you will find it useful to return to the contents of this module whenever you need, in your journey as a Green Teacher.

8.2

On completion of this unit you should be able to:

- Recall the contents of the previous units
- Recognize possible situations that would arise in your context
- Put yourself in these situations
- Review and analyze the situations realistically
- Respond to each situation as you would do so in reality.
8.3 LEARNING SCENARIO 1

What is Environmental Education?

You have recently joined S.P. Vidyalaya as a teacher for middle school. Your main subject is social science. You have done a B. Ed. It is your first teaching job and are keen to put your best efforts into it.

One evening you hear on the news that the Supreme Court has ruled that compulsory education on environment should be introduced in a graded way for all classes from Class I to Class XII, and also as a compulsory foundation course for all the undergraduate students. The next day, the Principal of your school calls you, and one of your senior colleagues who is teaching Biology in the Secondary section. The Principal discusses the same news item. She feels that the school should become aware of, and start to prepare for, introducing environment as a subject at all levels.

The first requirement is for all the teachers of the school to understand the thinking behind what is referred to as Environmental Education (EE). This, the Principal feels what help to establish a common understanding and framework within which all the staff can plan and proceed.

The Principal requests you and the senior colleague to prepare a presentation on Environmental Education for the school staff. She reminds you that this could include the background, as well as orientation to the nature, characteristics, role of EE. You are hesitant to take on this responsibility because you feel that you are not a science teacher and that you may not know enough about the subject. Your senior teacher says she will help you once you have put the basic information together. You decided to start finding out more about EE.

Learning Activity 1

Prepare a presentation for the school staff on EE. Include the definition, goals, objectives and guiding principles of EE. Also give a brief background of the evolution of EE in India, leading up to the Supreme Court judgement.
8.4 LEARNING SCENARIO 2

The Teacher as an Environmental Educator

The following week the Principal calls a staff meeting and you present what you have read and prepared about the objectives and guiding principles of EE. You also give a brief background to how the subject of “environment” has been treated in the education policy and curriculum. You conclude by telling about the Supreme Court directive that environment will henceforth be taught at all levels of school education.

After you finish, there is a quiet pause as everyone tries to take in all the new information. This is followed by a great outburst of comments and concerns by the teachers.

Several teachers: If environment is now going to be a separate subject, then new teachers will have to be appointed to teach it.

Other teachers: Yes, we are already over-loaded; we cannot take on anything extra.

Language teachers: We do not see how we are affected by this. It does not have anything to do with our subject.

Social Science teacher: Yes, this meeting should have been for the Science Teachers.

Science Teachers: The syllabus is already so vast, it is difficult to complete on time.

Maths Teacher: According to the presentation EE is best taught in and through the environment. It is not possible every time to take the students outdoors.

Chemistry Teacher: Even doing experiments in the labs is difficult as the number of students is so large.

Physics Teacher: With 50+ students in every batch, it is not possible to let every student carry out experiments.

SUPW Teacher: Even when we do have a period for carrying out activities, some parents feel that this is a waste of time. They feel that students should concentrate on their books and exams.

You are taken aback and confused at this reaction, and do not know how to respond.

The Principal however comes to your aid. She explains that the very nature of EE is that it is interdisciplinary which means that it concerns teachers of all disciplines. She also reminds everyone that as they saw in the presentation, the objectives of EE go beyond the transfer of information and acquisition of knowledge which most traditional subjects do. EE aims at affecting attitudes and behaviour, and building skills to take action. Thus it redefines the role of the teacher from being a transmitter of information and knowledge, to becoming
a facilitator of a process of taking students from awareness, to changing attitudes, to building skills to enable action for a better environment.

The Principal urges the teachers to reorient their own roles from that of being subject teachers to that of being environmental educators. She calls for a meeting the following week. She asks every teacher to prepare a brief presentation of how they could perform this new role of environmental education with reference to their own subject.

Learning Activity 2

Draft responses to each of the concerns voiced by the different teachers.

8.5 LEARNING SCENARIO 3

Greening the Textbooks

Over the next few weeks some of the teachers who teach science subjects have started discussing and reviewing possibilities of teaching the textbook topics with an environmental perspective.

The “non-science” teachers are still a bit lost. They are not at all sure how they could teach environment as part of the subjects they teach. The Principal feels that it would be a good idea to bring them together and have a half-day “brainstorm” on how every teacher could “green” their own subject.

The Principal informs all the staff about the proposed brainstorming. She specially invites the teachers who take language, arts and craft, games and PT, drama and music to stay back on Saturday afternoon for this. She asks you to help to plan and facilitate this.

You are yourself not very clear what “greening” of a subject implies, and how to go about it. You do some reading and try to understand what it means, and also think how this could be applied to different subjects.

Learning Activity 3

Make a plan for the 3-hour brainstorm. It should include and address the following:

- How will you introduce the session?
- What kind of resistance/doubts/questions do you anticipate will be raised by the teachers?
- How will you structure the proceedings? (E.g. will you take up subject by subject and invite ideas, or will you make a presentation and then open it up, etc.)
Prepare an example of a “greened lesson” from whichever subject you teach.

How will you convince the teachers about the effectiveness of the different/new approaches?

How will you help to ensure that some of the ideas are tried out by the teachers in class?

(credit points: 5)

8.6 LEARNING SCENARIO 4

Enriching the Classroom Experience 1

The Supreme Court directive about making environment a compulsory subject at all levels of school education has generated a lot of discussion in your school.

For some of the senior teachers it is not so much the subject that is of concern, but the expectations of how all subjects should ideally be taught—which is with an emphasis on involving the students more closely in the process of learning.

Some of the senior school teachers feel that the students already carry out physics, chemistry and biology experiments in the labs. They feel that this is sufficient “hands-on” experience, and that the remaining syllabus is best handled by books and lectures.

The middle school science teachers feel that bringing in “activities” will cut into the teaching time and they will not be able to complete the course as schedules.

The social science teachers feel that the “activities” refer mainly to experiments and that this methodology was not suitable for teaching subjects like geography, history or civics.

You, along with a group of colleagues, feel that involving students more directly in the process could make teaching and learning of any subject more enriching and effective. You also feel that if properly selected, planned and carried out, an activity need not eat into teaching time. Rather it could help to make the work of teaching easier.

You remember that you have a book which you had got when you attended an orientation programme, which had several examples of how this could be done. You find the book called Joy of Learning. You also share it with your groups of like-minded colleagues. Your groups feel that this could serve as a useful starting point to introduce the activity approach into the classroom,
and also serve as an example to help convince those who are a bit skeptical or hesitant about this methodology and approach.

Learning Activity 4

- Go through the book Joy of Learning. Now refer to the list of points that support the effectiveness of the activity approach. Identify at least one activity that helps to support each point.

- List three activities each that could be undertaken by a social studies teacher, a science teacher, a language, or arts and crafts teacher in your school.

8.7 LEARNING SCENARIO 4.1

Enriching the Classroom Experience 2

Having read the Joy of Learning, you and your friends are quite keen to start using some of the activities in the class. You are excited by the idea of using games as a teaching methodology. You do not know exactly what kind of games, and how effective they could be. You decide to do some reading and find out more. A few of your colleagues say that they like the idea of using demonstrations and experiments. You all decide to try one game or demonstration each during the next week.

After a week you meet again and share your experiences.

Teacher 1: I played the game Who Am I with my third standard students. They did not know of enough questions to ask.

Teacher 2: I tried to play Predator-Prey with my standard 7 students. It was too chaotic and rowdy. Everyone kept running here and there, and I could not explain anything.

Teacher 3: I tried Oh Deer with my class VIII. The game was orderly, but after that the discussion got very complicated, and students were confused.

Teacher 4: I did Energy Relay. Actually I am not sure whether to call it a game, an experiment or a demonstration. I used it to explain how some amount of water gets lost during the water cycle.

Teacher 5: I tried the game Segregate Your Garbage with my standard IX students. They could finish it very fast, and after a couple of rounds, they got very bored.

Teacher 6: I had planned to do the Dripping Tap experiment but I forgot to take a necessary cylinder and stop watch.
Teacher 7: We started to play web of Life, but we could not finish the activity and talk about what it demonstrated.

You are a little disappointed with the feedback. You had expected that at least your group of colleagues would be enthusiastic about using games and demonstrations as part of their teaching methodologies. But after the initial trials, they seem to feel uncomfortable about continuing with trying out use of games and experiments.

Learning Activity 4.1

Try to analyze and understand what may be the reason for each of the experiences that the teachers had. Write down your responses to each one.

(credit points: 5)

8.8 LEARNING SCENARIO 5

Nature as Teacher

The following Saturday afternoon, all the teachers are requested to stay back. There is a lecture and interaction with a person from an NGO that works mainly with wildlife and conservation issues. Your school has a regular tie up with this organization which arranges to take the students on nature camps. These are usually optional activities, and not all students take part in them. Today the guest speaker talks not only about nature camps, but about the possibilities of using any outdoor exposure or experience as opportunities for environmental education. He emphasizes that all teachers can avail of this opportunity and use it to complement and enrich their teaching. However, he also emphasizes the importance of proper planning of the entire activity, briefing of the students, follow up discussions and clarity of objectives for an outdoor activity to be transformed into an effective and enriching educational experience.

After his talk, there is an informal interaction.

A few of the teachers who have taken children out on short treks or trails shared their experiences. They agreed that the students had a very good time during the trek, but they were not sure whether they had learnt anything new or special during, or as a result of the experience.

One or two teachers felt that they would not like to repeat the experience because they felt that the students could not be controlled and the kind of discipline that is possible in the classroom could not be maintained.

A couple of teachers said that they did manage to keep the students orderly, and also could show them many different things—plants, birds, insects, etc. they also asked the students to note down their observations in their notebooks. But the students were confused about what to note down, and how to describe what they saw. So when they returned to class, they could not use whatever they had written for further study or discussions.
A few of the new teachers, including yourself were excited by the possibilities of using such experiences for teaching about a variety of subjects. Having interacted with the guest speaker, you feel that you would like to plan a nature trail for your students. Also having gone through some of the notes, worksheets and other handouts, you realize that some of the problems that the teachers had faced could be overcome or minimized with better planning and preparation.

Learning Activity 5

How could the teachers have avoided some of the problems that they faced? What are some of the steps/considerations which could have helped the nature trail activity to have achieved its objectives?

8.9 LEARNING SCENARIO 6

From Awareness to Action

The first term of the school year has just ended. Before the holidays, the Principal called a staff meeting to review and discuss the progress on bringing EE into the system. It turns out that most of the middle school teachers had tried out using the activity approach at least once or twice during the term. Having tried it, most were feeling a little more confident about trying some more in the next term. One common experience that all shared was the enthusiastic response of the students to this new way of learning. A few said that they were almost feeling pressured to continue with this as now the students were eager and expected to be part of this. These teachers were looking forward to the break when they could plan a bit more in advance and identify more opportunities for this. A couple of teachers said that they had planned to have some outdoor activities including nature trails after the break when the weather would be cooler. The senior school teachers reported that they had not been able to do many activities in the classroom, mainly due to the pressure of time. Several however said that they were more conscious when teaching from the textbook and tried to make relevant linkages between the textbook and real life examples from the environment and bring these into their teaching.

A few had discussed with the PE/games instructor and had used some of the games periods to involve students in outdoor games that were linked to understanding some of the textbook concepts.

In the junior classes, the arts teachers and language teachers had been able to use environmental themes for a lot of their teaching. By and large you sensed that everyone felt a little less confused and concerned than you all had been two and a half months ago.
The Principal urged all of you to continue and expand your experience with environmental education, in whatever you were involved with.

During the break you read in a newsletter about an interesting project carried out by a group of students.

You find this idea exciting you feel that by getting the students to systematically understand an issue, and work together towards managing it, they would be directly involved in a process which would take them through the full spectrum from understanding to action. You remember that this is what the goal of EE is, and should be. You feel that this process would be meaningful and have relevance to the students immediate concerns and situation. In that sense, it would be somewhat different from students carrying out a variety of assorted activities with reference to different subjects or topics.

You share this idea with three of your colleagues who are also enthusiastic about giving it a try. You try to find some books or articles that would give more information about this. In one place, you find that the activity by which students carry out a survey of resources or resource use is called an “audit”. Thus students could carry out a ‘waste audit’, ‘water audit’ or ‘electricity audit’ in the school or at home.

You share this with your colleagues. You all decide that you would be trying to introduce this idea in your classes, when the school reopens.

After the school reopens, you and two of your colleagues try out three kinds of “audits” with your respective classes. These involve a survey of water waste, electricity consumption, and garbage in the school premises. You inform the Principal about this. You proceed according to the plan that you formulated.

Students are quite excited and enthusiastic about this activity. In groups they carry out the audit and bring the forms back to class. They compile all the data, and the results are surprising even ‘shocking’ to all. Your class’s water audit discovers that there is some water wastage from at least 15 of the 115 taps in the school (either due to leaky tap or taps not properly closed). Your colleague’s “electricity audit” class discovers that during recess, there is on an average one fan or light left on in almost every classroom in the schools. The “garbage audit” reveals a lot of different kinds of litter in various parts of the school.

The students now feel strongly about this. They feel that something must be done with this information, but they do not know exactly what to do. You discuss this with your colleagues. You all realize that having initiated the process of investigation, you would need to take it further by also involving students in planning ways of tackling these issues. In other words, you need to take the activity as a starting point for a longer term project.
Learning Activity 6

Develop a plan to involve students in a project to help cut down water wastage in your school. Describe the steps that you will include: from survey to analysis of findings; presentation of findings to the school; planning steps needed to cut wastage (including technical [changing washers/repairing taps], creating awareness about problem, involving other students to cooperate including the school staff.

■ How long will the project take?
■ How will you share the project with others?
■ What are some of the problems/constraints that you may encounter during this project?

(credit points: 5)

8.10 LEARNING SCENARIO 7

Green Club

By the end of the term, your class has nearly completed the “water saving” project. The posters put up by the students urging everyone to shut the taps properly, or to report leaking taps have attracted attention of everyone in the school. Similar is the case with the electricity saving, and school clean up projects taken up by the other two classes. With the term coming to an end, you and your colleagues start thinking about what you could do next term. You all however do want that the initiative should not get lost. You review and discuss the situation. Some of the learnings from the project:

■ Having seen that they can make a difference, students are keen to continue, but not clear what to do next,
■ Some students in the class were much more involved and took more initiative than others.
■ While you could fit in the project between your regular periods and some free/extra curricular periods, you are not sure that you could sustain this.
■ You and your colleagues feel that some separate time and space would be needed to be able to sustain this.
■ The three class projects have interested other classes also. Several students from other classes are keen to take part in such activities.
■ The next term is the last term and you know that the syllabus will have to be completed, and students geared up for the final exams.
One of your colleagues says that she knows of a teacher in another school who often talks about her “Eco Club”. She feels that this may be a way of sustaining the “green” activities and projects of the students. She offers to invite that teacher to school to share her experiences. The Principal feels that it would be useful for all the teachers to attend.

The interaction is planned for the following Saturday.

**Learning Activity 7**

Make a list of the questions, comments and points of discussion that you would want to share with the guest speaker.