
UNIT 8 PLANNING TEACHING-LEARNING ACTIVITIES

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8.1 INTRODUCTION

All of us are aware of the importance of planning in our life. All kinds of activities require planning. Planning for any purposeful activity shows results. In addition, planning leads to shared understanding and acceptance of clear and attainable goals. In teaching-learning process planning of instructional activities enhances students' performance. Planning can give both teachers and students a sense of direction. It helps them to become aware of the goals that are implicit in the learning task they are asked to perform. Learning objectives, thus, have a focusing effect on students. Another positive aspect regarding planning is that it produces a smoothly running classroom with minimum discipline problems and

interruptions. Educational research consistently shows that planning is the key to tackling most of the classroom management problems. All these bear testimony to the need for planning of teaching-learning activities. At the elementary level, planning involves planning of both curricular and co-curricular activities. In this unit, we will discuss the meaning of curricular and co-curricular activities and how they are planned by a teacher.

8.2 OBJECTIVES

After reading this unit, you should be able to:

- define the concepts of curricular and co-curricular activities;
- distinguish between co-curricular and extra-curricular activities;
- discuss planning of curricular and co-curricular activities;
- describe the planning of Annual Plan, Unit Plan and Lesson Plan;
- differentiate between traditional and constructivist classroom;
- organise constructivist classroom activities; and
- prepare lesson plan based on the principles of Constructivism.

8.3 CONCEPTS OF CURRICULAR, CO-CURRICULAR AND EXTRA-CURRICULAR ACTIVITIES

8.3.1 Meaning of Curricular and Co-curricular Activities

You may be carrying out so many activities both inside and outside the classroom. These activities may be delivering a lecture in environmental sciences, organising a quiz in mathematics class, demonstrating an experiment in a science laboratory, organising a fieldtrip to the nearest industry or a historical place, asking students to visit the library and consult the books in social sciences, etc. Similarly, you might have engaged your students in activities such as music, drawing, stitching, knitting, dancing, etc. In fact, all these teaching-learning activities you organise in your school are either curricular or co-curricular in nature. Although, earlier days, there was a lot of stress on organisation of curricular or scholastic activities, of late there has been increasing emphasis on organisation of co-curricular or co-scholastic activities as well. Apart from curricular and co-curricular activities, schools also engage learners in extra-curricular activities. Organisation of co-curricular and extra-curricular activities alongside the curricular activities is necessary for holistic or all-round development of children.

Terms like curricular, co-curricular and extra-curricular activities overlap with each other with regard to their meanings.

Curricular activities can be defined as activities directly linked with instructional objectives based on which teaching-learning activities are organised. These activities are organised in the classroom, in the laboratory and in the workshop which are directly linked to the courses of study or curricular areas of the school curriculum. These activities include classroom activities like individual and group works, classroom experiments, conducting scientific experiments, preparation of charts, models, etc; library activities like reading books and journals, taking notes from library books, surfing digital library resources on the internet, etc.;

Socially Useful Productive Work(SUPW), and work experience; and activities in the science and language laboratories, etc.

Co-curricular activities are those activities which are organised by teachers having some definite responsibilities; many full time professional teachers are employed; schools rooms, time, equipment and materials are provided; their relationships with regular curricular activities are regarded as vital; credit for participation is allowed and recognition is also given. Co- curricular activities also have indirect reference to actual instructional works that go on in the classroom (IGNOU, 2000). Co-curricular activities are physical development activities, literary activities, civic development activities, visits, etc.

Extra-curricular activities are organised and promoted largely by students themselves, with relatively little assistance from teachers and administrators. No official recognition and credit is allowed for participation. Although they are not part of curriculum, but they have a lot of significance for student learning. They are outside the formal school hours. For example, student club, sports club, etc. are examples of extra-curricular activities.

Co- curricular activities work in tandem with curriculum. In both curricular and co-curricular activities, a variety of experiences are provided under the guidance of the school for fulfilment of curricular objectives leading to certification and grades. Extra-curricular events are considered part of the total social experience for the student. The word extra in extra-curricular activities is an optional piece to curricular learning, suggesting that not all students participate in these types of activities. All accept that co-curricular and extra-curricular activities occupy a very important place in the instructional programme of the school. They foster creative ability and provide opportunities for expression. Students acquire many subtle learning experiences like human values, beliefs, manners and thinking styles through hidden curriculum which includes co-curricular activities. Curriculum, thus, is not only teaching-learning in classroom. It also includes works in library, laboratory and workshop, participation in games and sports in playground and numerous informal contacts between teacher and students in these places (IGNOU, 2000). There is a strong inter- relationship among curricular, co-curricular and extra-curricular activities which is crucial for attainment of holistic development of learners. The relationship among these activities is depicted in Fig. 8.1.

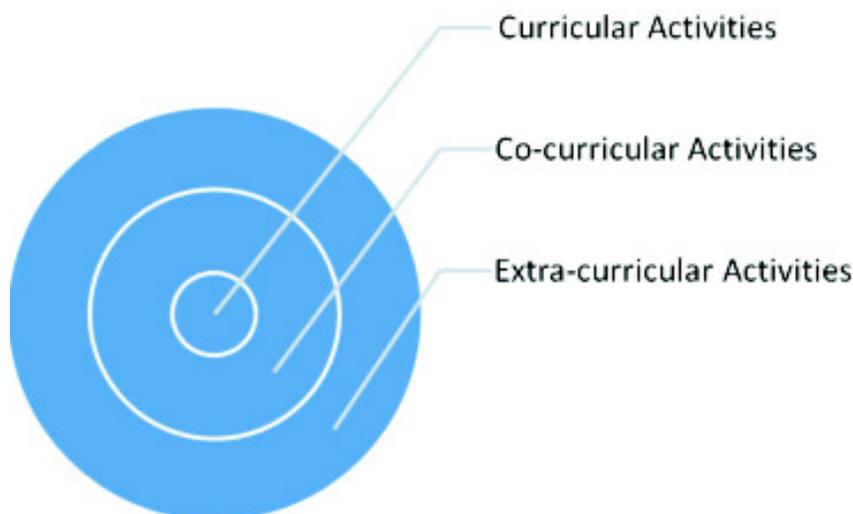


Fig.8.1 Relationship among curricular, co-curricular and extra-curricular activities

Check Your Progress

Notes: a) Write your answers in the space provided after each item.

1) Find out the type of activities whether curricular co-curricular/or extra curricular to which each of the following belongs:

Activity	Category
1) Singing a song during PTA meeting
2) Singing a song in the school choir
3) Study tour
4) Excursion
5) Painting
6) Offering painting in a workshop
7) Fancy dress
8) Celebration of Independence Day
9) Morning Assembly
10) Mass Parade

8.3.2 Types of Co-Curricular Activities

Co-curricular activities refer to activities that schools provide in addition to academic classes.

Examples include:

- 1) Literary Activities:
Debates and panel discussion, subject-wise club, School Magazine, Dramatics, Study Circle, Story Writing, Recitation, Kavi Summellan, Library Work.
- 2) Physical Development Activities:
Games, Indoor and Outdoor Athletics, Mass Drill, Parade,
- 3) Aesthetic and Cultural Development:
Music, Dancing, Drawing, Painting, Dramatics, Exhibition, Fancy, Folk Dance, Folk Songs, etc.
- 4) Civic Development Activities:
Morning Assembly, Celebration of Religious, National and Social Festivals, Organising of School Panchayat, Mock Parliament.
- 5) Excursion Activities:
Picnic, Visit to Museum, Zoo etc.

8.3.3 Importance of Co-curricular Activities

The co-curricular activities have the following benefits:

- 1) Prepare for Future
Co-curricular activities prepare students for the future. Through these activities, students learn about working in a group or a team to accomplish a

goal. When students enter the workforce and have to cooperate with their co-workers, they will be able to call on the teamwork and leadership skills they learned.

2) Develop Time Management

Because co-curricular activities occur outside school hours, participating students have less free time. This forces them to develop skill of time management.

3) Contribute to holistic development of students

Co-curricular activities contribute to holistic development of students because these activities teach students a variety of skills. For example, the debate facilitate students on how to communicate and to explain their point of view to others. Choir or drama helps students on how to perform in front of others without stage fright. Co-curricular also develops social skills by encouraging students to interact with one another. Excursions and tours provide first hand experience and reinforce classroom knowledge in subjects like history, geography, nature study etc. Co-curricular activities meet the psychological needs of students. These activities are a means of channelizing students' instincts into healthy and fruitful channels e.g. instinct of curiosity can be fruitfully channelized by library work and coin collection etc. By participating in group activities like dramatics, exhibition, etc., students learn good manners and develop a sense of cooperation. These activities train the students for good citizenship. Games, sports and athletics directly contribute to physical development of students,

8.4 PLANNING AND ORGANISATION OF INSTRUCTION

Organizing and planning for instruction is the framework on which effective teaching is based. Careful and thoughtful planning allows instructional time to be maximized, standards to be addressed, prior knowledge to be activated, misconceptions to be confronted and the diverse characteristics and learning needs of the students to be considered. Classroom management issues are minimized and the focus can be on instruction and increasing student achievement. In addition, instruction can be scaffolded more effectively and assessments, learning goals, and content can be aligned to maximize understanding. For curricular planning, it should be done before the academic year. In this case, the selection of textbooks, their distribution, conduct of exams, preparation of time-table, allotment of staff for each subject in different classes, monitoring of each class by teachers, etc. are very important. All these activities highlight the importance of annual planning, unit planning and lesson planning.

Good planning is the first step towards an effective classroom. A well-planned class reduces stress on the teacher and helps minimize disruptions. When teachers know what they need to accomplish and how they are going to do it, they have a better opportunity to achieve success with the added benefit of less stress. Further, when students are engaged in the entire class period, they have less opportunity to cause disruptions.

8.5 ANNUAL PLAN

An annual plan outlines smooth operation of curricular and co-curricular activities. An annual plan provides a method for tracking the progress of some of the key tasks your service needs to complete regularly, as well as specific 'one off' projects. For some projects you will need to develop much more detailed time lines identifying 'who, what, when'. An annual plan allows you to easily tick items off as you go and check progress. You can ensure that tasks are spread over the year and in the right order.

Each teacher needs to have a copy of the currently approved curriculum guide (program outline). The instructor's copy may include additions, deletions, and other unofficial modifications needed for curriculum planning purposes. Substitutions must be approved per the procedure for Approval of Program, Title, Hour, and Content Changes. However, the curriculum guide is not in sufficient detail to ensure sound instruction; therefore instructors need to maintain plans of instruction such as lesson plans.

An annual plan contains all academic and co-curricular activities to be taken in the specified academic year. It gives a detailed description about the units to be covered in each month and the related activities to be undertaken along with the unit. Hence we can say that an annual plan reflects the total activities of the school. From the annual plan the unit plan can be constructed. Generally, the annual plan is prepared before the beginning of the new academic year. It is useful in scheduling the activities of the school as well as the availability of time to accomplish the activities.

A Model Annual Plan

School:

Standard: VII

Subject: Social Science

Year :2012-13

Sl. No.	Units	Time in Period	Month when planned to teach	Special Methods if any	Teaching-learning materials	Co-curricular Activities
1.	Environment	4	July	Narration of a situation, Discussion, Co-operative learning	Picture of natural and human environment Poster on World Environmental Day	Celebration of World Environmental Day
2.	Inside Our Earth	4	July	Demonstration, Discussion, Observation	Model of Interior of Earth, Specimens of sandstone, limestone	Preparation of picture book related with rocks and minerals
3.	Our Changing Earth	6	August, September	Demonstration, Library reference, Case Study on earth quake	Chart of volution of landforms, Model of Volcano, Pictures of various landforms	Preparation of scrap book regarding earthquakes

4.	Air	7	September, October	Discussion, Demonstration, Observation, Experiments on rain gauge, wind vane	Chart of constituents of air, layers of earth	Library reference, Preparation of weather calendar, Mid- term test
5.	Water	7	October	Map reading, Observation, Discussion, Demonstration	Chart of water cycle, Physical Map of World, Model on Tides	Collage on water scarcity, Report writing on World Water Day
6.	Natural Vegetation and Wild Life	6	October, November	Narration of a situation, Discussion, Note making	Pictures on various types of forests and grasslands	Preparation of Picture album
7.	Human Environment- Settlement, Transport and Communication	7	November December,	Discussion, Lecture, Map reading	Pictures of different modes of transport, Map	Survey on Communicatio-n to nearby locality
8.	Human Environment Interactions- the Tropical and the Sub tropical region	7	January, February	Discussion, Lecture	World Map	Project on Destruction of Forests
9.	Life in the Temperate Grasslands	5	February	Map Reading, Note making, Discussion	World Map, Map filling	Model of World Map
10.	Life in the Deserts	4	February, March	Discussion, Map Reading	Map filling, Pictures of desert places	Desert game

8.6 UNIT PLAN

8.6.1 Meaning of Unit Plan

Proper planning of a unit is very important for a teacher's success in his/ her teaching. Unit planning can be one of the most exciting and rewarding experience for a teacher since it demands his/her ability to relate societal and professional values to knowledge of the learner, knowledge of the subject matter and knowledge of teaching methods. What exactly is a unit plan? What makes it so important?

A unit plan is a series of lesson plans designed around a specific topic, lesson, etc. Unit planning begins with the selection of a unit a starting point for this

process could be examination of the chapter headings in the students' text. Borich (1988) describes unit planning as creating a diagram or visual blue print of what one wants to teach. Unit planning is a process wherein teachers select, organize, order, evaluate and revise both what they teach and how they teach it. The unit must be a comprehensive and significant aspect of the environment.

Origin of Unit Plan

Unit plan was originated from Gestalt psychology. The Gestalt theory of learning has a great influence on human learning. According to this theory, learning takes place when the whole is perceived rather in parts. For example, we understand the concept of 'diversity'. When we know about the various aspects of diversity such as linguistic, religious diversity, etc. A unit plays an important role in learning. The learner usually takes help of the units in understanding and grasping the concepts given in that unit. The concepts are related to one another within a unit.

8.6.2 How Do Teachers Plan Units?

Planning a unit depends on nature of the topic, the importance assigned to it by a teacher, decisions about how lessons will be organised, students interest and time availability. Generally, 2-3 weeks is a manageable amount of time for transacting a unit. It allows a class to explore a topic with some depth and to engage in intellectual discourse on an issue. With every unit, try to provide students with a lesson schedule and a homework assignment sheet, design some form of unit project, and include a unit test. As you plan, it is useful to ask yourself some of the following questions:

- Does this unit build on the previous unit or has some connection with it?
- Does this unit lay the basis for future unit/units?
- Are there materials for students to analyze in class? Do the lessons include enough activities for students to do?
- Are my teaching-learning activities varied and interesting?

8.6.3 Steps for the Preparation of Unit Plan

The following steps are followed:

- i) Select a unit/chapter;
- ii) Divide the unit/chapter into sub-units;
- iii) For each sub-unit, formulate learning objectives;
- iv) Develop instructional procedures for each sub-units. Instructional procedures would include number of periods, main teaching points, teaching-learning activities, methods and media;
- v) Plan and prepare your evaluation questions;
- vi) Have benchmarks in place. Once the transaction of the unit has begun, use benchmarks to keep you on track for time and to ensure that learning objectives are being met.

The outline of a unit plan in social science is given as an example.

Outline of a Unit Plan

Planning Teaching –
Learning Activities

Name of the Teacher : Subject : Social Science
Name of the Institution: Standard : VII
Unit : Environment

Mode of Delivery: Constructivist Approach

<i>Sub-units</i>	<i>No. of Periods</i>	<i>Specific Learning Objectives</i>	<i>Main Teaching Points</i>	<i>Teaching-Learning Activities</i>	<i>Methods And Media</i>	<i>Evaluation</i>	<i>Co-curricular Activities</i>
Environment	1	To define the term environment	The place, people, things and nature that surround any living organism is called environment	The teacher presented a situation related with environment	Narration of a situation	Define the term environment	Prepare a poster on natural and human made environment
Components of Environment		To classify the components of environment	Environment is a combination of natural and man made phenomena.	From a picture teacher asks the student to list out the natural and human environment	Picture	Differentiate between natural environment from man-made environment	Prepare a model of domains of natural environment
Domains of Natural Environment	1	To categorize the domains of natural environment To define each domain of natural environment	Lithosphere, Hydrosphere, Atmosphere and Biosphere are the domains of natural environment	The teacher writes some words on the CB and asks learners to categorize into different domains	Discussion method Chalkboard	Note making	
Eco- system	1 1	To define the term eco-system To find the relationship between various organs of eco system	Eco- system is a complex set of relationships among the living resources, habitats and residents of an area	The students identify the picture related with eco- system	Observation Note making Picture	What is an eco- system?	Planting of trees in school surroundings Prepare a poster on World Environmental Day
Human interaction with environment		To analyze the interaction of human beings with environment	Human beings interact with environment and modify it according to their need	The students are asked to prepare a comparative table on the life of early man and modern man The class then discusses about the interaction of man with environment	Note making Discussion Method Textbook	Comparative table Conduct of Unit test	

Check Your Progress

Notes: a) Write your answers in the space provided after each item.
b) Compare your answers with those given at the end of the Unit.

2) What are the steps for the preparation of a unit plan?

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8.7 LESSON PLAN

8.7.1 Meaning and Definition

Planning for instruction is a part of a teacher day-to-day activity for teaching. Lesson plans, specify the learning objectives, content, methods, materials/ equipment, application, and evaluation for each lesson that is taught. Such planning prepares a teacher to teach and is invaluable to substitute teachers who will need to know what and how to teach. Lesson plans serve several purposes. For beginning teachers, in particular, they provide the day-to-day planning of a course. Such plans can easily be modified in subsequent years of teaching a program. lesson plans can be evidence of good sound planning and preparation and provide detailed information about teaching performance and level of expertise. Even after the lesson is taught, administrators and teachers themselves can analyze and reflect on instructional methodology. They can also provide useful information for school administration. Ideally, instructors will use formal plans such as lesson plans, which usually include the four step method for teaching to a specific outcome or objective: preparation of the student, presentation (procedure), application, and evaluation.

Theoretical knowledge of teaching concept does not provide any guideline for classroom instructional procedure. Every teacher who intends to teach something has to prepare an outline of his/ her subject or topic in written form or at his/ her cognitive level that is known as lesson planning. A teacher has to apply his/ her theoretical knowledge in planning and administrating his lesson plan. A practical outline of a topic to be taught in a period is called the lesson plan. It is designed during the student teaching or teaching practice.

Teaching is organized in three phases: pre-active, interactive and post-active. All the activities of a teacher and his planning done prior of the timings of his class are called pre-active. Lesson planning is the pre-active phase of teaching.

Binning and Binning (1982) have explained the structure and purpose of lesson planning in their definition. “All lesson planning involves defining the objectives, selecting and arranging the subject-matter and determining the method and procedure.”

8.7.2 Procedure and Planning for Content, Methods, Media and Evaluation Exercises

A lesson plan is the teacher’s road map of what students need to learn and how it will be done effectively during the class time. The first task in planning a lesson is to analyse the contents of the topic in terms of concepts, principles, laws, theories, etc. the learning objectives the second task is to based on the content analysis. Then, you can design appropriate learning activities and develop strategies to obtain feedback on student learning. The procedure is the body of your lesson plan, the ways in which you’ll share information with students and the methods that you’ll use to help them assume a measure of mastery of that material. A successful lesson plan addresses and integrates these three key components:

- Content analysis;
- Objectives for student learning;
- Teaching/learning activities including selection of methods and media;
- Strategies to assess student understanding.

Specifying concrete objectives for student learning will help you determine the kinds of teaching and learning activities you will use in class, while those activities will define how you will assess whether the learning objectives have been accomplished (see Fig. 8. 2).

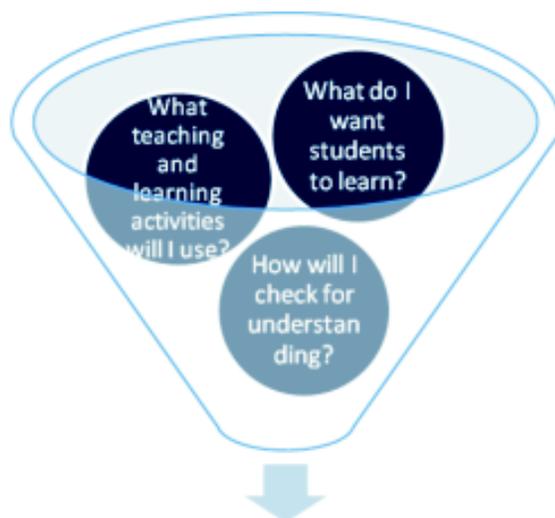


Fig. 8.2: Relationship between objectives, learning experience and evaluation

8.7.3 Steps for Preparing a Lesson Plan

Below are the steps to guide you when you prepare your first lesson plans. Each step is accompanied by a set of questions meant to prompt reflection and aid you in designing your teaching and learning activities.

a) Outline learning objectives

The first step is to determine what you want students to learn and be able to achieve at the end of class. To help you specify your objectives for student learning, answer the following questions:

- What is the topic of the lesson?
- What do I want students to learn?

- What do I want them to understand and be able to achieve at the end of class?
- What do I want them to take away from this particular lesson?

Once you outline the learning objectives for the class rank them in terms of their importance. This step will prepare you for managing class time and accomplishing the more important learning objectives in case you are pressed for time. Consider the following questions:

- What are the most important concepts, ideas, or skills I want students to be able to grasp and apply?
- Why are they important?
- If I ran out of time, which ones could not be omitted?
- And conversely, which ones could I skip if pressed for time?

b) Develop the introduction

Now having your learning objectives in order of their importance, design the specific activities that you will use to get students to understand and apply what they have learned. Because you will have a diverse body of students with different academic and personal experiences, they may already be familiar with the topic. That is why you might start with a question or activity to gauge students' knowledge of the subject or possibly, their preconceived notions about it. For example, you can take a simple poll: "How many of you have heard of the concept of sustainability? Raise your hand if you have." You can also gather background information from your students prior to class by sending students an electronic survey or asking them to write comments on index cards. This additional information can help shape your introduction, learning activities, etc. When you have an idea of the students' familiarity with the topic, you will also have a sense of what to focus on.

Develop a creative introduction to the topic to stimulate interest and encourage thinking. You can use a variety of approaches to engage students (e.g., personal anecdote, historical event, thought-provoking dilemma, real-world example, short video clip, practical application, probing question, etc.). Consider the following questions when planning your introduction:

- How will I check whether students know anything about the topic or have any preconceived notions about it?
- What are some commonly held ideas (or possibly misconceptions) about this topic that students might be familiar with or might espouse?
- What will I do to introduce the topic?

c) Plan the specific learning activities (the main body of the lesson)

Prepare several different ways of explaining the material (real-life examples, analogies, visuals, etc.) to catch the attention of more students and appeal to different learning styles. As you plan your examples and activities, estimate how much time you will spend on each. Build in time for extended explanation or discussion, but also be prepared to move on quickly to different applications or problems, and to identify strategies that check for understanding. These questions would help you design the learning activities you will use:

- What will I do to explain the topic?
- What will I do to illustrate the topic in a different way?
- How can I engage students in the topic?
- What are some relevant real-life examples, analogies, or situations that can help students understand the topic?
- What will students need to do to help them understand the topic better?

d) Plan to check for students' understanding

Now that you have explained the topic and illustrated it with different examples, you need to check for student understanding – how will you know that students are learning? Think about specific questions you can ask students in order to check for understanding, write them down, and then paraphrase them so that you are prepared to ask the questions in different ways. Try to predict the answers your questions will generate. Decide on whether you want students to respond orally or in writing. You can also ask yourself these questions:

- What questions will I ask students to check for students understanding?
- What will I have students do to demonstrate that they are following?
- Going back to my list of learning objectives, what activity can I have students do to check whether each of those has been accomplished?

e) Develop a conclusion and a preview

Go over the material covered in class by summarizing the main points of the lesson. You can do this in a number of ways: you can state the main points yourself; you can ask a student to help you summarize them; or you can even ask all students to write down on a piece of paper what they think were the main points of the lesson. You can review the students' answers to gauge their understanding of the topic and then explain anything not understood by students in the following class. Conclude the lesson not only by summarizing the main points, but also by previewing the next lesson. How does the topic relate to the one that is to be taught in the next class? This preview will spur students' interest and help them connect the different ideas within a larger context.

f) Create a realistic timeline

A realistic timeline will reflect your flexibility and readiness to adapt to the specific classroom environment. Here are some strategies for creating a realistic timeline:

- Estimate how much time each of the activities will take, then plan some extra time for each;
- When you prepare your lesson plan, next to each activity indicate how much time you expect it will take;
- Plan a few minutes at the end of class to answer any remaining questions and to sum up key points;
- Plan an extra activity or discussion question in case you have time left;
- Be flexible – be ready to adjust your lesson plan to students' needs and focus on what seems to be more productive rather than sticking to your original plan.

g) Presenting the Lesson Plan

Letting your students know what they will be learning and doing in class will help keep them more engaged and on track. You can share your lesson plan by writing a brief agenda on the board or telling students explicitly what they will be learning and doing in class. You can outline on the board or on a handout the learning objectives for the class. Providing a meaningful organization of the class time can help students not only remember better, but also follow your presentation and understand the rationale behind in-class activities. Having a clearly visible agenda (e.g., on the board) will also help you and students stay on track.

h) Closure

Whenever possible, use a cliffhanger at the end of a lesson.

- **Teacher summary.** Be sure to summarize the important points or critical elements of a lesson for students. Discuss what you taught and what they learned. This might be the most valuable 3 to 5 minutes of any lesson.
- **Student summary.** Provide opportunities for students to summarize a lesson as well. Inviting them to put a lesson into their own words can be helpful to you in determining how well they learned the material.
- **Lesson product.** Invite students to incorporate the major elements of a lesson into a final product. As described earlier, this product may take the form of a poster, brochure, model, or portfolio.

i) Reflecting on Your Lesson Plan

A lesson plan may not work as well as you had expected due to a number of extraneous circumstances. You should not get discouraged – it happens to even the most experienced teachers! Take a few minutes after each class to reflect on what worked well and why, and what you could have done differently. Identifying successful and less successful organization of class time and activities would make it easier to adjust to the contingencies of the classroom

j) Self-Evaluation

As you write lessons, include a brief section at the end that allows you to self-evaluate. This will be important when and if you decide to teach the lesson again. It will also provide you with some important insights relative to your perceived level of success.

You might consider some of these self-evaluative questions:

- How was my pacing?
- Did students understand the content?
- Did students understand the important concepts?
- Did I use my time appropriately?
- What changes should I make the next time I teach this lesson?
- Were students engaged and involved?
- What new activities or procedures could I include?
- Did I present the lesson well?

Check Your Progress

Notes: a) Write your answers in the space provided after each item.

b) Compare your answers with those given at the end of the Unit.

3) What are the steps for the preparation of a lesson plan?

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8.8 CONSTRUCTIVIST TEACHING AND LESSON PLANNING

Constructivist teaching is based on constructivist learning theory. This theoretical framework holds that learning always builds upon knowledge that a student already knows; this prior knowledge is called a schema. Because all learning is filtered through pre-existing schemata, constructivists suggest that learning is more effective when a student is actively engaged in the learning process rather than attempting to receive knowledge passively. A wide variety of methods claim to be based on constructivist learning theory. Most of these methods rely on some form of guided discovery where the teacher avoids most direct instruction and attempts to lead the student through questions and activities to discover, discuss, appreciate, and verbalize the new knowledge.

Constructivist learning theory says that all knowledge is constructed from a base of prior knowledge. Children are not a blank slate and knowledge cannot be imparted without the child making sense of it according to his or her current conceptions. Therefore children learn best when they are allowed to construct a personal understanding based on experiencing things and reflecting on those experiences.

8.8.1 Characteristics of Constructivist Teaching

One of the primary goals of using constructivist teaching is that students learn how to learn by giving them the training to take initiative for their own learning experiences.

According to Audrey Gray (1997), the characteristics of a constructivist classroom are as follows:

- the learners are actively involved;
- the environment is democratic;
- the activities are interactive and student-centred;
- the teacher facilitates a process of learning in which students are encouraged to be responsible and autonomous.

8.8.2 Constructivist Learning Environments (CLEs)

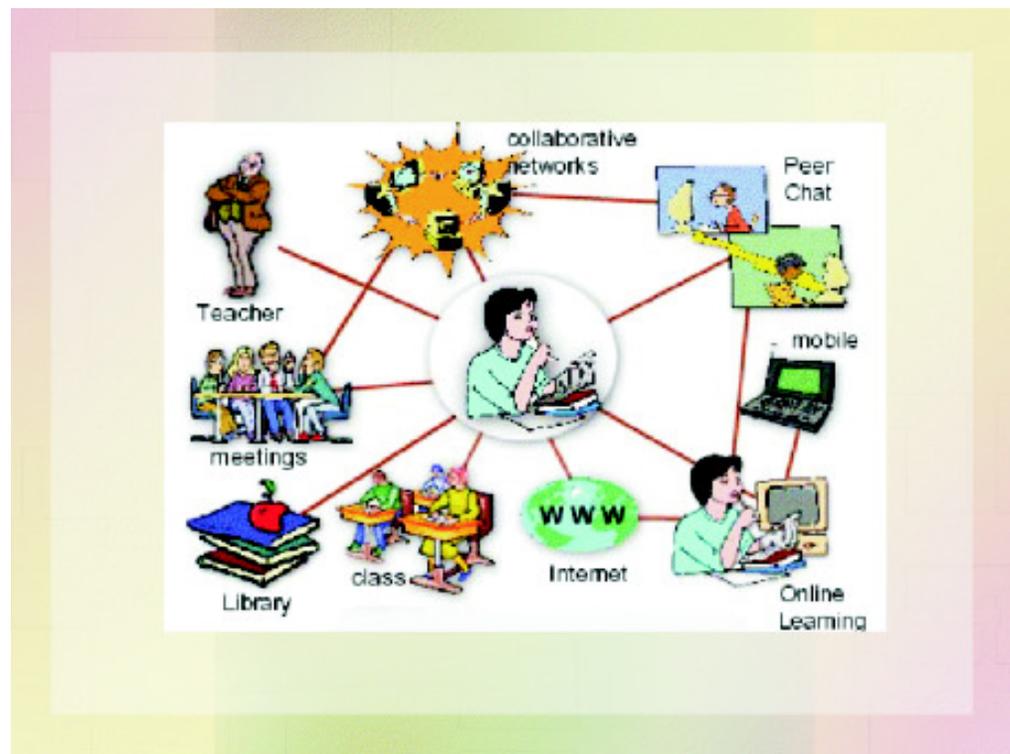


Fig. 8.3: Constructivist Learning Situation

Source: Constructivismetec512.edublogs.org

Jonassen (1994) has proposed a model for developing constructivist learning environments (CLEs) around a specific learning goal. This goal may take one of several forms, from least to most complex:

- Question or issue;
- Case study;
- Long-term Project;
- Problem (multiple cases and projects integrated at the curriculum level).

Jonassen (1994) recommends making the learning goals engaging and relevant but not overly structured. In CLEs, learning is driven by the problem to be solved; students learn content and theory in order to solve the problem. This is different from traditional objectivist teaching where the theory would be presented first and problems would be used afterwards to practice theory. Depending on students' prior experiences, related cases and scaffolding may be necessary for support. Instructors also need to provide an authentic context for tasks, plus information resources, cognitive tools, and collaborative tools.

8.8.3 Constructivist assessment

Traditionally, assessment in the classrooms is based on testing. In this style, it is important for the student to produce the correct answers. However, in constructivist teaching, the process of gaining knowledge is viewed as being just as important as the product. Thus, assessment is based not only on tests, but also on observation of the student, the student's work, and the student's points of view. Some assessment strategies include:

- Oral discussions. The teacher presents students with a "focus" question and allows an open discussion on the topic;

- KWL (H) Chart (what we **know(K)**, what we **want(W)** to know, what we have **learned(L)**, **How(H)** we know it). This technique can be used throughout the course of study for a particular topic, but is also a good assessment technique as it shows the teacher the progress of the student throughout the course of study;
- Mind Mapping. In this activity, students list and categorize the concepts and ideas relating to a topic;
- Hands-on activities. These encourage students to manipulate their environments or a particular learning tool. Teachers can use a checklist and observation to assess student success with the particular material;
- Pre-testing. This allows a teacher to determine what knowledge students bring to a new topic and thus will be helpful in directing the course of study.

In most pedagogies based on constructivism, teachers also intervene when there are conflicts that arise; however, they simply facilitate the students' resolutions and self-regulation, with an emphasis on the conflict being the students' and that they must figure things out for themselves. For example, promotion of literacy is accomplished by integrating the need to read and write throughout individual activities within print-rich classrooms. The teacher, after reading a story, encourages the students to write or draw stories of their own, or by having the students re-enact a story that they may know well, both activities encourage the students to conceive themselves as reader and writers.

Another important consideration in evaluating the potential benefits/limitations of constructivist teaching approach is to consider the large number of varied personal characteristics as well as prevalence of learning problems in children today. For example, when a solely constructivist approach was employed in your classroom, then a significant number of children, for example say with Attention Deficit/Hyperactivity Disorder, might not be able to focus on their perceptions of learning experiences long enough to build a knowledge base from the event. In other words, constructivist theory is biased to students who desire to learn more and are capable of focusing attention to the learning process independently. A mixed approach that incorporates components of constructivist learning along with other approaches, including more guided teaching strategies, would better meet the learning needs of the majority of students in a classroom by accounting for differences between learning styles and capacities.

8.8.4 Role of Teachers

The teacher as a facilitator

The teachers task is to facilitate the learning. Instead of direct instruction, teachers play the role of a facilitator who helps the learner to get to his or her own understanding of the content.

Instructor	Facilitator
lectures	supports
gives answers according to a set curriculum	provides guidelines and creates the environment for the learner to arrive at his or her own conclusions
Gives a monologue	continuous dialogue with the learners

The learner in traditional learning environments is a passive recipient to be filled with knowledge by the instructor while in constructivist pedagogy the learner plays an active role in the learning process.

In the constructivist classroom, the teacher's role is to prompt and facilitate discussion. Thus, the teacher's focus should be on guiding students by asking questions that will lead them to develop their own conclusions on the subject.

8.8.5 Procedure for Implementation of Constructivist Activities

Furthermore, in the constructivist classroom, students work primarily in groups and learning and knowledge are interactive and dynamic. There is a great focus and emphasis on social and communication skills, as well as collaboration and exchange of ideas. This is contrary to the traditional classroom in which students work primarily alone, learning is achieved through repetition, and the subjects are strictly adhered to and are guided by a textbook. Some activities encouraged in constructivist classrooms are:

- Experimentation: students individually perform an experiment and then come together as a class to discuss the results;
- Research projects: students research a topic and can present their findings to the class;
- Field trips. This allows students to put the concepts and ideas discussed in class in a real-world context. Field trips would often be followed by class discussions;
- Films. These provide visual context and thus bring another sense into the learning experience.
- Class discussions. This technique is used in all of the methods described above. It is one of the most important distinctions of constructivist teaching methods.

Constructivist approaches can also be used in online learning. For example, tools such as discussion forums, wikis and blogs can enable learners to actively construct knowledge. Because existing knowledge schemata are explicitly acknowledged as a starting point for new learning, constructivist approaches tend to validate individual and cultural differences and diversity.

8.8.6 Constructivist Lesson Planning

Although several models of lesson plan for constructivism exist, the model developed by Roger Bybee of the Biological Science Curriculum Study is widely used by practitioners. This model is best known as the "Five Es". (<http://sites.google.com/site/constructivism512/Home/lesson-plan>)

The Five Es Instructional Model

- 1) Engage: This stage provides the opportunity for the teachers to discover what students know or what they think they know.
- 2) Explore: This stage provides a common set of experiences as well as broad range of experiences. This stage allows students to compare what they think about with what they are actually observing.
- 3) Explain: This stage provides opportunity for students to connect their previous experiences and to begin to make conceptual sense of the main ideas within the unit of study.

- 4) Elaborate: In this stage students apply or extend the concepts in new situations and relate their previous experiences to new ones.
- 5) Evaluate: Evaluation of students’ conceptual understanding and ability to use skills begins at the Engage stage and continues throughout the model.

5Es	Suggested Activity	What the Teacher Does?	What the Student Does?
Engage	<ul style="list-style-type: none"> • Demonstration • Reading • Free Write • Analyze a Graphic Organizer • KWL • Brainstorming 	<ul style="list-style-type: none"> • Creates interest. • Generates curiosity. • Raises questions. • Elicits responses that uncover what the students know or think about the concept/ topic. 	<ul style="list-style-type: none"> • Asks questions such as. Why did this happen? What can I found out about this? • Shows interest in the topic.
Explore	<ul style="list-style-type: none"> • Perform an Investigation • Read Authentic Resources to Collect Information Solve a problem • Construct a Model 	<ul style="list-style-type: none"> • Encourages the students to work together without direct instruction from the teacher. • Observes and listens to the students as they interact. • Asks probing questions to redirect the students’ investigations when necessary. • Provides time for students to puzzle through problems. 	<ul style="list-style-type: none"> • Thinks freely but within the limits of the activity. • Tests predictions and hypotheses. • Forms new predictions and hypotheses. • Tries alternatives and discusses them with others. • Records observations and ideas. • Suspends judgement.
Explain	<ul style="list-style-type: none"> • Student Analysis & Explanation • Supporting Ideas with Evidence • Structured Questioning • Reading and Discussion • Teacher Explanation • Thinking Skill Activities: compare, classify and error analysis 	<ul style="list-style-type: none"> • Encourages the students to explain concepts and definitions in their own words. • Asks for justification (evidence) and clarification from students. • Formally provides definitions, explanations, and new labels. • Uses students’ previous experiences as basis for explaining concepts. 	<ul style="list-style-type: none"> • Explains possible solutions or answers to others. • Listens officially to others’ explanations. • Questions others’ explanations. • Listens to and tries to comprehend explanations the teacher offers. • Refers to previous activities. • Uses recorded observations in explanations.
Extend	<ul style="list-style-type: none"> • Problem Solving • Decision Making • Experimental Inquiry • Think Skill Activities: compare, classify and apply 	<ul style="list-style-type: none"> • Expects the students to use formal labels, definitions, and explanations provided previously. • Encourages the students to apply or extend the concepts and skills in new situations. 	<ul style="list-style-type: none"> • Applies new labels, definitions, explanations, and skills in new, but similar situations. • Uses previous information to ask questions, propose solutions, make

		<ul style="list-style-type: none"> • Reminds the students of alternative explanations. • Refers the students to existing data and evidence and asks, What do you already know? Why do you think...? • Strategies from Explore apply here also. 	<p>decisions, and design experiments.</p> <ul style="list-style-type: none"> • Draws reasonable conclusions from evidence. • Records observations and explanations. • Checks for understandings among peers.
Evaluate	<ul style="list-style-type: none"> • Any of the Above • Develop a Scoring Tool or Rubric • Test • Performance Assessment • Produce a Product • Journal Entry • Portfolio 	<ul style="list-style-type: none"> • Observes the students as they apply new concepts and skills. • Assesses students' knowledge and/ or skills. • Looks for evidence that the students have changed their thinking or behaviours. • Allows students to assess their own learning and group-process skills. • Asks open-ended questions, such as: Why do you think...? What evidence do you have? What do you know about x? How would you explain x? 	<ul style="list-style-type: none"> • Answers open-ended questions by using observations, evidence, and previously accepted explanations. • Demonstrates an understanding or knowledge of the concept or skill. • Evaluates his or her own progress and knowledge. • Asks related questions that would encourage future investigations.

Source: <http://www.mcps.k12.md.us/curriculaum/science/instr/5Eactivities.htm>.

A lesson plan in the subject of Social Science for Class VII is presented here. This lesson plan is prepared for teaching a topic on Meaning of Environment. It is done following the 5E constructivist approach to teaching-learning process. The detail outline of the plan is given under the following headings.

A Suggestive Model of Planning a Lesson Based on Constructivist Approach

Name:

Unit: Environment

Class: VII

Topic: Meaning of Environment

Duration: 60 mts.

Approach to Teaching-Learning: Constructivist approach

I) Learning Objectives

Students will:

- define the term environment;
- list the components in environment;
- differentiate between natural environment and man-made environment.

II) Materials Needed

- Picture of an environment
- Picture of natural and man-made environment
- Worksheet

III) Pre-Requisite

The students are already familiar with different objects existing in the environment.

Stage 1- Engage (Group work)

The teacher divides the students into two groups and asks them to go around the school campus and identify the objects, people, phenomena, etc. available in school surroundings. Afterwards the leaders of both the groups read out what their groups have identified and write them on the chalkboard. Both the groups discuss about their observations and summarise about the objects, people and phenomena existing in the school campus.

Stage 2- Explore (Introduction to the topic)

Based on the discussion, the teacher shows a picture related to environment and asks the following questions:

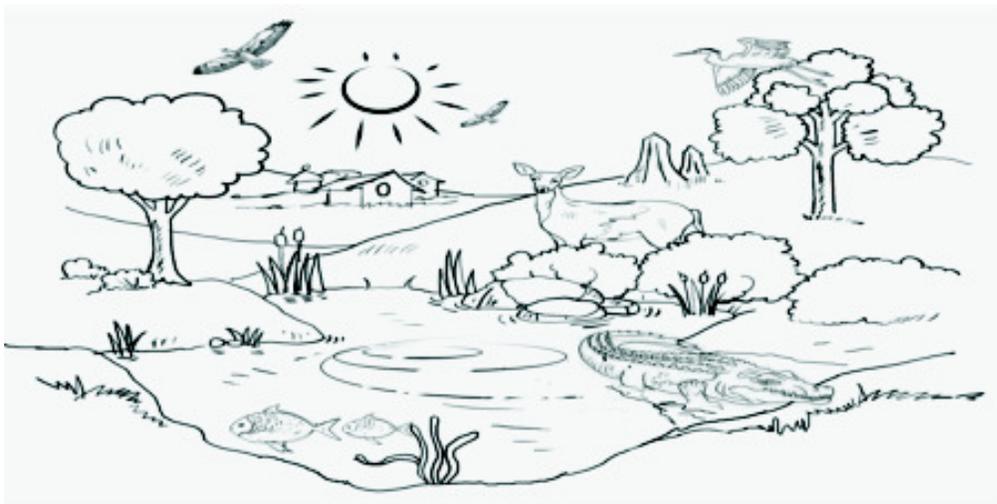


Fig. 8.4: A Picture Related to Environment

Teacher's Activities

Learners' Activities(Expected)

<p>What this picture is related with?</p> <p>List out the names of objects you observe in this picture.</p> <p>Can you identify where these objects can be seen?</p> <p>What do you mean by an environment?</p>	<p>Surrounding</p> <p>Trees, birds, crocodile , fish, water, etc.</p> <p>Environment</p> <p>The place, people, objects and nature that surround any living organism is called environment.</p>
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Announcement of the topic

After having the above discussion with the learners, the teacher announces that today let us discuss and learn what an environment is.

Stage 3- Explain (Presentation)

Next, the teacher shows the following two pictures related with environment.

Picture A

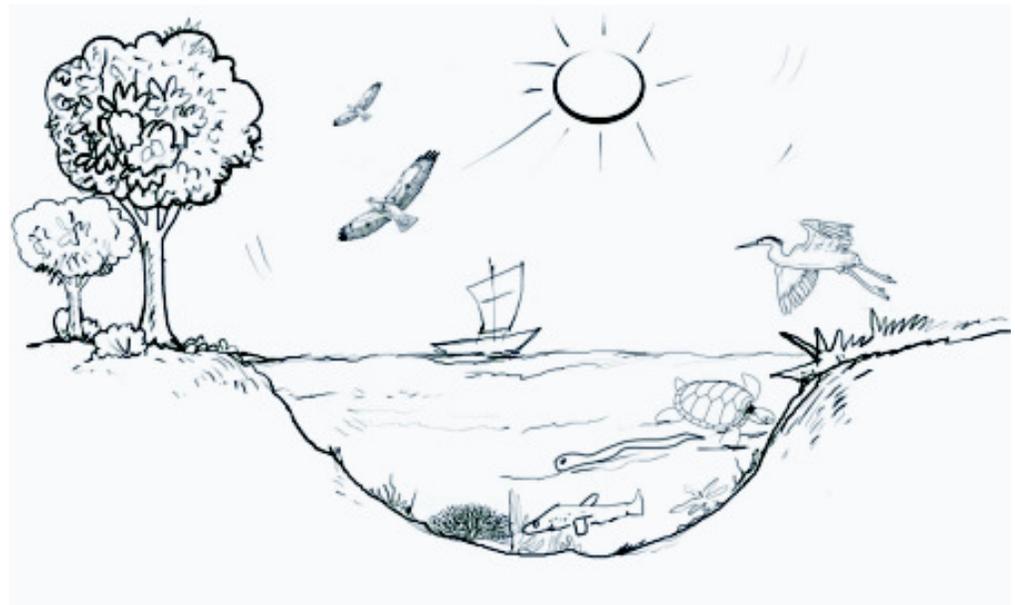


Fig. 8.5: Picture A

Picture B



Fig. 8.5: Picture B

(Source: NCERT.(2006). Unit 12, Work We Do in Looking Around-Textbook forClass III, p. 78)

Based on these pictures, the teacher asks the following questions:

What do you observe in the pictures?	Picture A includes the sun, lake, fishes, tree, birds, boat, tortoise, water etc., whereas in Picture B there are building, car, human beings.
Whether buildings and cars are a part of environment?	Yes.
How are buildings and car different from birds and animals?	Building is constructed by human beings and cars are produced by human beings; whereas birds and animals are part of nature.
Can you classify these two types of environments on the basis of your observation?	Yes.
How do you classify these two types of environment?	Environment can be classified into natural environment and man-made environment. All those objects like water, birds, trees, sun, rivers, sea, etc. are part of natural environment; whereas roads, buildings, vehicles, etc. comprise man-made environment.

The students then summarize the environment that is a combination of natural and man-made phenomena.

Stage 4- Extend

Activity-I Analyzing a situation

The teacher presents the following situation.

Rakesh was studying in a boarding school. During vacation he went home and found that the pond nearby his house was levelled and a building was constructed over this place. He felt sad because whenever he went home, he usually tried to catch fish from the pond and observed other insects, small animals, etc. and enjoyed moving around the pond. He enquired about this to his parents and they said that the environment was changing rapidly.

Based on this situation, the teacher asks students the following questions to discuss in groups.

- 1) Why did Rakesh feel sad when he saw the building on the spot where the pond was existing earlier?
- 2) What are the reasons for the rapid changes in the environment?

Activity II- Filling the worksheet

The following worksheets are given to each student to work on:

- 1) Among the items given below list out the items which are not a part of man-made environment.
 - Flat
 - Club
 - Flowers

- Community
- Mountains
- Aquarium
- Road
- Rain
- Train
- Rivers

2) Distinguish between natural environment and man-made environment based on the following aspects.

Aspects	Natural environment	Man-made Environment
<ul style="list-style-type: none"> • Living things • Non-living things • Pollution • Sustainability 		

Recapitulation

The students summarise the concept of environment and the difference between natural and man-made environments.

Stage 5- Evaluate (Reflective Questions and Activities)

- 1) With examples differentiate natural environment from human environment;
- 2) Prepare a poster related to World Environment Day;
- 3) Go to your nearby locality and find out the natural and man-made objects in the environment;
- 4) Conduct a talk in your class on ‘Care Our Environment and Protect Our Resources’;
- 5) How would you explain the role of human being in preserving the environment?
- 6) According to you, which component is more important in an environment- nature or human beings? Why do you think so?

Check Your Progress

Notes: a) Write your answers in the space provided after each item.
 b) Compare your answers with those given at the end of the Unit.

4) In what way is constructivist learning environment differ from traditional classroom environment?

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8.9 PLANNING CO-CURRICULAR ACTIVITIES

Before going through the steps of planning a co-curricular activity, let us ponder over three various situations in a school.

Situation 1: Mr. Kabir is the class teacher of Std. VIII A. During Gandhi Jayanthi celebration, he asked his students to participate in the cleaning of the school campus and left home. After his departure, some students participated in the cleaning activity and some students left home.

Situation 2: During the same celebration, Mr. Hari Das who was in-charge of Std. VIII B, asked his students to clean the classroom and courtyard. He asked the class leader to be in charge of the activity. But he didn't come for supervision of the activity. There was confusion and conflict among the students.

Situation 3: Ms. Lali, who was in-charge of Std VIII C, already informed her students about the cleaning activity for the Gandhi Jayanti celebration. She explained to the students the importance of dignity of labour. On Gandhi Jayanti day, she took attendance of all students. Then she divided them into small groups. Each group was assigned one area for cleaning. During the cleaning process, she came and supervised her students. Those students who were not participating in the activity were identified and motivated by her to participate in this activity. There was discipline among the groups. After the cleaning activity was over, she distributed refreshments among them.

From the above situations, can you point out the difference among the three teachers? The teachers differ in their styles of planning and implementation. While observing the three situations, we can see that Mr. Kabir just announced about the activity without giving guidance and specific instruction. In the case of Mr. Hari Das, he acts as an irresponsible teacher and giving the charge to class leader. As far as Ms. Lally is concerned, she adequately integrated the activity with the curriculum, gave proper guidance, took initiative, supervised and motivated the students.

Planning and organisation of co-curricular is important for achieving the objectives of school curriculum. Generally, there is negligence on the part of school authorities regarding co-curricular activities. But with the introduction of continuous and comprehensive evaluation (CCE), it is compulsory to organise co-curricular activities. Planning, scheduling and organising of these activities should be done democratically by involving pupils.

8.9.1 Principles Underlying Planning and Organisation of Co-Curricular Activities

The main principles which need to be kept in mind while planning and organising these activities are presented below (IGNOU, 2000):

- Select activities that are closely related to curriculum. They should be educationally relevant;
- The selected activities should be constructive and should aim at development of higher level objectives, which are not attainable through regular classroom

teaching e.g. novelty and originality, writing, skill of recitation of poems, discussion etc.;

- Co-curricular activities should have place within school timings so that all can participate;
- As far as possible, all students should participate in one or other activity going on in the school;
- The atmosphere has to be democratic: More suggestions and ideas can be incorporated in the democratic atmosphere so that nothing is imposed on students;
- Leadership should be proper and careful: Every time the same person should not get a chance to lead. Leadership should be rotational and maximum number of students should get opportunity to conduct an activity;
- Administration and supervision: the responsibility for organising the programme should be placed on students, while teachers can supervise and facilitate;
- Regularity: co-curricular activities should be organised regularly i.e. they should have a place in school time-table;
- Advisor: the teacher should have an advisory role and should not impose his/ her will on students;
- Programme should grow from small to large gradually. Initially there may be a few items and a few students but gradually the programme should widen with maximum number of students being involved.

Activites

1) From the above situations list out the general guidelines for organising co-curricular activities.

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2) Select any one co-curricular activity and prepare guidelines for organising that activity.

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8.10 LET US SUM-UP

In the present Unit, you have studied about the importance of curricular, co-curricular and extra-curricular activities and their importance in the teaching-learning process. Organisation of these activities have been discussed. As a teacher of elementary education, it is essential to know about these activities and the ways to organise them. We provided a detailed description and formats of annual plan, unit plan and lesson plan. The importance of constructivism in the field of education has been elaborated in this unit. A suggestive example of constructivist based lesson plan was presented.

8.11 UNIT-END ACTIVITIES

- 1) Select any co-curricular activity and describe how you will organise the same activity in your school.
- 2) Prepare a lesson plan on any topic of your choice based on constructivist approach.

8.12 SUGGESTED READINGS AND REFERENCES

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