UNIT 4 PLANNING AND ORGANIZING TEACHING-LEARNING EXPERIENCES

Structure

4.1 INTRODUCTION

All of us know that teaching is an activity that requires careful preparation and planning objectives and activities on an hourly, daily, and weekly basis. 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. This Unit is adapted the Unit-8 : Planning Teaching-learning Activities of BES-002 : Teaching-Learning and Assessment

of the School of Education, IGNOU; with major modifications. Another positive aspect regarding planning is that it produces a smoothly running classroom with minimum discipline problems and interruptions. You may be aware that beyond planning and preparation of materials, orientation towards the organization of learning experiences is also important for effective organizing of instruction. At the secondary level, planning involves planning of both scholastic and co-scholastic activities.

This unit explores the need of planning and organizing instruction in a social science classroom that have been considered as an important element in teaching-learning process. Providing learning experiences are essential in teaching-learning process. In this unit, you will identify the various learning experiences that can be provided in a classroom and how scholastic and co-scholastic activities could be organized.

4.2 OBJECTIVES

After going through this unit, you should be able to:

- examine the importance of planning in teaching-learning process in social sciences;
- identify the various areas of planning in social sciences;
- implement various learning experiences in a classroom;
- describe the planning of Annual Plan, Unit Plan and Lesson Plan;
- differentiate between behaviourist and constructivist classroom;
- organize constructivist classroom activities; and
- prepare lesson plan based on the principles of constructivism.

4.3 IMPORTANCE OF PLANNING LEARNING EXPERIENCES IN SOCIAL SCIENCES

In a classroom, whatever activities are provided to the students for learning comes under the category of learning experiences. Thus, you may note that a learning experience consists of any experience a student acquires in the process of learning. How a student encounter, with the content depends upon the learning experiences provided to her/him. A teacher must recognize that the way students interact with the material s/he teaches helps them to retain, understand, and apply learning. To make students develop meaningful understanding, a variety of meaningful learning experiences are essential. Before deciding the types of learning experiences that students should attain, teacher must first identify learning objectives. Thus in this way all learning is focused on specific objectives. In the next section, we will discuss the areas of planning in social sciences.

4.4 AREAS OF PLANNING IN SOCIAL SCIENCES

Generally, teachers of social science need to consider the following key questions while carrying effective instructional planning:-

- What to teach?
- How to teach?
- How to assess students' learning?

The first question 'What to teach?' deals with content selection and the second one, denotes the organization of various learning experiences in the classroom and the last one deals with assessing the outcomes of their learning experiences. Learning experiences include:

- having dialogues in the classroom;
- conducting discussions and debates on topics;
- raising questions from lower to higher order thinking;
- engaging in collaborative learning;
- experiencing social science content in real-life situations, either in or out of the classroom;
- engaging in map reading, and other skills-oriented activities, etc.

In order to make students to get the most out of learning experiences, you should ensure that your students are engaged in learning. You plan experiences that involve your students in content. While planning learning experiences, you should address the following questions:-

- What is most relevant for my students?
- How much time should be spent?
- What strategy might work best for the selected content?
- What should my students achieve at the end of my teaching?

Let's say Anita is teaching a unit on 'Awakening of Nationalism in India'. The first thing she'll do is to identify her instructional objectives. In this case, one of her objectives is: the students should be able to identify the reasons for the awakening of nationalism in India. She drives her unit with essential questions to reach the topic and expect students to think deeply on the topic. For this unit, another question is: 'How does nationalism in other countries influence Indian people to stand for their own nationalism?'

Finally, Anita needs to assess her students at the end of teaching-learning process. Her culminating assessment at the end of the unit will include oral/ written test or preparing a project on how Indian nationalism is relevant in the context of present day.

Variables that influence Planning

Several variables that interact to influence planning decisions taken by individual teachers are given below:

- Teacher characteristics and mindset
- Student characteristics and his/her context
- The learning context
- Time Management

- Learning Resources

Teacher Characteristics and Mindset

Teachers differ greatly in terms of academic background in the subjects taught, beliefs about students, general interests and mastery of teaching strategies. These variables interact to affect instructional decisions. It is useful on the part of teachers to ask self-introspective questions such as:

- How important do I think this content is?
- How well am I prepared to teach this content?
- What teaching strategy is suited to deal with this content?
- What do I want students to do or be able to do after teaching the content?

Student Characteristics and his/her Context

Students vary in their interests, abilities and socio-economic backgrounds. Successful teaching requires teachers to know their students well. In connection with this variable, it is pertinent to ask the following questions:

- What do students already know, and what are they already able to do?
- How will students practice to make meaning and understanding?
- How will the new information and skills be acquired?
- Do some of these students have special needs? If so, how can they best be accommodated?

The Learning Context

The learning context of the school is shaped by the general nature of the communities they serve, the characteristics of their students, the actions of school administrators and the policies taken by the government. Depending on the differences in the learning context, the expectations of teachers also vary from school to school. For this reason, you should ask yourself such questions as:

- How are teachers evaluated in this school?
- Am I able to maintain good relationship with parents?
- What does the community expect from the school and me?
- Is my teaching style compatible with what parents and other stakeholders expect here?

Time Management

Using time effectively is an essential component of effective instruction. Wong and Wong described four types of time at school-alloted time, instructional time, engaged time and academic learning time. Effective teachers optimize engaged time and academic learning time. For this, you have to ask the following questions:

- Am I able to manage time effectively in my classroom?
- Am I spending more time for engaging learners in academic learning?

Learning Resources

Instructional planning also depends upon the availability of various resources that support instruction. The instructional plans need to be prepared in light of accurate information about the availability of needed learning resources. Related with this, you may raise the following questions:

- From where would I get supplementary resources to enrich the content?
- Which websites do I have to browse to access the relevant content?
- What additional learning resources could I provide to my students?
- Is my teaching motivating learners to do further enquiry and go beyond textbooks?

Check Your Progress 2

Notes: a) Write your answers in the space given below.

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

1. What are the variables that influence planning learning experiences in social sciences.

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4.5 PLANNING AND ORGANIZATION OF TEACHING-LEARNING

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.

Organizing and planning of teaching-learning 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 students to be considered. Classroom management issues are resolved and the focus can be on instruction and increasing student achievement. In addition, instruction can be scaffolded more effectively and assessments of learning goals and content can be aligned to maximize understanding. For curricular planning, it should be done before the academic year. In this case, 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 which are presented in details in the subsequent paragraphs.

4.6 WHAT IS AN ANNUAL PLAN FOR IN SOCIAL SCIENCES?

An annual plan outlines smooth operation of curricular and co-curricular activities in social science. 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. You need 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. 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 you need to maintain plans of instruction such as lesson plans.

An annual plan contains all academic and co-curricular activities in social science 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: VIII

Subject: Social Science-Resources and Development Year : 2016- '17

Sl. No.	*Units*	*Time in Period*	*Month when planned*	*Special Methods of any*	*Teaching-learning materials*	*Co-curricular Activities*
1.	Resources	7	July	Narration of a situation, Discussion, Field visit to paddy field/ orchard/ plantation field	Picture of Natural and human environment Poster on Earth Day	Celebration of Earth Day
2.	Land, Soil, Water, Natural Vegetation and Wildlife Resources	7	August, September, October	Demonstration, Discussion , Observation Experiment on rain gauge	Specimens of sandstone,lime stone, Chart of water cycle, Map showing natural vegetation in India	Preparation of weather calendar, Report writing on world water day, Project on 'Afforestation'

Sl. No.	*Units*	*Time in Period*	*Month when planned*	*Special Methods of any*	*Teaching-learning materials*	*Co-curricular Activities*
3.	Mineral and Power Resources	4	November, December	Demonstration, Experiment on wind wane	Physical map of India	Preparation of scrap book regarding mineral and power resources, Project on 'save water, save energy, Mid term test
4.	Agriculture	4	January,	Map Reading, Observation, Field visit Filling the map	Pictures on various types of forests and grasslands	Library reference, Visit to Krishi Bhavan
5.	Industries	3	February	Map reading, Observation, Discussion, Demonstration	World Map	Field visit to cottage industries
6.	Human Resources	4	March	Narration of a situation, Discussion, Note making		Preparation of Picture album

4.7 UNIT PLANNING

4.7.1 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 enriching and empowering experience for a teacher since it demands his/her ability to relate knowledge 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, the starting point for this process could be examination of the chapter headings in the students' text. Borich (1988:113) 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,

let us take the concept of 'diversity'. When the learner learns the various aspects of diversity such as linguistic, religious etc. he/she usually takes help of the unit in understanding and grasping the concepts pertaining to diversity given in that unit. The concepts are related to one another within a unit.

B.F. Skinner has provided a recent approach to a unit plan. His major assumption about learning is that student learns better if the content is provided in smaller units. The unit-plan forms the basis for a lesson plan.

4.7.2 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 the teaching-learning activities varied and interesting?

4.7.3 Steps for the Preparation of Unit Plan

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

Name of the Teacher : Subject : Social Science

Name of the Institution : Standard : VIII

Unit : Resources

Mode of Delivery : Constructivist Approach

Sub-units	*No. of Periods*	*Specific Learning Objectives*	*Teaching-Learning Activities*	*Methods And Media*	*Evaluation*	*Co-curricular Activities*
Resources	1	To define the term resource	The teacher presented a situation and ask students to list the resources mentioned in the situation	Narration of a situation	Define the term resource	Celebration of Earth day
Classification of Resources-Natural, human made and human resources	1	To classify various resources	From a picture teacher asks the student to list out natural, human made and human resources	A picture	Classify the various resources	Preparing a poster on "Conserve Natural Resources and save posterity" Field visit to paddy field/orchard/ plantation field
Classification of natural resources based on level of development and use;origin; stock and distribution	3	To categorize natural resources on the basis of development and use, origin, stock and distribution	The students are asked to prepare a list of actual resources and potential resources The students are asked to prepare a list of abiotic and biotic resources The students are asked to make a write-up about renewable resources and how their stock may get affected by overuse The students are asked to list the resources that are localised and to locate the places in the map	Discussion method Discussion method Map reading	Differentiate between actual resources and potential resources Distinguish between abiotic and biotic resources Categorize renewable and non-renewable resources Differentiate ubiquitous and localised resources	Ask students to interview their family member about recycling practice and prepare a note in their journal Preparing a vegetable garden in the school premises
Human – made resources and Human resources	2	To develop understanding about human – made resources and human resources	The students are asked to make a chart on five human made resources that they could observe around them Divide the class into various groups and ask them to discuss on types of human resources	Cooperative learning	Chart preparation Note making	

Check Your Progress

Notes: a) Write your answers in the space given below.

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

2. What are the steps for the preparation of a unit plan.

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4.8 LESSON PLANNING

4.8.1 Meaning and Definition

Planning for instruction is a part of the day-to-day activity of 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 beginner teachers, in particular, they provide the day-to-day plan of action. Such plans can easily be modified in subsequent years of teaching a course. Lesson plans can be evidence of 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/her planning done prior to 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."

4.8.2 Procedure and Planning for Content, Methods, Media and Evaluation

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 understand the contents of the topic in terms of concepts, principles, laws, theories, etc. The second task of formulating learning objectives is 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 you'll use to help them acquire mastery of that material. A successful lesson plan addresses and integrates these four key components:

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

Specifying objectives for student learning will help you determine the kinds of teaching and learning activities you will organise in class as well as how you will assess whether the learning objectives have been accomplished (see Fig. 8. 2).

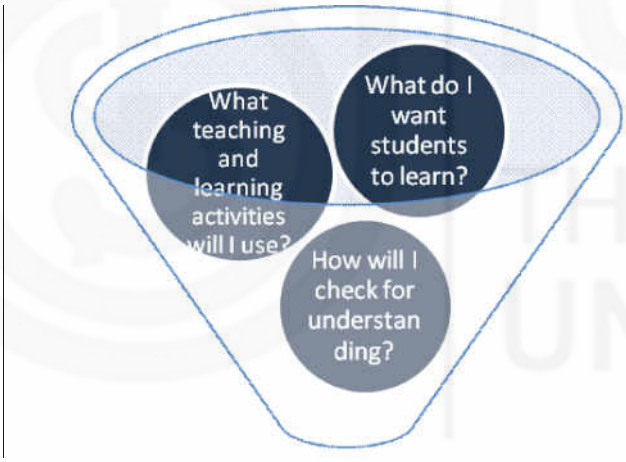

Fig. 4.1: Relationshp between objectives, learning experience and evaluation

4.8.3 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 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?

(b) Develop the introduction

Now that you have your learning objectives in order of their importance, design the specific activities 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 X? 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 like students to do demonstrate that they are following?
- Going back to my list of learning objectives, what activity can I have for students 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 given below.
b) Compare your answers with those given at the end of this unit.

1. What are the steps for the preparation of a lesson plan

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4.9 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 schemata. 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 claims 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.

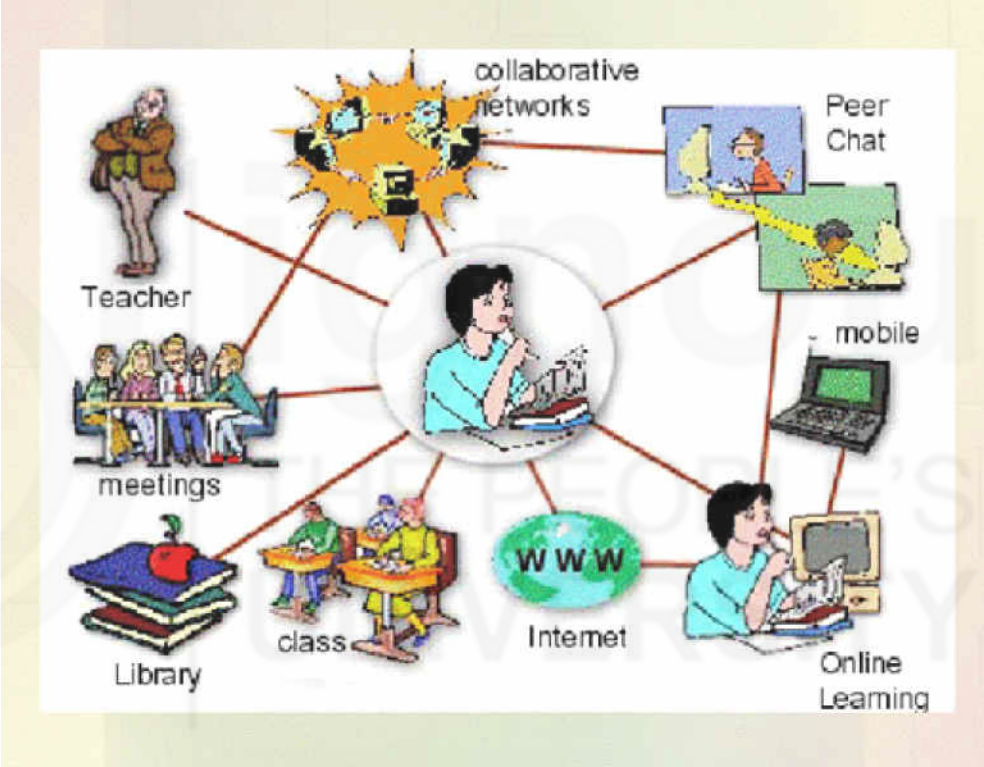
4.9.1 Characteristics of Constructivist Teaching

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, 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

4.9.2 Constructivist Learning Environments (CLEs)



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 (1996) 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.

4.9.3 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.[2]

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, is a solely constructivist approach mployed in a classroom of you children 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.

4.9.4 Role of Teachers

The teacher as a facilitator

The teacher's task is to facilitate the learning. Instead of direct instruction, teacher plays 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	provides guidelines and creates the
according to a set curriculum	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.

4.9.5 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 of the 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.[2]

Constructivist approaches can also be used in online learning. For example, tools such as discussion forums, 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.

4.9.6 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 observe.
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 should be encouraged to apply or extend the concepts in new situations and relate their pervious 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	• Demonstration • Reading • Free Write • Analyze a Graphic Organizer • KWL • Brainstorming	• Creates interest. • Generates curiosity. • Raises questions. • Elicits responses that uncover what the students know or think about the concept/ topic.	• Asks questions such as, Why did this happen? What can I find out about this? • Shows interest in the topic.
Explore	• Perform an Investigation • Read Authentic Resources to Collect Information Solve a problem • Construct a Model	• 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.	• 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.
Explan	• Student Analysis & Explanation	• Encourages the students to explain concepts and definitions in their own words.	• Explains possible solutions or answers to others.

	• Supporting Ideas with Evidence • Structured Questioning • Reading and Discussion • Teacher Explanation • Thinking Skill Activities: compare, classify, error analysis	• Asks for justification (evidence) and clarification from students. • Formally provides definitions, explanations, and new labels. • Uses students' previous experiences as basis for explaining concepts.	• 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	• Problem Solving • Decision Making • Experimental Inquiry • Think Skill Activities: compare, classify, apply	• 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. • 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.	• Applies new labels, definitions, explanations, and skills in new, but similar situations. • Uses previous information to ask questions, propose solutions, make decisions, and design experiments. • Draws reasonable conclusions from evidence. • Records observations and explanations. • Checks for understandings among peers.
Evaluate	• Any of the Above • Develop a Scoring Tool or Rubric • Test • Performance Assessment • Produce a Product • Journal Entry • Portfolio	• 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?	• 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/5Esactivities.htm

A lesson plan in the subject of Social Science for Class VIII is presented here. This lesson plan is prepared for teaching a topic on Types of Resources. 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: Resources
Class: VIII	Topic: Natural Resources
	Duration: 60 mts.
	Approach to Teaching-Learning:
	Constructivist approach

I. Learning Objectives

Students will:

- explain the term resources;
- classify the various types of resources; and
- categorize the types of natural resources

II. Materials Needed

- Picture of natural and human resources
- Worksheet

III. Pre-Requisite

The students are already familiar with various resources existing in the surroundings.

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 various resources available in their 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 resources that exist in the school campus.

Stage 2- Explore (Introduction to the topic)

Based on the discussion, the teacher narrates a situation thus:

'Annie, a class teacher of class VIII, tell students to clean their classroom and outside premises as part of the inauguration of social science club. The class is divided into four groups and start the cleaning process. Two groups clean the classroom and varenda and the other two clean the school premises. All the group collect a lot of waste materials like paper, plastic bottles, plastic covers etc. And throw it into the garbage area. After coming to the class, the teacher appreciates each group and says that whatever you throw into the garbage area, they are valuable objects.' Why are they important?

Chadrashekar replied that they are resources. Ravi raised the doubt: 'What is a resource?', Meena asks: 'How could empty plastic bottles can become a resource?' For Ravi's doubt, the teacher replied that anything that can be used to satisfy a need is a resource. Then the teacher took two ten rupee

currency notes and squeezed one currency note. She asked the class: Among these two currency notes which one do you prefer? Teena replied both. The teacher asks 'Why?'. Teena replied that both notes have value even though one is squeezed. The teacher states that things become resources only when they have a value.

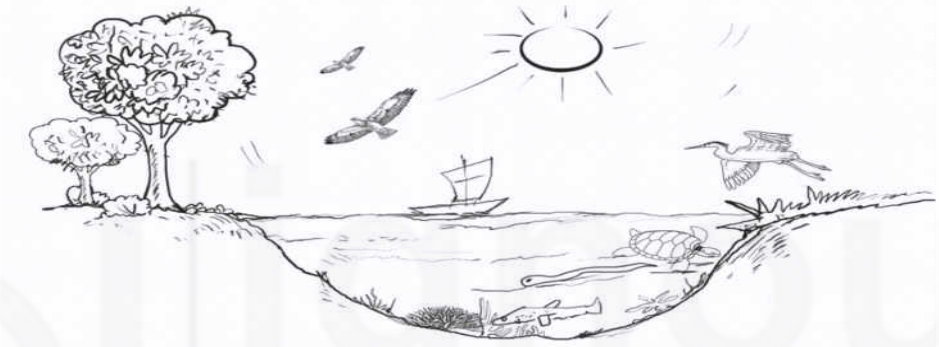
Announcement of the topic

After having the above discussion with the learners, the teacher announces that today let us discuss and learn about types of natural resources.

Stage 3- Explain (Presentation)

Next, the teacher shows the following pictures related with types of resources.

Picture A



Picture B

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

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

Teacher's Activities	Learner's Activities (Expected)
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, etc.
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
How do you classify these two types of resources on the basis of your observation?	Natural Resources and Human resources

The students then summarizes that resources can be classified into natural, human made and human resources.

Stage 4- Extend

Activity-I Providing think skill activity

The teacher writes the following words on the chalkboard:

Dark soil	High speed wind	Minerals	Animals
Solar energy	Petroleum	Air	Iron ore

Then the teacher divides the class into four groups and asks them to find out under which category of resources the above mentioned words belong to? S/he observes each group and notes down the contribution of each student in her diary. S/he noticed that all the groups have agreed upon the point that all the words come under natural resources.

Then s/he asks students to find out the difference between each natural resource. The groups noted thus:

- The quantity of petroleum is less.
- The quantity of all minerals are unknown.
- Air is available everywhere.
- Except animals, all others are non-living resources.
- Solar energy is available unlimitedly.
- Iron ore can be seen in some places only.

Good. All of you have written some relevant points. Let us discuss in detail about the classification of natural resources. Based on the students' findings, the teacher states that natural resources are classified into different groups based on the level of development and use, origin, stock and distribution.

On the basis of development and use, resources are classified into actual and potential resources. Actual resources are those resources whose quantity is known whereas potential resources are those whose entire quantity may not be known and sometimes are not in use at present. The teacher asks the students to point out the actual resources and potential resources from the words written on the chalkkboard.

Students listed thus:

Actual resources- Dark soil, Iron ore

Potential resources- High speed winds were a potential resource 200 years ago. Now it is an actual resource.

The teacher then asks how animals are different from minerals. Students stated thus:

- Animals come under living things whereas minerals come under non-living things.

The teacher adds that based on the origin of resources, it can be classified into abiotic and biotic resources. To add some more examples, the students listed thus:

- Abiotic resources- soils, rocks, stones, etc.
- Biotic resources- plants, human beings, animals

Next, the teacher asks the students to find the difference between solar energy and natural gas. The students stated thus:

- Solar energy is unlimited and it can be used again and again whereas natural gas has a limited stock and it may get exhausted.

The teacher then states that solar energy can be renewed and hence it is known as renewable resources whereas natural gas cannot be renewed easily, hence it is known as non- renewable resources.

The teacher states that for some resources you have noted that they are available in some places whereas others are seen in particular places. On what basis this difference will happen?

Students: On the basis of distribution.

Teacher: Good. On the basis of their distribution resources can be ubiquitous or localized. Resources that are found everywhere are ubiquitous resources and those found in certain places are called localized resources.

Activity II- Filling the worksheet

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

Identify the picture and find out the raw natural resource of each one. Categorize each natural resource according to their types under different columns.

2. Distinguish between natural resources and human-made resources based on the following aspects.

Aspects	Natural resources	Human-made resources
• Pollution • Recycling • Reuse • Sustainability		

Recapitulation

The students summarise the concept of resources and its various types. They classify various types of natural resources.

Stage 5- Evaluate (Reflective Questions and Activities)

1. With examples categorize various types of natural resources.
2. Prepare a poster related to World Earth Day.
3. Go to your nearby locality and find out the natural and human-made resources.

4. Conduct a talk in your class on 'Care for Environment and Protect Our Resources'.
5. Think of a few renewable resources and write in your journal how their stock may get affected by overuse.
6. According to you, which resources are more important –natural resources or human resources? Why do you think so?

Check Your Progress

Notes: a) Write your answers in the space given below.
b) Compare your answers with those given at the end of this unit.

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

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4.10 PLANNING CO-SCHOLASTIC 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. Lali 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.

4.10.1 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, discussion etc.
- Co-scholastic 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-scholastic 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.

Activity

1. Select any one co-scholastic activity and prepare guidelines for organizing that activity.

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4.11 LET US SUM-UP

In the present Unit, you have studied about the importance of curricular and co-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 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.

4.12 SUGGESTED READINGS AND REFERENCES

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4.13 ANSWERS TO CHECK YOUR PROGRESS

1. The following variables influence planning learning experiences in social sciences.
   - Teacher characteristics and mindset
   - Student characteristics and his/her context
   - The learning context
   - Time Management
   - Learning Resources
2. The steps for the preparation of a unit plan are:
   i) Select a topic
   ii) Divide the topic into subtopics.
   iii) Develop a curricular statement for each subtopic.
   iv) Develop instructional procedures for each goal.
   v) Link your unit to the national standards.
   vi) Plan and create your assessment tools.
   vii) Have benchmarks to makeover through the unit
3. The steps for preparation of a lesson plan are:
   i) Determine the learning objectives
   ii) Develop the introduction
   iii) Plan the specific learning activities
   iv) Plan to check for understanding.
   v) Develop a conclusion and a preview
   vi) Create a realistic timeline
   vii) Presenting the lesson plan.
   viii) Summarization of important points.
   ix) Self-evaluation

4.

Traditional classroom	Constructivist classroom
i) Tr. Is the primary source of information.	i) Tr. Acts as a facilitator and assist students in pursuit of knowledge.
ii) Teacher centred	ii) Student – centred.
iii) Students are passive listeners.	iii) Students are active participants.
iv) Less activity in the classroom	iv) Activity – oriented classroom environment.
v) Traditional assessment involves formal and informal tests.	v) Continuous and comprehensive evaluation in the constructivist classroom.