Unit - II

1. Teacher - Centric Methods.

- Lecture Method.
- Demonstration Method.
- Lecture cum demonstration Method.
- Historic Method.

2. Child - centred Method.

- Inquiry Method.
- Problem Solving Method.
- Project Method.
- Heuristic Method.
- Group Discussion Method.
- Laboratory Method.
- Inductive and deductive method.
- Group discussion Method.

Steps of Project Method.

- Providing a Situation.
- Selecting and purposing
- Planning of the Project.
- Executing the Project.
- Judging / Evaluating the Project.

Steps of Problem Solving Methods.

1. Recognizing the problem.
2. Interpreting; defining and delimiting the problem.
3. Gathering data in a systematic manner.
4. Organizing and evaluating the data.
5. Formulating tentative solutions.
6. Arriving at the true or correct solution.
7. Verifying the results.

Observation Methods.

- Types of observation.

Direct observation.

Indirect observation.

Controlled and uncontrolled observation.

Natural and Artifical observation.

Steps :-

- Planning
- Executing
- Recording.
- Interpretation.

Experimental Methods :-

- Statement of the problem - Memory, fatigue, learning process.
- Formulating hypothesis.
- Determining dependent and independent variables in the experiment.

- Creating controlled learning with the help of instrument.
- Analysis of the data.
- Testing the hypothesis on the basis of the result of collecting data.

Aims of Teaching Maths/Science

1. Utilitarian Aims :-

Maths/Science may target primarily for its practical value / aim. The students will be given maths/sc knowledge and skills needed in his day-to-day life and enabled to make use of that knowledge and skills. This aims makes the study of science/maths functional and purposeful and establishes relation between the subject and practical life.

2. Disciplinary Aim:-

The subject has also to be taught for its disciplinary and intellectual values. It has to aim at providing training to the mind of the learner and developing intellectual habits in them.

3. Cultural Aim:-

This aim helps the learners to understand the contribution of science/maths in the development of civilisation and culture. It has enabled them to understand the role of science/maths in fine arts and in beautiful human life.

4. Adjustment Aim:-

It is to help the learners to develop a healthy, purposeful, productive, exploratory and controlling adjustment with environment.

through the usual classroom teaching within the fixed period of duration.

Thus they may be termed as teaching-learning objectives.

Aims	Objectives
1. Aims is a general declaration of intent which gives direction to a teaching programme.	1. Objectives is a particular point in that direction.
2. It is the answer to the question of why a subject is taught.	2. It is an answer to the question of what will be achieved after the teaching of the topic.
3. They are indefinite and vague.	3. They are generally definite and clear.
4. They may not be somehow fully achieved.	4. They can be achieved.
5. School, society, nation are responsible for their fulfilment.	5. Mostly the teacher is responsible for their fulfilment.

6. It is long-term goal.	6. It is short-term goals.
7. Very broad and comprehensive.	7. Narrow and specific.
8. Gives direction to the educational system.	8. Objectives gives direction to the learner.
9. They are general	9. They are performance oriented.
10. These are broad.	10. They are measurable.

Assessment	Evaluation
1. The term is used in a narrow sense.	1. It is used in broad sense.
2. It aim at knowing the achievement of the pupils in a particular subject during a specified period.	2. It aims at improving the whole educational process.
3. Assessment tests the academic achievement of the pupil.	3. Concerns as evaluation tests the all round development of the child.
4. It is absolute.	4. Evaluation is not absolute or comparative.
5. It is a part of evaluation.	5. It is related to whole educational process like curricula methods of teaching, objectives and procedures.

6. Assessment is done at the beginning of the inquiry.	6. It is usually done at the end.
7. It pays attention to teaching and learning.	7. Evaluation focuses on the final outcome.
8. It is diagonastic	8. It is judgemental
9. It is formative	9. It is summative
10. It is process oriented.	10. It is product oriented
11. It analyzes improvement.	11. It analyzes success.