

## AIMS AND OBJECTIVES OF SCIENCE TEACHING

#### AIMS:

Aims are the general targets we wish to achieve through teaching the subject. Objectives are the ways of achieving the aim by bringing desired changes in the behavior of the person. Aims of teaching may be broken down into smaller achievable objectives. These objectives act as steps in reaching the aim.

Difference between aims and objectives:

Differences between aims and objectives	
Aims	Objectives
Aim is a long – term goal which we wish to	Objectives are the ways of achieving the aim by
achieve through teaching of a particular	bringing desirable changes in the behavior of the
subject.	person.
Aims tell us why a subject is to be taught.	Objectives answer the question what will be
	achieved after teaching a particular topic or lesson.
Aims are more comprehensive and broader in	Objectives are narrow than aims.
concept.	
They give a direction to education.	They are a step in reaching the aim.
It requires a long time period to reach the	Objectives may be achieved after teaching a single
targeted aim.	lesson or several lessons.

#### Shows hierarchy of objectives:

The objectives are further classified into two types – education objectives and instructional objectives. They are depicted as follows:

Objectives of education ↓ General objectives of the subject ↓ Specific instruction Objectives

#### • Hierarchy of objectives

#### **1. Educational Objectives**

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Education objectives are broad ideals related to the education system. These are general statements related to the philosophy of education. The whole education system is directed towards achieving these objectives. According to Bloom, "Education objectives are not only goals towards which the curriculum is shaped and towards which the instruction is guided but they are also the goals which provided the detailed specification of the construction and use of evaluation technique".



#### 2. Instructional Objectives

Instructional objectives are the statements, which clearly describe an anticipated learning outcome. Goal of education is learning. Instructional objectives specify exactly what is supposed to be learnt or what is to be taught. It is a statement of proposed changes in the thoughts, feelings and actions of the students. They can be written in general terms or they can be very specific depending on where they are going to be used.

#### **General instructional objectives**

General instructional objectives are an intended outcome of instruction that has been stated in appropriate general terms to encompass a domain of students' performance. These objectives provide guidance and direction to the act of teaching. It may cover the whole subject or may be related to a topic.

#### Specific instructional objectives

Specific instructional objectives are an intended outcome of instruction that has been stated in specific and observable student performance. It describes the type of performance learners will be able to exhibit when they have achieved the objective.

It specifies the immediate behavioral changes in the learner, as a result of classroom instruction. It expresses in specific and measurable terms the skills and attitudes the students develop on following a particular method of instruction.

Difference between Educational and Instructional Objectives:

Comparison of educational and instructional objectives	
Educational objectives	Instructional objectives
They are broad ideas, based on aims of	They are specific objectives derived from
education.	educational objectives
Principles of philosophy are the basis of	Principles of psychology are the basis for these
these objectives.	objectives
They require a longer time period to	They can be achieved in short time duration.
achieve.	
They are more comprehensive and cover	They are part of the educational objectives and
all school subjects.	related to a particular subject.

### **OBJECTIVES OF SCIENCE TEACHING:**

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The objectives of science teaching are as follows:

- 1. To provide knowledge of the facts, principles, concepts and laws of science.
- 2. To develop skills in experimentation, observation, drawing, problem solving and manipulating apparatus.
- 3. To develop ability to improvise apparatus, organize science exhibitions and fairs.
- 4. To inculcate scientific attitude characterized by critical observation, open mindedness, objectivity, impartiality, curiosity and intellectual honesty.



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- 5. To impart training in scientific method. Scientific method is a systematic procedure of solving problems in a scientific manner.
- To develop interest in science by participating in science-6. related co-curricular activities and reading scientific literature.
- 7. To inculcate socially desirable habits of honesty, truth and tolerance for others' points of view.
- To develop the ability to appreciate the contribution of science 8. in the progress of mankind and its impact on the day-to-day lives.
- 9. To use leisure time in a constructive way by involving in scientific hobbies and science-related activities.

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- To form the basis for careers related to science to prepare the students for specialization in subjects 10. such as biotechnology, medicine, engineering, astronomy, and so on.
- To apply the knowledge of science in everyday life through proper use of technology. 11.
- To solve problems which the learner encounters systematically using the scientific method. 12.
- 13. To contribute meaningfully towards conserving environment by judicious use of resources.





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