

QUALITIES OF A GOOD SCIENCE TEACHER

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Besides possessing the personal qualities, every science teacher should fulfill the following broad requirements.

1. Practical knowledge of child psychology and of the learning process
2. Trained in the modern methods and techniques.
3. Basic academic requirements.

Practical knowledge of child psychology and of the learning process

- ⊙ A science teacher must have practical knowledge of **child psychology** and of the **process of learning**. The science teacher should be able to cater to individual differences in the class.
- ⊙ Knowledge of child psychology helps a teacher to guide the students according to their interests, capabilities and help in educational, vocational and personal problems. Besides these, a science teacher should be of a **scientific temper, rational in approach to problems, free of bias and superstitions, innovative, inquisitive about the world around him**.
- ⊙ A Science teacher should regularly evaluate his teaching so that he can keep improving and also help him identify his weakness.

TRAINED IN THE MODERN METHODS AND TECHNIQUES.

- ◎ A science teacher must be trained in modern methods and techniques of science. New methods and techniques are being employed in the teaching of science. Science Clubs, improvisation of apparatus, programmed instruction, teaching machines and many other new concepts are coming in. It is, therefore, desirable that a science teacher is trained and well versed in:
 - (i) Development of aquaria, vivaria, terraria.
 - (ii) Knowledge of preserving specimens of plants and animals.
 - (iii) Techniques of evaluation.
 - (iv) Maintenance and use of science libraries.

- v) Lesson and unit planning.
- (vi) The various teaching methods in use today.

. Basic academic requirements.

The basic academic qualifications are laid down by the education department or the employer. In all the cases, the science teachers in high schools be at least B.Sc. and higher secondary schools M.Sc.

GENERAL QUALITIES

- ⊙ There are qualities which are general qualities which a teacher must be endowed with to be an effective teacher.
- ⊙ However, a science teacher must possess some specific qualities to become a successful science teacher.

1. Sincerity of purpose:

- ⊙ A teacher should have love for his profession. He should be seriously and sincerely committed to his duties and work. As such he must be on the path of excellence both for his own personal achievements and that of his pupils.

⦿ **2. Studious and learned:**

- ⦿ A very desirable quality of a teacher is his taste for reading. He should have the habit of keeping himself in touch with the latest development especially belonging to his own subjects. He should be a voracious reader of the knowledge available to him from multi-dimensional sources.

⦿ **3. A good communicator of ideas:**

- ⦿ A teacher should be clear in speech and should be able to convey his ideas to his pupils with ease and effectiveness. His blackboard and sketching should be quite neat, bold and effective.

◎ **4. Plan speaking:**

- ◎ A teacher by nature should be truth loving and plan speaking. He must have enough courage to say the right thing as right and wrong ones as wrong. There should not be any ambiguity in his thoughts and saying.

◎ **5. Impartial behaviour and attitude:**

- ◎ A teacher should not have any biases and prejudices of any kind towards any of his students. He should not distinguish and discriminate one people from the other and should try to drop all notions of favouritism or antagonism by giving a solid proof of his impartial behaviour and attitude towards all of his students.

⦿ **6. Hard worker and responsible:**

- ⦿ The teacher should be his own example of hard work and sincerity. He should inspire his students to acquire a taste for learning, doing safe work as well as sharing responsibilities with all his keenness and sincerity.

⦿ **7. Affectionate behaviour:**

- ⦿ The teacher should create an atmosphere of good will, love and cooperation in the matter of dealing with his students. He should not get irritated on minor faults and mistakes of his pupils but should try to create an environment of mutual trust and affection congenial for proper work and learning.

⊙ **8. Patience:**

- ⊙ A teacher should not lose his patience and unnecessarily get disturbed over minor mistakes and shortcomings of his pupils but must demonstrate a lot of patience in dealing with them. On the other hand, the pupils should not always live in constant fear of the teacher but must try to receive proper guidance from their teacher.

⊙ **9. Leadership and love for discipline:**

- ⊙ The teacher must possess the traits of a good leader in whom the students may have a genuine faith. He should be able to inspire the students to seek knowledge with sincerity. A disciplined and sincere teacher will be able to inculcate the values of sincerity, discipline and obedience among students. This will channellise the energy of students towards constructive activities.

◉ **10. Self confidence:**

- ◉ A teacher must have confidence in his abilities. This confidence must be demonstrated through his behaviour in general and his classroom teaching in particular.

◉ **11. Mastery of his subject:**

- ◉ A science teacher should have profound knowledge of his subject of study so that he may not cut a sorry figure before his students. He should be able to keep his head high and be able answer all the questions and problems put to him by his students up to their satisfaction in all branches of his subject.

- ◉ **12. Knowledge of other subjects:**

- ◉ A science should not only be an expert in his subject but should also have a good working knowledge of the other related subjects. For example, the physics teacher should have good knowledge of Mathematics and Biology teacher should know much about chemistry in order to do more justice with his teaching. Moreover, a teacher equipped with the essential knowledge of the all related subjects will be able to handle his students efficiently as the subjects of the curriculum are supplementary to each other in fulfilling the objectives of teaching at a particular stage and the application of one subject is easily found in the other.



- ◎ **13. Scientific thinking and attitude:**
- ◎ A good science teacher tries to imbibe scientific thinking and attitude in his own actions thoughts. For imbibition of such traits, a science teacher must attempt to provide science education in such a way as to inculcate in the pupils a habit of testing the validity of certain beliefs and facts by their own independent observations and experimentation.

⊙ **14. Efficiency in the preparation and use of teaching aids:**

- ⊙ The science teacher should have sufficient skill and dexterity in improvising and constructing his own aids in teaching of science according to the local needs and situations. Needless to say that he should have full self- confidence in handling all types of demonstration equipments and materials as well as in using all types of audio visual aids for making the science teaching as effective as possible.

◉ **15. Taste of scientific activities:**

- ◉ A good science teacher should have taste and love for organizing and participating in scientific activities like establishment of science museum and science club, organising scientific excursions and science fairs and engaging in the purposeful scientific hobbies. Such activities constitute real education and help in the proper development of scientific attitude among the students.

- ◉ **16. Knowledge of psychology related to science:**
- ◉ The teacher should have knowlege of the science of behaviour of his students in order to handle them effectively in the teaching-learning process. He should try to impart knowledge and skills to then according of their mental abilities, capacities, interests and attitudes, as well as emotional and social make up.

- If the teacher is well equipped he may help the students to undergo a battery of intelligence tests a science stream of the curriculum. In this way, if scientific knowledge is imparted to the deserving students it will make the tasks of the teacher and the taught easier.
- Apart from this the knowledge of other tests and psychological measurement will help the teacher to understand the ability, and behaviour potential of the child at the different stages of his learning or development and consequently he may bring changes in his own mode of behaviour and methods of teaching.

⊙ **17. Knowledge of methods of teaching science:**

- ⊙ It is also essential for a science teacher for being trained in the latest techniques, strategies and methodology of teaching science including the use of the all type of aid material and developed technology.

⊙ **Important Requirements Needed for the Professional Growth for the Science Teacher**

- ⊙ The need for the professional growth of a science teacher can be very well realized on account of the following advantages drawn on the part of the teacher:
- ⊙ 1. He can be in a position to contribute and participate in the construction and revision work of science curriculum, preparation and revision of science text book, instructional material and teaching aids, scheme of evaluation and host of other things related with the planning and implementation of the science education.

- ⊙ 2. He can be able to acquire necessary skills for providing better guidance to his students in the form of educational, personal and vocational guidance.
- ⊙ 3. He can acquire necessary competency in motivating the students for science learning, applying science in day to day life, inculcations love for extra reading as well as reading of scientific interests.
- ⊙ 4. He can acquire necessary knowledge, abilities and skills necessary for the organization of co-curricular activities and non-formal science education like organization of science fairs and exhibitions, science museum, science club, science excursions, scientific hobbies, nature study etc.

- 5. He can acquire more competencies in laboratory skills and practical work necessary in the changing circumstances. Besides this he may acquire skills in the development of improvised apparatus and science kits.

- ⦿ 6. He can himself develop proper scientific attitude, temper and interest and learn scientific method for solving the problem and discovering scientific facts.
- ⦿ 7. He can be acquainted and acquire the latest strategies, techniques and methodology of teaching his subject related to the aspects of:
 - ⦿ a. employing suitable evaluation devices.
 - ⦿ b. using appropriate teaching- learning aids.

- ⦿ c. selecting suitable learning experiences.
- ⦿ d. setting of the objectives.
- ⦿ 8. He can reorient himself with the up-to-date knowledge and latest development in his subjects or branch.
- ⦿ 9. To introduce the new teacher to the techniques of action research and small- scale experimentation so that he can handle effectively the particular problems that may arise in his own classes and follow procedures to manage these by his own efforts so that he can find the effectiveness of his own teaching techniques.

- ⊙ 10. To give special assistance to those students who are not up to the mark in their studies by, diagnosing the cause for the drawbacks and providing remedial.
- ⊙ 11. To understand the problems that arises in management of the students in the classes and work out strategies to solve them.
- ⊙ 12. To enable the teacher to provide guidance to students in their learning problems such as library reading and reference work, self-study and preparing for examination and in developing the all-round personality of the students.

- 13. To help the teacher improve his ability to communicate effectively in the classroom through the use of educational technology devices and to ensure better student participation in the teaching learning process.

- ① 14. To develop teaching skills that would help the teacher to improve his teaching effectiveness, in addition to employing several teaching techniques to cater to the needs of students in large, medium and small groups.
- ① 15. To enable the teacher to understand the needs, interests and behaviour patterns of students who are in their early adolescence period.