**12.5 Science Teacher**

Teachers of science are professionals responsible for their own professional development and for the maintenance of the standard of teaching profession.

* Being an effective science teacher is a continuous process that stretches from preserve experiences in undergraduate years to the end of the professional career.
* Science teachers must have understanding of how students with diverse interests, abilities and experiences make sense of scientific ideas and what a teacher do to support and guide all students.
* Science teachers require the opportunity to study and engage in research on science teaching and learning, and to share with collogues what they have learned.
* Current science education requires a substantive change in the method of teaching the subject, and equally substantive change in professional development process.
* Knowledge about the process of teaching-learning requires continuous development and the teacher must remain informed.
* Teachers must be involved in the development and refinement of new approaches to teaching, assessment and curriculum.
* Science content increases and changes and a teacher’s understanding in science must keep pace with the changes.
* Teaching of science is both theoretical and practical understanding and ability.
* To lean more about the teaching of science is to conduct classroom based research.
* In any case professional development activities must be sustained.
* It is assumed that the teachers of science will continue to learn science throughout their career.
* Basic task of a teacher at primary level is to lay experimental, conceptual and attitudinal foundation for future learning in science by guiding students through a range of inquiry activities.
* In addition to solid knowledge of science, teacher of science must have a firm grounding in learning theory, understanding how learning occurs and is facilitated.
* Learning is an active process by which students individually and collectively achieve understanding.
* Effective teaching requires that teachers know what students of certain ages are likely to know, understand, and be able to do; what they will learn quickly and what will they struggle in.
* Skilled teachers of science have special understandings and abilities that integrate their knowledge of science content, curriculum, learning and teaching.
* Science teachers must develop understanding of how students with different backgrounds, experience, motivation, learning style, abilities and interest learn science.
* Teachers use all of that knowledge to make effective decisions about learning objectives, teaching strategies, assessment tasks, and curriculum materials.
* Effective teachers of science also have a broad repertoire of instructional strategies that engage students in multiple ways.
* They are familiar with a wide range of curricula.
* They have the ability to examine critically and select activities to use with their students to promote the understanding of science.
* Skilled teachers of science know how to create and manage the physical, social and intellectual environment in a classroom community of science learners.
* The primary job of a teacher is to promote learning, and it follows that teachers themselves are dedicated learners.
* Tomorrow’s students will have markedly different needs from today’s student; even today’s employers require employees who can frame problems and design their own tasks, think critically and work together.
* Teachers of science need to develop the skills to conduct research in their classrooms on science teaching and learning and he/she is required to be able to share their results with others.