

Summary

Excerpts from:

The Role, Education, Qualifications and Professional Development of Secondary School Physics Teachers

https://www.aapt.org/Resources/upload/Secondary-School-Physics-Teacher-Role_booklet.pdf

5. Summary

The focus of physics teaching is to guide students to an understanding of physics concepts and to have the ability to apply their knowledge. The document describes the responsibilities and background of an effective secondary physics teacher. This teacher creates a positive learning environment in which the student is responsible for learning and understanding the concepts. The teacher is part of a community that extends beyond the classroom to the science department, the school, the community and secondary physics teachers nationwide. Since the teacher is part of this community, the ideas discussed in class include the application of mathematics to physical problems, how to apply language arts to explain their findings and explain ideas to other students as well as real world applications.

Preparation for secondary physics teaching requires a background in physics content, general education courses, and the ability to apply the education strategies to teaching physics. The background includes the planning and preparation of lessons and units that meet the state standards and use a variety of strategies depending on the needs of the students. The physics teacher also becomes aware of preconceptions and concept change. During field experiences the teacher may observe a safe learning environment that supports the understanding and application of physics concepts. During the student teaching experience the student teacher has the opportunity to apply the educational strategies and actually teach physics classes.

After successfully gaining the background for teaching physics classes and beginning the teaching experience, the physics teacher realizes that education is a continuing process. Professional development opportunities are available in courses offered by universities, workshops and other types of activities.

The secondary physics teacher is rewarded for their efforts to continually improve by students' statements such as "Physics is everywhere", "Physics is fun", "I explained the physics

ideas to . . .”, and “having a student relate mathematics applications to physics activities”. One of the best rewards may be having former physics students return for a visit and indicate they have become a physics teacher.

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