Canadian Association of Physicists | Association canadienne des physiciens et physiciennes

Contribution ID: **1775** Type: **CLOSED - Oral (Non-Student) / orale (non-étudiant)**

A First Aid Kit for High School Teachers tasked with teaching Quantum Mechanics

Wednesday 31 May 2017 14:15 (15 minutes)

Several provinces have now included quantum mechanics in their physics curriculum for grades 11 and 12. While certainly well intended, this is expected to cause problems due to the students' lack of mathematical proficiency, the fact that many physics teachers do not have a physics background, and the inadequate selection of specific topics that are suggested in the curriculum.

In this talk, I will give an overview of a professional development workshop I gave to BC high school teachers earlier this year. It includes a brief history of quantum mechanics that addresses the BC curriculum requirements, plus suggestions on how to make this content meaningful to the students. The next part is a summary of how we understand quantum mechanics today and addresses common misconceptions found in the media and even in textbooks, with suggestions for student activities and useful resources. The last part focuses on current research, mainly quantum computing, to inspire students to learn more and perhaps even consider a career in physics.

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Session Classification: W3-1 Teaching Physics to a Wider Audience (DPE/CEWIP) | Enseigner la physique à un auditoire plus vaste (DEP/CEFEP)

Track Classification: Physics Education / Enseignement de la physique (DPE-DEP)