

acknowledgements

The Manitoba Division of the Canadian Cancer Society and Manitoba Education, Citizenship and Youth gratefully acknowledges the contributions of the following individuals in the development of *Health and Physics: A Grade 12 Manitoba Physics Resource for Health and Radiation Physics*.

This resource, and its associated *Teacher Resource Guide*, were conceived and developed to assist students in achieving the learning outcomes for the “Medical Physics” topic in the Manitoba Grade 12 Physics curriculum. It provides a context for real-world applications of the fundamentals of radiation physics, with important connections to the health and well-being of the people of Manitoba.

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Published in 2009 by the Manitoba Division of the Canadian Cancer Society and the Government of Manitoba, Department of Education, Citizenship and Youth

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MINISTER OF EDUCATION, CITIZENSHIP AND YOUTH

Room 168
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CANADA

To the Students of Manitoba:

It is with great pride that I announce the publication of *Health and Physics: A Grade 12 Manitoba Resource for Health and Radiation Physics* to support your learning experiences as physics students. This is an important and timely resource that will help you learn critical content within a meaningful context. It explores the safe and necessary applications of radiation to diagnostic imaging techniques, introduces you to the field of medical physics, and examines the treatment options used for various cancers. This resource constitutes the fruit of a long-standing and successful collaboration between the Manitoba Division of the Canadian Cancer Society and Manitoba Education, Citizenship and Youth (MECY).

Though great progress has been made in adopting early detection and prevention strategies, there is an expectation that most Canadians will directly deal with cancer and/or its treatment among family members at some point. This is why having an education about the technologies involved in the fight against cancer will provide a firmer basis for your healthcare decision-making down the road.

Manitoba families are encouraged by the prospects of better detection and improved outcomes for cancer patients, and we believe that a sound science education in this area contributes to wider understanding of the complex field of cancer research, diagnosis and treatment. This partnership with the Canadian Cancer Society demonstrates a commitment to relevant, high-impact science education here in Manitoba. My hope is that this new resource will improve your healthcare system awareness and decision-making capability as it increases your technical knowledge in applying science to vital human needs.

Sincerely,

A handwritten signature in blue ink, appearing to read 'P. Bjornson', written over a horizontal line.

Honourable Peter Bjornson



Canadian Cancer Society
Société canadienne
du cancer

MANITOBA DIVISION

July 23, 2009

Dear Students and Teachers of Manitoba,

The Manitoba Division of the Canadian Cancer Society has been pleased to fund this interesting and informative curriculum guide in health physics – *Health and Physics: A Grade 12 Manitoba Resource for Health and Radiation Physics* and its associated Teacher Resource Guide. The project has been a partnership and fruitful collaboration among many individuals and organizations, including: students and teachers of physics who assisted in the pilot phases, the Department of Education, Citizenship and Youth's science consultants, medical physics expertise from CancerCare Manitoba and the St. Boniface Hospital Research Centre, and our staff here in the Manitoba Division of the Canadian Cancer Society.

The Canadian Cancer Society, Manitoba Division allocated donor dollars to this project as a demonstration of its commitments to public education in the sciences and to the well-being of all Manitobans. Our mandate is to serve all Manitobans who are at risk of developing cancer as well as those with cancer. We invested in this project as a meaningful connection to young adults, with the conviction that informed citizens are stronger advocates for their own health and the health of their families.

We believe that the information in the physics resource material will be of interest to students and their parents as the information is an excellent reference guide to imaging technology that is critical to much of health care. Imaging and radiation physics is also a core part of the cancer patient experience.

We are proud to have been associated with this project, and hope that students, teachers and families will find the material informative and useful for their future.

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