



Second National CRYSTAL Conference

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University of Alberta

Year 3 and Beyond...

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Necessary Transfers...and Ongoing Commitments



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Transferring....and Transforming...

- Looking strategically for points of entry where research of the Manitoba CRYSTAL can inform and support teaching and learning experiences
- Formation of innovative partnerships among graduate students, faculties of education/science, teachers, and the learning community

 <p>Can provide....</p>	<p>Manitoba  has a need for...</p>
<p>Supporting teacher success in science education through research</p>	<p>Connections among faculties of science/education and the Dept. of Education to be strengthened</p>
<p>Identify the characteristics of instructional strategies, curriculum content and pedagogical orientations which contribute to student success</p>	<p>Access to field data relevant to the efficacy of MB curriculum; we have no picture of how implementation is occurring nor its impacts on learners</p>
<p>Resource development and capacity building – professional development of teachers</p>	<p>Curriculum foundation areas such as the Nature of Science/STSE to be made more explicit in curriculum</p>

 Can provide....	Manitoba  has a need for...
Resource development and capacity building – professional development of teachers	Increasing the capacity among teachers for integrating the history and philosophy of science within curricular contexts
Development of partnerships and outreach	On-going identification of gaps in resources; collaboration in development of curriculum-aligned modules and thematic units
Identification of the risk and supportive factors affecting teacher self-efficacy	Continuing efforts in supporting Middle Years teachers of science in order for science to be present

 Can provide....	Manitoba  has a need for...
Continuing development of units of historical presentation and close teacher/researcher connections in field testing and implementation	The development and field validation of units suitable for the new Grade 12 <i>Interdisciplinary Topics in the Sciences</i> curriculum
Critical field data and online supports related to the implementation of Grades 11/12 Chemistry in school divisions	Understanding how a more conceptually-based chemistry approach enhances the teaching of chemistry
Graduate student research from Amanda Tetrault and Mona Maxwell towards ESD in curriculum	Explicit integration of the principles of SD through – not aside from – curriculum

Looking Ahead....

- The Manitoba Department of Education is increasingly reliant upon outside agencies to deliver on the research and planning required to inform curriculum policy
- In Manitoba, the NSERC CRYSTAL has emerged as the leader in creating more informed science educators and asking the key research questions that policymakers wish we had answers to

Looking Ahead....

- It is unimaginable that, beyond Year 5, there would not be an entity such as the CRYSTAL to continue a leadership role in the enhancement of science education in our region
- In an era of diminishing resources targeted specifically at teacher development and self-efficacy, the CRYSTAL will continue to be a portal through which research guides and informs effective practices

First Steps.....

