

# PROJECT IN A NUTSHELL

<b>Project Title:</b> So you want to teach math?	<b>Estimated Length:</b> 39 hours
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<b>Subject(s):</b> Curriculum and Instruction for Math Majors	<b>Grade Level(s):</b> Post-secondary
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## LEARNING GOALS

Key Learning Outcomes	21 <sup>st</sup> Century Competencies to be taught & assessed
<p>Students will: demonstrate the ability to plan effective units of instruction; gain familiarity with some of the current issues that surround mathematics education; gain working knowledge of mathematics education curriculum and resources as prescribed/recommended for schools in the Province of Alberta; become familiar with a variety of instructional and assessment strategies for K-12 mathematics. Students will understand the theory of mathematics teaching and learning for Grades k-12 mathematics. Students will understand a variety of teaching and assessment strategies that support learning. Students will justify the choices that they make in planning for and teaching mathematics based in educational theory and research.</p>	<input type="checkbox"/> Collaboration <input checked="" type="checkbox"/> Critical Thinking <input checked="" type="checkbox"/> Communication (Presentation) <input checked="" type="checkbox"/> Creativity & Innovation <input type="checkbox"/> Other: <a href="#">Click here to enter text.</a>

## CONTEXT

Type of Project	Summary of Challenge, Problem, Controversy, Issue, Simulation or Scenario
<input checked="" type="checkbox"/> Design Challenge <input type="checkbox"/> Problem Solving <input type="checkbox"/> Address a Controversial Issue <input type="checkbox"/> Address a Local, National or International Issue <input type="checkbox"/> Simulation <input checked="" type="checkbox"/> Scenario	<p>You are eventually going to teach math! So, how do you do that well?</p>

## FOCUSED INQUIRY

Driving Question	Method of Inquiry to be Used	Tools Needed
<p>How can we, as math teachers, design optimal learning experiences for students? What does effective mathematics teaching and learning look like/feel like in a classroom? What does it mean for students to understand mathematics?</p>	<input type="checkbox"/> Engineering Design Process <input checked="" type="checkbox"/> Design Thinking <input type="checkbox"/> Problem Solving Process <input type="checkbox"/> Scientific Method <input checked="" type="checkbox"/> Open Ended Inquiry <input checked="" type="checkbox"/> Decision Making Process <input type="checkbox"/> Historical Method <input type="checkbox"/> Other: <a href="#">Click here to enter text.</a>	<input checked="" type="checkbox"/> Inquiry Journals <input checked="" type="checkbox"/> Reflection Prompts <input checked="" type="checkbox"/> Observation <input checked="" type="checkbox"/> Authentic Documents <input checked="" type="checkbox"/> Primary Data <input type="checkbox"/> Field Work <input checked="" type="checkbox"/> Adults Outside of School <input checked="" type="checkbox"/> Other: Currlab - Beth

## TANGIBLE OUTCOMES: PRODUCTS, PERFORMANCES, PRESENTATIONS AND/OR SERVICES

Team	Individual	Class
<p>Manipulatives presentation; teach a lesson to classmates using optimal teaching strategies</p>	<p>Design a unit of instruction using a model of planning – either UbD or PBL; teach a lesson to classmates using optimal teaching strategies; weekly blog</p>	<p><a href="#">Click here to enter text.</a></p>

<b>ADULT WORLD INVOLVEMENT</b>		
Authentic Documents/Data	Organizations, Experts, Stakeholders and/or Professionals	Primary Data / Field Work
Read research/professional journals	Math teachers, Alberta Education representatives	