



**EDUC 535.09 Specialization II - Elementary Science
Fall 2024**

Land Acknowledgement

The University of Calgary, located in the heart of Southern Alberta, both acknowledges and pays tribute to the traditional territories of the peoples of Treaty 7, which include the Blackfoot Confederacy (comprised of the Siksika, the Piikani, and the Kainai First Nations), the Tsuut'ina First Nation, and the Stoney Nakoda (including Chiniki, Bearspaw, and Goodstoney First Nations). The City of Calgary is also home to the Métis Nation of Alberta (Districts 5 and 6).

Course Dates: September 3 – October 25, 2024

Last Day to Add/Drop/Swap: Due to the non-standard dates associated with this program, please check your Student Centre for the important dates pertaining to your section.

Pre-requisites: Due to the multiple pathways in the Bachelor of Education, please consult Undergraduate Programs in Education for questions related to pre-requisite courses.

Classes: All classes will be within the scheduled W 12:00-15:50 timeslot, and these sessions may be whole class, small group, or individual work, or combinations. Weekly schedules will be posted in advance of the following week.

Office Hours: By arrangement.

Email: Students are required to use a University of Calgary (@ucalgary.ca) email address for all correspondence.

COURSE DESCRIPTION:

Welcome to Specialization II: Seminar in Elementary Science Education!

The intent of the Specialization Seminar II is to deepen your understanding of the practical aspects of teaching within the specialization and to connect this practice with specific theoretical concepts. While this second specialization course focuses more on practical knowledge, you will also refine your knowledge of discourse and theory within the discipline and develop a deeper understanding of ways to enact this theory in a classroom context. You will additionally become familiar with any relevant Ministry documents associated with the Alberta curriculum and draw on practical classroom observation from the field experience to participate in meaningful discussion and to connect these observations with a vision for your own teaching. The emphasis of the course is on designing for

student learning (subject-specific; assessment to strengthen student learning and improve instruction; and designing for inclusion, differentiation, and inquiry).

LEARNER OUTCOMES:

In this course, students will:

- 1) Further develop a deeper conceptual understanding of the historical, socio-cultural, political contexts of the *discipline*, and relate this to curriculum planning in the specialization areas;
- 2) Identify and critique the *key learning perspectives* (as outlined in the front matter of the Programs of Study) and *intentions* (learning objectives) across the units in a grade from the Alberta Programs of Study;
- 3) Successfully apply theoretical knowledge to the design of a longer-term unit and assessment plan.

COURSE DESIGN AND DELIVERY:

This course will be delivered face-to-face on campus, with associated engagement in a D2L environment, through a problem-based and inquiry-focused approach. Student participation is crucial to the knowledge building in this course. Assessments are based on both the task descriptions and rubrics for each of the three Learning Tasks, and include self-assessment opportunities.

D2L will be used to post class information and for submitting assignments. Ahead of each week of the course, there will be an outline for the following week posted in D2L that will guide you through that week’s activities, such as what to prepare for the next class, what to post in the discussions. This might include videos, links to activities, notes on the topics of the readings, suggestions for assignments, etc. For many class activities, you will need a device with internet connectivity to access D2L, the library website, YouTube, etc., as well as to work on your assignments.

LEARNING TASKS OVERVIEW

There are three (3) required Learning Tasks and completion of all tasks is required to pass this course.

Task	Description of Learning Task	Weight	Group/ Individual	Due Date
LT1	Evolving Conceptual Understanding of Science Teaching <i>Learner Outcome:</i> <ul style="list-style-type: none"> • <i>develop a deeper conceptual understanding of the historical, socio-cultural, political contexts of the discipline</i> • <i>critique the key learning perspectives of science and intentions from the science learning outcomes</i> 	15%	Individual	Sept 5 Sept 12 Oct 10

LT2	<p>An Inquiry into Teaching Science: Knowledge Building in a Community of Inquiry <i>Learner Outcome:</i></p> <ul style="list-style-type: none"> • <i>develop a deeper conceptual understanding of the historical, socio-cultural, political contexts of the discipline</i> • <i>critique the key learning perspectives of science and intentions from the science learning outcomes</i> 	25%	Group	Sep 25
LT3	<p>Create a Field Experience Proposal and incorporate the experience into your Unit of Study <i>Learner Outcome:</i></p> <ul style="list-style-type: none"> • <i>Successfully apply theoretical knowledge to the design of a longer-term unit and assessment plan.</i> 	20%	Individual	Oct 18
LT4	<p>Creation of a Unit and Assessment Plan <i>Learner Outcome:</i></p> <ul style="list-style-type: none"> • <i>Successfully apply theoretical knowledge to the design of a longer-term unit and assessment plan.</i> 	40%	Individual (in Groups)	Oct 25

WEEKLY COURSE SCHEDULE:

(Schedule Subject to Change, details will be provided in class)

Date	Topic/Themes	Readings and Tasks & DUE Dates
Week 1 Sept 4	Welcome & Introductions <ul style="list-style-type: none"> • Intro to LT1, 2, 3 and 4 • Essential Questions: <ul style="list-style-type: none"> a What are the goals of science teaching? b What does it mean to teach science? 	DUE – LT1 Blog 1 (Week 1 Readings): Thurs. Sept 5 DUE – LT1 Peer Responses 1: Fri, Sept 6 Class 1 – Sep 4 Tasks: <ol style="list-style-type: none"> 1. Review Introductory materials, outline, etc. 2. Form Groups: LT2/3, Conversation 3. Begin preparing your first LT1 post 4. Begin thinking of ideas for LTs 2, 3 & 4 5. Prepare for Field Trip in Class 3 Essential Readings: <ul style="list-style-type: none"> • Science Programs of Study, Grades 1-6. Program Overview (p. 1-4). https://education.alberta.ca/media/159711/elemsci.pdf Jigsaw Activity Readings: <ul style="list-style-type: none"> • Rennie, L. (2005). Science awareness and scientific literacy. <i>The Journal of the Australian Science Teachers Association</i>. 51(1), 10-14. https://ezproxy.lib.ucalgary.ca/login?url=https://search.ebscohost.com/login.aspx?direct=true&db=ehh&AN=18133950&site=ehost-live • Harlen, W. (2015). <i>Working with big ideas of science education</i>. Hatfield, UK: Association for Science Education. Chapter 1 (p. 3-6). https://www.ase.org.uk/download/file/fid/6740 • Wilcox, J., & Lake, A. (2018). Teaching the nature of science to elementary students. <i>Science and Children</i>, 55(5), 78-85. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_1981662923

Week 2 Sept 11	EQ: How do teachers manage both the physical and instructional format of an inquiry-based classroom? Inquiry Big Picture	DUE – LT1 Blog 2 (Week 2 Readings): Thurs. Sept 12 DUE – LT1 Peer Responses 2: Fri. Sept 13 Details and Preparing for Class 3 – Sep 18: Field Trip Tasks: Work on LTs 1 & 2 Readings: <ul style="list-style-type: none"> Friesen, S., Saar, C., Park, A., Marcotte, C., Hampshire, T., Martin, B., Brown, B., & Martin, J. (2015). <i>Focus on inquiry</i>. [eBook] Chapter 2. http://inquiry.galileo.org/ Grueber, D. & Whitin, P. (2012). Valuing little steps toward inquiry. <i>Science and Children</i>, 50(3), 41-45. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_1152021333
Week 3 Sept 18	EQ: What is the value of Field Study and Place Based Learning?	Class 3 – Sep 18 Field Trip Day Tasks: Work on LT3 Readings: <p>Behrendt, M. & Franklin, T. (2014). A review of research on school field trips and their value in education. <i>International Journal of Environmental and Science Education</i>, 9(3), 235-245. https://eric.ed.gov/?id=EJ1031445</p>
Week 4 Sept 25	EQ: How to manage both the physical and instructional format of an inquiry-based classroom? <i>Inquiry Specifics</i> What is the role of <i>Computational Thinking</i> in the science classroom?	DUE – LT2 Class Presentations: Wed, Sep 25 Class 4 – Sep 25 Tasks: Work on LT 3 & 4 Readings: <ul style="list-style-type: none"> Bybee, R. W., Taylor, J. A., Gardner, A., Scotter, P. V., Powell, J. C., Westbrook, A., & Landes, N. (2006). <i>The BSCS 5E instructional model: Origins and effectiveness</i>. BSCS, (p. 1–13, 32-43). https://media.bsccs.org/bsccsmw/5es/bscs_5e_full_report.pdf Benedict-Chambers, A. & Fortner, T. (2019). The right kind of questions. <i>Science and Children</i>, 56(9), 50-57. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_2242627961 Holt-Taylor, L. (2017). What’s the buzz on bees? <i>Science and Children</i>, 55(4), 82-88. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_gale_infotrasmisc_A518337126 Wiggins, G. & McTighe, J. (2005). <i>Understanding by design</i> (2nd Edition). Alexandria, VA: Association for Supervision & Curriculum Development. Chapters 3-6. https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/detail.action?docID=3002118 Wing, J.M. (2006). <i>Computational Thinking</i>. <i>Communications of the ACM</i>, 24(3)

Week 5 Oct 2	<p>EQ: What does it mean to be a “designer” of learning?</p> <ul style="list-style-type: none"> • Stage 1. Identify Desired Results: STS/NoS, knowledge, skills, and attitudes. 	<p>Continuation of LT2 Presentations Class 5 – Oct 2</p> <p>Tasks: Work on LT 3 & 4</p> <p>Readings:</p> <ul style="list-style-type: none"> • Sumrall, W., & Sumrall, K. (2018). Understanding by design. <i>Science and Children</i>, 56(1), 48-54. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_2081757044 • Harlen, W. (2015). <i>Working with Big Ideas of Science Education</i>. Hatfield, UK: Association for Science Education. Chapters 3-4 (p. 11-33). https://www.ase.org.uk/download/file/fid/6740 • Mensah, F. M. (2010). Who do I look like? Diversity in self, family, and others. <i>Science Activities</i>, 47(4), 125-132. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_749617376
Week 6 Oct 9	<p>EQ: What will you accept as evidence that student understanding took place?</p>	<p>DUE – LT 1 - Blog Entry: Thurs. Oct. 10 DUE – LT 1 - Peer Responses: Fri. Oct. 11</p> <p>Continuation of LT2 Presentations Class 6 – Oct 9</p> <p>Tasks: Work on LT 3 & 4</p> <p>Readings:</p> <ul style="list-style-type: none"> • <i>Understanding by design</i>: Chapters 7-8. https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/detail.action?docID=3002118 • Minstrill, J. & van Zee, E. (2003). Using questions to assess and foster student thinking. In J. M. Atkin & J. E. Coffey (2003). <i>Everyday Assessment in the Science Classroom</i> https://ebookcentral-proquest-com.ezproxy.lib.ucalgary.ca/lib/ucalgary-ebooks/reader.action?docID=355237&ppg=77 • McLaughlin, C. A., McLaughlin, F. C., & Pringle, R. M. (2013). Simply performance assessment. <i>Science and Children</i>, 51(3), 50-55. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_1463730812 <p>Additional Resources:</p> <ul style="list-style-type: none"> • Alberta Assessment Consortium: https://aac.ab.ca/ Username: teachers Password: master

<p>Week 7 Oct 16</p>	<p>EQ: How do you shift the responsibility of learning from the teacher to the students?</p> <ul style="list-style-type: none"> • Stage 3: Designing experiences that engage, develop, and challenge student understanding. <p>EQ: What does it mean to be a teacher of diversity?</p> <ul style="list-style-type: none"> • Stage 4: Learner differentiation 	<p>DUE – LT1 Weeks 7 & 8 Readings in LT3 Groups DUE – LT3 Workshop: Oct 16, in class DUE – LT3 Stages 3 & 4: Friday, Oct. 18</p> <p>Class 7 – Oct 16</p> <p>Tasks: Work on LT1 & LT3: Stages 3 & 4 Readings:</p> <ul style="list-style-type: none"> • <i>Understanding by design:</i> Ch. 9 & 10 • Kurson, R. (2014). A Pattern in the sky. <i>Science and Children</i>, 52(2), 48-54. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_1611001214 • Bang, M., Medin, D., and Cajete, G., (2009). Improving science education for native students: Teaching place through community. <i>Sacnas News</i>, 12(1), 8-10. https://groups.psych.northwestern.edu/medin/documents/Bang_MedinCajete2009SACNAS.pdf <p>Additional Resources: Alberta Education. (2019). <i>Health and safety in the science classroom: Kindergarten to grade 12</i>. https://open.alberta.ca/publications/9781460133989</p>
<p>Week 8 Oct 23</p>	<ul style="list-style-type: none"> • Course Completion 	<p>DUE – LT3&4 Class Presentations: Wednesday, Oct 23 DUE – LT3&4 Final & Self-Assessments: Friday, Oct 25 DUE – Self-Assessments & Exit Slips: Friday, Oct 25</p> <p>Class 8 – Oct 23</p> <p>Tasks: Complete LT3 & 4 Readings:</p> <ul style="list-style-type: none"> • Martínez-Gudapakkam, A., Mutch-Jones, K., & Hicks, J. (2017). Formative assessment practices to support students who struggle in science. <i>Science and Children</i>, 55(2), 8893. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_1943030079 • Gomez-Zwiep, S., Straits, W., & Topps, J. (2015). 5E for ELL. <i>Science and Children</i>, 53(2), 80. https://ucalgary.primo.exlibrisgroup.com/permalink/01UCALG_INST/15o3ob6/cdi_proquest_journals_1720443138 <p>Additional Resources:</p> <ul style="list-style-type: none"> • Alberta Education (n.d.). <i>Benchmarks, strategies and resources for teachers of English Language Learners</i>. https://www.learnalberta.ca/content/eslapb/index.html • Alberta Education. (2010). <i>Making a difference: Meeting diverse learning needs with differentiated instruction</i>. https://open.alberta.ca/publications/9780778586012

CHANGES TO SCHEDULE:

Please note that changes to the schedule may occur to meet the emerging needs and dynamics of the participants in the course, although specific weekly course schedules will still be provided in advance by your Instructor.

LEARNING TASKS AND ASSESSMENTS

LT1: Evolving Conceptual Understanding of Science Teaching (15%)

Due Dates: Ongoing, as per Weekly Schedule (Blogs & Peer Responses 3 @ 5% each)

Intent of LT1: The main purposes of the learning task is to foster meaningful collegial engagement and to provide ongoing reflections on the following question: *How has your conceptualization of teaching Elementary Science through a design-based and inquiry-focused approach changed, been modified, or reinforced?* This will consist of three reflections will be in the form of a blog (either written or voice recording) in which you will communicate a perspective directly connected to class discussions, readings and experience.

For each of the three specified blogs, you will post an approximately 500-word blog or equivalent* within your small conversation group (3-4 members) on the D2L Discussion Board by Wednesday midnight. You will then respond to each of your small conversation group peers by Friday midnight. Approximately 200 words each.

These connections allow you to interact and share ideas with your colleagues. Thoughtfully plan how you will engage the members of your class on your insights and learning. Your blogs and responses must be persuasive, that is, you should take a personal stance on the question and explain your response, using relevant and varied evidence. Your blogs must include significant insights from:

- Professional Discussions and Activities (in class and/or online)
- Course Readings and Resources (including Discussions on the readings)
- Current research
- Classroom observations/engagements (e.g. from Field Experiences)

CRITERIA FOR ASSESSMENT OF LEARNING TASK 1

Criteria	A+ to A Meets all and exceeds some requirements	A- to B+ Meets all requirements	B to B- Meets most requirements	Does not meet requirements
Articulation of Science Teaching concepts	Contributions and responses are detailed, insightful, clearly communicated, and focused on knowledge building.	Contributions and responses are clear, and focused on knowledge building.	Contributions and responses are generally clear, but may lack some details or focus.	Contributions and responses are unclear and/or not focused on knowledge building.
Relevant evidence from LTs and other sources to support responses	Builds upon content from LTs, readings, conversations, and experiences to open new possibilities in understanding. Demonstrates skillful use of high quality, credible, relevant sources to explain and support ideas that are appropriate for the discipline. Cites all content obtained from any sources and personal experiences. APA 7 citation style is accurate (if applicable).	Demonstrates consistent use of credible, relevant sources to support ideas. Cites most content obtained from any sources and personal experiences. APA 7 citation style is accurate (if applicable).	Demonstrates an attempt to use credible and/or relevant sources to support ideas. Cites some content obtained from any sources. Citation style is either inconsistent or incorrect (if applicable).	Does not use credible and/or relevant sources to ideas. May not cite sources.
Democratizing knowledge	Recognizes all participants as legitimate contributors to the shared goals of knowledge building through supportive and constructive interactions. Participates in a timely manner in all class-related activities, including formative engagements such as class presentations and peer feedback rounds, self-assessment opportunities, and midpoint check ins and exit slips.	Recognize and integrates contributions from all group members. Participates in most class-related activities, including formative engagements such as class presentations and peer feedback rounds, self-assessment opportunities, and midpoint check ins and exit slips.	Attempts are made (potentially with some gaps) to recognize and respond to contributions from all group members. Participates in some class-related activities, including formative engagements such as class presentations and peer feedback rounds, self-assessment opportunities, and midpoint check ins and exit slips.	Contributions are primarily independent without recognition and/or integration of ideas from other group members. Does not often participate in class-related activities, including formative engagements such as class presentations and peer feedback rounds, self-assessment opportunities, and midpoint check ins and exit slips.

LT2: An Inquiry into Teaching Science: Knowledge Building in a Community of Inquiry**Due Dates: Wednesday, Sept 25****Percentage of the Final Grade: 25%****Length: 15 minutes (max)**

Context: There is a strong movement to improve education in Alberta with an emphasis on Mastery Learning as an instructional strategy that results in a comprehensive grasp of curriculum as demonstrated through competency or performance-based evaluations. With an all-encompassing understanding of the curricular intent (the Front Matter), science teachers are being challenged to develop rigorous and relevant curriculum. As teachers of science, our focus is on emphasizing students' active engagement in genuine inquiry and problem-solving, an approach to make science learning appealing to all students. Of central importance are science teachers' pedagogical practices with a focus on the integration of students' learning of core disciplinary concepts with active engagement in "doing science." As a new teacher there will be challenges acquiring this pedagogical knowledge and skill to meet these expectations. This assignment introduces opportunities and challenges that science teachers face in translating curriculum documents, including the philosophy and rationale of the Programs of Study, into engaging instruction that leads to student understanding and development of related knowledge, skills, and attributes.

Expectations: For this assignment, students (in groups of 2-3) will develop an investigable question on the topic of teaching science nested within the above context. The question should emerge from Specialization I inquiry projects and class discussion, and readings along with your practicum experience. This work can also be connected to Alberta Education's (2018) *Teaching Quality Standard*. You should consider many sources of evidence for answering your question: journal articles, teacher blogs, teacher resource books, and even conversations with experienced teachers.

During the course, you will present your work as a 20-30 min. (max) Professional Development workshop for teachers (your peers). Your presentation should focus on how these "understandings" will influence our pedagogical practices. The presentation along with references (APA 7: see *Purdue online writing lab: APA guide*) must also be submitted to both D2L Discussion and D2L Dropbox. You are also required to create a digital folder in D2L Discussion that could include text, visuals, media, and other supporting links for this inquiry. Be creative in the development of this folder.

This assignment will be graded as a group.

Further explanations will be presented to you in both D2L and in our first class.

Required elements of this project should include:

- An explanation of your inquiry question including: a clear statement of the question, your reasons for asking this question, and a summary of your conclusion or findings as well as new or further questions raised.

- A digital collection illustrating the evidence for your findings. You can create these and/or share existing links or examples (where copyright permits). The connection to your inquiry question should be made clear.
- A summary of your inquiry.
- List of resources used in the project completion (This must be presented in APA 7 format).
- Shared learning session
 - the significance of the inquiry,
 - how the inquiry fits in the ongoing pedagogical knowledge building focused on the teaching of science,
 - how these ideas generated from the inquiry may be achieved within the classroom, and
 - what implications does this inquiry have for each of you in shaping your own teacher identity and practice?

CRITERIA FOR ASSESSMENT OF LEARNING TASK 2

Criteria	A+ to A Meets all and exceeds some requirements	A- to B+ Meets all requirements	B to B- Meets some requirements.
Quality & Meaningfulness of Research Question			
Rationale: What and Why do you want to know “this” with respect to informing pedagogical practice?	The research question is clearly stated, specific and addresses a significant need or problem that teachers encounter in the classroom. The rationale for choosing the question is supported with personal interests in professional growth in this area. Considers and/or challenges common assumptions in this area.	The research question is appropriate and clearly stated but is either too general or too narrow, leading to a multitude of sub- question or ruling out new possibilities. The supporting rationale is generally well-written but not relevant to personal interest stemming from classroom experience or identification of professional growth areas.	The research question is roughly sketched and in need of refinement. The supporting rationale is weakly developed and/or does not address personal interest or identification of professional growth areas.
How will it make a difference to your teaching of the discipline?	The question has the potential to hold professional interest over time. Direct links are made to how new knowledge in this area will support teaching in the service of learning.	The question has the potential to hold professional interest beyond this assignment. Weak links are made to how new knowledge in this area will support teaching in the service of learning.	The question has limited importance for on-going investigation. Few or no links are made to how this question will support teaching in the service of learning.

Critique & Critical Analysis			
What are the connections between theory and practice?	Well-developed depth of understanding of the topic shown through credible and respected referenced connections between theory and practice. Cites all academic content obtained from other sources. APA 7 citation style is accurate.	Sufficient depth of understanding of the topic shown through limited referenced connections between theory and practice. Cites most content obtained from other sources. APA 7 citation style is accurate.	Little depth of understanding of the topic with minimum referenced connections between theory and practice. Citations do not employ APA 7 citation style.
Overall Presentation of Findings			
How effective is the creation and development of conceptual ideas in contributing to our pedagogical content knowledge?	Careful and critical development of the conceptual ideas through an inquiry approach so participants will be able to develop and apply pedagogical information, concepts, and skills to new teaching situations.	Some development of the conceptual ideas through an inquiry approach so participants will be able to develop minimal pedagogical understanding. with implications for practice in classrooms.	Little development of the conceptual ideas through an inquiry approach, with little or no connection to pedagogical development and with no implications for practice in classrooms
How effective is the presentation in allowing the viewer to follow your train of thought and supplementary support through the digital folder?	Presentation design and layout is creative, visually appealing, and effectively supports the audio; effective use of word count, font style, color, headlines, bullets, and numbers. Graphics (e.g., diagrams, picture, tables, figures, etc.) effectively enhance key ideas. Audience provided with important resources or handouts for later consideration.	Overall design and layout of the presentation is appealing and supports the audio; adequate use of word count, font style, color, headlines, bullets, and numbers. Graphics enhance key ideas. Handouts and other resources provided may not directly relate to central topic.	Design and layout of the presentation is adequate but somewhat cluttered. Choice of word count, font style, color, headlines, bullets, and numbers detract from the audio. Graphics are limited in enhancing the audio. Content arrangement is somewhat confusing and does not adequately assist the viewer in understanding order without narration.

LT3: Create a Field Experience Proposal and incorporate the experience into your Unit of Study (*Individual Assignment directly linked to LT4: Unit Plan assignment*)

Due Date: Friday, October 18 in D2L Drobox

Percentage of the Final Grade: 20%

Field experiences are essential in students making connections between the learning in the classroom and the world. Field experiences provide a means for students to apply concepts in authentic ways, helping them engage more deeply in their learning and increasing their depth of understanding in ways not possible within the confines of the school building. By providing field experiences at school, you are ensuring that your students have learning opportunities they may otherwise not have had.

Intent of LT3: The intent of LT3 is to incorporate a field or place based learning experience as a component to the unit plan that you are developing for LT4. The experience should include activities that are teacher planned and involve 1 or more other disciplines (LA, Social Studies, Math, Art ...). As a component of this assignment, you will need to plan and organize a successful field experience. Your field experience proposal should be organized around the three main sections included below.

Part 1: Introduction - Activity Description & Purpose

Provide a general overview of the proposed field experience including the rationale for the trip.

- Grade level
- Purpose and Connection to Unit of Study
- Essential Question
- Tasks/expected learning outcomes

Part 2: Curriculum Alignment, Pedagogy and Assessment

Connect the purpose and the goals of the trip to what we know about the benefits of experiential learning and place based education. Include explicit connections to general/specific science learner expectations/outcomes and also cross-curricular opportunities that exist. Connect the field experience to a larger unit of study (LT4). Assessment; how will you know if students have acquired the intended learning outcomes? How will you manage the student tasks/materials?

Part 3: Administrative and Safety Details

As a new teacher, there are many steps for you to learn in order to conduct a safe field trip. In this section, demonstrate you understand these logistics by addressing the following points. It may be very helpful to ask your mentor teacher to explain the process for getting a field experience approved.

- When are you going (hypothetical dates)?
- How will students get to the site?
- What time does the day start? Finish?
- What equipment do you need to provide, what equipment does the site provide? Any other resources needed?
- Do parents require any additional information (Parent letter)?
- How much is this going to cost the school? The parent? (Estimates are fine)
- What is your plan to provide applicable support/inclusion (if any) so all students can participate; eg) organizational groupings, strategies for student work, collaboration, etc...List any relevant issues, prior knowledge, certification needed with regard to safety.

- What are your plans for managing student health concerns such as carrying first aid kits, epipens, rescue inhalers, medications etc.
- What is the emergency response plan, (ambulance response times, nearest hospital, etc)?
- Number of parent volunteers, ratios, roles etc.

Proposal should not exceed 3 pages in length (Single-spaced is fine; 12-point font; no adjusting the margins). The 3 pages do not include the title page, student tasks, appendices or references. Name your document: “First Name, Last Name, LT3” e.g. Doug Stretch LT3

CRITERIA FOR ASSESSMENT OF LEARNING TASK 3

Criteria	A+ to A- Meets all and exceeds some requirements	B+ to B- Meets most requirements	C+ to D Meets some to few requirements
Introduction - Description of Activity and Purpose	Purpose/rationale of field experience is highly developed, very explicit, and clearly expressed thoughts are effectively organized, flow in a logical order and are easy to follow <i>(It is <u>extremely</u> clear what purpose this trip serves and how it is linked to the larger unit of study)</i>	Purpose/rationale of field experience is clear thoughts are generally well developed and organized and follow in a somewhat logical order, yet may need to search for stronger connections between ideas. <i>(It is <u>evident</u> what purpose this trip serves and how it it is linked to the larger unit of study)</i>	Purpose/rationale of field experience is lacking depth and clarity much difficulty expressing thoughts clearly, many spelling and grammatical errors; no sequential order of ideas or connection between thoughts. <i>(It is <u>not evident</u> what purpose this trip serves and how it it is linked to the larger unit of study)</i>
Description of Curricular Alignment, Pedagogy, Assessment & Next Steps	The goals and objectives of the field experience are clearly and intentionally aligned with numerous curricular outcomes , including strong integration with other disciplines (Math, LA, art, etc) Pedagogical connections (benefits of experiential/place based learning) are strongly articulated. Description and rationale for the assessment approach is expertly explained. It is highly evident how this field experience is situated within the larger unit of study that will inform future lessons. Writing is highly coherent and organized	The goals and objectives of the field experience are aligned with curricular outcomes , including some integration with other disciplines (Math, LA, art, etc) Pedagogical connections (benefits of experiential/place based learning) are provided Description and rationale for the assessment approach is provided It is evident how this field experience is situated within a larger unit of study that may inform future lessons Writing is coherent and organized	The goals and objectives of the field experience are only briefly stated and lack clarity Pedagogical connections (benefits of experiential/place based learning) are unclear or missing Description and rationale for the assessment approach is unclear or missing It is not fully evident how this field experience is situated within a larger unit of study or how it may inform future lessons Writing lacks coherence and organization

List of Administration and Safety Details	Most, if not all of the administrative and safety details are identified and elaborated This section demonstrates you have a comprehensive understanding of the numerous administrative and safety details required for the running of a safe field experience.	Many of the administrative and safety details are identified and elaborated, however, some key aspects may have been overlooked This section demonstrates you have an understanding of the numerous administrative and safety details required for the running of a safe field experience.	Many of the administrative and safety details have been overlooked This section demonstrates you have additional work required to better understand the numerous administrative and safety details required for the running of a safe field experience
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LT4: Designing a Unit and Assessment Plan

(Individual submissions within Small Group work)

Due Date: Friday, October 25 in D2L Discussion and Drobox

Percentage of the Final Grade: 40%

Intent of LT3: The intent of LT3 is to design a unit and assessment plan. We will be using a Whole-Part-Whole learning model over the last 4 weeks of the course to develop the unit plan. Through the D2L Content and our various classes you will first be presented with an overview of the expectations for the final assignment. Then over the four weeks, we will scaffold the assignment through a process of jigsaw reading. Working within small groups of 2-3, individuals will also track and provide evidence of their contributions to the collective plan and provide ongoing self-assessments of their work. While groups may work together, each student will submit and be assessed on their own individual plan.

Expectations of LT4:

- The unit plan will be comprised of one unit covering:
- 7 weeks with 30-45 minutes classes for Elementary classes.
- The unit plan must follow a clear and comprehensive **design for learning focused template (in D2L Content)** that promotes deep understandings of a key concept or competency of the discipline.
- **Use the following rubric to guide your unit design and assessment.**

CRITERIA FOR ASSESSMENT OF LEARNING TASK 4

Criteria	A+ to A Meets all and exceeds some requirements	A- to B+ Meets all requirements	B to B- Meets most requirements
Stage 1 - Lesson Rationale: To what extent does the design focus on building understanding of targeted content based on an Alberta Education Programs of Study?			
Curricular Outcomes	Has identified targeted understandings of curricular outcomes that are truly enduring, based on transferable big ideas at the heart of the discipline, and in need of uncovering.	Has identified targeted understandings of curricular outcomes that are based on transferable big ideas of the discipline.	Has identified targeted understandings of curricular outcomes and sometimes incorporates them into inquiry-based learning
Targeted Understandings	The targeted understandings are framed by essential questions that spark meaningful connections, provoke genuine inquiry and deep thought, and encourage transfer of learning.	The targeted understandings are framed by some essential questions that adequately make connections for inquiry-based learning, deep thought, and encourage transfer of learning.	The targeted understandings are framed by questions that could be incorporated into inquiry-based learning.
Misconceptions	Misconceptions are relevant and targeted.	Some misconceptions are identified and targeted.	Some misconceptions are identified, but not targeted
Ab Ed PoS Outcomes General (unit) Specific (lesson)	Lists the outcomes students must meet in order for the enduring understandings to develop. Outcomes clearly reflect the PoS, including STS, knowledge, skills and attitudes and are linked to the targeted understandings.	Outcomes are stated but all of the elements needed to provide the needed knowledge, skills, and attitudes for the targeted understandings have not been included.	Outcomes are stated but do not link to the targeted understandings.
Stage 2 - Assessment Evidence: To what extent do the assessments provide fair, valid, reliable, and sufficient measures of the desired results			
Balanced Assessment	Balanced assessment is integral to the learning and woven into the day-to-day fabric of teaching and learning. Appropriate criterion-based scoring tools are used to evaluate student products and performances.	Balanced assessment is used on a regular basis and is part of the teaching and learning. Some criterion-based scoring tools are used to evaluate student products and performances.	Assessment is primarily summative with limited or irregular use of formative assessment to improve teaching and learning.
Learning Outcomes	Assessment is directly matched to learning outcomes from Stage 1. (<i>Ab Ed Achievement Indicators</i>)	Assessment closely matches the learning outcomes from Stage 1.	Limited match between assessment and Stage 1,

Assessment Through Authentic Performance Tasks	Students are asked to exhibit their understanding through authentic performance tasks to provide additional evidence of learning. (GRASP)	Students have limited opportunities to exhibit their understanding through authentic performance tasks to provide general evidence of learning.	Limited number of assessment data provides a partial or incomplete picture of student learning.
Clear Criteria are Established	Assessment criteria are collaboratively designed with students and mediated by or added to by the teacher to reflect authentic real-world standards for high quality work.	Assessment criteria are developed by the teacher and fully explained to students before the work begins.	Assessment criteria are shared after the work has been graded.
Self and Peer Assessment	Students are encouraged to self-assess and peer-assess	Students have limited opportunities to self- assess and peer-assess	No evidence of self or peer assessment.
Stage 3: To what extent is the learning plan effective and engaging			
Design Is Informed by Pedagogical Content Knowledge (e.g. 5Es)	Designs learning experiences that engage the students in doing work that require distinct ways of thinking about and acting in the world that disciplines embody to make meaningful connections and build deep understanding.	Designs learning experiences that are organized around disciplinary ideas and core concepts and requires that students make connections between exiting and new ideas to build understanding.	Selects activities that emphasize subject matter acquisition which deal with acquiring information, facts and formulas.
Authentic Performance Task	The work students undertake requires them to engage in productive collaboration with each other and with discipline and other experts around real problems, issues, questions or ideas that are of real concern and central to the discipline, to the students and to the broader community outside of school.	The work students undertake requires them to engage in productive collaboration with each other around matters that are central to the discipline and the broader community outside of school.	The work students undertake requires them to acquire and recall static, inert facts.

Work Fosters Deep Understanding	<p>The work students undertake fosters strong habits of mind, innovation and creativity. Students are routinely asked to:</p> <ul style="list-style-type: none"> • Formulate plausible, coherent working theories, • Formulate well- reasoned judgment and conclusions based on evidence with an examination of different viewpoints, • Analyze assumptions, • Discuss how things might be otherwise, i.e. supposition, • Thoroughly examine implications, • Consider ambiguities • Work across a variety of contexts, and, make connections between and among concepts 	<p>The work students undertake fosters disciplined habits of mind. Students are asked to:</p> <ul style="list-style-type: none"> • Formulate plausible solutions, • Articulate assumption, • Formulate reasoned judgment and conclusions based on evidence, and, Consider implication that reach beyond the immediate situation. 	<p>The work students undertake builds habits of mind that emphasize groupthink by requiring a simplistic solution and/or absolute conclusion attributed to an external authority with no consideration of implications</p>
Stage 4: Learner Inclusion			
ESL Benchmarks (Level 3) reflected in the Performance Task	<p>Appropriately selected ESL benchmark objectives for level 3 students with specific rationale for performance task.</p>	<p>Selected ESL benchmark objectives for level 3 students or rationale for performance task not clearly articulated.</p>	<p>Inappropriate or missing selected ESL benchmark objectives for level 3 students.</p>
Learner Inclusion	<p>A variety of effective and inclusive learning strategies are incorporated into the design to address the learning interests and needs of all students. Inclusion of technology, Indigenous, multicultural, and inter-disciplinary activities are highly evident.</p>	<p>A limited variety of teaching methods are used to engage all students. Inclusion of technology, Indigenous, multicultural, and inter- disciplinary activities are restricted.</p>	<p>There is no evidence of a variety of teaching methods used to engage all students.</p>

THE EXPECTATION OF EXCELLENCE IN PROFESSIONAL WORK

Please review the Academic Calendar carefully. It describes the program and provides detailed schedules and important dates. It contains information on expectations for student work and professional conduct. In addition, procedures are described regarding concern about student performance in the program. Please pay especially careful attention to details and descriptions in the following topic areas:

- *The Importance of Attendance and Participation in Every Class*

As this is a professional program, experiences are designed with the expectation that all members will be fully involved in all classes and in all coursework experiences. As you are a member of a learning community your contribution is vital and highly valued, just as it will be when you take on the professional responsibilities of being a teacher.

- *Engagement in Class Discussion and Inquiry*

Another reason for the importance of attendance and participation in every class is that the course involves working with fellow students to share ideas and thinking. For example, each class you will work with a small group to engage fellow students in discussions on work being considered in class. You will also help other groups by providing ideas for scholarly inquiry in assignments. If you find that you are experiencing difficulties as a group collaborating, please inform the instructor.

EXPECTATIONS FOR WRITING

All written assignments (including, to a lesser extent, written exam responses) will be assessed at least partly on writing skills. Writing skills include not only surface correctness (grammar, punctuation, sentence structure, etc.) but also general clarity and organization. Sources used in research papers must be properly documented. If you need help with your writing, you may use the writing support services in the Learning Commons. For further information, please refer to the official online University of Calgary Calendar, Academic Regulations, E. Course Information, E.2: Writing Across the Curriculum: <http://www.ucalgary.ca/pubs/calendar/current/e-2.html>

LATE SUBMISSIONS

All late submissions of assignments must be discussed with the instructor **prior to the due date**. Students may be required to provide written documentation of extenuating circumstances (e.g., statutory declaration, doctor's note, note from the University of Calgary Wellness Centre, obituary notice). A deferral of up to 30 days may be granted at the discretion of the Associate Dean of Undergraduate Programs with accompanying written evidence.

<https://calendar.ucalgary.ca/pages/jyekfh6xwhoHwxcetCil>

ISSUES WITH GROUP TASKS

With respect to group work, if your group is having difficulty collaborating effectively, please contact the instructor immediately. If a group is unable to collaborate effectively or discuss course materials online in a timely manner, the instructor may re-assign members to different groups or assign individual work for completion.

GRADING

Grade	GPA Value	%	Werklund School of Education Description
A+	4.0	95-100	Outstanding
A	4.0	90-94	Excellent – Superior performance showing comprehensive understanding of the subject matter
A-	3.7	85-89	
B+	3.3	80-84	
B	3.0	75-79	Good - clearly above average performance with knowledge of subject matter generally complete
B-	2.7	70-74	
C+	2.3	65-69	
C	2.0	60-64	Satisfactory - basic understanding of the subject matter
C-	1.7	55-59	
D+	1.3	52-54	Minimal pass - Marginal performance
D	1.0	50-51	
F	0.0	49 and lower	Fail - Unsatisfactory performance

Students in the B.Ed. program must have an overall GPA of 2.5 in the semester to continue in the program without repeating courses.

Note: A+ is an exceptional and rare grade to be given only to works of the highest quality.

Academic Misconduct

Academic Misconduct refers to student behavior which compromises proper assessment of a student's academic activities and includes cheating; fabrication; falsification; plagiarism; unauthorized assistance; failure to comply with an instructor's expectations regarding conduct required of students completing academic assessments in their courses; and failure to comply with exam regulations applied by the Registrar.

For information on the Student Academic Misconduct Policy and Procedure please visit:

<https://www.ucalgary.ca/legal-services/university-policies-procedures/student-academic-misconduct-policy>

<https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy>

Additional information is available on the Academic Integrity Website at:

<https://ucalgary.ca/student-services/student-success/learning/academic-integrity>

Academic Accommodation

It is the student's responsibility to request academic accommodations according to the University policies and procedures listed below. The student accommodation policy can be found at: <https://ucalgary.ca/student-services/access/prospective-students/academic-accommodations>.

Students needing an accommodation because of a disability or medical condition should communicate this need to Student Accessibility Services in accordance with the Procedure for Accommodations for Students with Disabilities: <https://www.ucalgary.ca/legal-services/sites/default/files/teams/1/Policies-Accommodation-for-Students-with-Disabilities-Procedure.pdf>

Research Ethics

Students are advised that any research with human participants – including any interviewing (even with friends and family), opinion polling, or unobtrusive observation – must have the approval of the Conjoint Faculties Research Ethics Board (<https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-faculties-research-ethics-board-cfreb>) or the Conjoint Health Research Ethics Board (<https://research.ucalgary.ca/conduct-research/ethics-compliance/human-research-ethics/conjoint-health-research-ethics-board-chreb>)

In completing course requirements, students must not undertake any human subjects research without discussing their plans with the instructor, to determine if ethics approval is required. Some courses will include assignments that involve conducting research with human participants; in these cases, the instructor will have applied for and received ethics approval for the course assignment. The instructor will discuss the ethical requirements for the assignment with the students.

For further information see E.5 Ethics of Human Studies
<https://calendar.ucalgary.ca/pages/627ed88eb4b041b7a2e8155effac350>

Instructor Intellectual Property

Course materials created by instructors (including presentations and posted notes, labs, case studies, assignments and exams) remain the intellectual property of the instructor. These materials may NOT be reproduced, redistributed or copied without the explicit consent of the instructor. The posting of course materials to third party websites such as note-sharing sites without permission is prohibited. Sharing of extracts of these course materials with other students enrolled in the course at the same time may be allowed under fair dealing.

Freedom of Information and Protection of Privacy

Student information will be collected in accordance with typical (or usual) classroom practice. Students' assignments will be accessible only by the authorized course faculty. Private information related to the individual student is treated with the utmost regard by the faculty at the University of Calgary. For more information, please see: <https://www.ucalgary.ca/hr/work-compensation/working-ucalgary/freedom-information-and-privacy-act>

Copyright Legislation

All students are required to read the University of Calgary policy on Acceptable Use of Material Protected by Copyright (<https://www.ucalgary.ca/legal-services/university-policies-procedures/acceptable-use-material-protected-copyright-policy>) and requirements of the copyright act (<https://laws-lois.justice.gc.ca/eng/acts/C-42/index.html>) to ensure they are aware of the consequences of unauthorised sharing of course materials (including instructor notes, electronic versions of textbooks etc.). Students who use material protected by copyright in violation of this policy may be disciplined under the Non-Academic Misconduct Policy

<https://www.ucalgary.ca/legal-services/university-policies-procedures/student-non-academic-misconduct-policy>.

Sexual and Gender-Based Violence Policy

The University recognizes that all members of the University Community should be able to learn, work, teach and live in an environment where they are free from harassment, discrimination, and violence. The University of Calgary's sexual violence policy guides us in how we respond to incidents of sexual violence, including supports available to those who have experienced or witnessed sexual violence, or those who are alleged to have committed sexual violence. It provides clear response procedures and timelines, defines complex concepts, and addresses incidents that occur off-campus in certain circumstances. Please see the policy available at <https://www.ucalgary.ca/legal-services/university-policies-procedures/sexual-and-gender-based-violence-policy>

Other Important Information

Please visit the Registrar's website at: <https://www.ucalgary.ca/registrar/registration/course-outlines> for additional important information on the following:

- Wellness and Mental Health Resources
- Student Success
- Student Ombuds Office
- Student Union (SU) Information
- Graduate Students' Association (GSA) Information
- Emergency Evacuation/Assembly Points
- Safewalk

The Freedom of Information Protection of Privacy Act prevents instructors from placing assignments or examinations in a public place for pickup and prevents students from access to exams or assignments other than their own. Therefore, students and instructors may use one of the following options: return/collect assignments during class time or during instructors' office hours, students provide instructors with a self-addressed stamped envelope, or submit/return assignments as electronic files attached to private e-mail messages.

For additional resources including, but not limited to, those aimed at wellness and mental health, student success or to connect with the Student Ombuds Office, please visit <https://www.ucalgary.ca/registrar/registration/course-outlines>

Education Students Association (ESA) President for the academic year is Claire Gillis, esa@ucalgary.ca.

Werklund SU Representative is Tracy Dinh, educrep@su.ucalgary.ca.