

Formal #2

Candidate's name: Lisa Seymour

Grade/Class/Subject:	7/Block 5/Science	School:	Skeena
Date:	November 28 <sup>th</sup> , 2022	Allotted Time:	64 mins. 1:06-2:10
Topic/Title:	Evolution/Natural Selection		

**1. LESSON ORIENTATION**

Key resources: Instructional Design Map

*Briefly, describe purpose of lesson, and anything else to note about the context of lesson, students, or class, e.g., emergent learning needs being met at this time, elements of focus or emphasis, special occasions or school events.*

Students will be learning about natural selection, adaptation, and evolution in a fun and engaging manner, sharing and analyzing data.

**2. CORE COMPETENCIES**

Key resources: <https://curriculum.gov.bc.ca/competencies>

Core /Sub-Core Competencies (check all that apply):	Describe briefly how you intend to embed Core Competencies in your lesson, or the role that they have in your lesson.
<input checked="" type="checkbox"/> COMMUNICATION – Communicating <input type="checkbox"/> COMMUNICATION – Collaborating <input checked="" type="checkbox"/> THINKING – Creative Thinking <input checked="" type="checkbox"/> THINKING – Critical Thinking <input checked="" type="checkbox"/> THINKING – Reflective Thinking <input type="checkbox"/> PERSONAL AND SOCIAL – Personal Awareness and Responsibility <input type="checkbox"/> PERSONAL AND SOCIAL – Positive Personal and Cultural Identity <input type="checkbox"/> PERSONAL AND SOCIAL – Social Awareness and Responsibility	<p>Students will reflect to consider purpose and perspectives, pinpoint evidence, use explicit or implicit criteria, make defensible judgments or assessments, and draw conclusions. Students have opportunities for analysis and critique through engagement in formal tasks, informal tasks, and ongoing activities.</p>

**3. INDIGENOUS WORLDVIEWS AND PERSPECTIVES**

Key resources: First Peoples Principles of Learning (FPPL); Aboriginal Worldviews and Perspectives in the Classroom

FPPL to be included in this lesson (check all that apply):	How will you embed Indigenous worldviews, perspectives, or FPPL in the lesson?
<input type="checkbox"/> Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors. <input type="checkbox"/> Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place). <input type="checkbox"/> Learning involves recognizing the consequences of one's actions. <input type="checkbox"/> Learning involves generational roles and responsibilities. <input checked="" type="checkbox"/> Learning recognizes the role of Indigenous knowledge. <input checked="" type="checkbox"/> Learning is embedded in memory, history, and story. <input checked="" type="checkbox"/> Learning involves patience and time. <input type="checkbox"/> Learning requires exploration of one's identity. <input type="checkbox"/> Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations.	<p>Patience and allowing time when teaching, not all students work at the same pace or understand concepts at the same time.</p>



#### 4. BIG IDEAS

Key resources: <https://curriculum.gov.bc.ca/> (choose course under Curriculum, match lesson to one or more Big Ideas)

*What are students expected to understand? How is this lesson connected to Big Idea/s or an essential question?*

- Evolution by natural selection provides an explanation for the diversity and survival of living things.

#### 5. LEARNING STANDARDS/INTENTIONS

Key resources: <https://curriculum.gov.bc.ca/> (choose course under Curriculum)

Curricular Competencies: <i>What are students expected to do?</i>	Content: <i>What are students expected to learn?</i>
Demonstrate a sustained intellectual curiosity about a scientific topic or problem of personal interest. Make observations aimed at identifying their own questions about the natural world.	The natural process by which certain traits that have a greater fitness for their environment lead to a reproductive advantage; this process happens within a population over time because of genetic variation.

#### 6. ASSESSMENT PLAN

Key resources: [Instructional Design Map](#) and <https://curriculum.gov.bc.ca/classroom-assessment>

*How will students demonstrate their learning or achieve the learning intentions? How will the evidence be documented and shared? Mention any opportunities for feedback, self-assessment, peer assessment and teacher assessment. What tools, structures, or rubrics will you use to assess student learning (e.g., Performance Standard Quick Scale)? Will the assessments be formative, summative, or both?*

Students will be each be given a worksheet to write their guesses and answers on and to follow along with the lesson. They will have manipulatives to act out evolution by natural selection. The lesson will be formative, an introduction to the new unit.

#### 7. DESIGN CONSIDERATIONS

Key resources: [Instructional Design Map](#)

*Make brief notes to indicate how the lesson will meet needs of your students for: differentiation, especially for known exceptionalities, learning differences or barriers, and language abilities; inclusion of diverse needs, interests, cultural safety and relevance; higher order thinking; motivations and specific adaptations or modifications for identified students or behavioral challenges. Mention any other design notes of importance, e.g., cross-curricular connections, organization or management strategies you plan to use, extensions for students that need or want a challenge.*

Allowing students time and re-explaining instructions as needed. Students will be working in groups and as a whole class.

**Required preparation:** *Mention briefly the resources, material, or technology you need to have ready, or special tasks to do before the lesson starts, e.g., rearrange desks, book a room or equipment.*

I will make sure the supplies needed are provided (binder clips, "food", cup), students will be expected to bring their own pencils.



8. LESSON OUTLINE

Instructional Steps	Student Does/Teacher Does ( <i>learning activities to target learning intentions</i> )	Pacing
<p><b>OPENING:</b>  <i>e.g., greeting students, sharing intentions, look back at what was learned, look ahead to what will be learning, use of a hook, motivator, or other introduction to engage students and activate thinking and prior knowledge</i></p>	<ul style="list-style-type: none"> <li>• Introduce new topic - Evolution and Natural Selection.</li> <li>• Introduce the lesson for today.</li> </ul>	<p>5 mins.</p>
<p><b>BODY:</b></p> <ul style="list-style-type: none"> <li>• <i>Best order of activities to maximize learning – each task moves students towards learning intentions</i></li> <li>• <i>Students are interacting with new ideas, actively constructing knowledge and understanding, and given opportunities to practice, apply, or share learning, ask questions and get feedback</i></li> <li>• <i>Teacher uses learning resources and strategic opportunities for guided practice, direct instruction, and/or modelling</i></li> <li>• <i>Can include: transitions, sample questions, student choices, assessment notes (formative or otherwise), and other applications of design considerations</i></li> </ul>	<ul style="list-style-type: none"> <li>• I will be reading the back story for "Clipland" and how the ClipBirds population somehow got divided and confined to the East and West sides of the island.</li> <li>• I will ask the students what is the same and what is different about the ClipBirds on the booklet (different sized beaks). Just like in real life, different birds have different beaks for example: hummingbirds and eagles – different beak sizes and shapes for different types of food, and the birds themselves are different sizes. Bigger beaks, bigger birds require more food/energy.</li> <li>• I will then write on the board the food and its Megacalorie value. Different foods have different values.</li> <li>• I will divide the students into 2 groups of 6 one group will be the "east coast clipbirds" and the other will be the "west coast clipbirds", and one student will be chosen to be the "watcher" to make sure no cheating goes on.</li> <li>• I will demonstrate how the ClipBirds will be eating, actually using the binder clips to pick up the food and drop it into their cups or "stomachs", not scraping it off the table into the cup (this is where the watchers come in).</li> <li>• I will hand to each group 2 small, 2 medium, and 2 large binder clips and 6 cups to each group.</li> <li>• Then I will spread out the food designated for each side of the island and give them 20 seconds to "eat" all that they can.</li> <li>• After the Feeding Frenzy I will go back to the Food Transparency Chart and get students to calculate the food that they ate. If a student/ClipBird doesn't eat enough to survive they hand in their Beak and sit down, the ones who did eat enough continues as part of the population. I'll also get the students to clean up the food before moving on.</li> <li>• For the students who ate enough to reproduce they will get another "beak" the same size and choose a student to be their "offspring".</li> <li>• Using the ClipBird Populations transparency record 2 birds in each of the boxes labeled "1<sup>st</sup> Season" as that was the initial number. Get all the now-living ClipBirds to raise their hand so we as a class can count and record them and their offspring in the 2<sup>nd</sup> Season box.</li> <li>• REPEAT the Feeding Frenzy and Recording for Seasons 3 and 4.</li> <li>• Have students return the "beaks" and do clean up.</li> <li>• Get students back to their seats and ask what the numbers they recorded indicate?</li> <li>• I will ask the students to describe what happened to the ClipBirds Population and what they think caused the changes.</li> </ul>	<p>40 mins.</p>



<p><b>CLOSING:</b></p> <ul style="list-style-type: none"> <li>• Closure tasks or plans to gather, solidify, deepen or reflect on the learning</li> <li>• review or summary if applicable</li> <li>• anticipate what's next in learning</li> <li>• "housekeeping" items (e.g., due dates, next day requirements)</li> </ul>	<ul style="list-style-type: none"> <li>• Let students know how much time is left in class.</li> <li>• Reflect on the data shared and analyzed and what they have learned about the ClipBird populations for the East and West sides.</li> </ul>	<p>5 mins.</p>
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9. REFLECTION (anticipate if possible)

<ul style="list-style-type: none"> <li>• Did any reflection <u>in</u> learning occur, e.g., that shifted the lesson in progress?</li> <li>• What went well in the lesson (reflection <u>on</u> learning)?</li> <li>• What would you revise if you taught the lesson again?</li> <li>• How do the lesson and learners inform you about necessary next steps?</li> <li>• Comment on any ways you modelled and acted within the Professional Standards of BC Educators and BCTF Code of Ethics?</li> <li>• If this lesson is being observed, do you have a specific observation focus in mind?</li> <li>• Reflection on going through the whole activity first so students know what's going on and what to expect.</li> <li>• After lesson reflect on pacing as well as showing/demonstrating for the students.</li> </ul>
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<b>UNBC</b> <b>School of Education</b>  <b>EDUC 490</b> <b>CT/PE Observation form</b>	Teacher Candidate: <u>Lisa Seymour</u> Date: <u>Nov 28</u>
	School: <u>Skene Middle School</u> Time: <u>100-210</u>
	Coaching Teacher: <u>S. Klassen</u>
	Grade: <u>7</u> Subject/Lesson: <u>Science - Natural Selection</u>
	Practice Evaluator: <u>D. Lutz</u>

- Criteria Guidelines:  
This list of topics is suggested only:
- Professional Qualities**
- Communication Skills
  - Work Ethic/Initiative
  - Attitude/Commitment
  - Interpersonal Skills
  - Humour
  - Energy/Appearance
  - Professional Ethics
  - Reflectivity/Self-Evaluation
  - Collegiality/Teamwork
  - Parent Communication
- Planning/Preparation**
- Curriculum expectations
  - Competency expectations
  - Content Knowledge
  - Overviews/Unit Plans
  - Advance Preparation
  - Lesson Plans
  - Principles of Learning
  - Organization
  - Time Management
  - Differentiated Instruction
  - Assessment (Formative and Summative)
- Relationship Building**
- Classroom Community
  - Relationship with Students
  - Teaching Presence
  - Gaining and Keeping Focus on learning
  - Student Engagement and Motivation
  - Transitions/Directions/Routines

Natural Selection

Today we are going to do an activity about Natural Selection.

Student: what is natural selection?  
Lisa: We will find out soon!

I need someone to hand out this booklet.

- tells story about Clitland.

OK: Now we need to divide into 2 groups of 7.

- divides class into 2 "West side and East side.

As I write on the board, form your groups yourselves into 1 big group.

(students understand this)  
- great time saver

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Learning Activities

Instruction and Assessment

- Learning Intentions
- Co-developed or teacher developed Criteria
- Lesson Introduction
- Development/Flow/Progression of Learning
- Closure
- Resources/Hands-on Activities
- Instructional Strategies
- Supervision/Safety
- Questioning
- Assessment Strategies: self assessment, peer assessment and teacher assessment / evaluation
- Communicating Student Learning

Food Values Megacalories | Megacalories Needed

		To Survive	To reproduce
Marble fruit = 10	Big beak	60	120
Big tool fruit = 5	Med. Bill	25	50
Tiny tool fruit = 2	Small bill	16	32

As a class, went over and answered Q1 & Q2.

handed out beaks 2 big  
2 med  
2 small

to each group.

Feeding Frenzies 2, 3, 4.  
20 secs.

- Did the students answer the Qs after each 'season'?
- did you go over what to do, where to write for each feeding frenzy?

\* students seemed to really enjoy the activity!

Suggestions

1) Pace yourself when giving instructions

2) Go over booklet show example of 'how to'



Formal #2

**EDUC 490 Main Standards Checklist**

To be completed for each Formal Observation and summarized on the Summative Evaluation form. By the end of the practicum every standard must have been observed by CT or PE

BCTC Standard	Component Description	Goal
<b>Standard 1</b> Educators value the success of all students. Educators care for students and act in their best interests.	<ul style="list-style-type: none"> <li>Approach to classroom management indicates pleasant, caring, respectful and fair attitude towards students</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Ensures student learning environment is appropriate to activity</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Understands that equity does not necessarily mean equal</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Establishes balance in the classroom between intellectual and social goals and the expectations of society in education</li> </ul>	U/S
<b>Standard 2</b> Educators act ethically and maintain the integrity, credibility and reputation of the profession	<ul style="list-style-type: none"> <li>Is an ethical role model both on and off professional duty</li> <li>Conduct, dress, and appearance demonstrates an understanding that every individual in this profession contributes to the perception of the profession as a whole</li> </ul>	U/S
<b>Standard 3</b> Educators understand and apply knowledge of student growth and development	<ul style="list-style-type: none"> <li>Designs activities and assignments in an age, grade and culturally appropriate way</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Assesses individual and group performance in order to design instruction that meets individual learners' needs and interests</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Instructional materials reflect individual needs and interests of students</li> </ul>	U/S
<b>Standard 4</b> Educators value the involvement and support of parents, guardians, families, and communities in schools	<ul style="list-style-type: none"> <li>Lessons are planned and interactions occur in a way that relates to students' diverse personal, family, and community experiences, and are culturally appropriate</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Lessons are planned and interactions occur authentically in a way that focuses on students' personal, family, community experiences, and cultural backgrounds</li> </ul>	U/S
	<ul style="list-style-type: none"> <li>Differentiated instruction provides appropriate activities to support or challenge</li> </ul>	U/S
<b>Standard 5</b> Educators implement effective planning, instruction, assessment and reporting practices to create respectful, inclusive environments for student learning and development	<b>CLASSROOM COMMUNITY</b> <ul style="list-style-type: none"> <li>Classroom expectations are clear to students</li> <li>Behaves in a proactive manner, anticipates and remediates student responses in a respectful way</li> <li>Acknowledges the power of relationship and collaborates with the adult who has a long term relationship with student</li> <li>Non-instructional duties within the classroom are handled efficiently and in a professional manner</li> <li>Minimal loss of possible instructional time</li> </ul>	U/S
	<b>PLANNING</b> <ul style="list-style-type: none"> <li>Lesson plans and classroom learning activities indicate thoughtful planning has taken place in advance of lessons</li> <li>In response to suggestions, adjustments are made to plans</li> <li>Plans are linked to knowledge of classroom diversity and to students' needs and abilities</li> </ul>	U/S



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<p>Standard 5 continued...</p>	<p><b>INSTRUCTION</b></p> <ul style="list-style-type: none"> <li>• Pacing is reflexive and demonstrates the TC awareness of the learning</li> <li>• Monitors students to determine appropriate pace</li> <li>• Checks for student understanding</li> <li>• Effective transitions between individual activities are well planned and lead to little loss of instructional time</li> <li>• Specific procedures for changing subject/content area are taught and used effectively</li> <li>• Consistently helps students make connections between current content and their own background and experiences</li> <li>• Involves students in constructivist/inquiry-based learning</li> <li>• Provides variety of questions, probes for understanding, and helps students to articulate ideas</li> <li>• Ensures all students are involved in discussion</li> <li>• Provides sufficient wait time</li> <li>• Students actively engaged in the lesson</li> <li>• Checks for student understanding of problem solving and critical thinking</li> <li>• A variety of instructional strategies are incorporated into lesson based on subject matter and needs of students</li> <li>• Uses a variety of technologies to add impact to instruction and to increase student learning</li> </ul>	<p>U/S</p>
	<p><b>ASSESSMENT</b></p> <ul style="list-style-type: none"> <li>• Conveys consistent expectations for student achievement</li> <li>• Strong use of Assessment for Learning strategies</li> <li>• Instruction is appropriate for the grade level or course and is driven by student feedback</li> <li>• Appropriately challenges students by presenting material at a qualitatively high level</li> <li>• Students co-create criteria, or effective criteria is stated</li> <li>• Feedback includes qualitative comments to highlight both strengths or needs and there is evidence that students have implemented feedback</li> <li>• A cycle of instruction informed by assessment is established</li> <li>• Formative and/or summative evaluation uses a number of assessments</li> <li>• System for scoring and recording data is fully effective and up to date</li> <li>• Administration and parents receive data from multiple sources</li> <li>• Assessment and evaluation data is shared weekly with the Coaching Teacher</li> </ul>	<p>U/S</p>
<p>Standard 6 Educators demonstrate a broad knowledge base and an understanding of areas they teach</p>	<ul style="list-style-type: none"> <li>• Displays solid conceptual knowledge in subject areas</li> <li>• Uses inter-disciplinary approaches and plans for multiple ways of learning</li> </ul>	<p>U/S</p>
	<ul style="list-style-type: none"> <li>• Builds student capacities for intercultural understandings, empathy and mutual respect. Educators cultivate the values, beliefs and knowledge of Canada's democratic and inclusive society.</li> <li>• Invites students to elaborate upon the material based upon personal understandings</li> </ul>	<p>U/S</p>



<p><b>Standard 7</b> Educators engage in professional learning</p>	<ul style="list-style-type: none"> <li>• Employs reflective practices that enhance understanding and skill</li> <li>• Educators recognize and meet their individual professional needs</li> </ul>	<p>U/S</p>
<p><b>Standard 8</b> Educators contribute to the profession</p>	<ul style="list-style-type: none"> <li>• Develops and refines personal philosophy</li> </ul>	<p>U/S</p>
<p><b>Standard 9</b> Educators respect and value the history of First Nations, Inuit and Metis in Canada and the impact of the past on the present and the future. Educators contribute towards truth, reconciliation and healing. Educators foster a deep understanding of ways of knowing and being, histories and cultures of First Nations, Inuit and Metis in Canada</p>	<ul style="list-style-type: none"> <li>• Focus on connectedness and relationships to oneself, family, community and the natural world.</li> <li>• Integrate First Nations, Inuit and Métis worldviews and perspectives into learning environments.</li> <li>• Embed First Peoples Principles of Learning into classroom community of learners</li> <li>• Embeds TRC calls to action in daily classroom activities</li> </ul>	<p>U/S</p>

U=Unsatisfactory  
S= Satisfactory

Formal #2