** LESSON PLAN (PILOTED 2022)**

**Candidate’s name:**

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| Grade/Class/Subject: | Grade 4/ Math | School: | Sacred Heart |
| Date: | Feb 23/2022 | Allotted Time: | 1hr 15min |
| Topic/Title: | Addition, Subtraction, and Multiplication Sequences | | |

1. **LESSON ORIENTATION**

**Key resources:** [Instructional Design Map](https://www.dropbox.com/s/g7l0nd7jah1o927/InstructionalDesignMap.pdf?dl=0)

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| *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.* |
| To learn about the variety of different math sequences and how to use mathematical strategies to answer questions related to sequence.  JUMP math work book. |

1. **CORE COMPETENCIES**

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

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| **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.* |
| COMMUNICATION – Communicating  COMMUNICATION – Collaborating  THINKING – Creative Thinking  THINKING – Critical Thinking  THINKING – Reflective Thinking  PERSONAL AND SOCIAL – Personal Awareness and Responsibility  PERSONAL AND SOCIAL – Positive Personal and Cultural Identity  PERSONAL AND SOCIAL – Social Awareness and Responsibility | Questioning and investigating  I consider alternative approaches and make strategic choices. I take risks and recognize that I may not be immediately successful. I examine my thinking, seek feedback, reassess my work, and adjust.  Students are to engage with the manipulatives given by participating in class discussion and then using these strategies to find the answers to the equations in their workbooks. Students are encouraged to find different strategies that work for them to answer questions. |

1. **INDIGENOUS WORLDVIEWS AND PERSPECTIVES**

**Key resources:** First Peoples Principles of Learning (FPPL); [Aboriginal Worldviews and Perspectives in the Classroom](https://www2.gov.bc.ca/assets/gov/education/administration/kindergarten-to-grade-12/indigenous-education/awp_moving_forward.pdf)

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| **FPPL to be included in this lesson** *(check all that apply):* | *How will you embed Indigenous worldviews, perspectives, or FPPL in the lesson?* |
| Learning ultimately supports the well-being of the self, the family, the community, the land, the spirits, and the ancestors.  Learning is holistic, reflexive, reflective, experiential, and relational (focused on connectedness, on reciprocal relationships, and a sense of place).  Learning involves recognizing the consequences of one's actions.  Learning involves generational roles and responsibilities.  Learning recognizes the role of Indigenous knowledge.  Learning is embedded in memory, history, and story.  Learning involves patience and time.  Learning requires exploration of one's identity.  Learning involves recognizing that some knowledge is sacred and only shared with permission and/or in certain situations. | Students are to understand that learning takes patience to understand and that they need to take their time when solving equations if they are going to be successful. |

1. **BIG IDEAS**

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

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| *What are students expected to understand? How is this lesson connected to Big Idea/s or an essential question?* |
| Development of computational fluency and multiplicative thinking requires analysis of patterns and relations in multiplication and division.  Regular changes in patterns can be identified and represented using tools and tables.  Essential Question: Can I use manipulatives to solve sequence equations? |

1. **LEARNING STANDARDS/INTENTIONS**

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

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| **Curricular Competencies:**  *What are students expected to do?* | **Content:**  *What are students expected to learn?* |
| Understanding and solving   * Develop and use multiple strategies to engage in problem solving   Students are to use manipulatives and mental math to develop multiple strategies to solve equations involving sequences. | * Increasing and decreasing patterns * Addition and subtraction to 10 000   Students are expected to learn how to use the manipulatives to add or subtract in a sequence. |

1. **ASSESSMENT PLAN**

**Key resources:** [Instructional Design Map](https://www.dropbox.com/s/g7l0nd7jah1o927/InstructionalDesignMap.pdf?dl=0) and<https://curriculum.gov.bc.ca/classroom-assessment>

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| *How will students demonstrate their learning or achieve the learning intentions? How will they know if they are proficient? How will the evidence be collected, 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 demonstrate their learning by participating in discussion in the beginning of the lesson and then by filling out their workbook. Students will know they are proficient when they have finished a few questions in the workbook using the manipulatives given. Evidence will be documented in their workbook which teacher will assess is being done correctly by circulating the room and helping students when needed. This assessment will be formative. |

1. **DESIGN CONSIDERATIONS**

**Key resources:** [Instructional Design Map](https://www.dropbox.com/s/g7l0nd7jah1o927/InstructionalDesignMap.pdf?dl=0)

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| *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 behavioural 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.* |
| Differentiation will be used in the form of manipulatives by giving students several strategies to complete the work needed including: manipulatives, fingers, and mental math. Teacher will also make sure to take time going through examples as a class to ensure learners do not have any questions before beginning.  All students: must use the manipulatives to answer questions.  Most students: can use one or two strategies they really like to answer questions.  Some students: could use several different strategies to complete questions |
| **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.* |
| * Popsicle sticks (some sort of manipulatives) * Workbooks handed out |

1. **LESSON OUTLINE**

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| **Instructional Steps** | **Student Does/Teacher Does** *(learning activities to target learning intentions)* | **Pacing** |
| **OPENING:**  *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* | Begin lesson by saying we will be learning about addition and subtraction sequences before handing out manipulatives.  Each student should be given 20 manipulatives while teacher writes an “I can statement” on the white board. | 5-10min |
| **BODY:**   * *Best order of activities to maximize learning -- each task moves students towards learning intentions* * *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* * *Teacher uses learning resources and strategic opportunities for guided practice, direct instruction, and/or modelling* * *Can include: transitions, sample questions, student choices, assessment notes (formative or otherwise), and other applications of design considerations* | Do 3-5 practice questions with the manipulatives of varying difficulties for both addition and subtraction:   1. 4 \_\_ 8= Add 4 1) 6\_\_ 2= Subtract 4 2. 12 \_\_ 18= Add 6 2) 19\_\_ 10= Subtract 9 3. 33 \_\_ 40= Add 7 3) 46\_\_ 39= Subtract 7   Students can use the manipulatives given or their fingers to count.  Once students seem to grasp the concept move onto finding the pattern:  5\* 10\* 15\*\_\_\*\_\_ Pattern increases by 5 so the next 2 numbers are 20 and 25.  Explain this as a 2-step process where students find the gap between the numbers first before finding the next numbers in the pattern.  Next do a subtraction pattern as a class:  20\* 16\*12\* \_\_\* \_\_= Subtract 4 next numbers 8 and 4  Answer any questions before giving students time to work in their workbook’s pages 99-104.  Once the majority of students are finished and time permits give a 5min warning before explaining multiplication sequences.  Follow a similar explanation of addition and subtraction sequences doing 1 or 2 practice questions with the students before allowing them to work in their workbook’s pages 105-106. | 5min  5-10min  30min  15-25min |
| **CLOSING:**   * *Closure tasks or plans to gather, solidify, deepen or reflect on the learning* * *review or summary if applicable* * *anticipate what’s next in learning* * *“housekeeping” items (e.g. due dates, next day requirements* | Wrap up by asking if there are any other questions about the learning today and assigning any unfinished pages as homework for the next day. | 2min |

1. **REFLECTION** *(anticipate if possible)*

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| * *Did any reflection in learning occur, e.g. that shifted the lesson in progress?* * *What went well in the lesson (reflection on learning)?* * *What would you revise if you taught the lesson again?* * *How do the lesson and learners inform you about necessary next steps?* * *Comment on any ways you modelled and acted within the Professional Standards of BC Educators and BCTF Code of Ethics?* * *If this lesson is being observed, do you have a specific observation focus in mind?* |
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