** LESSON PLAN (PILOTED 2022)**

**Candidate’s name:**

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| Grade/Class/Subject: | Grade 4/ Math | School: | Sacred Heart |
| Date: | March 2/ 2022 | Allotted Time: | 1hr 15min |
| Topic/Title: | Multiplying by adding on and multiplying by tens, hundreds, and thousands | | |

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.* |
| Understand multiplication by adding on through the use of manipulatives as well as how to multiplication facts involving 10s, 100s, and 1000s. |

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 can use what I know and observe to identify problems and ask questions. I explore and engage with materials and sources.   Students are to use what they already know about arrays and multiplication to effectively use the manipulatives to answer questions in their workbook. Students are also expected to use their prior knowledge of multiplying by 10s to explore how to answer questions multiplied by 10s, 100s, and 1000s. |

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. | The FPPL that learning involves patience and time is embedded within this lesson by giving students the patience needed for them to fully grasp a new concept as well as give them the time needed to work through a problem. |

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.  Essential Question: Can I use what I already know about multiplying to learn multiplying by adding on as well as how to multiply by 10s, 100s, and 1000s? |

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?* |
| * Model mathematics in contextualized experiences * Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving   Students are expected to use the manipulatives given to model arrays by adding on as well as apply mathematical understanding and problem-solving skills to understand the patterns involved in multiplying by 10s, 100s, and 1000s. | * multiplication and division facts to 100 (introductory computational strategies)   Students are expected to learn how to multiply by adding on through the use of manipulatives as well as multiplication facts involving 10s. |

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 learning by participating in the class discussion while learning about the new concept as well as when they are able to complete some of the workbook correctly. Students will know they are proficient when they are able to answer at least ½ the assigned pages in the workbook correctly. Evidence will be documented through the workbook, and students will have a chance to get real time feedback as the teacher and EA’s circulate the room correcting students work. 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.* |
| All Students: must participate in class discussion and answer at least 2 questions in each section of their workbook  Most Students: can participate and ask questions in class discussion as well as complete the questions in their workbook  Some Students: could contribute to class discussion with questions or new ideas as well as complete all questions in the workbook and help those around them who are having trouble.  EA’s should circulate the room helping those who need it and correct work when students need it. |
| **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.* |
| * Find manipulative (Playdough preferred, but others are acceptable) * Workbook |

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* | Greet students and state what we will be learning today. Prompt students to state what they remember about arrays; if students run into trouble remembering write a few arrays on the board to solve as a class. | 5min |
| **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* | Ideas for Multiplying by adding on:  Sculpt playdough arrays plus adding on.  Set boundaries with the playdough; what are we doing with our hands while teacher is talking (not playing with the playdough), are we sharing our playdough (no), where is the playdough supposed to be (on their desks), and talk about how the playdough is a tool to help us learn.  Students are to listen to instructions and answer the boundary setting questions.  Teacher will hand out playdough.  Students will wait to receive their playdough and take it out of the container while waiting for teacher to get ready.  Teacher will then write an equation on the whiteboard that students will create an array out of. EX: 4x3. After students are given sufficient time teacher will draw the array on the white board.  After writing the array teacher will explain how to multiply by adding on by prompting students to remember how she has helped other students previously; in this case teacher would ask if students know what 3 x 2 is and then 3 x 3. Teacher will then write the adding on statement for students to change their already created array out of. 4x3 🡪 3x3 + 3  Do another array example following the same method as the previous equation.  Students are to engage with the lesson by raising their hand, asking questions, and answering questions throughout.  Move onto the last part of the workbook by asking students to turn the product into a smaller sum similar to what they did previously.  6x4= (5x4) + 4 = 20 + 4= 24  \*Only move onto the next topic if students grasp the previous concept; if they seem to be struggling move onto the workbook before beginning a new section - Maybe offer students the choice if they are ready to learn a new concept or to do the workbook if they feel they need to practice the first skill before moving on.  Multiplying by tens, hundreds, and thousands:  Use the blocks to represent multiplication statements.  Prompt students to state their knowledge of multiplication facts involving 10s, 100s, and 1000s.  Ensure students know the rule that if something is multiplied by 10 it will always end in 0. Do some sample questions;  10 x 3= 30 so 10 x 30= 300 students need to recognize that if there is a 0 at the end of both #s it adds another 0 to the answer so  10 x300= 3000 and 10 x30000= 300000  You can also break this down by adding the 0s at the end so 6 x20 turns into 6x2= 12 first and then the 10s are added back so the answer would be 120.  Finish lesson portion with a video: <https://www.youtube.com/watch?v=8g6EJX_qLSU>  Give students time to do their workbooks. | 5min  5min  10-15min  10min  15min  5min  30min |
| **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* | Finish by assigning the last pages of the workbook for homework. | 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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