

LESSON PLAN: "Groups of" Multiplication Practice with Word Problems

Candidate's name: Madison Webb

Grade/Class/Subject:	Grade 3 Mathematics	School:	
Date:	Friday, March 8, 2024	Allotted Time:	30 minutes
Topic/Title:	"Groups of" Multiplication Practice with Word Problems		

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.

The purpose of this lesson is to develop student understanding of multiplication word problems. This is our second lesson focused on word problems and the lesson is designed to give students lots of time to practice solving multiplication word problems independently. During this lesson, 1-2 word problems will be solved through guided practice on the Smartboard and then students will be released to independent work where they will work through word problems on their own.

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 type="checkbox"/> THINKING – Creative Thinking <input checked="" type="checkbox"/> THINKING – Critical Thinking & Reflective Thinking <input checked="" 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>Communicating: I communicate purposefully, using forms and strategies I have practiced.</p> <ul style="list-style-type: none"> Students will communicate their thinking as we discuss how to solve the guided practice word problem as a class. They will also communicate their thinking on their individual worksheets. <p>Critical Thinking & Reflective Thinking: I can use evidence to make simple judgements.</p> <ul style="list-style-type: none"> Students will share their thinking as they participate in our discussion of how to solve the guided practice word problem. Students will verbally respond to my interactive questions. Students will use their critical thinking skills to discern what information in the word problem is relevant to answering the question. They will make simple judgments about how to use the information and show their answer in a short sentence. <p>Personal Awareness and Responsibility: I can initiate actions that bring me joy and satisfaction and recognize that I play a role in my well-being.</p> <ul style="list-style-type: none"> Students will be encouraged to express their needs and ask for help during independent work time. Students will be responsible for completing a certain level of work and attending to any corrections before they are allowed to participate in centres. Students recognize that they play a role in how their day unfolds and can take action to help ensure they reach the desired outcome.

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 <i>(check all that apply):</i>	<i>How will you embed Indigenous worldviews, perspectives, or FPPL in the lesson?</i>
<ul style="list-style-type: none"> <input checked="" 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 checked="" type="checkbox"/> Learning involves recognizing the consequences of one's actions. <input type="checkbox"/> Learning involves generational roles and responsibilities. <input 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. 	<ul style="list-style-type: none"> ● During this lesson, students will be working to develop their understanding of multiplication and their ability to apply their understanding to realistic, word problem scenarios. Gaining these skills supports student and community well-being by supporting the development of foundational math skills. Additionally, this lesson will be delivered in a manner that prioritizes and supports student well-being and does not place unnecessary stress on students as they learn. ● During this lesson, students with corrections will be required to correct their work before submitting it. This will help students to see that actions have consequences while simultaneously helping them to see that when we make mistakes, we can take the opportunity to try again and learn from our errors. ● The word problems presented to students today are part of a story. Each problem on the worksheet helps the characters in the story through their problems. This will help students to see that learning can be embedded in story. ● This lesson is part of a unit of lessons on the “groups of” multiplication strategy. This is our second lesson focused on word problems. Students will have plenty of time to work on their individual worksheets and they will be aware that these important concepts may take time to master which demonstrates that learning takes patience and time.

4. BIG IDEAS

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

<i>What are students expected to understand? How is this lesson connected to Big Idea/s or an essential question?</i>
<p>Big Idea: Development of computational fluency in addition, subtraction, multiplication, and division of whole numbers requires flexible decomposing and composing.</p> <p>By the end of this lesson, students are expected to understand how to solve a multiplication word problem on their own by writing out the multiplication question, drawing out the groups and the dots in each group, writing out the repeated addition statement, finding the product, and writing a short sentence to show their answer.</p> <p>This lesson addresses the following essential questions:</p> <ol style="list-style-type: none"> 1. What are the parts of a multiplication equation and what do the factors tell us? 2. How can the “groups of” strategy be used to understand and work through multiplication problems?

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>
<p>Reasoning and analyzing:</p> <ul style="list-style-type: none"> ● Use reasoning to explore and make connections ● Model mathematics in contextualized experiences <p>Understanding and solving:</p> <ul style="list-style-type: none"> ● Visualize to explore mathematical concepts ● Develop and use multiple strategies to engage in problem solving <p>Communicating and representing:</p> <ul style="list-style-type: none"> ● Use mathematical vocabulary and language to contribute to mathematical discussions ● Represent mathematical ideas in concrete, pictorial, and symbolic forms 	<p>Multiplication concepts:</p> <ul style="list-style-type: none"> ● Understanding concepts of multiplication (e.g. groups of, arrays, repeated addition) ● Provide opportunities for concrete and pictorial representations of multiplication

6. ASSESSMENT PLAN

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

<p><i>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? Will you use observations, have targeted conversations, or collect products? 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?</i></p>
<p>Students are continuing to strengthen their understanding of multiplication word problems using the “groups of” strategy. All assessments connected to this lesson will be formative.</p> <p>During the guided practice portion of this lesson, I will make observations about student understanding and aim to get as many students involved in the discussion as possible. Lots of positive praise and follow-up questions to prompt students to elaborate on their answers to show their thinking will be used.</p> <p>Students will complete 1-2 independent worksheets during this lesson. The worksheets will be assessed for their ability to show the steps to solve the practice problems, accuracy, and understanding. Students will have the opportunity to work through any corrections they may have. The following assessment strategies will be used:</p> <ul style="list-style-type: none"> ● Observational assessments. I will circulate the room as students work to answer any questions and ensure they are on the right track. I will also provide feedback as I circulate. ● As students finish their worksheets, I will assess them. Students with corrections will be sent back to their desks to complete their corrections.

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 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: The number of practice problems students will be required to complete may be differentiated. There are two practice worksheets available in this lesson. All students will be given worksheet #1. They will complete the worksheet and bring it up to me for assessment. If they finish worksheet #1 and any corrects early enough in the block, I will hand them worksheet #2. Worksheet #2 will follow the same procedures as worksheet #1 but the numbers in the questions are larger so it will be slightly more challenging. Students who demonstrate diligence during their independent work time but do not manage to move onto the second worksheet will not be required to complete the second worksheet. It may be best that these students finish the first worksheet and complete quality work rather than rushing to get through both sheets. I will monitor student progress as the lesson unfolds. If some students do not manage to finish the first worksheet during this lesson, I will work one-on-one with them in the afternoon to complete it and gauge their understanding.

Some students may struggle to read the word problems on their own. I will read all the word problems aloud to the class before they are released to independent work. There will be an education assistant in the room at this time to support two students who struggle with reading/writing. I will encourage students to raise their hands for help. Some students who feel they need extra support with reading the problems may be invited to work in a small group at the back table.

The practice problem in the prepared slide deck is colour-coded to match the anchor chart students can reference as they work to solve their multiplication word problems. The first factor which tells us how many groups to draw is always green, the second factor which tells us how many dots to draw in each group is always blue, and the product is always red. The colour coding system helps students to read the questions and identify what each number in the multiplication problem communicates to them.

Management & Motivation: Smiley face stamps will be stamped onto work that is approved to be submitted to the math bin. Students must complete all of their work for the day before they can play at centres so this will serve as a motivator. I also give out star stickers to students who demonstrate that they are “stars of neatness” by producing exceptionally neat math work.

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.*

- Anchor chart displaying what each factor in the multiplication problem tells us
- Access to Smartboard
- Access to document camera
- Access to prepared slides with colour-coded practice problems
- Class set of “Multiplication Word Problems” worksheet
- Class set of “Multiplication Word Problems #2” worksheet
- Prepared answer key to both worksheets
- Printed out lesson plan

8. LESSON OUTLINE

Instructional Steps	Student Does/Teacher Does (<i>learning activities to target learning intentions</i>)	Pacing
<p>OPENING: <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>	<p>The prepared slide deck of colour-coded word problems will be displayed on the Smartboard when the lesson begins.</p> <p>I do: Greet students with, “Good morning Grade 3!” They respond by saying, “Good morning Miss Webb.”</p> <p>I do: Share the learning activities for this lesson.</p> <ul style="list-style-type: none"> ● “Today, we are continuing to practice solving multiplication word problems. We will work together to solve the first question on the worksheet I am about to hand out and then you will use the rest of our class time today to solve the rest of the questions on your own.” <p>I do: Instruct the students in charge of handouts to distribute the “Multiplication Word Problems” worksheet (This one is about a class field trip to a bird zoo).</p> <p style="text-align: center;"><i>Transition to guided practice</i></p>	<p>2 minutes</p>
<p>BODY:</p> <ul style="list-style-type: none"> ● <i>Best order of activities to maximize learning -- each task moves students towards learning intentions</i> ● <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> ● <i>Teacher uses learning resources and strategic opportunities for guided practice, direct instruction, and/or modelling</i> ● <i>Can include: transitions, sample questions, student choices, assessment notes (formative or otherwise), and other applications of design considerations</i> 	<p>I do: Once all students are seated and have the “Multiplication Word Problems” worksheet in front of them, we will work through the first problem together.</p> <ul style="list-style-type: none"> ● Step 1: Read out the question. ● Step 2: Write out the multiplication sentence. <ul style="list-style-type: none"> ○ Ask, “Can anyone tell me what the multiplication sentence is?” ○ Write out the multiplication sentence across the top of the workspace and have students do the same on their worksheets. ● Step 3: Draw out the groups. <ul style="list-style-type: none"> ○ Ask, “Who can tell me how many groups we need to draw?” (draw the groups out using green on the board) ○ Prompt students to draw the groups on their page. ○ Ask, “Who can tell me how many dots we need to draw in each group?” (draw the dots using blue on the board) ○ Prompt students to draw in the dots on their page. ● Step 4: Write out the repeated addition. <ul style="list-style-type: none"> ○ Ask, “Who can tell me what the repeated addition sentence is for this question?” (write it on the board using blue) ○ Prompt students to write out the addition neatly under their drawing on their worksheets. ● Step 5: Find the product. <ul style="list-style-type: none"> ○ Ask, “Who can tell me what the product is?” (write it using red on the board) 	<p>3-5 minutes for guided practice</p> <p>20 minutes for individual practice</p>

	<ul style="list-style-type: none"> ○ Prompt students to write the product on their worksheets and remind them to write it at the end of the repeated addition sentence and at the end of the multiplication sentence. <ul style="list-style-type: none"> ● Step 6: Write a short sentence to show the answer. <ul style="list-style-type: none"> ○ Re-read the end of the question and ask the class, “What could we write to show our answer in a short sentence?” ○ Write the sentence on the board using the black marker. ○ Prompt students to write the sentence down and remember that a sentence begins with a capital and ends with a period. <p>I do: Read the remaining three word problems on the worksheet out loud. Ask students if they have any questions.</p> <p>I do: Remind students to take their time, read through the question carefully, be neat, and remember to write a short sentence showing the answer.</p> <p>I do: Release students to independent practice and let them know that if they need help they can raise their hands.</p> <p>I do: As students finish their work, they will bring it up to me at the teacher’s desk and I will assess it. Students will have the opportunity to attend to their corrections and bring it back to me.</p> <p>I do: If some students finish “Multiplication Word Problems” quickly and there is time remaining in our work block, I will set them up with the “Multiplication Word Problems #2” worksheet which follows the same procedures (“Multiplication Word Problems #2” is centred around a character named Jane who is preparing for her birthday party). This sheet will be for extra practice. Students who do not complete “Multiplication Word Problems #2” during math will not be expected to complete it during unfinished work time.</p>	
<p>CLOSING:</p> <ul style="list-style-type: none"> ● 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) 	<p>I do: Thank students for their efforts today. Ask that they finish working on the question they are currently focused on, turn their worksheets in, and clean up.</p> <p>I do: Let students know that those who have not yet finished the first worksheet, will have an opportunity to complete it during our unfinished work block in the afternoon.</p> <p>I do: Let students know that next week, we will begin reviewing what we learned during my time with them.</p> <p style="text-align: center;"><i>Transition into Social Studies</i></p>	<p>2 minutes</p>

9. REFLECTION (*anticipate if possible*)

- 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?

This lesson went really well! I am very pleased with how smoothly the lesson progressed and how hard students worked to complete their worksheets by the end of the block! The lesson unfolded exactly as planned. I worked with the class to solve question #1 on their worksheets together and then they worked diligently to answer the remaining 3 questions on the worksheet. Students were engaged in the lesson and participated eagerly as we worked through the first question together. I assessed their work as they finished it and by the end of the block, all students were successful in their understanding and had finished all of their corrections. The pacing of this lesson was great and I am happy with the progress I am making in terms of timing my lessons this week. Throughout the lesson, I called attention to and held up examples of student work that was completed properly. I incorporated lots of positive praise and as I worked one-on-one with students to address their corrections, I made sure to highlight the aspects of the question they had completed correctly. During this lesson, I was trying to ensure that I spoke loudly, clearly, and confidently with a firm, yet positive tone. I am growing in this area and I am excited to keep working to polish it. Professional Standards 1, 3, and 5 connect to this lesson.

If taught this lesson again, I would be more intentional with the phrasing of my language during moments of classroom management. The students are used to firm phrasing in this classroom so when I say something like, "Girls, can you please be quiet in the line?" they do not really respond until I rephrase it to, "Girls, please quiet down."

Students were successful in their understanding and many of them can explain why they are doing the steps they are doing and explain their thinking. Today was our second lesson focused on word problems. I feel confident in moving on to review during our next two lessons before our summative assessment on Wednesday. Our math lessons on Monday and Tuesday will be focused on working through a review packet filled with a few questions based on what we learned at the very beginning of the unit, several from the middle of the unit, and a few word problems from the end of the unit.