UNBC UNIVERSITY OF NORTHERN BRITISH COLUMBIA

LESSON PLAN (PILOTED 2022)

Candidate's name: Kieron Vick

Grade/Class/Subject:	1/Math	School:	Thornhill Primary School
Date:	November 7, 2024	Allotted Time:	25 Minutes
Topic/Title:	Adding Numbers with a Sum of 10 or Greater with Rekeneks.		

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 in Mrs. Watson's class have been working on addition and subtraction with single digit numbers for a while, and are now beginning to transition to adding doubles and addition with a sum that is greater than 10. For this lesson, students will use physical Rekenreks along with the teacher to model the different problems the teacher presents with it for adding digits together that create a sum greater than 10, with the goal of building stamina in math as the students begin to work their way towards number concepts to 20.

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.*
☐ 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	Communication: Students communicate with intention and purpose. They understand that communication can influence, entertain, teach, inspire, and help us make sense of the world and our experiences. Students communicate by receiving and presenting information, and engage in informal and structured conversations in which they listen, contribute, develop understanding and relationships. Thinking: Math arguably requires all ranges of thinking, and this will be explored during the lesson. Students apply critical, metacognitive, and reflective thinking in given situations, and relate this thinking to other experiences, using this process to identify ways to improve or adapt their approach to learning. Students think critically to develop ideas, and learn to engage in inquiry when they identify and investigate questions. Personal and Social: Because this lesson takes place in a group setting, all students have the responsibility of promoting a safe environment, being aware of their surroundings and themselves. Students who are personally aware and responsible have a sense of self-worth and growing confidence in a variety of situations, and are personally aware and responsible take ownership of their choices and actions.

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?*
☐ 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.	Because this lesson heavily emphasizes mathematics and is limited in time, most areas of the FPPL will not be targeted. That being said, because this lesson takes place in a collective setting, learning will support the well-being of all individual students and the community of the classroom, which also means students will recognize the consequences of their actions if they are misbehaving and disrupting their peers. The learning will be reflexive, reflective, and experiential; because math is naturally a complex subject that has layers of understanding to it, the learning will involve patience and time to be able to understand tougher math problems that will be explored.

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?
- Numbers to 20 represent quantities that can be decomposed into 10s and 1s. - Addition and subtraction with numbers to 10 can be modelled concretely, pictorially, and symbolically to develop computational fluency.

5. LEARNING STANDARDS/INTENTIONS

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

Curricular Competencies: *What are students expected to do?*	**Content:** *What are students expected to learn?*
Reasoning and analyzing: - Reasoning and analyzing. - Model mathematics in contextualized experiences. Understanding and solving: - Develop, demonstrate, and apply mathematical understanding through play, inquiry, and problem solving. - Visualize to explore mathematical concepts. - Develop and use multiple strategies to engage in problem solving. Communication and representing:	- Number concepts to 20. - Ways to make 10. - Addition and subtraction to 20. - Change in quantity to 20, concretely and verbally.

- Communicate mathematical thinking in many ways.	

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 they know if they are proficient? How will the evidence be collected, documented and shared? Will you use **observation**s, 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?*
The assessment for this lesson will be strictly formative, as students continue to progress in math and start to encounter slightly more difficult addition and subtraction questions. The assessment will be based on observations, as I will ask all the students in a group setting to model me and then answer different addition problems I present to them with their Rekenreks. I will also have targeted conversations with students so that they can show me how they got their answers with the Rekenrek.

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.
All students will have equal access to the materials used and are capable of using them. There is a First Nations Support Worker present for math; if there are students who may have been away and need further help, or if there are students who may naturally need assistance with using the Rekenrek, she will be able to provide that extra support.
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.*
- Class set of Rekenreks ready to be handed out.   

8. LESSON OUTLINE

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*	At the beginning, I will settle the students in on the carpet as they are just coming back from the gym, make sure they are sitting properly (crisscross applesauce), staying quiet and are ready to receive instruction. Once they are all settled, I will hand out the Rekenreks that have two rows of 10 beads to all the students. After all the students have one, we will go over the Rekenreks (counting how many beads there are on them, then quickly go over some easier addition questions (such as 4 + 3, and 7 + 2) that they can model me doing.	5 Minutes
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*	Now that students have time to get their math minds going and are refamiliarized with the Rekenreks, I will start doing more addition problems on the Rekenrek which will slightly increase in difficulty as we do more. This lesson is all done collaboratively; I will start with adding from 10, then change it up to single digit addition that ends with a sum greater than 10. Since the Rekenrek has 10 beads in a row (and the students will know this because we will count all the beads in the introductory phase), we will all move them to the left, I will then say another number (2), and then we will move two beads from the bottom row to the left, leaving us a pictorial representation of 10 + 2. Once this is set up on all the Rekenreks, we will count all the beads, leading up to 12, which students will then understand that 10 + 2 = 12. I will repeat this a few times with different numbers (10 + x). After this, we will move away from starting from 10 beads at the top row and change it up to something like 6 + 6, and so on, continuing to challenge the students a little bit to add single digits to get a sum greater than 10. I will do a couple with the students so they can model what I am doing, then, I will ask them to do different equations (such as 7 + 4) and go around the carpet to check progress and give students some additional help if needed. Once done, we will review the question, and I will ask students to show me how they got the answer. We will repeat this process until the closing phase.	17 Minutes
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*	Once it is about time to wrap up and get the students ready for recess, I will quickly reflect on the learning the students have just engaged in and reiterate that we are going to continue working on number concepts to 20. Then, I will congratulate the students on their hard work as they will have certainly earned it! Students will then put their Rekenreks away and get ready for recess.	3 Minutes

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

• *Did any reflection <u>in</u> learning occur, e.g. that shifted the lesson in progress?* • *What went well in the lesson (reflection <u>on</u> 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?*