

Lesson Title: Cownters Farm

Course: Math Grade 2

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Learning Outcomes/Intentions

Formal Unit Outcome(s):

N2.1

Demonstrate understanding of whole numbers to 100 (concretely, pictorially, physically, orally, in writing, and symbolically) by:

- representing (including place value)
- describing
- skip counting
- differentiating between odd and even numbers
- estimating with referents
- comparing two numbers
- ordering three or more numbers.

[C, CN, ME, PS, R, V]

r) Represent a 2-digit numeral using ten frames or other proportional base ten materials.

v) Demonstrate how to count objects using groupings of 10s and 1s and explain how those groups help in the writing of the 2-digit number that represents the quantity of objects.

Objectives:

Students can represent 2-digit numbers using ten frames.

Students show grouping through translating what is on the die to what is on the tens frames (including any remainders).

Mathematical Process:

[ME] Mental mathematics and estimation- Students will use mental mathematics to estimate number groups that can be made (ex. 2,3,5,7) through a variety of math problems. They can estimate if the number will be odd or even if there will be any remainders leftover.

[R] Reasoning- Students will use reasoning by comparing their number group estimations to find the 2-digit number solution. Students will explain how they did the math to get the right answers and explain how they color in their sheets in order to get the remainder.

[V] Visualization- Students will visualize the number groups by counting blocks to aid in solving math problems. Students will draw in ten charts and be able to make groups within them, they will then color in the remainder in another color.

Essential Question:

How can you represent 2-digit numbers?
How can you use place value to understand numbers?
How can you represent numbers in a variety of ways?

First Nations Content

N/A

Assessment Evidence

Formative Assessments (Assessment for Learning):

Observe students rolling three dice and problem solve how many counters are needed to create these numbers.

Summative Assessments (Assessment of Learning):

Students will hand in their completed "Cownters" worksheet. The teacher can see based on the sheet if the students are understanding the concept of representing a 2-digit numeral.

Materials

Ten Frames
3 sets of Dice (per group)
Cownters
Worksheet on Cownters

Learning Plan

Learning Experiences & Instruction:

Students will be handed out "Cownters", and three different colours (6 cows of each colour). They will use the colours to colour in the cows on their counter sheets.

Students will also be handed out a worksheet.

Each student is creating a farm. You are only allowed to have 10 cows per section of land (10's frames).

In pairs, roll the three dice! This is how many cows you will each have at your farm.

Represent each cow with one colour of counters. Show this on your ten frame.

Fill up the first section of land (10 cows) before going onto the next.

How many sections of land did you fill up? (10 cows)

How many cows were left?

Complete this activity many times over. If students wish, they can start with two dice, then move up to representing three dice.

Engage-

Students will review their prior understanding of counting using 1 die to represent the cows (5 = 5 cows on the tens chart), then 2 dice (10 cows = one full tens chart full), then 3 dice (15 = one full tens chart, then 5 on the other tens chart).

Explore-

Students will explore how to add up numbers using dice and represent these numbers using “Cownters” on their ten frames.

How can you present numbers using pictures?

Show me how you got the total of the 3 dice using the “Cownters”?

Explain-

Students will explain how they solved problems as the teacher asks each group individually as they are working:

How can students support their ideas?

How can you use place value to understand numbers?

How can you represent numbers in a variety of ways?

How did you know you have the right total of Cows?

Elaborate/extend-

The teacher will ask after the lesson:

What is the smallest number of cows you can have? Why? Represent this number on your ten frame.

What is the most number of cows you can have? Why? Represent this number on your ten frames.

Evaluate-

Students will be given feedback throughout the lesson to ensure and encourage understanding.

The teacher will observe students working to represent numbers.

















Students will be submitting their “Cownters” sheet where they will be graded based on their completion.

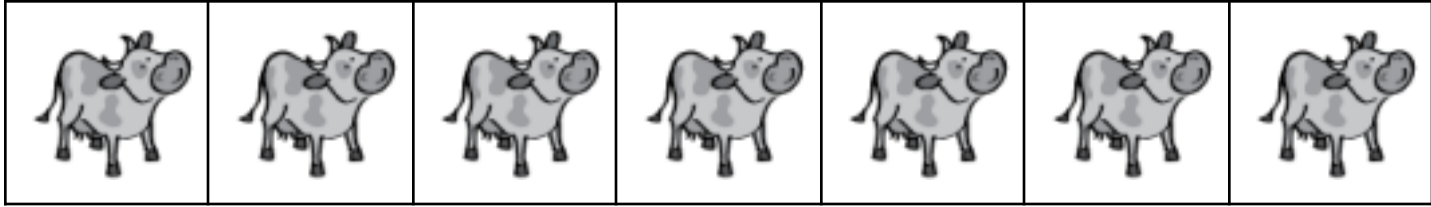
Based on this sheet, teachers will know if the students understand the concept or if we should spend more time on this idea.

Counting Cows NAME _____

Put your cows into the ten frames to help you count them.

Counters



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How Many Tens?

How Many Ones? NAME

If you had _____ cows and you wanted to group them into tens, how many groups of ten do you think you would have? _____ How many cows would be left over? _____

Draw the number you chose below (use circles for the candies).

Circle groups of ten in your drawing.

How many groups of ten are there? _____

How many are left over? _____

3. What is your number? _____

How many groups of ten could you make? _____

How many ones will be left over? _____

4. What is your number? _____

How many groups of ten could you make? _____

How many ones will be left over? _____

5. What is your number? _____

How many groups of ten could you make? _____

How many ones will be left over? _____

6. What is your number? _____

How many groups of ten could you make? _____

How many ones will be left over? _____

Counting Cows Recording Sheet

Record your work for each herd of cows you counted.



Herd 1:

1. How many ten frames are filled?

2. How many cows in are the ten frames? _____ 3.

How many leftover cows are there? _____ 4. How many cows

altogether?

_____ + _____ = _____ cows in
frames leftover cows total cows

Herd 2:

1. How many ten frames are filled? _____ 2. How many

cows are in the ten frames? _____ 3. How many

leftover cows are there? _____ 4. How many cows altogether?

_____ + _____ = _____ cows in
frames leftover cows total cows