

# Counting and Representing Numbers

## 1<sup>st</sup> Grade

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## Counting and Representing Numbers: Activity 1

**Learning Target:** Students will represent a number of objects with a written numeral.

**Connection:** Students will take any number and understand there are different ways to represent those numbers. Students will be exposed to a review of numbers 0-12 and asked to expand those numbers up to 20. Since first grade students are expected to add and subtract within 20, this activity will improve their ability to recognize and understand number concepts up to 20.

**Standards:** CC.1.NBT.A.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

**Mathematical Practices:**

**SMP 4: Model with Mathematics** ---Students use the appropriate models for numbers. They analyze their pictures to draw conclusions about their numbers.

**SMP 6: Attend to Precision** --- Students communicate with others using clear definitions and their own reasoning. Students use appropriate math vocabulary when discussing their pictures.

**Materials:** chart paper; Anno's Counting Book; markers or crayons; Handout 1;

**Procedures:**

- Introduce Anno's Counting Book. Ask students to predict what will happen in the story.
- Display first page and ask students what they notice in the story.
- Display the second page and ask students to discuss with a partner similarities and differences.
- Chart students' responses making sure to focus on key vocabulary.
- Continue reading Anno's Counting Book, discussing/counting the objects on each numeral's page.
- Break into small groups and introduce the activity:
  - Each group receives Handout 1 and teacher states the number (13-20) that each group will represent.
  - Ask "Think about how many ways you can represent your number?"
  - Have students work on their pages as teacher circulates. Teacher is a facilitator as students lead their own discussion and discovery.
  - Bring students together and discuss students' thinking regarding the learning target. Guide students to discover any misconceptions through questioning and discussion.
- Closure: Make a connection about ways numbers are represented around them. (Real-World)

**Adaptations:**

Higher-level --- use numbers greater than 20.

Lower-level --- strategically partnered; create guide for the written number on Handout;

Assessment: completed book pages; teacher observation on the process

## Counting and Representing Numbers: Activity 2

Learning Targets: Students will represent a number of objects with a written numeral.

Connection: Students will take any number and understand there are different ways to represent those numbers. Students will be exposed to a review of numbers 0-12 and asked to expand those numbers up to 20. Since first grade students are expected to add and subtract within 20, this activity will improve their ability to recognize and understand number concepts up to 20.

Standards:

CC.1.NBT.A.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Mathematical Practices:

SMP 4: Model with Mathematics ---Students use the appropriate models for numbers. They analyze their pictures to draw conclusions about their numbers.

SMP 6: Attend to Precision --- Students communicate with others using clear definitions and their own reasoning. Students use appropriate math vocabulary when discussing their pictures.

Materials: chart paper; base-10 blocks; markers or crayons; Handout 1; Anno's Counting Book

Procedures:

- Number Talk: Give a Number Talk using Dot Cards up to 12. Chart student discussion.
- Revisit Anno's Counting Book. Compare and contrast the students' book pages from Activity 1 with Anno's Counting Book.
- Given base-10 blocks, review using base-10 blocks to represent numbers.
- Students get back into previous groups and add base-10 representations to their pictures.
- Closure: Groups present their book pages to the class and explain their number representations.

Adaptations:

Higher-level --- use numbers greater than 20.

Lower-level --- strategically partnered; create guide for the written number on Handout;

Assessment: completed book pages; teacher observation on the process

## Counting and Representing Numbers: Activity 3

Learning Targets: Students will represent a number of objects with a written numeral.

Connection: Students will take any number and understand there are different ways to represent those numbers. Students will be exposed to a review of numbers 0-12 and asked to expand those numbers up to 20. Since first grade students are expected to add and subtract within 20, this activity will improve their ability to recognize and understand number concepts up to 20.

Standards:

CC.1.NBT.A.1: Count to 120, starting at any number less than 120. In this range, read and write numerals and represent a number of objects with a written numeral.

Mathematical Practices:

SMP 4: Model with Mathematics ---Students use the appropriate models for numbers. They analyze their pictures to draw conclusions about their numbers.

SMP 6: Attend to Precision --- Students communicate with others using clear definitions and their own reasoning. Students use appropriate math vocabulary when discussing their pictures.

Materials: markers or bingo daubers; Number Card Handout; teacher-created numeral-word matching game; base-10 blocks

Procedures:

- Students will choose a number 0-20 and complete their Number Card Handout at the stations.
  - o Station 1: Make dot cards using bingo daubers.
  - o Station 2: Play a numeral and word matching game. Write the correct word for the chosen number.
  - o Station 3: Use base-10 blocks to make numbers 0-20. Draw a quick picture of the chosen number.
  - o Station 4: Create a ten-frame for the chosen number using markers or bingo daubers.
  - o Station 5: Write the expanded form for the chosen number.

Adaptations:

Higher-level --- use numbers greater than 20.

Lower-level --- complete 3 stations; number word is filled in

Assessment: completed Number Card Handout; teacher observation on the process

Source: Number Talks. Sherry Parrish, 2010

Name: \_\_\_\_\_ Number Card

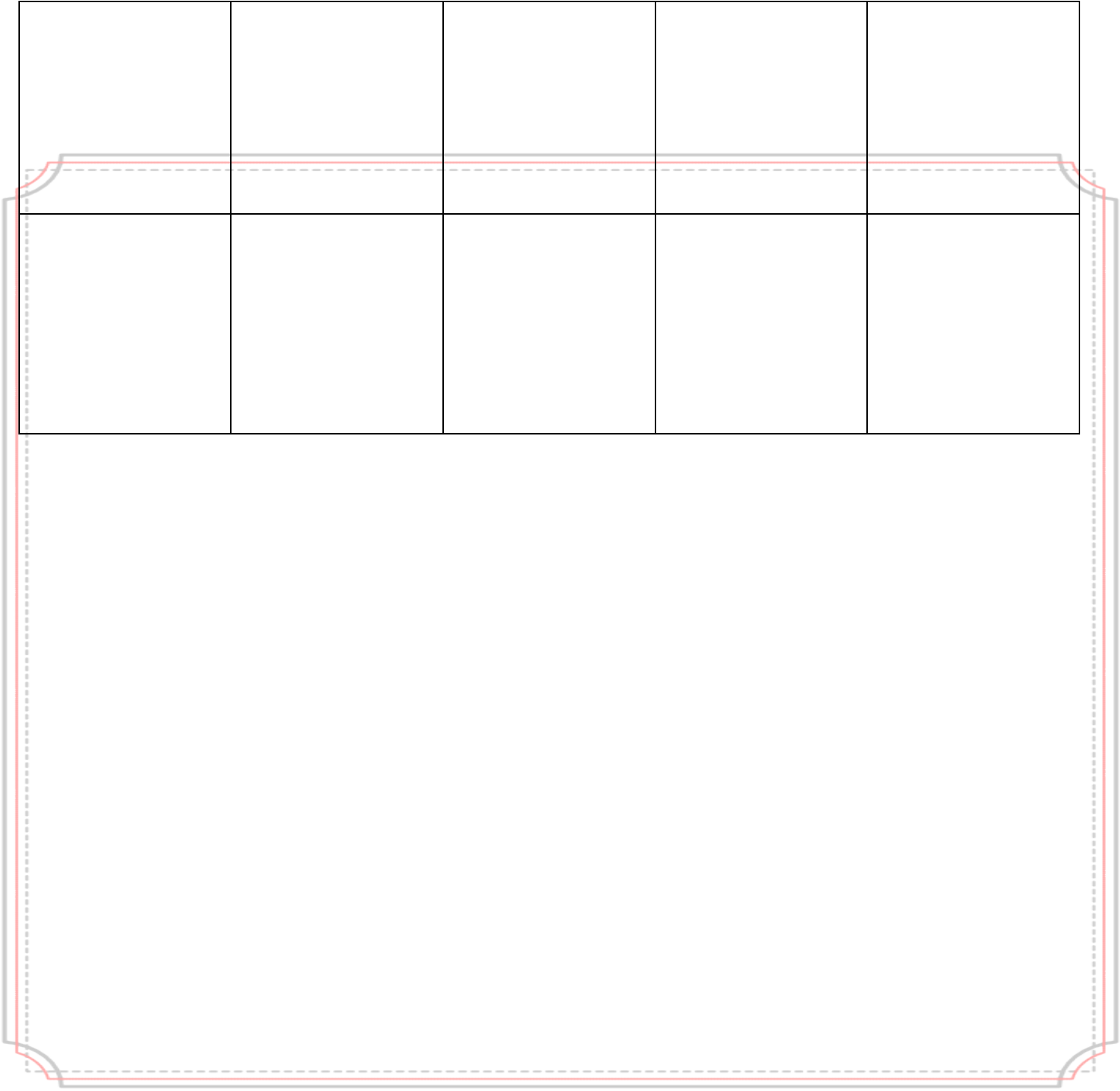
Dot Card

Word

My number is

Base-10 Blocks





Ten Frame