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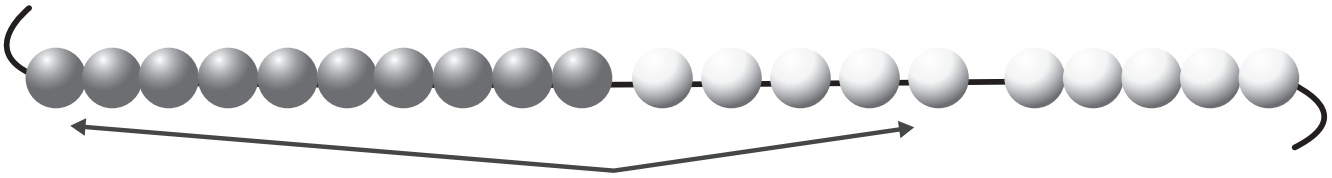
Grades K–5

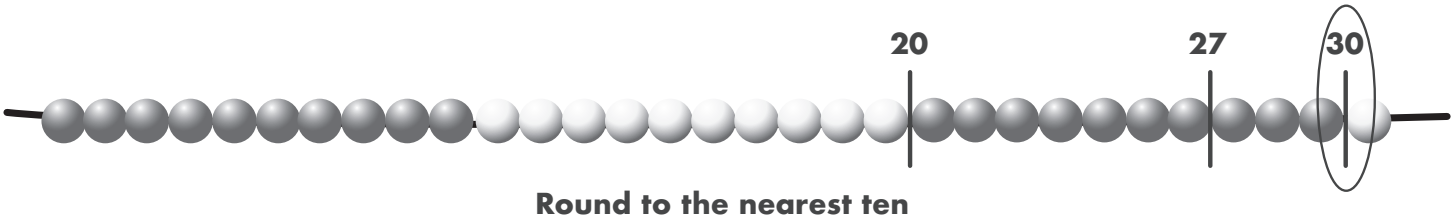
WORKING WITH THE

Beaded Number Line

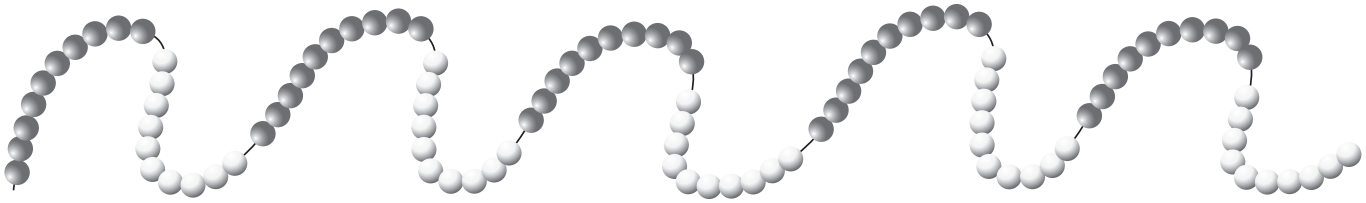
60 Activities for the 20-Bead and 100-Bead Number Lines



15
One ten and 5 ones



Round to the nearest ten



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Contents

1 Count to 100 by Ones

Math Standards

- Count to 20.
- Count to 100 by ones and by 10s.

Grouping(s)

Whole group or small guided math group

Materials

For the student:

- 20-bead number line or 100-bead number line (BNL)

For the teacher:

- Activity 1 Assessment (page 73)

Overview

Teacher uses the BNL to have students demonstrate their ability to count from 1 to 20 and 1 to 100.

Note

In early K, this activity should be done using the 20-bead string. As students progress, move to the 100-bead string. This activity will need to be repeated throughout the year as student competency grows.

Presenting the Activity

1. Teacher instructs student(s) to use the beaded number line to count as high as they can.
2. Teacher uses the recording sheet to note student accuracy of number sequence, and if necessary, where student accuracy broke down.
3. Teacher uses the recording sheet to note the date, how far student(s) successfully counted, and any notable errors.

Guided Learning

Ask:

- What number comes after 10?
- What number comes after 29?
- What is the highest number you can count to?

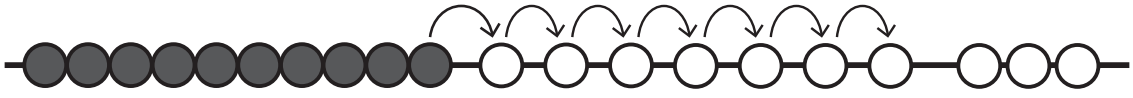
Assessing Student Responses

- Does student demonstrate one-to-one correspondence?

  Y / N / Emerging

- Were digits recorded in the correct order?

  Y / N / Emerging



10, 11, 12, 13, 14, 15, 16, 17 . . .

15 Model the Value of Numbers

Math Standard Understand that the two digits of a two-digit number represent amounts of tens and ones.

Grouping(s)

Small guided math group

Materials

For the student:

- 100-bead number line (BNL)
- Number Cards 1–100 (pages 81–85)

For the teacher:

- Activity 15 Assessment (page 75)

Overview

Students draw a card and model the value on the BNL, identifying the number of tens and the number of ones.

Presenting the Activity

1. Students select a card.
2. Students build the quantity on the BNL.
3. Students record the value on the recording sheet, noting the tens and ones.
4. Teacher uses the teacher recording sheet to note accuracy of student understanding of place value, and if necessary, where student understanding broke down.

Number	Value of Tens Digit	Value of Ones Digit
23	20	3

Guided Learning

Ask:

- How many tens? How many ones?
- How many tens does this digit represent? (Example: In the number 37, the digit 3 represents 3 tens or 3 groups of 10.)
- Where is this amount seen on the BNL?

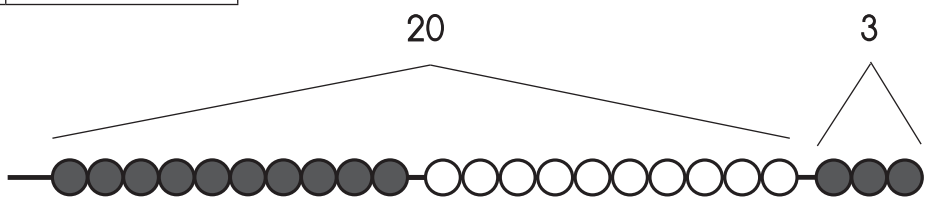
Assessing Student Responses

- Was student successful in writing the numbers?

  Y / N / Emerging

- Did student record the digits in the correct order?

  Y / N / Emerging / N / Emerging



Teacher Assessment Sheet:
Activity 1: Count to 100 by Ones

Student Name: _____ Date: _____

Student successfully counted to: _____

Note on the chart where the student broke down and record what the student said (for example: "nineteen, twenty-teen," and so on).

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41	42	43	44	45	46	47	48	49	50
51	52	53	54	55	56	57	58	59	60
61	62	63	64	65	66	67	68	69	70
71	72	73	74	75	76	77	78	79	80
81	82	83	84	85	86	87	88	89	90
91	92	93	94	95	96	97	98	99	100

Notes: _____

Focus area for future instruction:
- ☐ One-to-one correspondence
- ☐ Understanding the number sequence
- ☐ Counting on from _____

Teacher Assessment Sheet:
Activity 15: Model the Value of Numbers

Student Name: _____ Date: _____

How student arrived at: _____

☐ Counted by ones ☐ Skip-counted

☐ Found nearest 10 and counted on ☐ Found next 10 and counted back

Other: _____

_____

Determine student understanding of place value:

Ask about the value of each digit. For example, if the number is 37:

- Point to the digit 7 (don't say 7). Ask student to show you on the BNL where this amount is.
- Point to the digit 3 (don't say 3). Ask student to show you on the BNL where this amount is.

When student identified the ones quantity, was student accurate? ☐ Yes ☐ No

Notes: _____

When student identified the tens quantity, was student accurate? ☐ Yes ☐ No

If no, did student say "3" instead of "30"? ☐ Yes ☐ No

If student said "3," provide the BNL as a scaffold and continue with probing questions to uncover that the digit 3 represents 3 tens.

Notes: _____

Focus area for future instruction:

☐ Efficient strategy to model numbers. (Example: To model 98, jumping to 100 and moving back 2 instead of 90 and 8 more, skip-counting, or counting by 1s.)

☐ Understanding the value of each digit.