

Learning Notes

In this unit the children will learn about place value (tens and ones) and how to add and subtract two-digit numbers without regrouping.

Materials

- beans
- plastic storage bags
- craft sticks
- 3" x 5" (8 cm x 13 cm) index cards
- glue

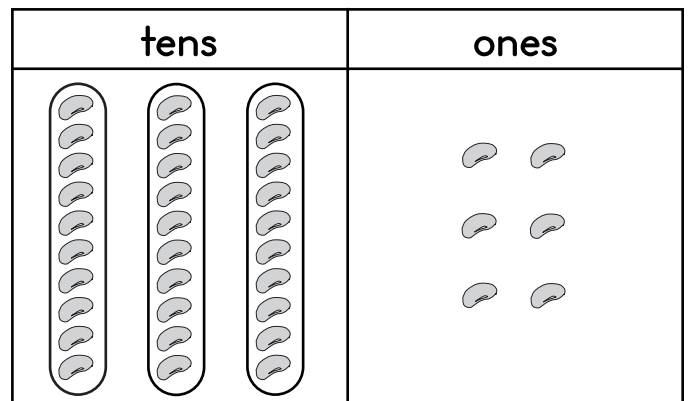
Before Teaching the Lesson

Have the children make bean sticks. Give each child 99 beans and 9 craft sticks. Have the children glue exactly 10 beans to each craft stick. Leave the remaining 9 beans loose. The craft sticks will represent tens. The loose beans will represent ones. Store the bean sticks and loose beans in a plastic storage bag.

Introduce the concept of tens and ones. Have the children make various one- and two-digit numbers using the bean sticks and beans.

For example, ask children to show you 9, show you 24, and show you 36.

Make a tens and ones mat for each child. Have the children practice adding and subtracting two-digit numbers using the beans, bean sticks, and tens and ones mats. Emphasize to the children the importance of starting on the ones side when adding or subtracting.



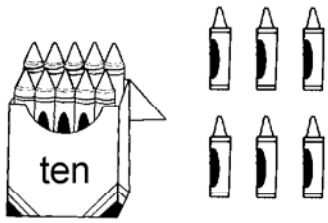
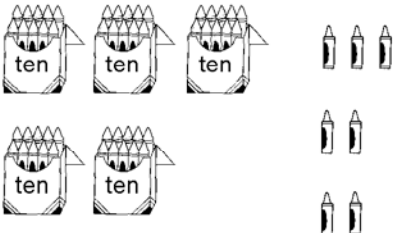
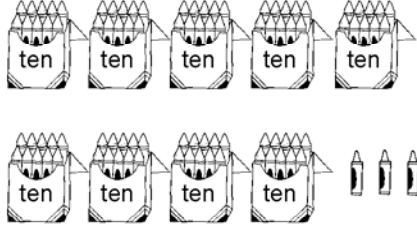
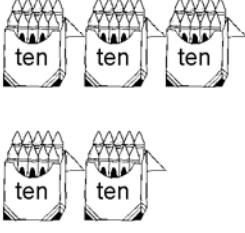
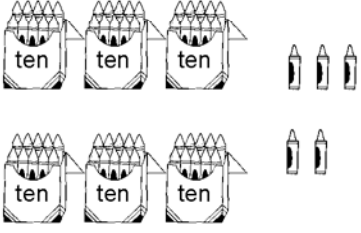
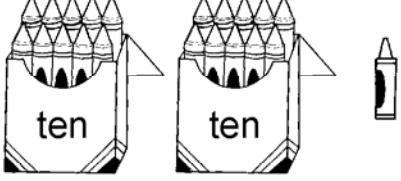
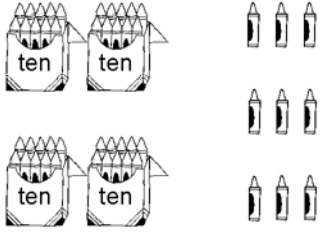
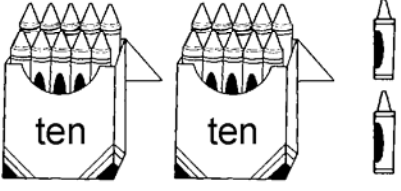
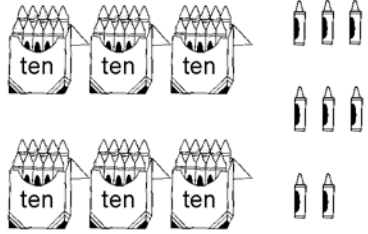
Teaching the Lesson

Using Tens and Ones (page 38): Go over the practice page that introduces the concept of tens and ones. Discuss how the single crayons stand for one and the box of crayons stands for ten. Model how to count and record the ones and tens.

Two-Digit Addition and Subtraction (page 39): Give each child a small self-sticking note to use when adding or subtracting two-digit numbers. Model how to use the sticky note to cover up the tens column when adding the ones together and remove the self-sticking note when adding the tens column.

Guessing the Operation (page 40): Have the children number the index cards 0–99. Two or three children can share the same deck of cards. Remind the children that when adding or subtracting, they must start on the ones side. Also, remind them that in order to subtract, the number on the first card must be larger than the number on the second card.

Each box of crayons holds 10 crayons or one set of ten. Each single crayon is one. Count each set of tens and ones. Write the number of tens and ones in each box. Write the total number on the line below.

<p>1.</p>  <p><u> 1 </u> tens <u> 6 </u> ones <u> 16 </u></p>	<p>2.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>	<p>3.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>
<p>4.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>	<p>5.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>	<p>6.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>
<p>7.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>	<p>8.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>	<p>9.</p>  <p><u> </u> tens <u> </u> ones <u> </u></p>

10. Write the answers from each problem in order from smallest to greatest.

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Answer Key

page 28

1. already done
2. $8 - 6 = 2$, $8 - 2 = 6$
3. $9 - 2 = 7$, $9 - 7 = 2$
4. $7 - 4 = 3$, $7 - 3 = 4$
5. $6 - 0 = 6$, $6 - 6 = 0$
6. $4 - 3 = 1$, $4 - 1 = 3$
7. $10 - 1 = 9$, $10 - 9 = 1$
8. $5 - 2 = 3$, $5 - 3 = 2$
9. 10

10. 3
11. 6
12. 0
13. 4
14. 1

page 30

1. 6
2. 9
3. 18
4. 9
5. 9
6. 1
7. 7
8. 10
9. 4
10. 4
11. 6
12. 3
13. 6
14. 7
15. 10
16. 10
17. 1
18. 1

page 31

1. 3
2. 5
3. 4
4. 2
5. 4
6. 4
7. 14
8. 8
9. 4
10. 8
11. 6
12. 5
13. 2
14. 6
15. 9
16. 15
17. 8

18. 9
19. 10
20. 11
21. 1
22. 11
23. 2
24. 0
25. 5
26. 0

page 32

1. 8
2. 9
3. 8
4. 7
5. 12
6. 12
7. 7
8. 2
9. Answers will vary.

page 34

1. 1
2. 9
3. 10
4. 2
5. 0
6. 7
7. 7
8. 8
9. 0
10. 17
11. 8
12. 9
13. 0
14. 10
15. 10
16. 1
17. 0
18. 0
19. subtract
20. subtract
21. add
22. add

page 35

1. 6
2. 16
3. 6
4. 14
5. 13
6. 12
7. 11
8. 6
9. 4
10. 10

page 36

1. already done
2. $7 + 8 = 15$
 $8 + 7 = 15$
 $15 - 7 = 8$
 $15 - 8 = 7$
3. $6 + 9 = 15$
 $9 + 6 = 15$
 $15 - 6 = 9$
 $15 - 9 = 6$
4. $4 + 11 = 15$
 $11 + 4 = 15$
 $15 - 4 = 11$
 $15 - 11 = 4$
5. $3 + 12 = 15$
 $12 + 3 = 15$
 $15 - 3 = 12$
 $15 - 12 = 3$
6. $5 + 10 = 15$
 $10 + 5 = 15$
 $15 - 5 = 10$
 $15 - 10 = 5$
7. All of the addends in each problem make 15.

Challenge: Answers will vary.

page 38

1. Already done
2. 5 tens, 7 ones, 57
3. 9 tens, 3 ones, 93
4. 5 tens, 0 ones, 50
5. 6 tens, 5 ones, 65
6. 2 tens, 1 one, 21
7. 4 tens, 9 ones, 49
8. 2 tens, 2 ones, 22
9. 6 tens, 8 ones, 68
10. 16, 21, 22, 49, 50, 57, 65, 68, 93

page 39

1. 69
2. 50
3. 59
4. 88
5. 89
6. 95
7. 90
8. 49
9. 66
10. 58
11. 95
12. 98
13. 80

14. 97
15. 28
16. 99
17. 99
18. 60
19. 62
20. 21
21. 21
22. 10
23. 30
24. 1
25. 0
26. 31
27. 5
28. 5
29. 34
30. 30
31. 21
32. 15
33. 40
34. 62
35. 32
36. 0

page 40

Answers will vary.

page 41

6 different combos:

c-v-s	v-c-s
c-s-v	s-c-v
v-s-c	s-v-c

pages 42 and 43

Answers will vary.

page 44

R-G	O-P
R-B	Y-G
R-P	Y-B
O-G	Y-P
O-B	9 outfits