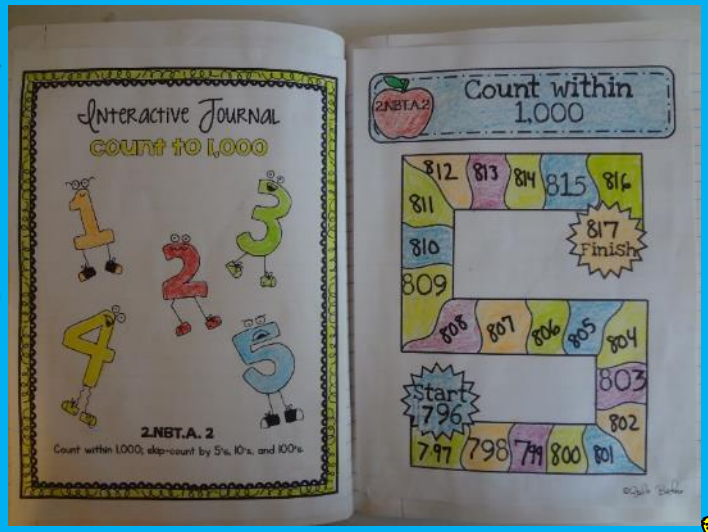
Math

Interactive Journal

2.NBT.A.1, 2. NBT.A.2, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7, 2.NBT.B.8, 2.NBT.B.9

Numbers and Operations in Base Ten



2nd

Math

Interactive Journal

2.NBT.A.1, 2. NBT.A.2, 2.NBT.A.3, 2.NBT.A.4, 2.NBT.B.5, 2.NBT.B.6, 2.NBT.B.7, 2.NBT.B.8, 2.NBT.B.9

Numbers and Operations in Base ten

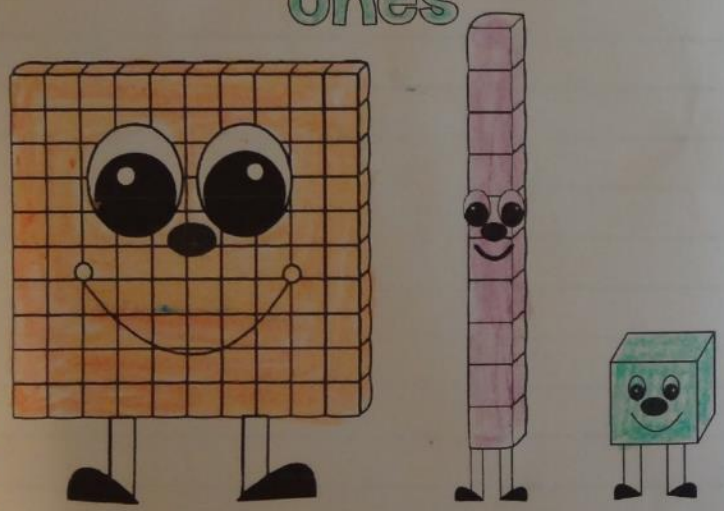
Table of contents

Exit Tickets are included for each standard

★To fit pages in a composition Notebook shrink pages to 80% under Printer Preferences.

Interactive Journal

Place Value Hundreds, Tens, Ones

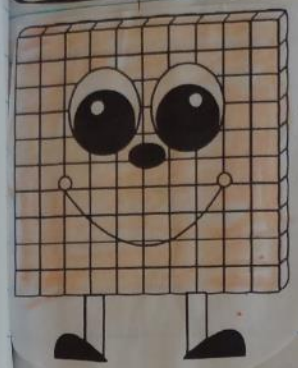


2.NBT.A.I

I understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones.

2.NBT.A.I

I understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones



Hundred

Bundle

Ten

Digit

23

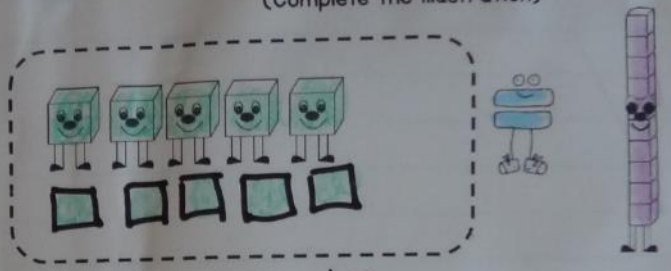
One

	Hundreds	Tens	Ones
Digit	4	1	7
Place Value Blocks			

	Hundreds	Tens	Ones
Digit	2	5	4
Place Value Blocks			

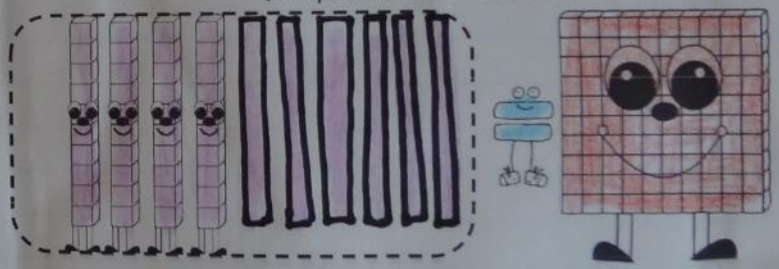
A bundle of 10 ones equals 10.

(Complete the illustration)



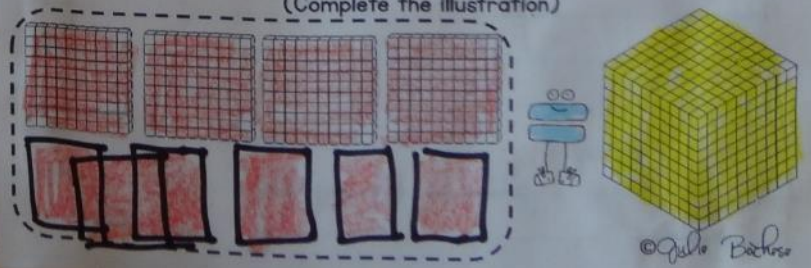
A bundle of 10 tens equals 100.

(Complete the illustration)



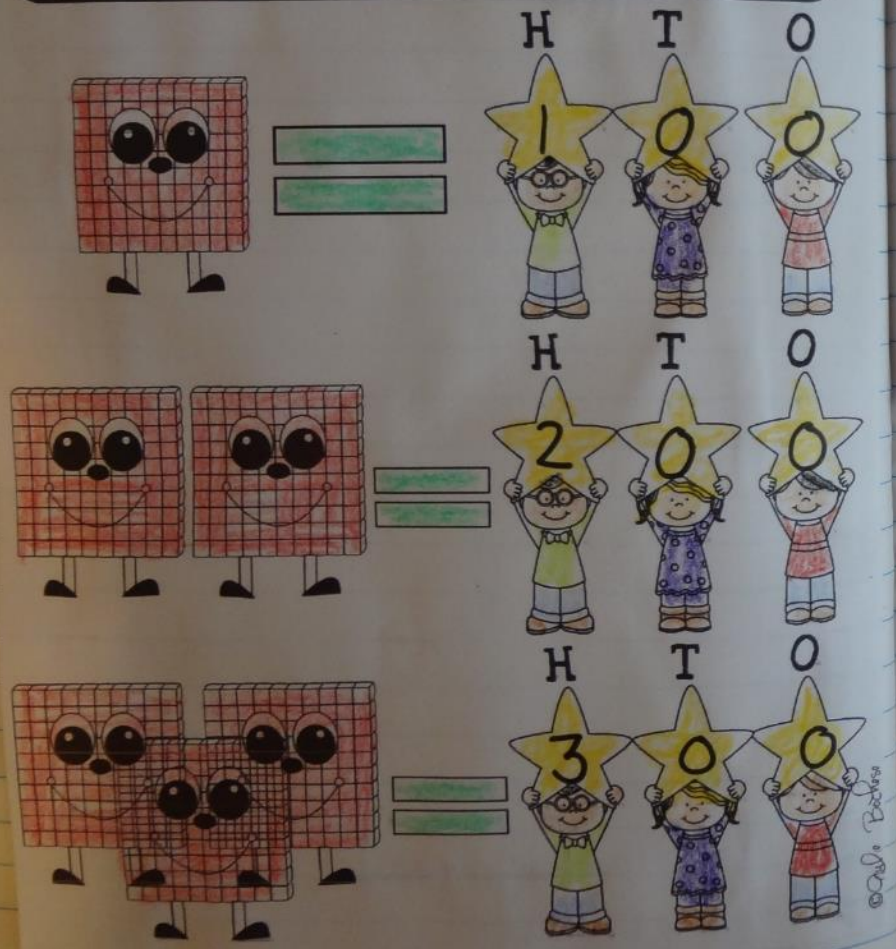
A bundle of 10 hundreds equals 1,000.

(Complete the illustration)



©Julie Bachorse

2.NBT.A.1 The numbers 100, 200, 300... refer to one, two, three... hundreds (and 0 tens and 0 ones).



Exit Ticket:

Use the following numbers to make the largest and smallest numbers possible:

5, 8, 3

Largest Number: 853

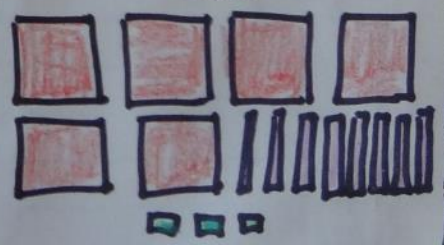
Smallest Number: 358

How did I do?

Exit Ticket:

Show the following number using place value blocks:

683



How did I do?

Interactive Journal

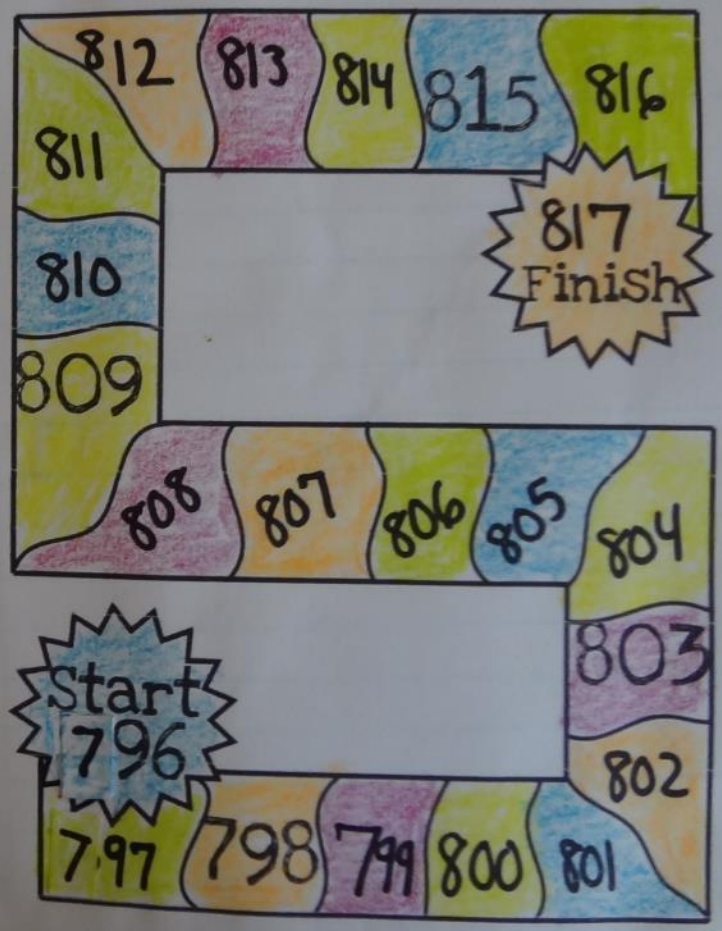
count to 1,000

2.NBT.A. 2

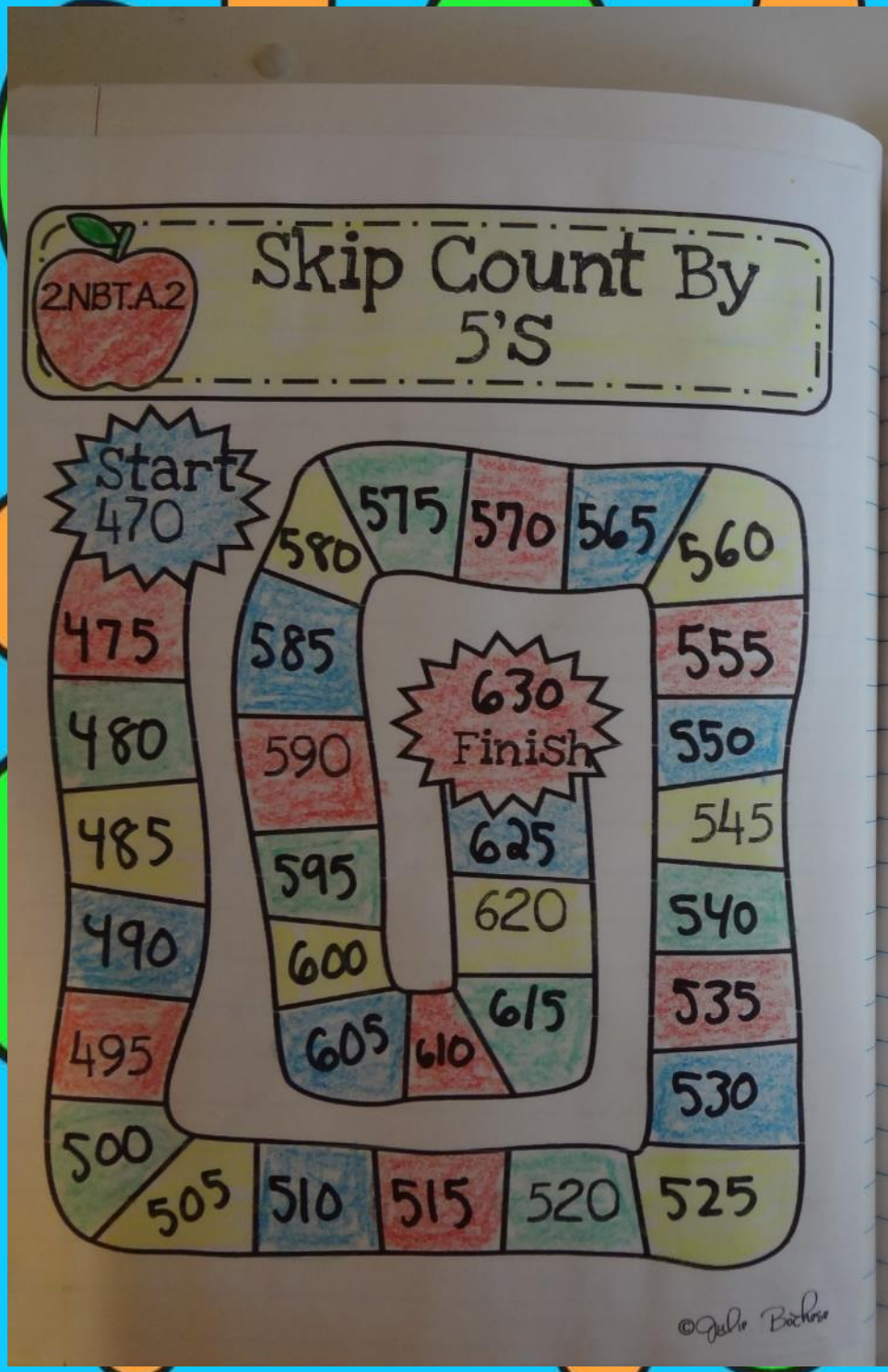
Count within 1,000; skip-count by 5's, 10's, and 100's.

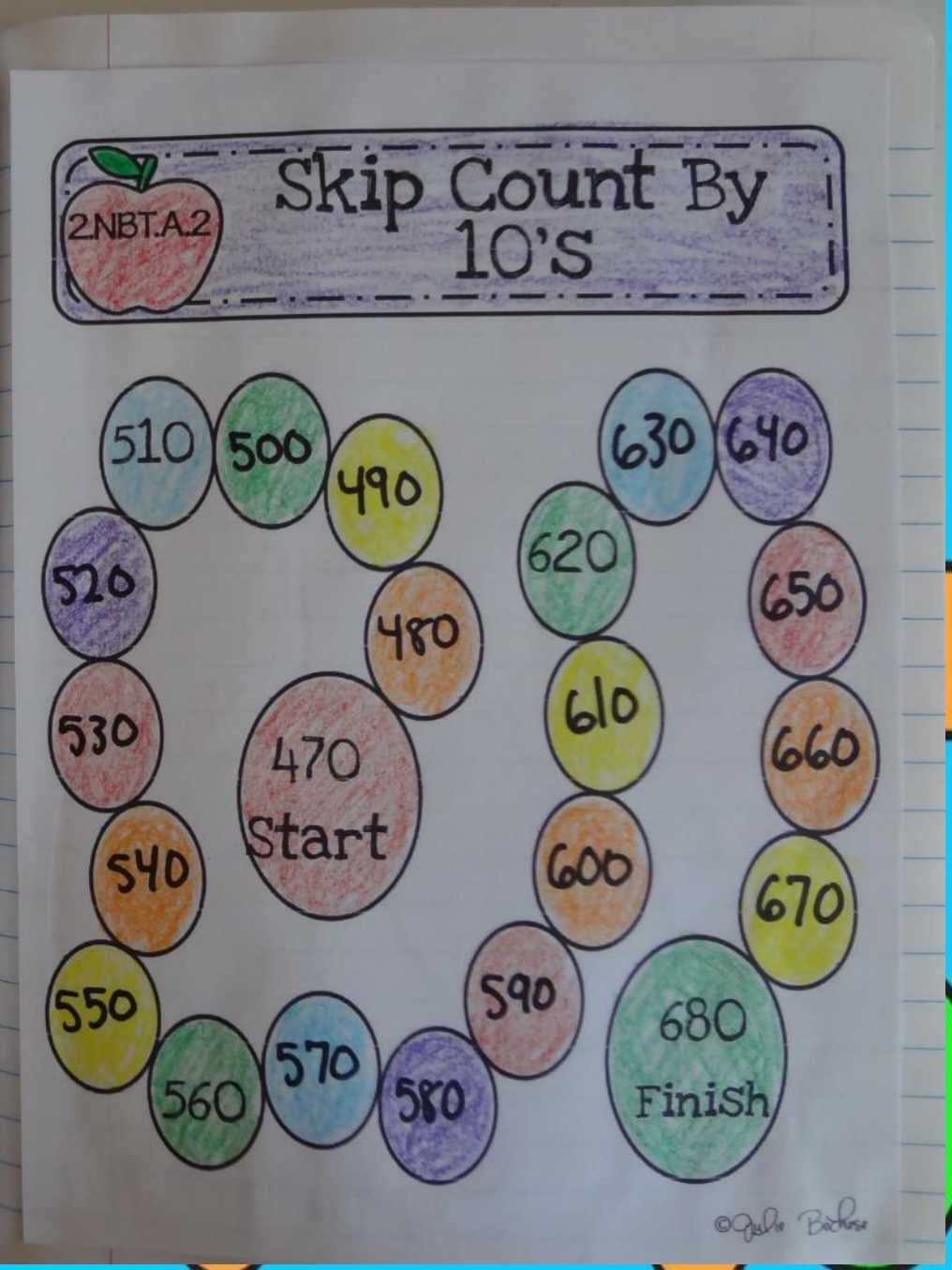
2.NBT.A.2

Count within 1,000



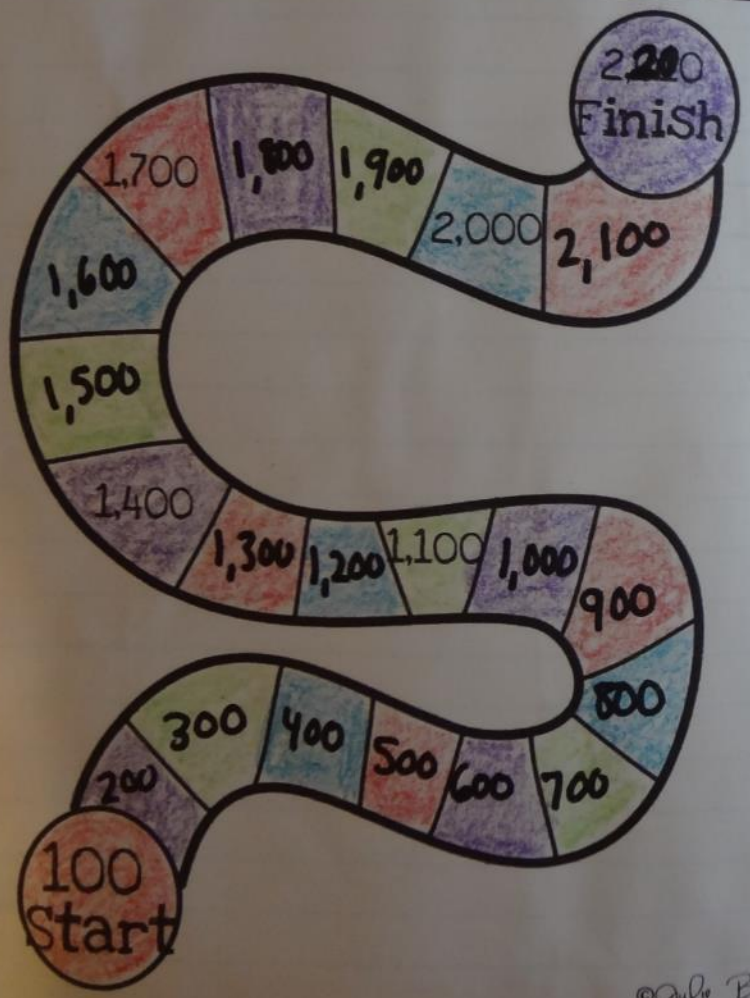
©Julie Bachose


2.NBT.A.2
Skip Count By 5's
Start 470
475
480
485
490
495
500
505
510
515
520
525
530
535
540
545
550
555
560
565
570
575
580
585
590
595
600
605
610
615
620
625
630 Finish
©Julie Bachose


2.NBT.A.2
Skip Count By 10's
470 Start
510
500
490
480
520
530
540
550
560
570
580
590
600
610
620
630
640
650
660
670
680 Finish
©Julie Bachose

2.NBT.A.2

Skip Count By 100's



©Jackie Bochorse

Exit Ticket:

What number comes next?:

150, 155, 160, 165, 170, 175

260, 270, 280, 290, 300

150, 250, 350, 450, 550

How did I do?

- When you skip count by 5's the ones and tens place changes from 0 to 5.
- When you skip count by tens, the tens place changes by one until you roll over to a new hundred.
- When you skip count by hundreds, the hundreds place increases by one.

Interactive Journal

Read and Write Numbers to 1,000

2.NBT.A.3

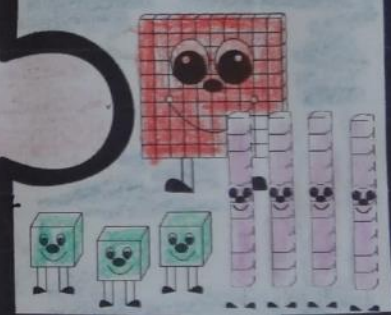
Read and write numbers to 1,000 using base-ten numerals, number names, and expanded form. .

Read and write numbers to 1,000 using base-ten

Standard Form:

143

Place Value Blocks:



100+40+3

Expanded Form:

One hundred forty-three

Word Form:

©Julie Bathrse

Expanded Form

2.NBT.A.3

Hundreds		Tens		Ones		
300	+	90	+	2	=	392

Hundreds		Tens		Ones		
500	+	0	+	8	=	508

Hundreds		Tens		Ones		
900	+	40	+	6	=	946

Exit Ticket:

Write the numbers represented below:

800+7 807

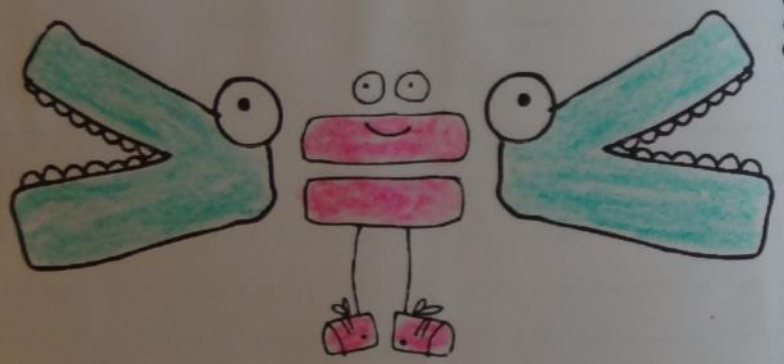
Three hundred fifty-two 352

693 (expanded form) 600 + 90 + 3

How did I do?

Interactive Journal

comparing numbers



2.NBT.A.4

I can compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, < symbols to record the results of comparisons.

I can compare two three-digit numbers based on meanings of the hundreds, tens, and ones digits, using >, =, < symbols to record the results of comparisons.

Meet Ali the Alligator. She loves to eat numbers. She always eats the biggest number.

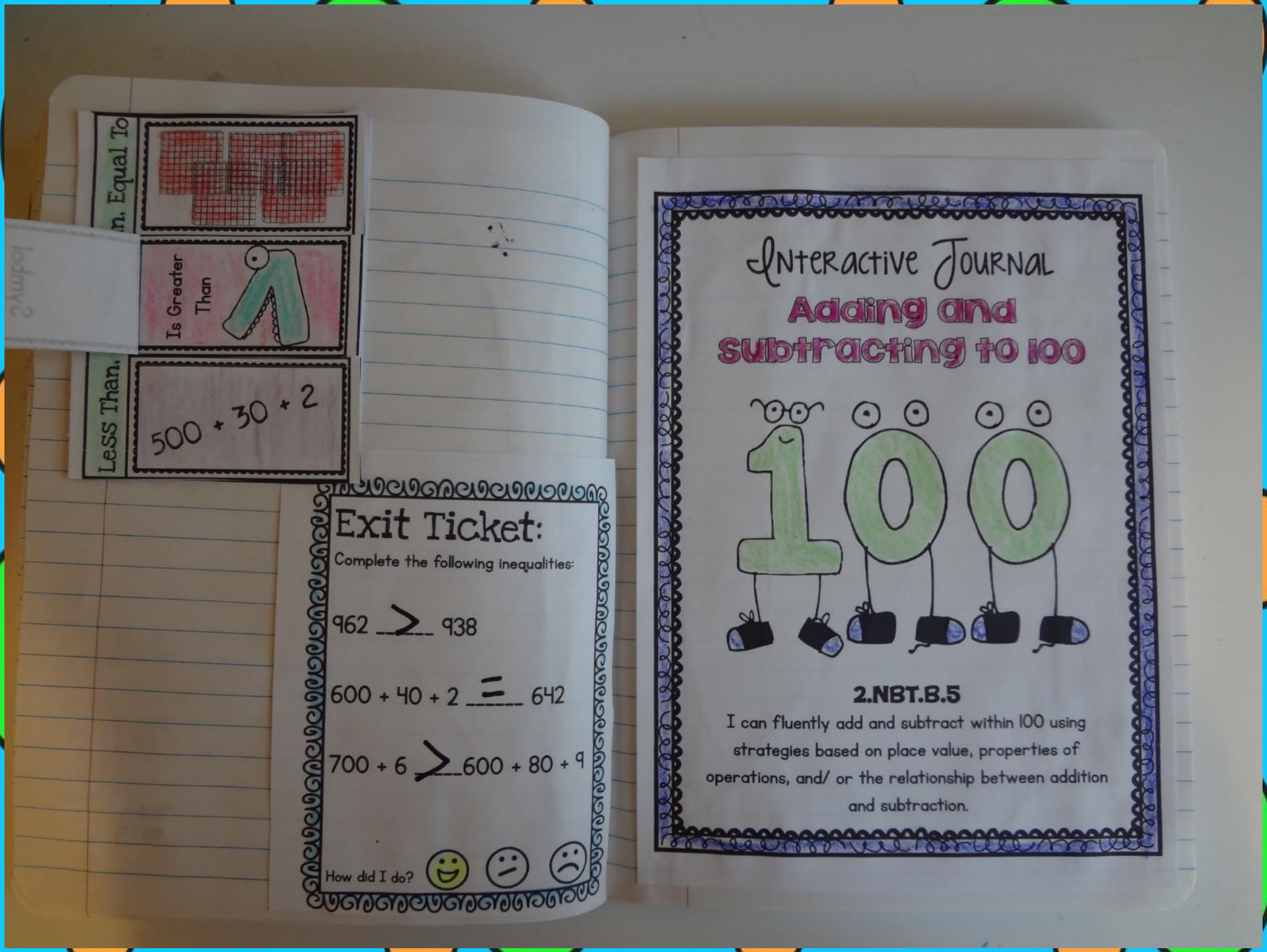
Inequality

Greater Than

Less Than

Equal To

©Julie Bathurse


Is Greater Than
Less Than,
500 + 30 + 2
Exit Ticket:
Complete the following inequalities:
962 __>__ 938
600 + 40 + 2 __=__ 642
700 + 6 __>__ 600 + 80 + 9
How did I do?
Interactive Journal
Adding and subtracting to 100
2.NBT.B.5
I can fluently add and subtract within 100 using strategies based on place value, properties of operations, and/ or the relationship between addition and subtraction.

2.NBT.B.5

I can fluently add and subtract within 100 using strategies based on place value, properties of operations, and/ or the relationship between addition and subtraction.

Strategies for Adding and Subtracting to 100 Efficiently

Hundreds Chart

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

To add ones on hundreds chart move right.

To subtract ones on a hundreds chart move left.

To add tens on a hundreds chart move down.

To subtract tens on a hundreds chart move up.

Decomposing Numbers

1. Break apart the tens and ones.
2. Add the tens together
3. Add the ones together
4. Add the sum of the tens and ones to get your final answer.

56 + 23 = _____

50 + 6

20 + 3

70 + 9 = 79

Standard Algorithm

$$\begin{array}{r} 56 \\ +\ 23 \\ \hline 79 \end{array} \qquad \begin{array}{r} 79 \\ -\ 23 \\ \hline 56 \end{array}$$

1. Add or subtract the ones place.
2. Regroup if necessary.
3. Add or subtract the tens place.

©Julie Bachose

2.NBT.B.5

Adding on a Hundreds Chart

Solve the following equations. Show your work on the hundreds chart.

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

+10

+2

1. 36 + 42 = 78 2. 53 + 29 = 82 3. 47 + 35 = 82

When you add ones you move Right

When you add tens you move down

©Julie Bachose

2.NBT.B.5 Subtracting on a Hundreds Chart

Solve the following equations. Show your work on the hundreds chart.

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

1. 99 - 45 = 54 2. 52 - 19 = 33 3. 83 - 35 = 48

When you subtract ones you move Left.
When you subtract tens you move Up

©Julie Bachose

2.NBT.B.5 Decomposing Numbers

1. 38 + 43 = ____

30 + 8
40 + 3
70 + 11 = 81

3. 34 + 46 = ____

30 + 4
40 + 6
70 + 10 = 80

2. 29 + 65 = ____

20 + 9
60 + 5
80 + 14 = 94

4. 84 + 13 = ____

80 + 4
10 + 3
90 + 7 = 97

When decomposing numbers you are breaking the numbers into tens and ones.

©Julie Bachose

Standard Algorithm

2.NBT.B.5

1. 38 + 47 = 85

2. 94 - 56 = 38

$$\begin{array}{r} {}^{1}3\,8 \\ +\ 4\,7 \\ \hline 8\,5 \end{array} \qquad \begin{array}{r} {}^{8}\cancel{9}\,{}^{1}4 \\ -\ 5\,6 \\ \hline 3\,8 \end{array}$$

Check your work with a fact family

85 47 38

+ −

$$\begin{array}{r} 7\cancel{8}\,{}^{1}5 \\ -47 \\ \hline 38 \end{array} \checkmark$$

Check your work with a fact family

94 56 38

+ −

$$\begin{array}{r} {}^{1}56 \\ +\ 38 \\ \hline 94 \end{array} \checkmark$$

©Julie Bachman

Exit Ticket:

Solve the following equations with a strategy of your choice.

$$\begin{array}{r} {}^{1}5\,5 \\ +\ 2\,7 \\ \hline 8\,2 \end{array} \qquad \begin{array}{r} 7\cancel{8}\,{}^{1}2 \\ -55 \\ \hline 27 \end{array} \checkmark$$

$$\begin{array}{r} {}^{8}\cancel{9}\,{}^{1}2 \\ -\ 3\,8 \\ \hline 5\,4 \end{array} \qquad \begin{array}{r} {}^{1}54 \\ +38 \\ \hline 92 \end{array} \checkmark$$

How did I do?

Interactive Journal

Adding up to Four Two-Digit Numbers

2.NBT.B.6

I can add up to four two-digit numbers using strategies based on place value and properties of operations.

2.NBT.B.6 I can add up to four two-digit numbers using strategies based on place value and properties of operations.

Choose four tiles from below. Stack them and add to find the sum.

To add multiple two-digit numbers:

1. Stack the numbers. Be sure to line up the ones, tens, and hundreds.
2. Add the ones. Regroup if necessary.
3. 3. Add the tens. Regroup if necessary.

H	T	I
	1	9
+	9	6
	6	2
1	7	7

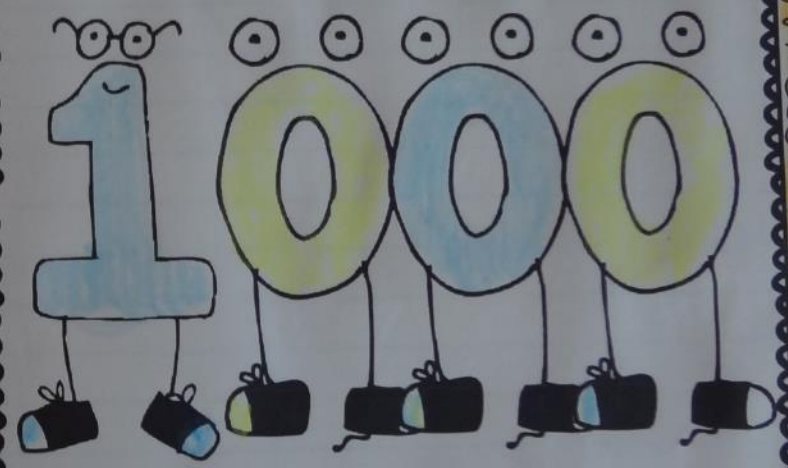
Exit Ticket:

Solve the following equation:

```
   1
   1 4
   2 3
   5 5
+  3 7
  -----
  1 2 9
```

How did I do?

Interactive Journal to Adding up 1,000



2.NBT.B.7

I can add and subtract within 1,000, using concrete models or drawings and strategies based on place value, properties of operations, and/ or the relationship between addition and subtraction.

2.NBT.B.7 Add to 1,000

1.

	1	1
1	4	8
+ 5	6	3
7	1	1

2.

	1	
3	2	6
+ 4	2	7
7	5	3

3.

4	0	0
+ 5	8	9
9	8	9

4.

	1	1
7	9	2
+ 1	3	8
9	3	0

5.

	1	
2	8	8
+ 6	5	1
9	3	9

6.

	1	
5	2	1
+ 3	0	9
8	3	0

©Julie Bachose

Subtraction

More on top?
No need to stop!

6	9	8
- 3	6	7
3	3	1

More on the floor?
Go next door and get 10 more!

5 6	12 3	1 2
- 5	7	5
	5	7

Number's the same?
Zero's the game!

8	9	9
- 4	9	9
4	0	0

©Julie Bachose

2.NBT.B.7

Subtract within 1,000

1.

8	4	6
− 5	3	6
3	1	0

2.

2 ~~3~~	13 ~~4~~	1 3
− 2	9	9
	4	4

3.

8 ~~9~~	9	10
− 7	5	2
1	4	8

4.

6	8 ~~9~~	1 2
− 4	6	7
2	2	5

5.

2	9	9
− 1	7	6
1	2	3

6.

4 ~~5~~	9	1 2
− 3	7	8
1	2	4

©Jade Backer

Exit Ticket:

Solve the following equations with a strategy of your choice.

$$\begin{array}{r} 523 \\ +\ 474 \\ \hline 997 \end{array} \qquad \begin{array}{r} 7\ \ 10\ \ 2 \\ \cancel{8}\ \ 0\ \ 2 \\ -\ 6\ \ 5\ \ 2 \\ \hline 1\ \ 5\ \ 0 \end{array}$$

How did I do?

Interactive Journal

Add and subtract 10 or 100

10 & 100

2.NBT.B.8

I can mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.

2.NBT.B.8

I can mentally add 10 or 100 to a given number 100-900, and mentally subtract 10 or 100 from a given number 100-900.

Only the tens place changes. It goes up 1: 178+10=188

The hundreds place may change if you roll to the next hundred: 294+10=304

The tens place goes down 1: 846-10=836.

The hundreds place may change if you roll back to the hundred before: 203-10=193

The hundreds place increases by 1: 548+100=648

The hundreds place decreases by 1: 842-100=742

©Julie Bochorse

Complete the following foldable with numbers that would match a hundreds chart. Remember the rules:

- Move down to add 10
- Move up to subtract 10

607	608	609	610
617	618	-10 619	620
627	-1 628	629	+1 630
637	638	+10 639	640

Exit Ticket:

662, 672, 682
10 Less — Ten More

803, 813, 823
10 Less — Ten More

245, 345, 445
100 Less — 100 More

629, 729, 829
100 Less — 100 More

How did I do?

Interactive Journal

Explain why Addition and subtraction work

2.NBT.B.9

I can explain why addition and subtraction strategies work, using place value and the properties of operations.

2.NBT.B.9 I can explain why addition and subtraction strategies work, using place value and the properties of operations.

Write a letter to a class mate explaining how to solve the following addition equation.

$$\begin{array}{r} 1\,538 \\ +\ 354 \\ \hline 892 \end{array}$$

Dear Becky,

First you add the ones place: 8+4=12 Write the 2 ones (in 12) in the ones place, and bring the 1 ten to the tens place. Next add the tens place: 1+3+5=9. Write the 9 in the tens place. After that add the hundreds place: 5+3=8. Write the 8 in the hundreds place. You have your answer! Be sure to always check your work.

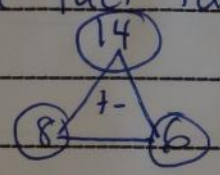
Sincerely,
Julie

©Julie Bichrse

Exit Ticket:

How are 14-8 and 6 + 8 related?

14-8 and 6+8 are related because the numbers 14, 6, and 8 are all in a fact family. 14-8=6 14-6=8 6+8=14 8+6=14



How did I do?

Exit Ticket:

Explain how to solve 54 + 26 mentally.

To solve 54+26 mentally, you can begin by solving 50+20=70. Next, I know that 4+6=10. Therefore, 70+10=80, so 54+26=80.

How did I do?