General Information

Lesson Parts & Duration

Total Duration: 1 hour

- Addition and Subtraction Within 1000 Using Partial Sums and Decomposing

Subject(s)

- Adding and Subtracting Within 1000; Expanded Form, Value of Digits, Partial Sums, and Decomposing (3.NBT.2).

Objective

- Students will use expanded form to decompose a number and identify the value of the digits.
- Students will add within 1000 by using partial sums.
- Students will subtract within 1000 by using decomposing.

Materials

- blank paper
- pencil & crayons/colored pencils
- document camera or whiteboard
- **Optional Printable Student Resources:** "Exit Slips" (page 10) (1 copy per student), "Partial Sums and Decomposing Practice" (page 11) (1 copy per student), "Adding and Subtracting Within 1000: Partial Sums and Decomposing" (page 12) (1 copy per student)
- **Optional Printable Teacher Resources:** "Break Up Your Day" brain/movement break ideas (page 13)

Throughout this lesson, you will find:

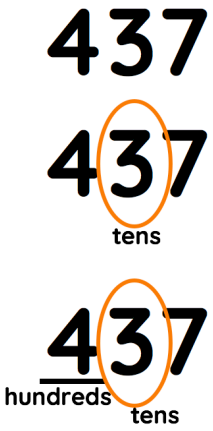
- ***Scripted Text*** indicates things that need to be said directly. Bullets starting with a **"T"** followed by *italicized type* indicate scripted text
- **Clarifiers** within scripted text are in orange
- **Teacher Directions** indicate things you should be doing
- **Side notes** provide helpful hints, ELL strategies, differentiation and information
- **Break Up Your Day** (Brain/Movement Breaks) are in green boxes (at the end)

Remember!

Quality over quantity. All components do not have to be accomplished; lessons may be ended at any time and resumed later.

Instructional Plan: 60 minutes

Introduction



- ***T*** *All good athletes warm up before they start to play a sport.*
- ***T*** *Right now you are not an athlete, you are a mathlete and you need to warm up your brain!*
- ***T*** *Let's start by adding and subtracting some numbers by 1s or 100s.*
- ***T*** *When we are adding or subtracting by 10's the only digit we will change in our number is the digit in the tens place.* Write 437 on the board.
- ***T*** *Who can come up and circle the digit in the tens place for us?* Call on a student to come up.
- ***T*** *Great job, in the number 437, the 3 is the digit in the tens place.*
- ***T*** *Now who would like to come up and underline the digit in the hundreds place for us?* Call on a student to come up.
- ***T*** *Excellent, the 4 is the digit in the hundreds place.*
- ***T*** *Now that we know which place is which I think we are ready to start our warm up!*
- ***T*** *If I said + 10, you would increase the digit in the tens place by 1, because you are adding 1 more ten to it.*
- ***T*** *So instead of my number being 437, it would now be 447.*
- ***T*** *But what if I said minus 10.*
- ***T*** *Then we would have needed to decrease our digit in the tens place by 1 ten.*
- ***T*** *That would make my number 427.*
- ***T*** *You will do the same thing if I say plus 100 or minus a hundred, however you will be moving the digit in the hundreds place up or down by 1-hundred.*
- ***T*** *Ok, let's try a few.*
- ***T*** *I will give the command to either add or subtract 10 or 100.*
- ***T*** *Your job is to shout out what the new number would be.*
- ***T*** *So, our starting number is* 437. Point to the number you have written on the board.
- ***T*** *Plus* 10. Students yell 447.
- ***T*** *Good* 447. *Minus* 10. Students yell 437.
- ***T*** *Correct* 437. *Minus* 10. Students yell 427.
- ***T*** *Minus* 10. Students yell 417.
- ***T*** *Great,* 417. *Plus* 10. Students yell 427.
- ***T*** *Now let's try some mental math changing the digit in the hundreds place.*
- ***T*** *What was the digit in the hundreds place everyone?* Answer: 4
- ***T*** *That means when I say plus 100 you will be increase the number by 1-hundred, so 1-hundred more than 400 would be 500.*
- ***T*** *What would be 100 less than 400 everyone?* Answer: 300.
- ***T*** *Ok, sounds like you're ready!*
- ***T*** *Our starting number is* 437. Point to the number you have written on the board.
- ***T*** *Plus* 100. Students yell 537.
- ***T*** *Good,* 537. *Plus* 100. Students yell 637.
- ***T*** *Excellent,* 637. *Plus* 100. Students yell 737.
- ***T*** *Correct* 737. *Minus* 100. Students yell 637.
- ***T*** *Minus* 100 Students yell 537.
- ***T*** *Minus* 100. Students yell 437.
- ***T*** *Great work, we are back at* 437.

T *I think are brains are nice and warmed up and ready for some more math.*

Whole Group Setting up the Paper

Pass out a piece of paper to each student for notes.

Name: _____

Adding and Subtracting Within 1000

I can add within 1000 by using partial sums.
I can subtract within 1000 by using decomposing.

Decompose: To separate numbers into parts.
Expanded Form: To decompose or break apart a number by each digit's value.

	Hundreds place	+	Tens place	+	Ones Place
695		+		+	
237		+		+	

T *Please write your name and date in the top right-hand corner.*

T *Then we will title our notes "Adding and Subtracting Within 1000."*

T *Below your title you will write, your learning target which is "I can add within 1000 by using partial sums." and "I can subtract within 1000 by using decomposing."* See example and model for students to copy.

T *We will include important words and examples in our notes.*

T *Notes are great because you can look back at them later as you try to solve problems, so that you can remember the steps in the process of what you are doing.*

T *Today I am going to show you how understanding the value of a digit will help us to write a number in expanded form and then use either the partial sums strategy for addition or the decomposing strategy for subtraction to more easily solve addition and subtraction equations.*

T *Let's start by defining two key words/phrases, that you might not already know.*

T *In your notes please write the word "Decompose."*

T *To decompose simply means to separate numbers into parts.* See example and model for students to copy.

T *That brings us to our next words, "Expanded Form," simply put, expanded form means to decompose or break apart a number by each digit's value.*

T *We will use a place value chart to help us to identify the value of two numbers.*

T *I will start by drawing myself a chart with 3 rows and 6 columns.* See example and model for students to copy.

T *Starting on the right side I will write my places.*

T *The first place on the right is the ones place, then I will move one box to the left and put a plus sign.* See example and model for students to copy.

T *The next place on my chart is the tens places, then I will move one box to the left and put another plus sign.* See example and model for students to copy.

T *Finally, I will put the last place on my chart which is the hundreds place.*

T *I will leave the box to the left blank.* See example and model for students to copy.

T *In the first box on the second row I will write the number 695 and in the first box in the third row I will write 237.*

T *These will be the two numbers I want to add.*

T *Before adding these numbers let's break them apart to show the value of each digit.*

T *Starting with 695, the digit 6 in the hundreds place has a value of 600, the digit 9 in the tens place has a value of 90, and the digit 5 in the ones place has a value of 5.* See example and model for students to copy.

T *We put plus symbols between each of these values because with expanded form, all of these values added together gets us the whole number, 695.*

T *Now let's examine the second number, 237.*

T *The value of the digit 2 in the hundreds place is 200, the value of the digit 3 in the tens place is 30 and the value of the digit 7 in the ones place is 7.* See example and model for students to copy.

T *Adding the plus symbols in we can now see the expanded form of the number 237.*

T *When I add two numbers using partial sums, I first break the whole numbers into their expanded form or parts.*

T *Next, I will add each of these parts together.*
T *You will add the hundreds with the hundreds, the tens with the tens, and finally the ones with the ones.*
T *The last step is to combine all of these sums by adding the sum of our hundreds, the sum of our tens, and the sum of our ones.*
T *Let's try that with these two numbers.*
T *There are two ways that you can show your work for this.*
T *The first way we will write in our notes, is to write out our equation horizontally.*
T *I will write "600 + 90 + 5" then leaves some space and put a plus sign.*
T *Then I will leave a little space and write "200 + 30 + 7."*
T *Notice I am writing these all in one straight horizontal line.* See example and model for students to copy.
T *Next, I will draw lines to connect my parts and then record the sum of these two parts below.*
T *We will connect 600 and 200. 600 plus 200 equals 800, so I will record 800 below where the two lines meet.*
T *Next, we will find the sum of our two tens, 90 and 30. 90 plus 30 equals 120.*
T *I will record "120" below where these two lines meet.*

Name: _____

Adding and Subtracting Within 1000

I can add within 1000 by using partial sums.
I can subtract within 1000 by using decomposing.

Decompose: To separate numbers into parts.
Expanded Form: To decompose or break apart a number by each digit's value.

	Hundreds place	+	Tens place	+	Ones Place
695	600	+	90	+	5
237	200	+	30	+	7

695 + 237 =

Partial Sums

600 + 90 + 5 + 200 + 30 + 7

800 120 12

Hundreds: 600 + 200 = 800
Tens: 90 + 30 = 120
Ones: 5 + 7 = 12
Combine all sums: 800 + 120 + 12 = 932

T *Last, we will find the sum of our ones, 5 plus 7 equals 12.*
T *We will record this below where the two lines meet.*
T *The final step is to combine or add up all of our sums.*
T *Our equation is "800 + 120 + 12 = 932."* See example and model for students to copy.
T *The second way of showing our work takes the same steps, but I will record each step as an actual equation vertically.*
T *Let me show you what I mean.*
T *I will list either the words or just the first letter for hundreds, tens, and ones each followed by a colon.*
T *Then next to the word hundreds or the letter H, I will write my equation for adding my hundreds.*

Hundreds: 600 + 200 = 800
Tens: 90 + 30 = 120
Ones: 5 + 7 = 12
Combine all sums: 800 + 120 + 12 = 932

T *I will write out "600 + 200 = 800."*
T *Then on the next line next to the word tens or the letter T, I will write my equation to find the sum of my tens; I will write "90 + 30 = 120."*
T *And finally, I will write my equation to find the sum of my ones, "5 + 7 = 12."*
T *Now our last and final step is to combine all of our sums.*
T *Our equation is "800 + 120 + 12 = 932."*

Subtraction: Decomposing

T *Now we will flip our paper over so that we can write an example of how to subtract.*

T *When we add the method is called partial sums, because a sum is the answer to an addition problem.*
T *For subtraction, we will use a similar method that we call decomposing.*
T *Can anyone think of why I can't follow the same steps as addition, what problem might I run into when subtracting two numbers?* Give students time to think. Call on a few students to share their ideas. Answer: needing to regroup if the top or left number is less in value than the bottom or right number.
T *Sometimes in subtraction problems we need to do what is called regroup.*
T *To do this we visit the place to the left and we borrow some.*
T *For example, what if I had 5 cookies, can I give away 7 cookies?*
T *No that's impossible I can't give away 2 cookies that I don't have.*
T *So, I would first need to go get more cookies.*
T *I would go to the tens place and knock on their door and ask if I can borrow ten cookies.*
T *If the tens have 10 to give, they will give me 10 of their cookies.*
T *The tens now have 10 less, and I have 10 more.*
T *Now I have my 5 cookies, plus the 10 cookies I just borrowed.*
T *That means now I have 15 cookies. Can I give away 7 when I have 15?* Pause and wait for students to say yes.
T *Absolutely, so I would take 7 away from my 15, and I would have 8 cookies left over.*
T *Now that we have discussed the reason why we need to follow different steps to solve a subtraction equation, let's take some notes and write an example that we can refer back to later.*
T *At the top of our paper we are going to make another place value chart like we did with addition.*
T *Remember, some of these steps are either the same or similar.*
T *Starting on the right side I will write my places.*

	Hundreds place	+	Tens place	+	Ones Place
472		+		+	
284		+		+	

Decomposing Method

472 – 284 =

T *The first place on the right is the ones place, then I will move one box to the left and put a plus sign.* See example and model for students to copy.
T *The next place on my chart is the tens places, then I will move one box to the left and put another plus sign.* See example and model for students to copy.
T *Finally, I will put the last place on my chart which is the hundreds place. I will leave the box to the left blank.* See example and model for students to copy.
T *In the first box on the second row I will write the number 472 and in the first box in the third row I will write 284.*
T *These will be the two numbers in our subtraction equation.*
T *Before subtracting these numbers let's break them apart to show the value of each digit.*
T *Starting with 472, the digit 4 in the hundreds place has a value of 400, the digit 7 in the tens place has a value of 70, and the digit 2 in the ones place has a value of 2.* See example and model for students to copy.
T *We put plus symbols between each of these values because with expanded form, all of these values added together gets us the whole number, 472.*
T *Now let's examine the second number, 284.*
T *The value of the digit 2 in the hundreds place is 200, the value of the digit 8 in the tens place is 80 and the value of the digit 4 in the ones place is 4.* See example and model for students to copy.
T *Adding the plus symbols in we can now see the expanded form of the number 284. Below our chart let's write: "Decomposing Method."*
T *Then I want to write my equation horizontally, "472 – 284 =."*
T *And last, before I start, I want to give myself a reminder.*
T *You probably already know this, but I want to make sure we don't forget.*
T *Let's write: "If the number on the bottom is bigger, you need to regroup."*
T *This is referring to a situation like my cookie scenario.*

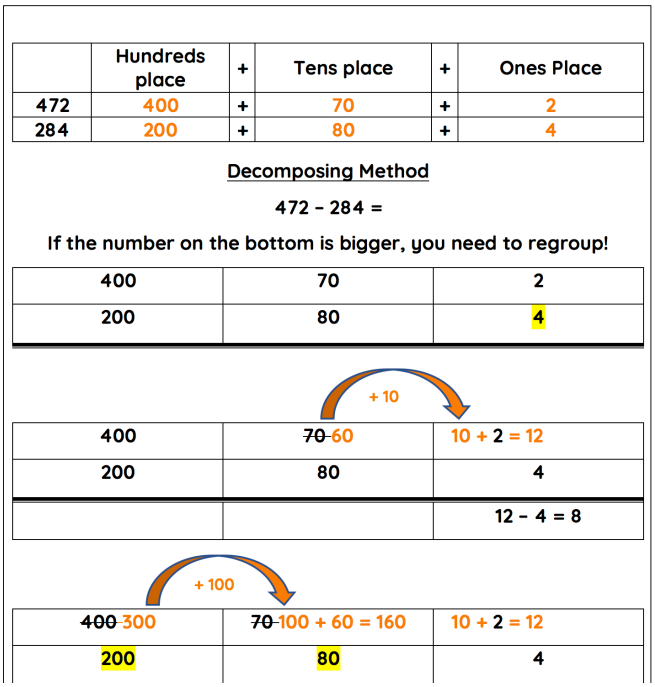
T *You can't take away 7 cookies if there are only 5!*

T *For subtraction, I always like to list my equation vertically, however rather than writing the traditional 472 - 284 and then a line, I will write out my equation using expanded form.*

T *I will leave some space between each part in case I need to regroup.*

T *This leaves me room to show my work.*

T *Let me show you what I mean.* See example of first equation written out in expanded form and model for students to copy.



	Hundreds place	+	Tens place	+	Ones Place
472	400	+	70	+	2
284	200	+	80	+	4

Decomposing Method

472 - 284 =

If the number on the bottom is bigger, you need to regroup!

400	70	2
200	80	4

+ 10

400	~~70~~ 60	10 + 2 = 12
200	80	4
		12 - 4 = 8

+ 100

~~400~~ 300	~~70~~ 100 + 60 = 160	10 + 2 = 12
200	80	4

T *I will cross out the 70 and make it 60 since 10 less than 70 is 60.*

T *Then I will draw an arrow from the tens to the ones with a +10 underneath.*

T *This will show me the step I took.*

T *The last thing I need to do is to add the 10 I borrowed to my 2.*

T *So, 10 + 2 = 12.*

T *Can I take 4 away from 12?*

T *Absolutely, 12 minus 4 equals 8.*

T *I will record this below the line.*

T *Now I am ready to move over and subtract the values in my tens place.*

T *Just like with the ones the first thing I need to do is to check the values.*

T *I need to make sure the top value is larger than the bottom value.*

T *Let's see.*

T *The top value was 70, but I borrowed and regrouped 10.*

T *Now the top value is 60.*

T *The bottom value is 80.*

T *Can I take away 80 if I only have 60? No way!*

T *Now, just like we did when subtracting our ones, we will go next door.*

T *But the next-door neighbor of the tens is the hundreds.*

T *When you borrow from the 100s you are regrouping 100 more, not 10.*

T *When we look at the hundreds place the value of the top number is 400, they have enough for me to borrow some.*

T *Remember the hundreds give away 100 at a time, not 10.*

T *I will cross out the 400, then I will subtract 100, leaving the hundreds with 300.*

- ***T*** *Then I will draw an arrow to show that I am regrouping 100 to the tens place.*
- ***T*** *Now we must add the 100 we just borrowed to the 60 we already had, 100 + 60 = 160.*
- ***T*** *If there is 160 can we take 80 away? Yes, we sure can!*
- ***T*** *Below the line let's write this equation: "160 - 80 = 80."*
- ***T*** *Ok we are finally ready to subtract the hundreds.*
- ***T*** *The value of the top number was 400, but we regrouped 100 to the tens place, so the value is 300 now and the value of the bottom number is 200.*
- ***T*** *Can you take away 200 from 300? Absolutely!*
- ***T*** *Let's write this equation below the line. "300 - 200 = 100."*
- ***T*** *Do you think we are done now?* Pause for students to think and respond.
- ***T*** *Nope, we still don't have an answer to 472 - 284.*
- ***T*** *We have only found an answer to each of our parts separately.*
- ***T*** *The last step, just like with partial sums is to combine all of our difference.*
- ***T*** *So, we will add: "100 + 80 + 8 = 188."*
- ***T*** *Now we are done. 472 - 284 = 188.*
- ***T*** *Although these two strategies of partial sums and decomposing have several steps, breaking apart our numbers into parts helps us to more easily add and subtract.*
- ***T*** *Using your notes, let's practice using these two methods together.*

	Hundreds place	+	Tens place	+	Ones Place
472	400	+	70	+	2
284	200	+	80	+	4

Decomposing Method

472 - 284 =

If the number on the bottom is bigger, you need to regroup!

400	70	2
200	80	4

+ 10

400	~~70~~ 60	10 + 2 = 12
200	80	4
		12 - 4 = 8

+ 100

~~400~~ 300	~~70~~ 100 + 60 = 160	10 + 2 = 12
200	80	4
300 - 200 = 100	160 - 80 = 80	12 - 4 = 8

Combine all differences: 100 + 80 + 8 = 188

Depending on time, solve at least a few (#2 and #4 on both the top and the bottom portion of the practice page) problems as a whole class and then let students finish either independently or with a partner.

Walk through each problem in the same way that you did for the notes, but call on students to tell you what to write for each step, rather than telling them.

If/when they finish this first practice sheet they can continue to practice using "Adding and Subtracting Within 1000: Partial Sums."

Partner Practice

If time allows bring the class back together to review their answers. You can have one student come up and be the teacher and walk the class through how they solved the problem. Or you can simply share with them the answers using the document camera.

Name: ANSWER KEY

Partial Sums and Decomposing Practice

1. 733 + 266 =

H: 700 + 200 =900

T: 30 + 60 = 90

O: 3 + 6 = 9

Combine: 900 + 90 + 9 = 999

2. 112 + 131 + 363 =

H: 100 + 100 + 300 =500

T: 10 + 20 + 60 = 90

O: 2 + 1 + 3 = 6

Combine: 500 + 90 + 6 = 596

3. 745 – 437 =

700 ~~40~~ 30 5 + 10 = 15

-400 30 7

15 – 7 = 8

30 – 30 = 0

700 – 400 = 300

Combine: 300 + 0 + 8 = 308

4. 631 – 327 =

600 ~~30~~ 20 1 + 10 = 11

-300 20 7

11 – 7 = 4

20 – 20 = 0

600 – 300 = 300

Combine: 300 + 0 + 4 = 304

1. Jimmy was selling candy to raise money for his soccer team. He sold 559 chocolate bars, 281 gummy candies, and 123 chocolate covered peanuts. How much candy did Jimmy sell in all?

559 + 281 + 123 =

H: 500 + 200 + 100 = 800

T: 50 + 80 + 20 = 150

O: 9 + 1 + 3 = 13

Combine: 800 + 150 + 13 = 963 pieces of candy

2. Marco was building a model house out of popsicle sticks. He used 456 sticks for the front and back of the house, 192 for the roof of the house and 420 for the two sides. How many popsicle sticks did he use altogether?

456 + 192 + 420 =

H: 400 + 100 + 400 = 900

T: 50 + 90 + 20 = 160

O: 6 + 2 + 0 = 8

Combine: 900 + 160 + 8 = 1,068 popsicle sticks

3. Carla had a large coin collection containing 824 coins. 236 of her coins were quarters. How many coins were not quarters?

~~800~~ 700 ~~20~~ 10 + 100= 110 4 + 10 = 14

-200 30 6

14 – 6 = 8

110 – 30 = 80

700 – 200 = 500

Combine: 500 + 80 + 8 = 588 coins were not quarters

4. Both Joe and Miguel had large dogs. Joe's dog weighed 119 pounds. Miguel's dog weighed 145 pounds. How much more did Miguel's dog weigh?

100 ~~40~~ 30 5 + 10 = 15

-100 10 9

15 – 9 = 6

30 – 10 = 20

100 – 100 = 0

Combine: 0 + 20 + 6 = 26 pounds more

Name: ANSWER KEY

Adding and Subtracting Within 1000: Partial Sums and Decomposing

Directions: Show your work using partial sums or decomposing.

1. 489 + 247 =

H: 400 + 200 = 600

T: 80 + 40 = 120

O: 9 + 7 = 16

Combine: 800 + 150 + 13 = 963

2. 701 – 561 =

~~700~~ 600 0 + 100 = 100 1

-500 60 1

1 – 1 = 0

100 – 60 = 40

600 – 500 = 100

Combine: 100 + 40 + 0 = 140

3. Mr. Farmer had 852 vegetables in his garden. He went to the farmer's market to sell them and sold 658 vegetables. How many vegetables did he have left over?

852 – 658 =

~~800~~ 700 ~~50~~ 40 + 100= 140 2 + 10 = 12

-600 50 8

12 – 8 = 4

140 – 50 = 90

700 – 600 = 100

Combine: 100 + 90 + 4 = 194

4. Michaels class had 643 pencils left at the end of the year. Carl's class had 323 pencils left at the end of the year. How many pencils did Michael and Carl's classes have altogether?

643 + 323 =

H: 600 + 300 = 900

T: 40 + 20 = 60

O: 3 + 3 = 6

Combine: 900 + 60 + 6 = 966 pencils

5. 243 + 112 + 396 =

H: 200 + 100 + 300 = 600

T: 40 + 10 + 90 = 140

O: 3 + 2 + 6 = 11

Combine: 600 + 140 + 11 = 751

6. 319 – 190 =

~~300~~200 10 + 100= 110 9

-100 90 0

9 – 0 = 9

110 – 90 = 20

200 – 100 = 100

Combine: 100 + 20 + 9 = 129

Part A: There are 257 third graders, 315 fourth graders, and 298 fifth graders at Michelle's school. How many students are in all three grades?

257 + 315 + 298 = 993

257 = 200 + 50 + 7

315 = 300 + 10 + 5

298 = 200 + 90 + 8

Hundreds: 200 + 300 + 200 = 700

Tens: 50 + 10 + 90 = 150

Ones: 7 + 5 + 8 = 20

Combine sums: 700 + 150 + 20= 870 students in all three grades

Part B: Of all the students 423 of them are boys and the rest are girls. How many girls are in those three grades?

800 ~~70~~ 60 0 + 10 = 10

-400 20 3

10 – 3 = 7

60 – 20 = 40

800 – 400 = 400

Combine: 400 + 40 + 7 = 447 students were girls

Optional Assessment Component Exit Slips

***You may use the exit slip at the end of this lesson as a quick assessment of student understanding. Either print them out (page 20), or simply have students copy the problems on a half sheet of paper.**

Make sure to "Break Up Your Day!"

Now is a great time to take a break and get students re-energized.

See our list of engaging movement and brain break ideas to get your students moving and ready to refocus! (see page 27)

Name: ANSWER KEY Date: _____

Exit Slip:

Addition and Subtraction Using Partial Sums and Decomposing

Directions: Show your work using partial sums or decomposing.

Part A: There are 346 third graders, 452 fourth graders, and 415 fifth graders at Michelle's school. How many students are in all three grades?

316 + 352 + 325 = 993
316 = 300 + 10 + 6
352 = 300 + 50 + 2
325 = 300 + 20 + 5

Hundreds: 300 + 300 + 300 = 900
Tens: 10 + 50 + 20 = 80
Ones: 6 + 2 + 5 = 13
Combine sums: 900 + 80 + 13 = 993 students in all three grades

Part B: Of all the students 497 of them are girls and the rest are boys. How many boys are in those three grades?

~~900~~ 800 ~~90~~ 80 + 100= 180 3 + 10 = 13
-400 90 7

13 – 7 = 6

180 – 90 = 90

800 – 400 = 400

Combine: 400 + 90 + 6 = 496 students were boys

Name: _____Date: _____

Exit Slip:

Addition and Subtraction Using Partial Sums and Decomposing

Directions: Show your work using partial sums or decomposing.

Part A: There are 346 third graders, 452 fourth graders, and 415 fifth graders at Michelle's school. How many students are in all three grades?

Part B: Of all the students 497 of them are girls and the rest are boys. How many boys are in those three grades?

Name: _____Date: _____

Exit Slip:

Addition and Subtraction Using Partial Sums and Decomposing

Directions: Show your work using partial sums or decomposing.

Part A: There are 346 third graders, 452 fourth graders, and 415 fifth graders at Michelle's school. How many students are in all three grades?

Part B: Of all the students 497 of them are girls and the rest are boys. How many boys are in those three grades?

Name: _____

Partial Sums and Decomposing Practice

1. 733 + 266 =	2. 112 + 131 + 363 =
3. 745 – 437 =	4. 631 – 327 =
1. Jimmy was selling candy to raise money for his soccer team. He sold 559 chocolate bars, 281 gummy candies, and 123 chocolate covered peanuts. How much candy did Jimmy sell in all?	2. Marco was building a model house out of popsicle sticks. He used 456 sticks for the front and back of the house, 192 for the roof of the house and 420 for the two sides. How many popsicle sticks did he use altogether?
3. Carla had a large coin collection containing 824 coins. 236 of her coins were quarters. How many coins were not quarters?	4. Both Joe and Miguel had large dogs. Joe's dog weighed 119 pounds. Miguel's dog weighed 145 pounds. How much more did Miguel's dog weigh?

Name: _____

Adding and Subtracting Within 1000: Partial Sums and Decomposing

Directions: Show your work using partial sums or decomposing.

1. 489 + 247 =	2. 701 – 561 =
3. Mr. Farmer had 852 vegetables in his garden. He went to the farmer's market to sell them and sold 658 vegetables. How many vegetables did he have left over?	4. Michaels class had 643 pencils left at the end of the year. Carl's class had 323 pencils left at the end of the year. How many pencils did Michael and Carl's classes have altogether?
5. 243 + 112 + 396 =	6. 319 – 190 =

7. **Part A:** There are 257 third graders, 315 fourth graders, and 298 fifth graders at Michelle's school. How many students are in all three grades?

Part B: Of all the students 423 of them are boys and the rest are girls. How many girls are in those three grades?

Make sure to "Break Up Your Day!"

These can be used in the middle of a lesson or at the end of your lesson.

Here are a few engaging movement and brain break ideas to get your students moving and ready to refocus!

Break Up Your Day: Guess My Number!

- Begin by showing an example:
- "I am thinking of a number between 1 and 10. Who would like to guess my number" Call on a student.
- When they take a guess, let them know if your number is bigger or smaller than what they guessed (ex: Student guesses 5, your number is 7, so you would say "My number is bigger than 5." Then call on another student to guess).
- Keep giving clues until students guess the number.
- You could play again with the teacher picking the number if students need reinforcement, or you could have a student come up and pick the number (have them tell you what the number is so you can help them).

Break Up Your Day: The Wiggles!

- Let's get our wiggles out before we continue!
- Stand up and shake out your arms (4-5 seconds to shake) Remember! No one should get hurt! …now FREEZE!
- Now shake the wiggles out of your right leg…FREEZE!
- Now shake the wiggles out of your left leg…FREEZE!
- Now shake all the wiggles out of your whole body….FREEZE!

Break Up Your Day: Body Stretches!

10 minutes

FORMATION: Standing at desks

- Have students begin the day with a series of simple activities lasting 30 seconds or more: jumping jacks, knee lifts, flap arms like a bird, hopping, scissors (feet apart then cross in front, feet apart then cross in back)…
- Follow each activity with a basic stretching movement:
- Reach for the sky runner's stretch
- Butterfly stretch (sit with bottom of feet together)
- Knee to chest, rotate ankles, scratch your back

Hold stretches for 10 - 30 seconds. Repeat a different simple activity followed by a new basic stretch as many times as desired.