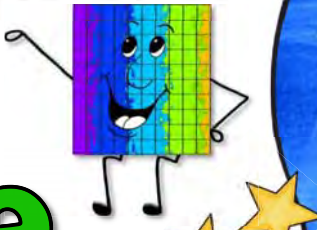




Includes CCSS & Traditional Terms

Place Value Partners



Exciting Partner Review Game for Whole Numbers and Decimals

Ways to Express Number
Base-ten Numeral: 563
Number Name: five hundred sixty-three
Expanded Form: $500 + 60 + 3$

CCSS Math
2.NBT.A.3
4.NBT.2
5.NBT.A.3

CCA
Common Core Aligned

Number Words

one	ten	nineteen	hundred
two	eleven	twenty	thousand
three	twelve	thirty	million
four	thirteen	forty	billion
five	fourteen	fifty	trillion
six	fifteen	sixty	ten
seven	sixteen	seventy	hundredth
eight	seventeen	eighty	thousandth
nine	eighteen	ninety	

Place Value Partners
Decimal Receiver Directions

1. Listen as your partner calls out each digit and its place.
2. Show the digit on the base below in the correct position.
3. Read the number to your partner using its correct base name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the base.
5. Both partners write the number, its word name, and its expanded form on their own recording page or in a journal.
6. Switch roles and repeat from step 1.

Place Value Partners
Receiver Directions

1. Listen as your partner calls out each digit and place.
2. Show the digit on the base below in the correct position.
3. Read the number to your partner using its correct base name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the base.
5. Both partners write the base ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and repeat from step 1.

Place Value Partners
Decimal Sender Directions

1. Listen as your partner calls out each digit and its place.
2. Show the digit on the base below in the correct position.
3. Read the number to your partner using its correct base name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the base.
5. Both partners write the number, its word name, and its expanded form on their own recording page or in a journal.
6. Switch roles and repeat from step 1.

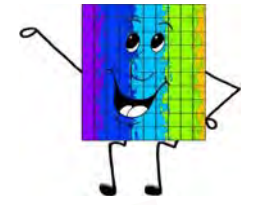
Place Value Strip

Decimal Place Value Strip

Laura Candler

Place Value Partners

Created by Laura Candler
www.lauracandler.com



Place Value

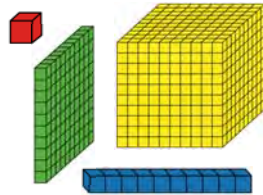
Place Value Partners is a Common Core aligned game for math centers, cooperative learning partners, small guided math groups, or even whole class instruction. The concept is similar to the game Battleship™ with partners facing each other across a barrier. Instead of ships and a grid, they have a place value game board and number tiles or number cards. One partner is the “Sender” who calls out the numbers and places, and the other is the “Receiver” who listens and builds the number on his or her game board. The two compare boards, discuss the correct response, and then record the base-ten numeral, the number name, and its expanded form in their journals or on a recording page. This activity includes five different variations: three levels for whole numbers and two levels for decimals. The entire packet is available in both color and black and white. Both books are almost identical other than the color, so choose the version you prefer.



CCSS Alignment Notes
This version of Place Value Partners is aligned with at least one number and operations Common Core standard in grades 2, 4, and 5. See the last page in this packet for details. Third grade does not have a specific standard for this skill, but third graders can certainly use the activity for review. The terminology used in this game is consistent with Common Core language. For example, the term “standard form” has been replaced with “base-ten numeral” and “word name” has been replaced with “number name.” If you prefer the traditional terms, use the variation of this game located in the zip file you downloaded when you purchased it.

Introducing Place Value Concepts
When introducing whole number and decimal place value concepts to students, it’s important to use manipulatives to develop the concepts on a concrete level. Base ten

blocks will help students develop the understanding that each place to the left is 10 times as big as the one to the right, and they are especially helpful when demonstrating how to write expanded forms. Before assigning the game, be sure your students know the place names as well as how to write base-ten numerals (standard forms), number names (word names), and expanded forms. You'll find four mini posters in this packet that show examples of the different ways to express numbers. You can display the appropriate level while students are working if needed.



Tips for Introducing Place Value Partners

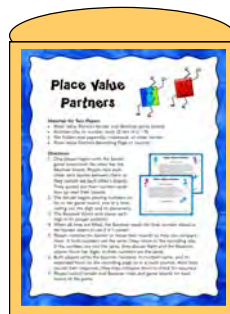
The best way to introduce the game is to play it against the class. If you don't want to prepare a whole class set of materials, students can write their responses on individual dry erase boards just to get a feel for the game. You will play the role of the Sender and they will all be Receivers. Or you can have two students come to the front of the room and demonstrate how to play the game as you coach them through the steps. It can also be introduced in a small guided math group.

Materials Needed for each Game:

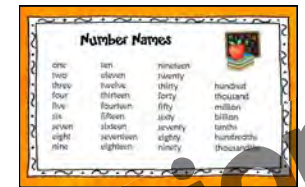
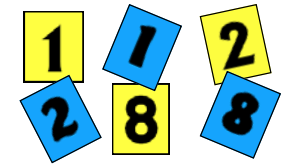
- Place Value Partners student directions
- Large envelope for storage (9" x 12")
- Place Value Partners Sender Board
- Place Value Partners Receiver Board
- Number cards or number tiles (2 sets of 0 – 9)
- File folders, notebooks, or other barriers
- Number Names list (optional)
- Place Value Partners Recording Pages (2) or Math Journals

Advanced Preparation

There are five different variations of the game board. One has places up to hundreds, one has places up to thousands, one has places up to millions, one is a decimal variation from tens to hundredths, and the last is a more advanced board from thousands to thousandths. Decide which level is appropriate for your students, and print the materials for that level only.

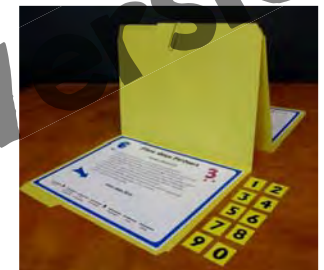


To prepare each game packet, print out the student direction page and glue it on the front of a 9" x 12" envelope. Print out a Sender board, a Receiver board, and one page of number cards (2 sets per page). The number cards come in two different colors so students can tell them apart. Laminate the boards and number cards if possible, and cut the number cards apart. Store each set of numbers in a small zippered plastic bag. You can also purchase 1" square number tiles or create them from thin sheets of foam rubber. If you know your students will have difficulty spelling the number words, you can add a copy of the Number Names list to each packet for reference. Store all materials in the envelope.



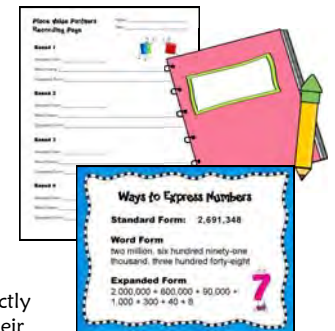
The Game Set Up

Each pair of students will need a barrier to place between them. File folders work well if opened and placed back to back as shown. You can fasten them with a large paper clip. Students can also use a 3-ring binder as a barrier, but I found that they tend to fall over. The file folders held with a paper clip seem to work best. They place their game boards on the bottom half of the file folder. To start the game, they leave the lines blank and spread their numbers out next to the board.



Options for Recording Numbers

Decide whether you want your students to record their numbers, word names, and expanded forms on the Place Value Partners Recording Page or in Math Journals. There are two different variations of the recording page. One is more appropriate for younger students because it has fewer spaces for recording answers, the font is larger, and the spacing allows for larger handwriting. The other has more spaces, a smaller font, and clipart that's more appropriate for older kids. If you want your students to use a math journal, be sure to model exactly what you want them to record and how to set up their journal pages. You can display "Ways to Express Numbers" for students to refer to when working. After they understand the format, remove the visual aid and only provide it to students who need it.



Directions for Introducing Place Value Partners:

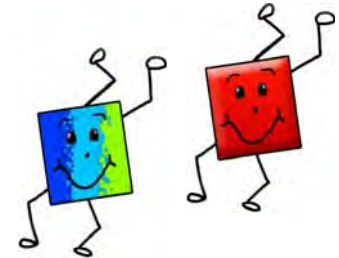
1. Pair each student with a partner. In each pair, one person will start with the Sender game board and the other will start with the Receiver game board. Each person will need a set of number cards or tiles from 0 to 9.
2. Demonstrate the game set up. Partners should face each other across a low barrier such as two file folders held together at the top with a paper clip. They should be able to see and hear each other, but not see each other's game boards. Have them place their number cards or tiles face up beside their boards.
3. Display the Place Value Partner directions and coach students through a round or two of play. Point out that the Sender's board has the place value positions labeled and the Receiver board does not. The Sender gives directions for placing the digits, one at a time. For example, "Put your nine in the hundred's place," or "Find the ten's place and put your three in that spot." The Sender must pause between each set of directions to make sure the Receiver is ready for the next direction.
4. When all the lines are filled as shown, the Receiver reads the number aloud. Next, they move the barrier aside and turn their boards to compare them. If they have the same number, they proceed with the recording step. If not, they discuss the answer and the Receiver must change his or her response to the correct number.
5. Both students write the base-ten numeral, number name, and the expanded form on their recording sheets or in their journals. Remind them to use the "Number Names" list if they need it. Display the "Ways to Express Numbers" page if they need help remembering how to write each form. When teaching decimals, display the page called "Expanded Forms of Decimals" to demonstrate that there are many ways to write decimals in expanded form. Be sure to tell them which method you would like them to use. Finally, students compare and discuss the answers on their recording pages. This is not intended to be a graded activity, so it's fine for them to talk over their answers and correct them if needed.
6. After each round, students switch roles and game boards. The Sender becomes the Receiver and the Receiver becomes the Sender. The Sender must always have the board that shows the place value positions and the Receiver has the blank one.



Math Stations for Middle Grades

Place Value Partners works great in math centers or stations. For more information about math centers, check out **Math Stations for Middle Grades** available from my [TeachersPayTeachers store](http://TeachersPayTeachers.com). If you teach grades 2 through 8, you'll find this book to be full of easy strategies to help you get math stations started in your classroom.

Place Value Partners

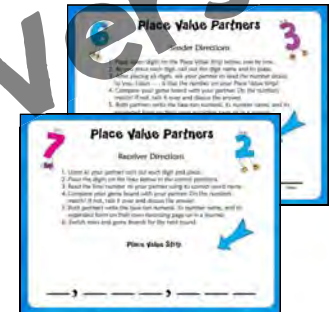


Materials for Two Players:

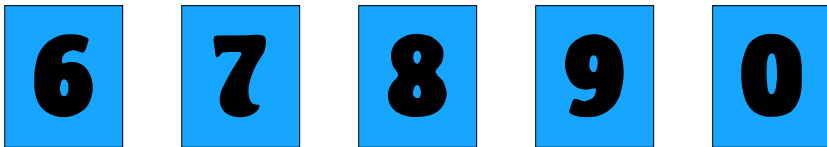
- Place Value Partners Sender and Receiver game boards
- Number tiles or number cards (2 sets of 0 – 9)
- File folders and paperclip, notebook, or other barrier
- Place Value Partners Recording Page or Journal

Directions:

1. One player begins with the Sender game board and the other has the Receiver board. Players face each other with barrier between them so they cannot see each other's boards. They spread out their number cards face up near their boards.
2. The Sender begins placing numbers on his or her game board, one at a time, calling out the digit and its placement.
3. The Receiver listens and places each digit in its proper position.
4. When all lines are filled, the Receiver reads the final number aloud as the Sender listens to see if it's correct.
5. Players remove the barrier or move their boards so they can compare them. If both numbers are the same, they move to the recording step. If the numbers are not the same, they discuss them and the Receiver adjusts his or her digits so their numbers are the same.
6. Both players write the base-ten numeral, its number name, and its expanded form on the recording page or in a math journal. After they record their responses, they may compare them to check for accuracy.
7. Players switch Sender and Receiver roles and game boards for each round of the game.



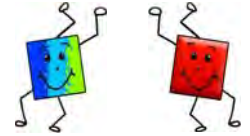
Place Value Partners Number Cards



Place Value Partners Recording Page

Name _____

Date _____



Round 1

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 2

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 3

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 4

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Place Value Partners Recording Page



Name _____

Date _____

Round 1

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 2

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 3

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 4

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 5

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 6

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Round 7

Base-ten Numeral _____

Number Name _____

Expanded Form _____

Number Names



one	ten	nineteen	
two	eleven	twenty	
three	twelve	thirty	hundred
four	thirteen	forty	thousand
five	fourteen	fifty	million
six	fifteen	sixty	billion
seven	sixteen	seventy	tenths
eight	seventeen	eighty	hundredths
nine	eighteen	ninety	thousandths

Number Names



one	ten	nineteen	
two	eleven	twenty	
three	twelve	thirty	hundred
four	thirteen	forty	thousand
five	fourteen	fifty	million
six	fifteen	sixty	billion
seven	sixteen	seventy	tenths
eight	seventeen	eighty	hundredths
nine	eighteen	ninety	thousandths



Place Value Partners



Sender Directions

1. Place three digits on the Place Value Strip below, one by one.
2. As you place each digit, call out the number and its place.
3. After placing all digits, ask your partner to read the number aloud to you. Is that the number on your Place Value Strip?
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Place Value Strip



_____ _____ _____
Hundreds Tens Ones



Place Value Partners



Receiver Directions

1. Listen as your partner calls out each digit and its place.
2. Place the digits on the lines below in the correct positions.
3. When all three lines have been filled, read the number to your partner using its correct word name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Place Value Strip



_____ _____ _____

Ways to Express Numbers

Base-ten Numeral: 563

Number Name
five hundred sixty-three

Expanded Form
 $500 + 60 + 3$



Place Value Partners



Sender Directions

1. Place four digits on the Place Value Strip below, one by one.
2. As you place each digit, call out the number and its place.
3. After placing four digits, ask your partner to read the number aloud to you. Is that the number on your Place Value Strip?
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Place Value Strip



_____ , _____ _____ _____
Thousands Hundreds Tens Ones



Place Value Partners



Receiver Directions

1. Listen as your partner calls out each digit and its place.
2. Place the digits on the lines below in the correct positions.
3. When all four lines have been filled, read the number to your partner using its correct word name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Place Value Strip



____ , ____ _

Ways to Express Numbers

Base-ten Numeral: 2,348

Number Name

two thousand, three hundred forty-eight

Expanded Form

$2,000 + 300 + 40 + 8$





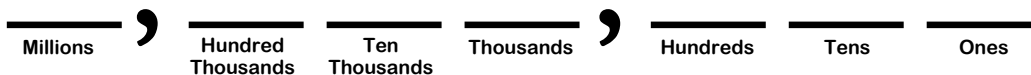
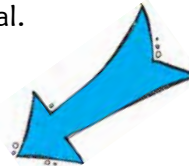
Place Value Partners



Sender Directions

1. Place seven digits on the Place Value Strip below, one by one.
2. As you place each digit, call out the digit name and its place.
3. After placing all digits, ask your partner to read the number aloud to you. Listen . . . is that the number on your Place Value Strip?
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Place Value Strip



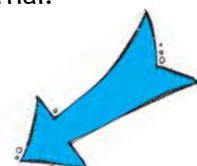
Place Value Partners



Receiver Directions

1. Listen as your partner calls out each digit and place.
2. Place the digits on the lines below in the correct positions.
3. Read the final number to your partner using its correct word name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Place Value Strip



Ways to Express Numbers

Base-ten Numeral: 2,691,348

Number Name

two million, six hundred ninety-one thousand, three hundred forty-eight

Expanded Form

$2,000,000 + 600,000 + 90,000 + 1,000 + 300 + 40 + 8$



Place Value Partners



Decimal Sender Directions

1. Place four digits on the Place Value Strip below, one by one.
2. As you place each digit, call out the digit name and the place.
3. After placing all digits, ask your partner to read the number aloud to you. Listen . . . is that the number on your Place Value Strip?
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Decimal Place Value Strip





Place Value Partners



Decimal Receiver Directions

1. Listen as your partner calls out each digit and its place.
2. Place the digits on the lines below in the correct positions.
3. Read the number to your partner using its correct word name.
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Decimal Place Value Strip



_____ • _____

Ways to Express Numbers

Base-ten Numeral: 54.23

Number Name

Fifty-four and twenty-three hundredths

Expanded Form

$5 \times 10 + 4 \times 1 + 2 \times (1/10) + 3 \times (1/100)$

Expanded Forms of Decimals

Base-ten Numeral: 45.36

Expanded Forms:

$$40 + 5 + 0.3 + 0.06$$

$$4 \times 10 + 5 \times 1 + 3/10 + 6/100$$

$$4 \times 10 + 5 \times 1 + 3 \times (1/10) + 6 \times (1/100)$$

5

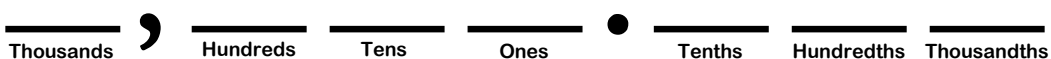
Place Value Partners

2

Decimal Sender Directions

1. Place seven digits on the Place Value Strip below, one by one.
2. As you place each digit, call out the digit name and the place.
3. After placing all digits, ask your partner to read the number aloud to you. Listen . . . is that the number on your Place Value Strip?
4. Compare your game board with your partner. Do the numbers match? If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Decimal Place Value Strip





Place Value Partners



Decimal Receiver Directions

1. Listen as your partner calls out each digit and its place.
2. Place the digits on the lines below in the correct positions.
3. Read the number to your partner using its correct word name.
4. Compare your game board with your partner. Do the numbers match?
If not, talk it over and discuss the answer.
5. Both partners write the base-ten numeral, its number name, and its expanded form on their own recording page or in a journal.
6. Switch roles and game boards for the next round.

Decimal Place Value Strip

_____ , _____ . _____

Ways to Express Numbers

Base-ten Numeral: 5,218.397

Number Name

five thousand, two hundred eighteen and three hundred ninety-seven thousandths

Expanded Form

$5 \times 1,000 + 2 \times 100 + 1 \times 10 + 8 \times 1 + 3 \times (1/100) + 9 \times (1/1000) + 7 \times (1/10000)$