

Place Value Stations

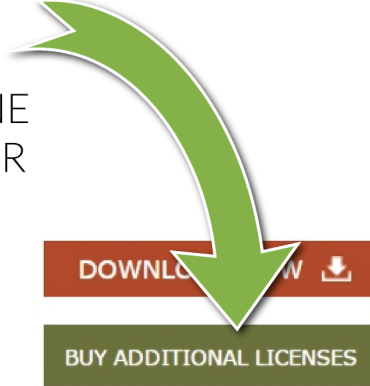
4th Grade



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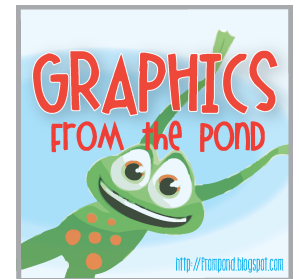


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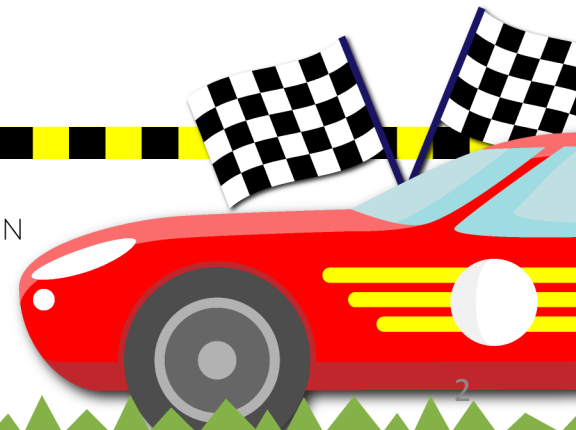


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TO the Teacher

- This product is meant to be a no frills, all action tool for cementing the concept of place value with students in preparation for standardized testing.
- Each activity can be completed in a variety of ways to fit your classroom needs.
- It was created with the following standards in mind:
 - TEKS
 - represent the value of the digit in whole numbers through 1,000,000,000 and decimals to the hundredths using expanded notation and numerals 4.2(B)
 - Common Core
 - CCSS.Math.Content.4.NBT.A.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form.
 - I have included activities for both expanded form and expanded notation

Teacher Tips

This resource can be used in a variety of ways:

- Individual Assessment
 - Any station within this resource can be used to informally assess a student. To complete an assessment, an individual student would complete the station on their own making sure to show their thinking on the recording sheet.
- Partner Practice
 - These stations are perfect for partner practice. By including the title page, station pieces, and recording sheets in one container (I use a Velcro sealed folder or plastic bag with zipper) students are able to practice the standards over and over again.
 - For partner practice I ability group my students so that they are able to scaffold for one another.
 - If using as partner practice stations I would recommend using a “3 Before Me” or similar expectation where partner groups can help one another rather than requiring teacher assistance during small group time.
 - The first time we use stations I explicitly explain my expectations and model proper station and partner etiquette. This pays off throughout the year.

Teacher Tips

This resource can be used in a variety of ways:

- Small Group Re-teach or Pre-teach
 - I love to use these stations in small group to accelerate or remediate student learning.
 - By using station activities instead of worksheets students are more engaged.
 - These stations are perfect for “gamifying” your small group time.
 - Instead of working in partners, the small group works together to solve each station with the teacher there for support.
 - When the teacher notices a misconception they pause play of the station to have a “number talk” with the small group.
 - This practice allows the teacher to triage student learning as they get peer practice.

Prep Recommendations

- Each activity is created in black and white to conserve color ink
 - Using colored paper to differentiate different parts in each activity will help students to stay organized.
- If you plan to use the activities for small group or partner activities, I would recommend laminating them for durability.

content vocabulary

- Content vocabulary is an important element of math.
- I keep this list of content vocabulary at the small group table for students to use as a word bank.
- We also add these words to our math journal and word wall.

content vocabulary

whole number	Set of natural numbers greater than zero used to count. Examples: 5, 709, or 1,000,001
decimal	Number that represent part of a whole recorded with a decimal point. Examples: 1.1, 2.0, or 100.25
digit	Any number 0-9
standard form	The representation of a number using digits. Examples: 37 or 0.97
word form	The representation of a number using words. Examples: four hundred thirty seven or ninety-seven hundredths
expanded form	The representation of a number using the sum of its place values. Examples: $400+30+7$ or $0.9+0.07$
expanded notation	The representation of a number as a sum of its place values where each term is shown as the digit's multiple of its place value. Example: $(4 \times 100) + (3 \times 10) + (7 \times 1)$ or $4(100)+3(10)+7(1)$
numeral	A symbol used to represent a number
order	Arrange from least to greatest or greatest to least based on their value
compare	Consider the value of two numbers and use a symbol such as $<$, $>$, or $=$ to determine which is greater
period	Three-digit grouping of numbers containing a ones, tens, and hundreds place
place value	The value of a digit based on its location in a number
rounding	Making an estimation to the closest specified value
value	The amount that a number represents

content vocabulary

whole

decimal

digit

number

standard
form

word form

expanded
form

expanded
notation

numeral

order

compare

period

place value

value

rounding

Place Value Vocabulary

one

ten

hundred

thousand

ten

hundred

thousand

thousand

million

ten million

hundred

million

billion

ten

hundredth

Forms of a Number

Match the three forms of the
number to each other.

Teacher suggestions

Forms of a Number

- In this activity students are asked to match the standard form, word form, and expanded notation form of a number.
- This activity can be used in a variety of ways
 - Small group with teacher guidance
 - A partner activity to practice
 - Independently to assess
- An optional recording sheet is included to hold students accountable
- I prefer to copy each of the card sets on a different color of paper to show variety.

Materials

Included:

- Word form cards
- Standard form cards
- Expanded notation cards
- Answer Key
- Recording sheet

Not Included:

- pencil

Twelve million, three hundred sixty-five thousand, four



Fourteen and sixteen hundredths



Seven billion, four hundred nineteen thousand, five hundred forty-two



Nine and three tenths



Nine hundred thirty



One thousand, four hundred sixteen



Twelve thousand, four hundred seventy-three



Five hundred thousand, seventy-six



Fifty-nine



Sixty-seven thousand, three hundred fifty and eleven hundredths



Five hundred seventy six



Fourteen thousand, five hundred thirty-two and six tenths



12,365,004

14.16

7,000,419,542

93

A

D

G

J

930

1,416

12,473

500,076

B

E

H

K

57

67,350.11

576

14,532.6

C

F

I

L

$$\begin{aligned} &(1 \times 10,000,000) + \\ &(2 \times 1,000,000) + \\ &(3 \times 100,000) + \\ &(6 \times 10,000) + \\ &(5 \times 1,000) + \\ &(4 \times 1) \end{aligned}$$

a

$$\begin{aligned} &(1 \times 10) + \\ &(4 \times 1) + \\ &(1 \times 0.1) + \\ &(6 \times 0.01) \end{aligned}$$

b

$$\begin{aligned} &(7 \times 1,000,000,000) + \\ &(4 \times 100,000) + \\ &(1 \times 10,000) + \\ &(9 \times 1,000) + \\ &(5 \times 100) + \\ &(4 \times 10) + \\ &(2 \times 1) \end{aligned}$$

c

$$\begin{aligned} &(9 \times 1) + \\ &(3 \times 0.1) \end{aligned}$$

d

$$\begin{aligned} &(9 \times 100) + \\ &(3 \times 10) \end{aligned}$$

e

$$\begin{aligned} &(1 \times 1,000) + \\ &(4 \times 100) + \\ &(1 \times 10) + \\ &(6 \times 1) \end{aligned}$$

f

$$\begin{aligned} &(1 \times 10,000) + \\ &(2 \times 1,000) + \\ &(4 \times 100) + \\ &(7 \times 10) + \\ &(3 \times 1) \end{aligned}$$

g

$$\begin{aligned} &(1 \times 100,000) + \\ &+ \\ &(7 \times 10) + \\ &(6 \times 1) \end{aligned}$$

h

$$\begin{aligned} &(5 \times 10) + \\ &(9 \times 1) \end{aligned}$$

i

$$\begin{aligned} &(6 \times 10,000) + \\ &(7 \times 1,000) + \\ &(3 \times 100) + \\ &(5 \times 10) + \\ &(1 \times 0.1) + \\ &(1 \times 0.01) \end{aligned}$$

j

$$\begin{aligned} &(5 \times 100) + \\ &(7 \times 10) + \\ &(6 \times 1) \end{aligned}$$

k

$$\begin{aligned} &(1 \times 10,000) + \\ &(4 \times 1,000) + \\ &(5 \times 100) + \\ &(3 \times 10) + \\ &(2 \times 1) + \\ &(6 \times 0.1) \end{aligned}$$

l

Name _____ # _____

Date _____

Forms of a Number Recording Sheet

Record the number (word form), uppercase letter (standard form,) and lowercase letter (expanded notation) for each number in the order you match them.

Forms of a Number **Answer key**

While students should have the same number, lowercase letter, and uppercase letter, they may be in any order.

★ 1 ★ A a	★ 4 ★ D d	★ 7 ★ G g	★ 9 ★ J j
★ 2 ★ B b	★ 5 ★ E e	★ 8 ★ H h	★ 1 ★ I i
★ 3 ★ C c	★ 6 ★ F f	★ 1 ★ K k	★ 2 ★ L l

Name _____ # _____ Date _____

Test Bridge Questions

Caitlin saw 3,650 cars on your road trip. She wrote the number of cars in expanded notation as $(3 \times 1,000) + (6 \times 100)$.

What is she missing?

- a. (1×1)
- b. (5×100)
- c. (5×10)
- d. $(5 \times 1,000)$

What place value is represented by the numeral 6 in 4,657,890

- a. millions
- b. thousands
- c. Hundreds
- d. hundred thousands

What is the value of the four in the number 32,247,798?

- a. 10,000
- b. 400,000
- c. 1,000
- d. 40,000

Birdie's ears are 3.20 centimeters tall. How would you represent the height of her ears in expanded form?

- a. $3+2$
- b. $3+2+0$
- c. $3+0.2$
- d. $2+0.3$

Answer key

Test Bridge Questions

- 1.** Caitlin saw 3,650 cars on your road trip. She wrote the number of cars in expanded notation as $(3 \times 1,000) + (6 \times 100)$. What is she missing?
- a. (100)
 - b. (5×100)
 - c. (5×10)
 - d. $(5 \times 1,000)$
- 2.** What is the value of the four in the number 32,247,798?
- a. 10,000
 - b. 400,000
 - c. 1,000
 - d. 40,000
- 3.** What place value is represented by the numeral 6 in 4,657,890?
- a. millions
 - b. Thousands
 - c. hundreds
 - d. hundred thousands
- 4.** Birdie's ears are 3.20 centimeters tall. How would you represent the height of her ears in expanded form?
- a. $3+2$
 - b. $3+2+0$
 - c. $3+0.2$
 - d. $2+0.3$