

**Module: Mathematics**

**Lesson Title: Place Value**

**Standards for the Lesson**

<b>Florida Adult Basic Education Mathematics Standards</b>
Understand place value of two-digit numbers. (CCR.MA.ABE.1.1.1)
Understand place value of three-digit numbers. (CCR.MA.ABE.1.2.1)

**Interpreting the Standard**

1 Standards	2 Skills Included in the Standard	3 Concepts Included in the Standard	4 Through a Particular Context	5 Cognitive Demand/Levels of Thinking	6 Sample Activity
Understand place value of two-digit numbers. (CCR.MA.ABE.1.1.1)	understand	place value	Use of manipulatives or real-world experiences with larger and smaller numbers.	DOK 1	Have students write different ways to describe a number.
Understand place value of three-digit numbers. (CCR.MA.ABE.1.2.1)	understand	place value		DOK 1	Have students play a place value game.

**Objectives of the Lesson**

Students will:

- Read, write, and represent value of whole numbers and symbols
- Read, write, and represent whole numbers in standard form, expanded form, and word form

**Materials**

- Base 10 Blocks
- List of numbers that students will use to describe via symbols, standard form, expanded form, and word form
- **Handout A: Place Value Chart**
- **Handout B: Place Value Chart to the Millions**

**Instructional Plan**

*Overview*

This lesson focuses on a foundational skill of numeracy – place value. Place value is important for students to understand in order to be successful in other mathematical skills, such as number operations, word problems, and real-life situations.

### Process

Ask students whether they would rather have 6 dollars or 60 dollars. Ask students how they know that 60 is larger than 6. Provide students with **Handout A: Place Value**. Show students that 60 is equivalent to six tens and no ones; whereas, 6 is equivalent to 6 ones. Place both numbers in a place value chart that you have drawn on the board or have projected on a screen. You may also wish to use Base 10 Blocks to show students the number 6 and the number 60 so that they have a visual. Base 10 Blocks are very useful as a manipulative in assisting students in “seeing” numbers.

Discuss that place value is important to learn about for both solving math problems, as well as understanding place value in their daily lives. Ask students when they may need to use both the number (standard form) and the word form of a number. One example is in writing checks.

Write the number 583 on the board and model for students how to represent the number in expanded form and in word form. If students need support in identifying the value of the number, you may also use Base 10 Blocks.

If using Base 10 Blocks, expanded form, and word form, your script may be similar to the following:

*I know that the 3 is in the ones place, so I will represent that digit with 3 units. Count the units to demonstrate that there are 3. I know that the 8 is in the tens place, so I will represent that digit with 8 rods. Skip-count the rods by 10 to demonstrate that there are 80 units. I know that there is a 5 in the hundreds place, so I will represent that digit with 5 flats. Skip-count the flats by 100 to demonstrate that there are 500. Let's see if we really have 583. Begin counting the flats: 100, 200, 300...continue counting the rods 510, 520, 530...and continue counting the units 581, 582, 583. I can represent the number using the models to help me see the value of the number. So, 583 means that I have  $500 + 80 + 3$ . I can also write out this number: five hundred and eighty three. It's easy to see how we can take a number and represent it in many different ways.*

Provide students with sample numbers and have them use models, expanded form, and word form to define the number. To ensure that students understand the different ways that numbers can be written, provide them with different forms, e.g., show an expanded form and have students write the standard form or use the word form and have students identify the standard form.

When they are comfortable with the process, divide the class into teams. Tell the students that you are going to give them directions. Their task is to find the best answer. Tell students that they can discuss their answers. Call out three numbers and ask the students to make the smallest number possible on their charts. For example, with the digits 4, 7, and 2, the smallest number would be 247. Then ask them to find the largest number (742). Next, have students take turns giving three numbers to put on the chart.

Additional challenges to use with this activity can include numbers with more digits or numbers where specified digit placement is given, such as:

- Make a 3-digit number that is greater than 650 using the digits 3, 6, 8.
- Make a 3-digit number that has a 0 in the tens place using the digits 0, 6, 3.
- What number is closest to 900 using the digits 2, 8, 7?
- Make a 4-digit number that is less than 2000 using the digits 9, 2, 5, 0.
- Make a 4-digit number that is an even number and is greater than 4000 using the digits 3, 7, 4, 1.
- Make a 4-digit number that is an odd number and is less than 2500 using the digits 1, 4, 2, 6.

You may wish to have students create their own number digit challenge.

*Sample Debriefing Questions*

- Why is it important to understand place value?
- Did using Base 10 Blocks and a place value chart help you in better understanding place value? How?
- Where would you use the word form of a number?

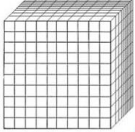
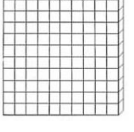


**Modifications for Different Levels**

This lesson has been developed for lower-achievement levels of math. To modify the lesson for higher-achievement levels, provide students with activities that require they apply their skills in place value to the millions using standard form, expanded form, and word form. You may also wish to have students identify the place value of decimals, as well as whole numbers.

A place value template is provided in **Handout B: Place Value Chart to the Millions**.

As students work with place value, make sure that they can apply the standard form, as well as a model, the expanded form, and the word form of the number.

**Handout A: Place Value Chart**

Thousands	Hundreds	Tens	Ones
			

### Handout B: Place Value Chart to the Millions

Whole									and	Parts		
Millions			Thousands			Ones/Units			DP	Decimal		
Hundred-millions	Ten-millions	Millions	Hundred-thousands	Ten-thousands	Thousands	Hundreds	Tens	Ones	.	Tenths	Hundredths	thousandths