



MISSISSIPPI  
**EXEMPLAR**  
Units & Lessons  
MATHEMATICS

**Grade 2**

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## Lesson 3: I Use Place Value... What's Your Super Power?

**Focus Standard(s):** 2.NBT.3

**Additional Standard(s):** 2.NBT.1, 2.NBT.2

**Standards for Mathematical Practice:** SMP.3, SMP.4, SMP.7

**Estimated Time:** 50 minutes

**Resources and Materials:**

- Magnificent Math (a stuffed animal superhero used during the lesson as a motivational tool)
- Chart paper
- Markers
- Handout 3.1: Maze of Wonder Learning Accountability Page
- Handout 3.2: Secret Four Learning Accountability Page

**Lesson Target(s):**

- Students will be able to identify a 3-digit written number in relationship to the number of objects it represents as well as its place value and vice versa.
- Students will be able to identify a 3-digit written number in relationship to its expanded notation as well as the words that form the number and vice versa.

**Guiding Question(s):**

- Why is it important to represent numbers in different ways?
- Where do you find numbers represented in the real world? What form are they represented in?

### Vocabulary

**Academic Vocabulary:**

- Base Ten
- Digits
- Hundreds
- Ones

**Instructional Strategies for Academic Vocabulary:**

- Introduce words with student-friendly definition and pictures
- Model how to use the words in discussion
- Read and discuss the meanings of words in a mathematical context


<ul style="list-style-type: none"> <li>● Place Value</li> <li>● Tens</li> <li>● Value</li> </ul>	
<div style="display: flex; justify-content: space-between;"> <span><b>Symbol</b></span> <span><b>Type of Text and Interpretation of Symbol</b></span> </div>	
	Instructional support and/or extension suggestions for students who are EL, have disabilities, or perform well below the grade level and/or for students who perform well above grade level
✓	Assessment (Pre-assessment, Formative, Self, or Summative)
<div style="text-align: center;"><b>Instructional Plan</b></div>	
<p><b>Understanding Lesson Purpose and Student Outcomes:</b>            Students will be able to read and write number words for numbers 0–1000. Furthermore, students will gain the skill of identifying and recording three-digit numbers in expanded form, standard form, and number word form. Additionally, students will model three-digit numbers using base ten.</p> <p><b>Anticipatory Set/Introduction to the Lesson:</b>            Distribute <b>Handout 3.1: Maze of Wonder Learning Accountability Page</b>. Tell students to use a crayon or colored pencil to start at the square marked “In” and find their way out of the maze coming out at the square marked “out.” Allow 3 minutes to complete individually. Display the maze that’s illustrated on Handout 3.1 on a Smart Board, document camera, overhead projector, or other large display. Allow various students (using different colors) to record their path on the large display for the class to see. Discuss that there are many ways to exit the maze just as there are many ways to represent a number. Use the following questions to guide discussion.</p> <p style="padding-left: 20px;">Prompting Questions:</p> <ul style="list-style-type: none"> <li>● What could this maze have in common with what we have been learning in this unit?</li> <li>● What else can we represent in many ways?</li> </ul> <p><b>Activity 1: Chart Challengers – Ways to Show a Number</b>            Using one problem from the previous night’s homework, demonstrate how to write standard form numbers in expanded form using base ten blocks and place value mats. Extend this understanding to writing the numbers in number name form. Create an anchor</p>	

chart showing how to write numbers in standard, expanded, and number name form. Practice a variety of numbers on the board using various strategies (SMP.4, SMP.7).

**For students who are EL, have disabilities, or perform well below grade-level:**

- Provide students with a fact sheet displaying the various ways that numbers can be represented.

**Extensions for students with high interest or working above grade level:**

- Encourage students to lead the classroom conversation and challenge students to represent all numbers in expanded form.

**Activity 2: Secret Four - Four Ways Superheroes Know to Represent Numbers**

Distribute **Handout 3.2: Secret Four Learning Accountability Page** (Print double-sided so there are 2 templates on each sheet).

Display **Handout 3.2: Secret Four Learning Activity Accountability Page** using a Smart Board, document camera, overhead projector, or in another large format. Elicit student help in filling out each section of the chart. Write the number 897 in the center of the page and then fill in each of the four sections. Repeat with the number 124. Have students fill in their own chart. Group students into 6 groups for a jigsaw activity (groups may be uneven based on student numbers). Assign each home group member a different section of the form. Students will meet with other students who are completing the same part of the form. Students return to their home group and each person presents their work. Repeat the activity 3 times so each member of a home group will do all the sections of the form.

- ✓ Instruct students to work individually to complete all parts of a new form for the number 962. Use the following questions to review their work and tell students to write their answers on their individual white board.

Prompting Questions:

- How do you show 962 using base ten blocks and a place value mat?
- How do you write the number 962 in standard form?
- How do you write the number 962 in expanded form?
- How do you write the number 962 in number word form?

**Activity 3: Superhero Math Talk**

Lead a classroom discussion about the students' essential understanding from today's lesson and how students can build upon this learning.

Prompting Questions:

- What did you discover today?
- Explain the process of using a number line as a place value strategy.
- Which strategy uses numbers broken down into each place value?
- How would you write the number 226 in standard form?
- Did you explain your strategy to others in a way they were able to understand?
- How can you build upon what you learned today?
- Can you relate what you learned today to something else?
- What did you learn today that surprised you? (SMP.3)

**For students who are EL, have disabilities, or perform well below grade-level:**

- Sit students strategically near you so you can quietly prompt them (you may use sentence starters to help them think about each question or you may prompt them by reminding them of how they used the prerequisite skill to help jog their thinking) and monitor their participation.

**Extensions for students with high interest or working above grade level:**

- Ask students to record today's learning gains in a math journal or problems they encountered or concepts they didn't understand. Review the journals to address these issues or enrich students who have a clear understanding of the concept.

**Reflection and Closing:**

- ✓ Students explain the 5 most important new learning gains they made during today's lesson. When students finish explaining the 5 learning gains, all at once they will raise their hands in the air and lead them into shouting, "High five for learning!"

**Note:** Choose the student you think should get to release Magnificent Math to protect. Magnificent Math may sit on his/her desk, take the superhero to recess, lunch, specials, etc. He/She may also take the superhero home for the night. Be sure to discuss the rules of receiving Magnificent Math. The stuffed animal may not become a distraction to others, and it must be returned the following day.

## Homework

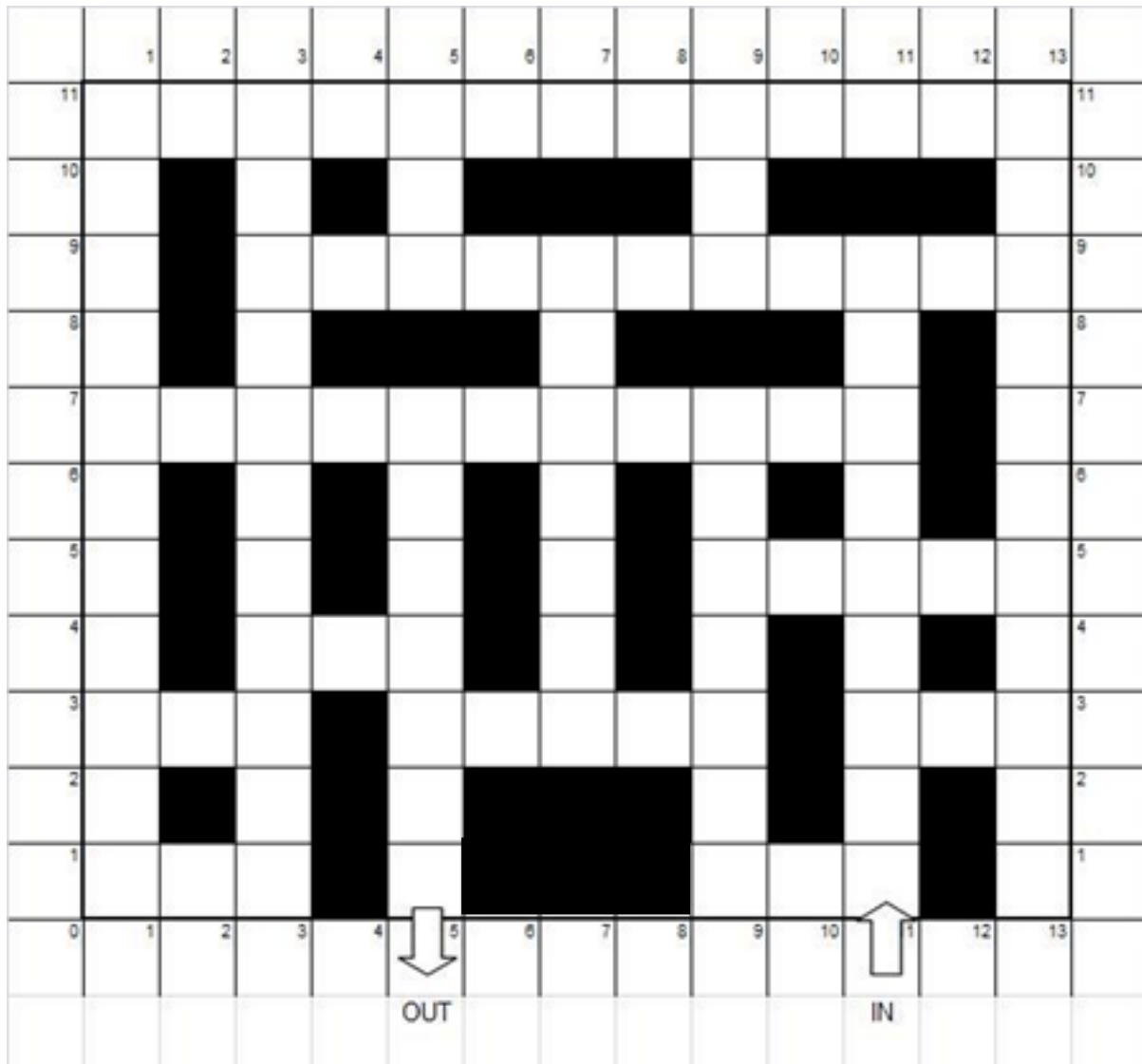
No homework.

**Handout 3.1: Maze of Wonder Learning Accountability Page**

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Directions:** Starting at the IN arrow, find as many possible ways to get to the exit marked with the OUT arrow.



Handout 3.2: Secret Six Learning Accountability Page

Name: \_\_\_\_\_

Date: \_\_\_\_\_

*Standard Form*

*Model with Base Ten Blocks*

*Different Ways  
to represent  
The Number \_\_\_\_\_*

*Word Form*

*Expanded Form*

For training or questions regarding this unit,  
please contact:

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