



MISSISSIPPI
EXEMPLAR
Units & Lessons
MATHEMATICS

Grade 2

Grant funded by:



Lesson 1: Hundreds and Beyond

Focus Standard(s): 2.NBT.1

Additional Standard(s): 2.NBT.3

Standards for Mathematical Practice: SMP.3, SMP.5, SMP.7

Estimated Time: 50 minutes

Resources and Materials:

- Magnificent Math (a stuffed animal superhero used during the lesson as a motivational tool)
- Handout 1.1: Bubble Gum House Learning Accountability Page
- Hundreds chart
- A set of 1,000 small items (paperclips, beans, straws, popsicle sticks, centimeter cubes, inch tiles, etc.). Must be the same item for the entire class.
- Various containers for students to choose from, preferably disposable (mouth wash cups, solo cups, pie tins, cupcake papers, various sizes of plastic food containers, Zip-lock bags, etc.)
- Markers
- White boards or desks to write on
- Dry erase markers
- Handout 1.2: How Many Do We Have?
- Bubble Gum House Video: <http://www.101qs.com/3338>
- 100 Hungry Ants by Elinor J. Pinczes Reading: <https://www.youtube.com/watch?v=kmdSUHPwJtc>
- Parent Guide: http://mdek12.org/docs/elementary-education-and-reading-library/fgss_2nd-grade_web-view.pdf?sfvrsn=2

Lesson Target(s):

- Students will accurately skip count by tens.
- Students will understand that 10 tens equal 100.
- Students will be able to read a 3-digit number.

Guiding Question(s):

- What is the relationship between numbers?
- How many ones equal one ten?
- Why is 100 a special number?

Vocabulary

Academic Vocabulary:

- Base Ten
- Digits
- Hundreds
- Ones
- Place Value
- Tens
- Value

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

Symbol

Type of Text and Interpretation of Symbol



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)

Instructional Plan

Understanding Lesson Purpose and Student Outcomes:

Students will be able to model place value of ones, tens, and hundreds, while recognizing the value of a digit. Students will recognize the fact that ten ones equal 1 ten and that a bundle of 10 tens equals one hundred.

Anticipatory Set/Introduction to the Lesson: Bubble Gum House

Introduce Magnificent Math to the students and explain to them that Magnificent Math is a superhero who is trapped and needs the students' help. Motivate the students to do their absolute best and inform them that every day the teacher will choose one student who will get to free Magnificent Math and have the very important job of protecting the superhero until the next math lesson!

Tell students they will be watching a video showing how to create a house using bubble gum and then answer questions about the video. Remind students to watch attentively because there are some hidden clues that will help them answer the questions. Present the video [Bubble Gum House](#) to students.

Use the following questions to guide a whole class discussion about the video moving them to the understanding of bundling 10 ones to make 1 ten.

Prompting Questions:

- How many packs of gum did it take to build the house without the roof?
- If we know how many pieces of gum are in one pack and how many packs she used to make the house part, can we determine how many pieces of gum are in the house part? (8 packs with 10 pieces per pack = 80 pieces of gum)
- Can we use skip counting to count the number of pieces of gum to build the house part?
- Why were some of the pieces of gum in packs and others single?
- How many pieces of bubble gum did it take to build the roof? ($1+2+3+4+5+6+7+8=36$)
- If it took 36 pieces of gum to build the roof, how many packs of gum will it take to build the roof? (3 plus 6 more)
- Do these two items (the pack of ten and the single pieces) remind you of a mathematical tool you have used before (SMP.7)?

Note: If necessary, show the sequel video and the images that can be found on the same website.

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

- Distribute **Handout 1.1: Bubble Gum House** to provide a visual aid for reference purposes and questions to help guide the student to elicit specific previous learning.

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

- Students will determine how many bubble gum houses will fit on top of their desk.

Activity 1: Superheroes Discover Hundreds

Collect 1,000 of one item (paperclips are very economical for this). Divide the items by the number of groups you have (e.g., 5 groups - Group A = 153, Group B = 248, Group C = 109, Group D = 347, and Group E = 143) making sure each group's items total more than 100. Distribute **Handout 1.2: How Many Do We Have?** to each group. Instruct students to count the items given to them and provide their answer on the handout. Direct students to the counting containers and explain that they may choose any of the containers provided to help them count the items. They may also use or develop other items or strategies they deem appropriate (SMP.5).

Tell students they may use paper, a dry erase board, or desk as a dry erase board if necessary. (Do not tell the students to use a hundred chart or direct them in that manner as this is a discovery activity based on prerequisite skills.) You may see students trying to use a place value chart with tens and ones and some may ask if there is another place value. Challenge these students to try to justify why they feel there is another place value and what the place value may be. Circulate during group work to monitor student discussions and engagement. After about 10 minutes begin asking student groups questions based on their counting strategy and container strategy (SMP. 3). Guide objective learning as needed through direction and discussion:

Prompting Questions:

- What could you do with these ten groups of ten?
- What is another way that you can show your answer?
- What other container might you use to help represent tens and ones appropriately?
- Explain why you chose the containers you did.
- What is something you have previously learned that could help you count a greater number of objects?
- How can you group these items to help counting become easier?
- How do we use tens and ones when counting?
- What is another method that we can use that would be more efficient?
- If that doesn't work, what might you do?

After students complete their counting, have student groups record their answers on **Handout 1.2: How Many Do We Have?** Make sure students recorded the correct answer. If they did not, direct the students to recount their items. Save their work to use later in the unit.

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

- Group students strategically to place students that need extra support with a peer coach.

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

- Before they count the objects, have students predict how many objects they have and justify their prediction.
- After their group counts the objects, have them compare their predictions to the actual count and explain the differences.

Activity 2: Superhero Math Talk

- ✓ Have a class discussion about the students' essential understandings from today's lesson and how students can build upon this learning.

Prompting Questions:

- What did you discover today?
- What place value did you learn today?
- What is the value of this place value?
- Which containers did you choose and why?
- Did you have to change counting, containers, or strategy during the lesson? If so, why?
- What kinds of items might we have to count in this way?
- What can you relate today's learning gains to?
- What prerequisite skill(s) did you build upon to help you in today's lesson?
- How can you build upon what you learned today?
- What did you learn today that surprised you?

Activity 3: 100 Angry Ants

Show the video [100 Angry Ants](#) to student and read the story to the class. Tell students they will work in their group to create a poster for a graffiti wall. Assign each group one way to group the 100 ants as indicated in the story. After the posters are completed, have each group present their poster to the class.

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

- Review important concepts from the video and provide students the opportunity to answer questions using manipulatives.

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

Encourage students to list the ways 100 is used outside of the school building. Contact parents about utilizing the [Parent Guide](#): to reinforce the day's lesson.

Handout 1.1: Bubble Gum House

Name: _____

Date: _____



Think:

- 1) What do you NOTICE or WONDER?
 - a. One thing I notice is...
 - b. One thing I wonder is...
- 2) How many pieces of gum are in the pack? What does how they look remind you of what you have learned before?
- 3) What did the video show that was used to make the roof? What does this remind you of that you have learned before?

For training or questions regarding this unit,
please contact:

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