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MISSISSIPPI
EXEMPLAR
Units & Lessons
MATHEMATICS

Grade 2

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W.K. KELLOGG FOUNDATION

Lesson 6: Mission Addition… Mental Preparations

Focus Standard(s): 2.NBT.2, 2.NBT.8

Additional Standard(s): 2.NBT.1, 2.NBT.3, 2.NBT.4, 2.NBT.5

Standards for Mathematical Practice: SMP.7

Estimated Time: 50 minutes

Resources and Materials:

- Large Thousands Chart (can be made using bulletin board paper or use: http://rpdp.net/admin/images/uploads/resource_8360.pdf
- Task Card Materials depending upon chosen option (sidewalk chalk, poster board, dowel rods, paper, markers, etc.)
- Mentally Add or Subtract: https://learnzillion.com/lesson_plans/5237-mentally-add-or-subtract-10-or-100-using-expanded-form

Lesson Target(s):

- Students will mentally add and subtract 100s and 10s to/from a 3-digit number by skip counting.
- Students will recognize the structure of addition- adding hundreds with hundreds, tens with tens, and ones with ones.

Guiding Question(s):

- In what kind of situations might we need to mentally add or subtract 10s or 100s to or from a 3-digit numbers?
- How can place value help me add 10 and 100 to large numbers?

Vocabulary

Academic Vocabulary:	Instructional Strategies for Academic Vocabulary:
• Addend • Addition • Difference • Mental Math • Subtraction	☐ 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

• Subtrahend • Sum	

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 solve problems by finding number patterns and skip counting. Furthermore, students will be able to add and subtract 10 and 100 to and from two- and three-digit numbers using mental math.

Anticipatory Set/Introduction to the Lesson: Mentally Add or Subtract
Display Magnificent Math in students' view. Remind students that their mission today is to achieve today's learning goals in order to free Magnificent Math from captivity.

Show the video Mentally Add or Subtract to students. Allow students the opportunity to interact with the video.
Note: Oftentimes I split the class into teams to add a little competition component. Conduct a Math Talk following the video to assess student learning and redirect misconceptions.

Prompting Questions:

- What was one thing that stood out to you in the video?
- How can you use what you learned today to enhance your knowledge?
- What was one thing that surprised you in the video?
- What prerequisite skills did the lesson build upon?

Actively monitor students and provide scaffolding support through questioning.

Activity 1: Mental Preparations
Display a large thousands chart for students to interact with preferably near a white board for place value work space. Ask students questions pertaining to the structure of a thousand's chart using these questions.

Prompting Questions:

- What do you notice about the thousands chart?
- What patterns do you see in the thousands chart?
- How is a thousands chart similar/different that a hundreds chart?
- How can you mentally visualize a thousands chart to help you mentally solve addition problems? (SMP. 7)

Give students a 3-digit number, such as 657 asking them to either find 10 more/less or 100 more/less. Repeat with other numbers.

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

- Provide a set of hundreds (charts can be placed on a ring and each chart only includes a set hundreds- the first chart will have 1-100, the second chart 101-200, the third chart 201- 300, etc.) charts for the student's reference.

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

- Encourage students to attempt adding 1000s to 3- and 4-digit numbers.

Activity 2: Mental Math Path

Prior to the lesson, be sure to do the following:

- Set up a mental math path in a long area. The hallway outside of your classroom could work well. You may want to set up two parallel mental math paths to add an element of competition.
- Hang task cards on the wall. Each poster will have a different problem using the mental math strategy of adding 10s and 100s.
- Students that are fluent in adding 10s and 100s can be "coaches" preparing others for the path ahead.
- Encourage students to have good sportsmanship, explaining that we are a superhero team and must work together for a common goal.

Divide the class into two teams. Students start at the beginning of the Mental Math Path.

Select a student to answer the problem at the first check point. If the student answers correctly, he/she can "tag" in a teammate to advance to the second checkpoint on the Mental Math Path. However, if the student answers incorrectly, the student can receive

assistance from one of the team's "coaches." Continue until both teams correctly answer all the problems along the Mental Math Path.

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

- Refer students to anchor charts or handouts used previously for assistance.

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

- Allow students to help "coach" students who are struggling along the Mental Math Path.

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: If today's learning goals were successfully met, release the Magnificent Math. The MVP of today's learning goals is given Magnificent Math to protect. Magnificent Math may sit on his/her desk, He/She may 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

Instruct students to create 5 skip counting problems and to solve them independently.

Handout 6.1 Mental Math Task Cards

120 +10	467 +10
100 +10	222 +10

211 +100	872 +100
567 +100	476 +100

372 -10	830 -10
658 -10	479 -10

420 -100	563 -100
701 -100	100 -100

For training or questions regarding this unit, please contact:

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