



Marietta City Schools District Unit Planner

Fourth Grade

Unit Title	<i>Launch Unit</i>	Unit duration	<i>5-7 days</i>
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GSE Standards

Standards

3rd grade Standards:

MGSE3.NBT.2 Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.

MGSE3.OA.3 Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

4th grade Standards:

MGSE4.G.1 Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

MGSE4.NBT.2 Read and write multi-digit whole numbers using base-ten numerals, number names, and expanded form. Compare two multi-digit numbers based on meanings of the digits in each place, using $>$, $=$, and $<$ symbols to record the results of comparisons. (Focus on place value to the thousands place.)

Standards for Mathematical Practice 1-8

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

Essential Questions

Why do we do Number Talks?
What will our daily math time look/sound like?

What is a mathematician? How do mathematicians use tools/toolkits appropriately?
How do mathematicians work in groups?
What does it mean to be precise?
How do mathematicians construct viable arguments in order to defend their thinking?
How do mathematicians critique the reasoning of others?
How do mathematicians show their work?
How do mathematicians make sense of problems?
How do mathematicians persevere in solving problems?
How do mathematicians connect math to the real world?
What are the procedures for rotations?

Assessment Tasks

Diagnostic Assessment(s): Savvas Readiness Test

Formative Assessment(s): Independent Tasks

Unit Overview and Rationale

Purpose and Goals of the Launch Unit

- for students to become familiar with the rituals and routines of the Mathematics Workshop, Number Talks and Guided Math
- for teachers to be able to implement and teach the rituals and routines that allow Number Talks, Guided Math and the Mathematics Workshop to function smoothly in the classroom.

Rituals and routines that should be established in the mini-lesson include the following:

- expectations of behavior when working with a partner, small group or participating in a whole group discussion.
- signals to use for confusion, questions, or proposing alternative strategies or solutions.
- how and when movement is constrained or not constrained.
- how student work and oral participation is respected.
- what to do when an activity is completed.
- how and when to use the tools of mathematics.

Teacher Preparation Before Beginning the Launch Unit

Make decisions regarding:

- *Will students be called to a central meeting place?*
- *How will manipulatives be managed?*
- *What signals will you use to call students to the math workshop, get their attention and to begin cleanup? (bell, wind chime, music)*
- *Will you have a bulletin board dedicated to the Math Workshop? If not, how will you organize daily groups?*
- *How will the teacher handle movement during workshop (bathroom, sharpening pencils, etc.)?*
- *Do you want to establish a "hands-off" signal for when students should stop working and listen for instructions?*

Read through the unit to see what centers need to be prepared ahead of time.

Suggested Math Block: [MCS Math Framework + Savvas Observation Tool](#)

Duration	Instructional Component	Description
5-10 min.	Number Talk	<ul style="list-style-type: none"> classroom conversation around purposefully crafted computation problems that are solved mentally (can be done anytime throughout the day)
5-10 min.	Opening <i>Savvas Component: Solve & Share</i>	<ul style="list-style-type: none"> Activating strategy to activate schema (problem-based learning) Introduces standard(s), learning target(s) and success criteria, along with an emphasis on academic work Engages students, accesses prior knowledge and makes connections Provides explicit instruction aligned to standard(s), including skill development and conceptual understanding
5-10 min.	Transition to Work Session <i>Savvas Component: Visual Learning Bridge + Guided Practice</i>	<ul style="list-style-type: none"> Engages students in collaborative, problem-solving tasks Engages students in lesson-specific discussion Models problem-solving and comprehension strategies Asks challenging questions
30-45 min.	Work Session <i>Savvas Component: Assess & Differentiate</i>	<ul style="list-style-type: none"> Provides small group instruction based on data (differentiated support) Facilitates independent and small group work; scaffolds learning task Purposefully forms collaborative groups and differentiates tasks allowing for student choice Monitors, assesses and documents student progress and provides ongoing, standards-based feedback Allows students to engage in productive struggle, make mistakes, and engage in error analysis
5 min.	Closing <i>Savvas Component: Quick Check</i>	<ul style="list-style-type: none"> Clarifies misconceptions in student understanding and provides data-driven, targeted feedback Formatively assesses student understanding Summarizes and celebrates progress toward learning target and mastery of standard(s) Identifies next steps for instruction based on data analysis

As you work through the math workshop for this launch unit, the times might be different than they will be as you move through the year. These are just guiding times. Your differentiated groups will later be your differentiated lessons and small group instruction time based on student needs.

Anchor Charts for Routines and Procedures:

The anchor charts included below are shared to give you ideas for use in your classroom. However, the anchor charts for your class NEED to be created by the students. You can write them, but students should be involved in generating the ideas you record. The anchor charts SHOULD NOT be created prior to the lesson.

Common Learning Experiences

Day 1 Lesson

Number Talk

(Teacher Note: The introduction of number talks is a pivotal vehicle for developing efficient, flexible, and accurate computation strategies that build upon the key foundational ideas of mathematics such as composition and decomposition of numbers, our system of tens, and the application of properties.)

Teacher will preview Number Talk's Hand Signals Chart and explain to students "Number talks" (Below is a Number Talks lesson format with hand signals). Number Talks is a time for students to discover their own strategies. (Student directed, not teacher directed. Some strategies that you may encounter are listed below. Please take time to review and become familiar with these strategies before beginning Number Talks in your classroom.

Number Talks Posters (Posters illustrating Number Talks strategies)

[4 Number Talk Strategy Charts.pdf](#) [4 Number Talks](#) [4 Addition Strategies Anchor Charts.notebook](#) [4 Multiplication Strategy Anchor Charts.notebook](#)
[4 Division and Subtraction Anchor Charts.notebook](#)

Math Workshop

Opening

Teacher will call students to gathering area to introduce Math Workshop. (This anchor chart could be made ahead of time). Discuss what Math Workshop will look like and what the participants' jobs are during each section.

Start a new anchor chart on how to use manipulatives. This chart will be added to throughout the launch unit. Cover rules and procedures on using manipulatives (where they are stored, how to get them, and how to use them appropriately). Select students to model expected behavior. Then ask a student to model how NOT to use manipulatives. Give students signals you will use.

These anchor charts can be adapted for Math Workshop.

Work Time

Select students to work as partners. Students will use dice and base ten blocks to race to make 100.

[4 Race to a Flat.pdf](#)

Closing

Select groups of students to share their thinking, including what worked for them and where they struggled.

No Small Groups (Stations) are required today.

Day 2 Lesson

Number Talk

Review Number Talk expectations from Day 1.

Focus: Using landmark numbers and multiples of 10

19 + 8

19 + 28

19 + 49

Math Workshop

Opening:

Create an anchor chart on how to work with a partner. Students should model correct and incorrect behaviors.

[4 Math Talk Anchor Chart.jpg](#) [4 PBJ Partner Chart.jpg](#) [4 Partner Anchor Chart.jpg](#)

Work Time

Explain and model the task. Students will create the largest number possible using 9 number tiles.

[4 Number Scramble](#)**Closing**

Signal students to clean up and return to gathering area. Ask: what challenges and benefits are there when working with a partner? Add to partner anchor chart as needed.

No Small Groups (Stations) are required today.

Day 3 Lesson**Number Talk**

Review Number Talk expectations from Day 1.

Focus: Using landmark numbers and multiples of 10

$$59 + 39$$

$$59 + 62$$

$$49 + 49 + 49$$

Math Workshop**Opening**

Signal students to come to the gathering area. Create an anchor for working in small groups. Be sure to cover volume control. Talking voices are much louder in small groups than they are with partners.

Teacher will introduce the Exemplar, Keeping the Park Clean and assign students to small groups (attached below).

[4 Group Norms Anchor Chart.jpg](#)**Work Time**

Students will gather supplies and work in small groups to complete task (all groups are working on the same task, at the same level). Students will use chart paper to record and share their answers with the group during the Closing.

While the students are working in small groups, the teacher is visiting each group to check on progress, ask about the strategies being used, and highlighting the appropriate small group behavior being exhibited.

[4 Keeping the Park Clean Exemplar.pdf](#)**Closing**

Signal students to come to the gathering area. Teacher will ask students to share how they solved the problem. Teacher will ask about noticing and wonderings. What did you notice about someone else's work? What do you wonder about?

No Small Groups (Stations) are required today.

Day 4 Lesson

Number Talk

Review Number Talk expectations from Day 1.

Focus: Doubles/Near-Doubles for Addition

$15 + 15$

$15 + 16$

$17 + 15$

$15 + 18$

Math Workshop**Opening**

Introduce centers and your class expectations for appropriate behavior. Introduce expectations for when to and when not to interrupt if the teacher is unavailable or working with another small group. It is not necessary to create an anchor chart for this, but here is an example if you would like to:

[4 Math Stations Look Sound.jpg](#)

Small group time (stations/centers) are only inserted in Day 4 within the Launch Unit to scaffold students on the procedures of small groups. Stations/Centers will be done independently of the worktime for the remainder of the school year.

Work Time

Confirm that students are set up and know how to use Compass Learning. Give students time to rotate through the stations/centers (15-20 minutes each station).

Closing

Have students meet back together to close out math centers. Guide students into discussing successes and struggles during rotations/centers.

NOTE: Stations/centers should be organized well. Expectations for each center should be clear through the set-up and structure of each area so that students can clearly find some visual clues to indicate what kind of activity they will be doing there (independent, partner, or group).

Small Group 1: Teacher-Led Center

Bring Students to your table or workspace and use the resource below to model how you want them to respond to math journal prompts. If you have your math journal ready, you can have them respond in it, or you can have them respond on paper.

Note: If you have not set up journals, yet, this would be a great station to do that!

[4 101 Math Journal Prompts](#)

Small Group 2: Computer Center

For this center, have students go to a math website to practice. (i.e. Edgenuity)

Small Group 3: Partner Game

This center should be a math fact game that a small group could play. Feel free to use any game you may already have, but below are the directions for creating "BOOM!" with math facts. This game will need to be prepared beforehand.

[4 Math Boom Game](#)

Day 5 Lesson**Number Talk**

Review Number Talk expectations from Day 1.

Focus: Doubles/Near-Doubles for Addition

20 + 20
19 + 19
19 + 18
19 + 17

Math Workshop

Opening

Review workshop model expectations including partner and small group behavior. Tell children that they are going to play a game called NIMble Numbers (attached below). Go over the game rules given in On Their Own. Ask for a volunteer to demonstrate the game with you. Play a model game, working to reach a target number of 40. Tell children that they will now play this game using the target number 100.

[4 SS Nimble Numbers.pdf](#)

Work Time

Ask students to play the game with a partner or a group of 3 using the target number of 100.

Closing

Bring students back to the closing area. Discuss what went well and what could go better in terms of working in groups. Invite children to talk about their games and describe some of the thinking they did. Use prompts like these to promote class discussion:

- Did winning have anything to do with going first? Explain.
- How did you decide which blocks and how many of each to play?
- Did you make any moves that you wanted to take back? Explain.
- Was there a turning point in the game? If so, what caused it?
- Did you find a winning strategy? Did it always work?

Small Group 1: Teacher-Led Center

Bring Students to your table or workspace and use the resource below to model how you want them to respond to math journal prompts. If you have your math journal ready, you can have them respond in it, or you can have them respond on paper.

Note: If you have not set up journals, yet, this would be a great station to do that!

[4 101 Math Journal Prompts](#)

Small Group 2: Computer Center

For this center, have students go to a math website to practice. (i.e. Edgenuity)

Small Group 3: Partner Game

Students have already been introduced to the Nimble Numbers game, so this should be an easy introduction to partner centers. Give students different numbers as the winning number to keep them from losing interest and focus.

[4 SS Nimble Numbers.pdf](#)

Day 6 Lesson

Number Talk

Review Number Talk expectations from Day 1.

Focus: Doubles/ Near-Doubles for Addition

35 + 35
35 + 36
34 + 35

36 + 37

Math Workshop

Opening

Discuss expectations of working independently. Introduce and model Boggle (materials will need to be prepared beforehand). Put an example of a Boggle recording sheet on the board. Show students how to find and record their equations.

Work Time

Send students to their seat with a Boggle sheet to complete. This can be done independently (or in partners if needed).

[4 Addition Boggle.pdf](#)

Closing

Bring students back to the closing area. Discuss what went well and what could go better working Independently. Ask students probing questions about working Independently, and about what they learned as they were playing the Boggle Game. Record the findings of the game.

Small Group 1: Teacher-Led Center

Bring Students to your table to model how to use the universal problem solving protocol. Use an anchor chart that illustrates the steps as a visual cue. Give them some addition and subtraction word problems to practice.

Small Group 2: Computer Center

For this center, have students go to a math website to practice. (i.e. Edgenuity)

Small Group 3: Independent Task

In this center, students will work independently to solve a different Boggle Board. Use the addition 5 to extend the worktime and all operations for enrichment.

[4 Addition Boggle 2.pdf](#) [4 ASMD Boggle.pdf](#)

Day 7 Lesson

Number Talk

Review Number Talk expectations from Day 1.

Focus: Doubles/ Near-Doubles for Addition

$$125 + 125$$

$$124 + 126$$

$$126 + 127$$

$$124 + 128$$

Math Workshop

Mini-Lesson

Review workshop model expectations including small group, partner, and independent center behaviors. Review how to play Boggle: put an example of a Boggle recording sheet on the board & show students how to find and record their equations.

Work Time

Have students work in partners to create their own Boggle board (using any or all of the operations).

Closing

Bring students back together. Using a document camera, have 3 student groups share their boards. Have class work together in finding and recording some equations on each of the boards.

Stations: Each group will rotate through 2 stations today (1&2 or 3&4) allowing for approximately 15 minutes at each station.

<p>Small Group 1: Teacher-Led Center Bring Students to your table to model how to use the universal problem solving protocol. Use an anchor chart that illustrates the steps as a visual cue. Give them some addition and subtraction word problems to practice.</p>	<p>Small Group 2: Computer Center For this center, have students go to a math website to practice. (i.e. Edgenuity)</p>	<p>Small Group 4: Partner or Small Group Center Students have already been introduced to the Nimble Numbers game, so this should be an easy introduction to partner centers. Give students different numbers as the winning number to keep them from losing interest and focus.</p>
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Materials Needed		
Day 1 Lesson	Day 2 Lesson	Day 3 Lesson
<ul style="list-style-type: none"> ● Chart paper ● Dice ● Base 10 blocks ● Race to a Flat task sheet 	<ul style="list-style-type: none"> ● Chart paper ● Pattern blocks ● Partner Pattern Block check sheet 	<ul style="list-style-type: none"> ● Keeping the Park Clean Exemplar ● paper/pencil for each group ● chart paper ● anchor charts from Day 1 and 2 ●
Day 4 Lesson	Day 5 Lesson	Day 6 Lesson
<ul style="list-style-type: none"> ● chart paper ● math journals ● journal prompts ● BOOM! game 	<ul style="list-style-type: none"> ● chart paper ● math journals ● journal prompts ● Nimble Numbers partner task ● Base 10 blocks 	<ul style="list-style-type: none"> ● chart paper ● math journals ● journal prompts ● Boggle Boards
Day 7 Lesson		
<ul style="list-style-type: none"> ● Same materials as days 4-6 		