



Marietta City Schools District Unit Planner

Third Grade

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

Standards

MGSE3.NBT.1 Use place value understanding to round whole numbers to the nearest 10 or 100.

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.

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:

Teacher will provide guidance regarding procedures for obtaining and returning various materials, partner selection, and ending work time.

Anchor chart ideas are attached in this unit. 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

A Number Talk is not required today. Instead, move to the Math Workshop portion of the lesson plans. If you do feel comfortable and want to begin Number Talks with your class, please feel free.

Math Workshop

Opening

Create an anchor chart ahead of time of what Math Workshop looks like (example below). Discuss with the students 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. Explain your expectations for clean-up. Create an anchor chart on how to work with a partner. Students could model correct and incorrect behavior.

Proceed to choose a volunteer and model how to play "What Makes 20?" (use "Introducing" section in the lesson attachment below).

[3_Workshop Anchor Chart.jpg](#) [3_Procedures for Manipulatives.jpg](#) [3_Partner Anchor Chart.jpg](#) [3_Partner Talk.jpg](#)

Work Time

Select students to work as partners. Have students play the game, "What Makes 20?" in partners. As they play, reinforce routines and procedures for working with a partner. During the activity, students discuss their thinking. You may want to ask questions such as:

- How did you know the pictures and numbers matched each other?
- Could a picture match more than one number? Could a number match more than one picture?

[3_What Makes 20.pdf](#)

Closing

During the activity, students discuss their thinking. You may want to ask questions to prompt the discussion such as:

- How did you come up with that answer?
- What strategy did you use?
- Did you notice any patterns?

Discuss the components of the Math Workshop of the lesson you just completed. Add to the anchor chart created during the opening at this time.

*Save materials from "What Makes 20?" game to use in Days 5 and 6 of this unit.

No small group stations are required today.

Day 2 Lesson

Number Talk- A Number Talk is not required today. Instead, move to the Math Workshop portion of the lesson plans. If you do feel comfortable and want to begin Number Talks with your class, please feel free.

Math Workshop

Opening

The teacher will review the anchor charts from Day 1 (Math Workshop). The teacher will explain and model Nimble Numbers activity (use the “Introducing” section). Students will be assigned partners.

[3_SS Nimble Numbers.pdf](#)

Work Time

Review the partner work anchor chart from day 1 and procedures for obtaining manipulatives. Pair students and have them find an appropriate work space. Students will collect base ten blocks and play Nimble Numbers.

Game Procedures:

In this game for two players, children take turns adding longs and units to a pile in an effort to be the one who puts down the block that brings the value of the pile to 100.

*To make this game more accessible for 3rd graders you may want students to bring the value of the pile to 40 instead of 100.

Closing

Remind students to return materials correctly. Use the following questions to assess students' learning and understandings.

- 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?

*Save materials from “NIMble Numbers” game to use in Days 5 and 6 of this unit.

Extension

Ask children to suggest some ideas for making up a new strategy game by changing a few of the rules for NIMble Numbers.

Day 3 Lesson

Number Talks

(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 use with hand signals.)

[3_Number Talks](#)

Math Workshop

Opening

Set the stage for the “Bug Watching” task by asking questions such as “What is your favorite bug?”, “If you wanted to catch your favorite bug, where would you go and what would you do?”

Introduce the Bug Watching Exemplar, ““More Accessible Version” (attached in the task pdf below).

Stress the importance of having the students solve these tasks in a picture representation, a number sentence and words describing how they solved the task (pictures, numbers and words). *Students will always need to solve tasks this year with “pictures, numbers and words” unless directed by the teacher beforehand.

During this time you should also state your procedures for working in small groups. Be sure to state explicit expectations for working with you and away from you. Procedures and expectations should be set for rotation to and from workstations. Predetermine groups for each small group. Have students sit with their group.

Work Time

Students will explore the task, “Bug Watching” (original version), below collaboratively in a small group while the teacher observes and makes anecdotal notes on individual students. Teacher will ensure students are following previously established routines and procedures. Teacher may confer with students at this time. (The purpose of short increments of time is to build stamina, increasing students’ ability to stay on task for the specified period of time.) Have students write their findings collaboratively on one sheet of paper using a picture representation, a number sentence and words explaining how they solved the task.

Bug Watching Task (original version) :

I went bug watching after school every day for a week.

On Monday I saw 3 bugs.

On Tuesday I saw 6 bugs.

On Wednesday I saw 9 bugs...

On Friday, after I went bug watching I said, "Wow! It's a pattern!"

How many bugs did I see that week?

Use pictures, numbers and words to solve this problem.

[3 Bug Watching Exemplar.pdf](#)

Closing

Ask different groups to share their findings. Encourage the children to explain how they solved the problem. If the child is able to express him/herself in writing, then the child is to do so independently and the paper stands by itself. If the child is unable to write his/her own thinking, then the teacher (or other "scribe") must elicit the child's thinking or explanation without coaching. Possible questions to ask to prompt discussion:

- What patterns did you notice?
- What strategy did you use to find your solution?
- What skills did you use (addition/subtraction)?

*Start thinking about how you can differentiate these tasks with your new class during the work time using the more accessible, original and more challenging versions if needed.

Day 4 Lesson

Number Talks

(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.

[3 Number Talk Strategy Charts.pdf](#) [3 Number Talks](#)

Math Workshop

Opening

Introduce the game *Race for a Flat*. Go over the game rules for *Race for a Flat* by:

- Inviting two volunteers to play part of a demonstration game with you. (You may wish to play until someone gets blocks worth 50.)
- Each player should have a place-value mat. You go first.
- On your first turn, announce the sum of the digits you roll. If the sum was 10 or more, point out that you must trade 10 units for 1 long.
- After your second turn, point out that the blocks on your mat are from your first and second turns combined.
- Play until each player has had several turns. Tell the rest of the class to call out “Trade!” whenever 10 units should be traded for 1 long.

[3 Race to a Flat Spinner.pdf](#) [3 Race to a Flat.pdf](#)

Review procedures for working with partners. Be sure to state explicit expectations for working with you and away from you.

Work Time

Students will play *Race for a Flat* with a partner. The teacher will monitor student partner work as needed.

Closing

The students will discuss their game and describe their thinking. The teacher may use the following prompts to promote class discussion:

- After you rolled the number cubes, how did you know how many units to put on your mat?
- If your first roll was a five and a six, what would you put on your mat? Explain.
- How did you decide when to trade units for longs?
- What was the greatest sum you could get on one roll of two number cubes? When could rolling that sum help you win the game?

Students should be able to:

- maintain appropriate partner voices
- use manipulatives as directed
- follow a task and directions
- work collaboratively
- maintain a clean work area and classroom organization
- use established Number Talk signals
- transition properly
- be aware of expected work space

Day 5 Lesson

Number Talks

Review “Number Talks” procedures and hand signals.

Use the file - Addition Number Talks Category 1 Making Ten.

Math Workshop

Opening

The teacher will introduce small group procedures and create an anchor chart for what small group work (stations) should sound like, look like, and act like. The students will practice movement around the classroom and expectations for the use of manipulatives. Small group time (stations/centers) are only inserted in Days 5 & 6 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

Students will spend approximately 15 minutes at each center. Allow time between each rotation to clean up materials and review procedures. Divide students into four groups. Two groups will complete centers #1 and #2 today. The other two groups will complete centers #3 and #4 today. Students will complete the other two centers tomorrow. Students will only complete two rotations because the rotations will be repeated the following day.

- **Station 1: Teacher led guided small group**

- [3 Place Value Frenzy](#)

- Review place value for the hundreds, tens, and ones with a couple of 3 digit numbers. Also talk about the value of specific numbers.

- Be sure to provide and use base ten blocks (Example: 347)

- Questions:

- What is the place of 7? (ones)
 - What is the place of 4? (tens)
 - What is the place of 3? (Hundreds)
 - What is the value of the 7?
 - What is the value of the 4?
 - What is the value of the 3?
 - How would the value of the 7 change if it was in the hundreds place?

- Then complete Place Value Frenzy with students (Laminate for easier use)

Closing

Bring students back to the meeting center to talk about how math went today. Give each child 2 sticky notes. Have each child record what they thought went well on one note and an item they think still needs improvement on the other. Discuss the students' responses. The teacher will add to the anchor chart if needed.

Station 1 Race to a Flat game (from Day 4)	Station 2 Technology (i.e. Edgenuity)	Station 3 What Makes 20 game (from Day 1)
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Day 6 Lesson**Number Talk**

Review procedures and hand signals for Number Talks.

Use the SMART Notebook file - Addition Number Talks Category 1 Making Ten.

Math Workshop**Opening**

Recall routines and expectations for center rotations. Students will spend approximately 15 minutes at each center they did not visit yesterday. Allow time between each rotation to clean up materials and review procedures. Two groups will complete centers #1 and #2 today and the other two groups will complete centers #3 and #4 today. Small group time (stations/centers) are only inserted in Days 5 & 6 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

Students will rotate through stations described above (Day 5) in the small group section.

- **Station 1: Teacher led guided small group**

- [3 Place Value Frenzy](#)

Review place value for the hundreds, tens, and ones with a couple of 3 digit numbers. Also talk about the value of specific numbers.

Be sure to provide and use base ten blocks (Example: 347)

Questions:

- What is the place of 7? (ones)
- What is the place of 4? (tens)
- What is the place of 3? (Hundreds)
- What is the value of the 7?
- What is the value of the 4?
- What is the value of the 3?
- How would the value of the 7 change if it was in the hundreds place?

Then complete Place Value Frenzy with students (Laminate for easier use)

Closing

Bring students back to the meeting center to talk about how math went today. Invite children to talk about their games and describe some of the thinking they did.

Use prompts like these to promote class discussion:

- After you rolled the number cubes, how did you know how many units to put on your mat?
- If your first roll was a five and a six, what would you put on your mat? Explain.
- How did you decide when to trade units for longs?
- What was the greatest sum you could get on one roll of two number cubes?
- When could rolling that sum help you win the game?

In their journals, have the students pretend that they have blocks worth 93 on their place-value mat in the game, "Race to a Flat". Tell them to draw blocks with a value of 93 on the mat. Then tell them that they may have one more roll. Have them figure out which numbers they could roll to reach 100 or more on their next turn. They need to draw the picture and explain their reasoning in their journal.

***Math journaling is a great opportunity to access your students' thoughts about math and their problem-solving strategies and a wonderful addition to the math program. In this lesson you will help your students set up and manage an easy-to-maintain math journal system in your classroom. Many teachers choose to have students respond to math journal prompts in a separate math journal. Having a special math journal that's different from everyday school materials can be very motivating for children. Other teachers have students respond to math journal topics as part of a Math Notebook: one composition book holds a student's journal reflections, class notes, and practice activities. Still other teachers have students keep one journal in which they respond to a wide variety of prompts across different content areas (this could be termed as a "Writer's Notebook". There's no one right way to do math journaling, so feel free to pick a format that makes sense for you.*

Station 1 Race to a Flat game (from Day 4)	Station 2 Technology (i.e. Edgenuity)	Station 3 What Makes 20 game (from Day 1)
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Day 7 Lesson

Number Talks
Review "Number Talks" procedures and hand signals.
Use the file - Addition Number Talks Category 1 Making Ten.

Math Workshop

Opening

[3 Collecting Seashells Exemplar.pdf](#)

Review procedures for working in partners. Be sure to state explicit expectations for working with you and away from you. Predetermine partners based on ability if able. Introduce the Collecting Seashells task. Set the stage for this activity with the students. Talk about collections and how some people collect seashells.

Work Time

Students will explore the task, Collecting Seashells, in partners while the teacher observes and makes anecdotal notes on individual students. You may differentiate the task by assigning different versions of this task (More Accessible, Original, or More Challenging) to different partner sets. Teacher will ensure students are following previously established routines and procedures. Teacher may confer with students at this time. (The purpose of short increments of time is to build stamina, increasing students’ ability to stay on task for the specified period of time.) Have students use one piece of paper to collaboratively prove their picture representation, number sentence and explanation or individually in their journals.

- **Station 1: Teacher led guided small group**

Review place value and model 3-digit numbers using base-ten blocks. Then sketch a picture of the base-ten blocks.

[3 Place Value Task](#) [3 Number Cards](#)

Closing

Ask different partners to share their findings. Encourage the children to explain how they solved the problem. Possible questions to ask to prompt discussion:

- What patterns did you notice?
- What strategy did you use to find your solution?
- What skills did you use (addition/subtraction)?

Station 1 3 SS Nimble Numbers.pdf	Station 2 Technology (i.e. Edgenuity)	Station 3 3 Place Value Concentration.pdf
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Materials Needed		
Day 1 Lesson	Day 2 Lesson	Day 3 Lesson
<ul style="list-style-type: none"> ● Chart paper ● 2 Dice ● Copies of Game boards (What makes 20?) (attached) ● Colored Game pieces/or colored paper squares ● 	<ul style="list-style-type: none"> ● NIMble Numbers directions (attached) ● Base Ten Blocks ● 	<ul style="list-style-type: none"> ● Bug Watching Smart Notebook (attached) ● Bug Watching task (attached) ●

Day 4 Lesson	Day 5 Lesson	Day 6 Lesson
<ul style="list-style-type: none"> ● Base Ten Blocks, 1 set per group ● Base Ten Blocks Place-Value Mat, 1 per pair ● Number cubes marked 1 to 6, 2 per group ● Units/Longs Spinner, 1 per pair (attached) ● Place Value Frenzy (attached) ● Base Ten Blocks ● Materials from “What Makes 20?” ● Computers ● 	<ul style="list-style-type: none"> ● Base Ten Blocks, 1 set per group ● Base Ten Blocks Place-Value Mat, 1 per pair ● Number cubes marked 1 to 6, 2 per group ● Units/Longs Spinner, 1 per pair (attached) ● Place Value Frenzy (attached) ● Base Ten Blocks ● Materials from “What Makes 20?” ● Computers ● Field Trip Task ● 	<ul style="list-style-type: none"> ● **Math Journals ● Place Value Frenzy (attached) ● Base Ten Blocks ● Materials from “What Makes 20?” and “Race to a Flat” games ● Computers ●
Day 7 Lesson		
<ul style="list-style-type: none"> ● 3_Collecting Seashells Exemplar.pdf ● Math Journals (optional) ● Place Value Task ● Number Cards ● Place Value Concentration Materials (laminated if wanted) ● 		