

# Overall Structure



1. **Explore, Play, and Discuss:** These activities provide opportunities for students to explore the initial ideas of the section. This section can be completed asynchronously using digital manipulatives and response tools, or using physical manipulatives and the student workbook pages with guiding questions for caregivers. If planning for a section per week, these activities would ideally be assigned earlier in the week.
2. **Deep Dive:** These activities are key learning opportunities for students around the section goals. **If there are chances for in-person or virtual synchronous time, these would be the activities to do collaboratively to share ideas and build community.** If done asynchronously, opportunities to view and respond to peer work or sample student work as well as receive feedback from teachers (and perhaps peers), is essential for these activities. Formative assessment is also a part of this section to check in on student understanding. If planning for a section per week, these activities would ideally be done mid-week.
3. **Synthesize and Apply:** These activities are ways for students to synthesize the learning of the section and for teachers to assess student understanding toward the section learning goals. These activities can be completed asynchronously, with either written, in-person, or automated feedback. If planning for a section per week, these activities would ideally be done toward the end of the section.
4. **Ongoing Practice:** These provide opportunities for students to practice unit topic ideas and build toward computational fluency. In K–5, the activities in this section are typically practice problems and center games that can be played independently, with a family member, or with classmates. In IM 6–12, each lesson includes a distributed practice set. Many existing digital platforms already have IM 6–12 practice problems loaded in so that students can complete and submit them online. Some can be autoscored.
5. **Anytime Resources:** The activities in this section have the flexibility to be used anytime during a section. In K–5, these are center activities that provide opportunities for students to build computational fluency across the year. In 6–12, these activities are modeling prompts that offer students the opportunities to engage in mathematical modeling.

# Grade 1, Unit 2: Addition and Subtraction Story Problems

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## Abbreviated Unit Narrative

In this unit, students expand problem types to solve the majority of problem types introduced in Grade 1: Add to/Take Apart, Change Unknown, Put Together/Take Apart, Unknowns in All Positions, and Compare, Difference Unknown. This work relies heavily on the relationship between counting and addition and subtraction. In all problem types, numbers are kept within 10 so that students can focus on interpreting the meaning of the problem rather than on learning and applying new computation methods. This unit also gives students an opportunity to continue to develop fluency with addition and subtraction within 10. Although the first 3 sections each focus on a specific problem type, students will have an opportunity to work with all of the previously introduced problem types in each section.

## Section A Goals

- Solve Add To/Take From, Result Unknown and Addition, Change Unknown problems.
- Understand the meaning of the equal sign.

In this section, students revisit familiar problem types (Add To/Take From) where the action of the problem is explicit and students can physically act out the problems with objects or draw pictures. Students work formally with equations for the first time, including equations where the sum or difference is before the equal sign. They write equations such as  $2 + 7 = \boxed{9}$  and learn the convention of drawing a box around the answer to the question in the story problem.

The work of the section focuses on the first goal. Students will work with equations and make sense of the equal sign in later sections in the unit.

Explore, Play, and Discuss	<p><b>Activity Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 1, Warm-up and Activity 2: <ul style="list-style-type: none"> <li>○ Can be combined into 1 activity.</li> <li>○ If possible, create an audio recording so students can hear the problems being read to them.</li> </ul> </li> <li>● Lesson 5, Warm-up and Activity 1 <ul style="list-style-type: none"> <li>○ Can be combined into 1 activity.</li> <li>○ Create slides of the Math Stories pictures and encourage students to take their own pictures to add to the deck.</li> </ul> </li> </ul>	<p><b>Assessment Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 2, Cool Down</li> </ul>
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Deep Dive	<p><b>Activity Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 3, Warm-up <ul style="list-style-type: none"> <li>○ Use this as an opportunity to reflect on the Math Community poster from Unit 1.</li> </ul> </li> <li>● Lesson 3, Activity 1 <ul style="list-style-type: none"> <li>○ Lead a discussion for students to compare the new problem type to those they solved in Lesson 1.</li> </ul> </li> </ul>	<p><b>Assessment Suggestions</b></p> <ul style="list-style-type: none"> <li>● Can students: <ul style="list-style-type: none"> <li>○ retell the story?</li> <li>○ represent the story problem with objects or drawings?</li> <li>○ explain how a representation matches the story?</li> <li>○ Answer the question correctly?</li> </ul> </li> </ul>
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Synthesize and Apply	<p><b>Activity Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 4, Activity 2</li> <li>● Read Student Lesson Summary <ul style="list-style-type: none"> <li>○ Ask students to solve the problems given before looking at the images provided.</li> </ul> </li> </ul>	<p><b>Assessment Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 4, Cool Down</li> </ul>
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## Ongoing Practice

- Practice Problems
  - Pre-unit
  - Lesson
- Center: Shake and Spill, Stage 3 and 4

## Anytime Resources

- Practice Problems
  - Exploration Problems
- Center: Make the Number, Stage 2
- Center: Bingo, Stage 4
- [IM Talking Math](#)

## Section B Goals

- Solve Put Together/Take Apart problems with unknowns in all positions.
- Write equations to represent problems.

Students solve Put Together/Take Apart problems with the Total, One Addend or Both Addends Unknown. This builds on work in kindergarten when students composed numbers up to 10 in different ways.

Explore, Play, and Discuss	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 6, Warm-up and Activity 1<ul style="list-style-type: none"><li>○ In the Warm-up, ask students to draw what Kiran's fish could look like.</li><li>○ In Activity 1, ask students how <math>4+5</math> and <math>5+4</math> can represent the problem.</li><li>○ If possible, create an audio recording so students can hear the problem being read to them.</li></ul></li><li>• Lesson 7, Activity 1 and Lesson 8, Activity 1<ul style="list-style-type: none"><li>○ Students can use any (virtual) manipulatives that have 2 different sides.</li><li>○ Embed a video or slide that introduces each game and gives examples of equations to represent the action.</li></ul></li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 7, Cool Down</li><li>• Lesson 8, Cool Down</li></ul>
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Deep Dive	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 9, Warm-up</li><li>• Lesson 9, Activity 1<ul style="list-style-type: none"><li>○ Leverage students experience with Shake and Spill to support them making sense of the story problems.</li></ul></li><li>• Lesson 9, Activity 2</li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>• Can students:<ul style="list-style-type: none"><li>○ retell the story?</li><li>○ represent the story problem with objects or drawings?</li><li>○ represent the story problem with equations?</li><li>○ explain how a representation</li></ul></li></ul>
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	<ul style="list-style-type: none"> <li>○ In the synthesis, discuss equations that match each story problem, as well as other student-generated representations.</li> </ul>	<ul style="list-style-type: none"> <li>○ matches the story?</li> <li>○ Answer the question correctly?</li> </ul>
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Synthesize and Apply	<p><b>Activity Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 10, Activity 1 (Center: What's Behind My Back, Stage 2)</li> <li>● Center: Shake and Spill, Stage 4</li> </ul>	<p><b>Assessment Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 8, Cool Down</li> </ul>
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Ongoing Practice	<ul style="list-style-type: none"> <li>● Lesson 7, Warm-up</li> <li>● Practice Problems <ul style="list-style-type: none"> <li>○ Lesson</li> </ul> </li> <li>● Center: Shake and Spill, Stage 3 and 4</li> </ul>
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Anytime Resources	<ul style="list-style-type: none"> <li>● Practice Problems <ul style="list-style-type: none"> <li>○ Exploration Problems</li> </ul> </li> <li>● Center: What's Behind My Back, Stage 1</li> <li>● <a href="#">IM Talking Math</a></li> </ul>
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## Section C Goals

- Solve Compare, Difference Unknown problems.
- Relate addition and subtraction.

In this section, students solve Compare, Difference Unknown problems. These problems provide more opportunity for students to consider the relationship between addition and subtraction.

Students start by considering how many they need to add to a quantity to make the two quantities equal. This allows students to work with questions that simplify the language of comparison (for example, how many cubes do we need to add so that both towers have the same number of cubes?). Once they are familiar with this language, students answer “how many more” and “how many less” questions.

<b>Explore, Play, and Discuss</b>	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 11, Warm-up and Activity 1<ul style="list-style-type: none"><li>○ Can be combined into 1 activity</li><li>○ If possible, create an audio recording so students can hear the problem being read to them.</li></ul></li><li>• Lesson 11, Activity 2<ul style="list-style-type: none"><li>○ If possible, create an audio recording so students can hear the problem being read to them.</li></ul></li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 11, Cool Down</li></ul>
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<b>Deep Dive</b>	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 12, Warm-up<ul style="list-style-type: none"><li>○ Use this as an opportunity to reflect on the Math Community poster from Unit 1.</li></ul></li><li>• Lesson 12, Activity 2<ul style="list-style-type: none"><li>○ In the synthesis, discuss equations that match each story problem, as well as other student-generated representations.</li></ul></li><li>• Lesson 14, Activity 2<ul style="list-style-type: none"><li>○ Choose 1-2 of the problems.</li></ul></li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 12, Activity 1</li></ul>
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Synthesize and Apply	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>● Lesson 13, Activity 2 and Lesson 15, Activity 2<ul style="list-style-type: none"><li>○ Can be combined into 1 activity</li></ul></li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>● Lesson 13, Cool Down</li></ul>
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Ongoing Practice	<ul style="list-style-type: none"><li>● Practice Problems<ul style="list-style-type: none"><li>○ Lesson</li></ul></li><li>● Center: Board Game, Stage 1</li></ul>
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Anytime Resources	<ul style="list-style-type: none"><li>● Practice Problems<ul style="list-style-type: none"><li>○ Exploration</li></ul></li><li>● Center: Capture Squares, Stage 1</li><li>● <a href="#">IM Talking Math</a></li></ul>
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## Section D Goals

- Solve different types of story problems, limited to those learned in this unit.
- Apply understanding of the meaning of the equal sign to make sense of equations with a symbol for the unknown.

This section brings the work of the unit together as students solve a variety of problem types and make sense of equations with a symbol for the unknown. Students compare different problem types and use the understanding of the relationship between addition and subtraction and the equal sign to write equations to represent the problem. Students contextualize equations by writing stories to represent equations and determine the answer through their drawings, pictures, and words and make that answer easily identifiable. In this section, students make sense of equations with a symbol for the unknown, but are not required to write them.

<b>Explore, Play, and Discuss</b>	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 17, Warm-up</li><li>• Lesson 17, Activity 1: Comparing Recess Stories<ul style="list-style-type: none"><li>○ If possible, create an audio recording so students can hear the problem being read to them. Ask students to record their ideas in writing or by voice recording.</li></ul></li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 17, Activity 2 (Choose one of the problems.)</li></ul>
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<b>Deep Dive</b>	<b>Activity Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 18 Warm-up<ul style="list-style-type: none"><li>○ Use this as an opportunity to reflect on the Math Community poster from Unit 1.</li></ul></li><li>• Lesson 18, Activity 1<ul style="list-style-type: none"><li>○ Card sort can be done in small groups of up to 5 students.</li></ul></li></ul>	<b>Assessment Suggestions</b> <ul style="list-style-type: none"><li>• Lesson 18, Cool Down</li></ul>
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Synthesize and Apply	<p><b>Activity Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 19, Activity 2 <ul style="list-style-type: none"> <li>○ If possible, create an audio recording so students can hear the problem being read to them. Ask students to record their ideas in writing or by voice recording.</li> </ul> </li> <li>● Lesson 20, Activity 2 <ul style="list-style-type: none"> <li>○ Ask students to record their ideas in writing or by voice recording.</li> </ul> </li> </ul>	<p><b>Assessment Suggestions</b></p> <ul style="list-style-type: none"> <li>● Lesson 19, Activity 1 (Choose one of the problems.)</li> </ul>
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Ongoing Practice	<ul style="list-style-type: none"> <li>● Practice Problems <ul style="list-style-type: none"> <li>○ Lesson</li> </ul> </li> </ul>
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Anytime Resources	<ul style="list-style-type: none"> <li>● Practice Problems <ul style="list-style-type: none"> <li>○ Explorations</li> </ul> </li> <li>● Center: Number Puzzles, Stage 1</li> <li>● <a href="#">IM Talking Math</a></li> </ul>
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