LESSON PLAN

Teacher Name: Monique LaCour
School/Location: Acorn Woodland Elementary
Grade: 2nd Grade
Class/Subject: Math
Class Size: 24 students

LESSON CONTEXT

Students have been participating in both teacher-led and student-led Number Talks as a vehicle for discussing mathematical processes covered in the 2nd Grade CCSS. Accountable Talk sentence frames are used throughout daily content in the classroom. Following the Number Talk, students will debrief their experience participating in the Academic Conversation in order to improve the quality of discussion.

TEACHING CONTEXT (What have you been working on in your practice that we might see in this lesson? What do students already need to know prior to teaching this lesson?)

In my practice, I focus on the gradual release of responsibility to my students. In my classroom we all work to empower students to engage in productive struggle, to take risks with their thinking and speaking, and to collaborate with one another building a community of learners that appreciate mistakes and new ideas. Prior to this lesson, students have participated in many Number Talks that have been teacher led and a growing number that have been student led, as well. Students need to know how to use sentence frames, respect the speaker with active listening, build on and question one another’s reasoning, and strive to solve addition and subtraction problems using many different methods.

STANDARDS ADDRESSED

Mathematical Content

- Fluently add and subtract within 20 using mental strategies. By end of Grade 2, know from memory all sums of two one-digit numbers. (2.OA.2)
- Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones (2.NBT.1)
• Use place value understanding and properties of operations to add and subtract. (2.NBT.)
• Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. (2.NBT.5)
• Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds. (2.NBT.7)
• Add and subtract within 20 (2.OA.2)

Mathematical Practices

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.
6. Attend to precision.

LESSON DETAILS

Learning Goals: What will students know and be able to do by the end of the lesson? What will you be looking for in order to assess how students are progressing?

Students will engage in academic discourse during a student led Number Talk. Students will:

1. Use Sentence Frames to support Academic Conversation.
2. Lead and conduct a Number Talk with minimal teacher interruption.
3. Take risks and model mathematical reasoning and processes.
4. Solve an equation using multiple methods and explore different methods proposed by peers.

5. Apply different methods to a similar problem, employing collaboration.

6. Reflect and examine their participation in the Number Talk, discussing and questioning their roles in the conversation.

7. Formulate Positive and constructive Feedback for themselves and one another regarding their collaboration and student achievement.

8. Apply alternate strategies to a similar math problem using collaboration.

**Essential Question (s):** Think about the most important concepts students should learn from this lesson.

**How many different ways can you solve this problem?**

<table>
<thead>
<tr>
<th>Time</th>
<th>Lesson Component</th>
<th>Teacher Role: Instructional notes for the teacher. Name and describe any specific strategies to be used.</th>
<th>Learner Role: Instructional notes for the students</th>
<th>Student Success Criteria: What does success look like? What evidence are you collecting? How are you formatively assessing?</th>
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<tbody>
<tr>
<td>5-10 min.</td>
<td>Review Number Talk Poster and Sentence Frames.</td>
<td>Introduce student leaders for the day. Connect goals to Common Core Math standards. Review procedure, roles and behaviors for the Number Talk.</td>
<td>Students will practice reading the sentence frames and discuss how to handle challenges that arise during the Number Talk.</td>
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### Review Anchor Chart of Academic Conversation Roles & Behaviors

#### Turn and Talk:
1) ask students to share challenges and solutions they might face during the Number Talk.

2) ask students to explain learning goals and related standards to each other in their own words. Ask pairs to share what their partner said.

Clarify any questions about the goals.

#### Turn and Talk:
1) What challenges might happen during the Number Talk? How can you fix them? What should you do to help others?

2) Please explain what we will be learning today in your own words to your partner. Listen carefully as you will be asked to share what you partner said.

#### Turn and Talk:
I will record student learning goals as suggested by students.

### 15-20 min.

#### Students lead a Number Talk in Small Groups

Teacher posts a mental math problem (such as 25 +32=, 37 + 28=, 91-48=) and observes the activity. Students solve it silently, using as many different strategies as possible and showing the number of strategies they have used as fingers held up over their hearts.

The Facilitator leads the Number Talk.

In each group, 3 Students share their answers. One student defends an answer. All students participate in a discussion sharing every strategy used to solve the problem, asking questions, clarifying strategies, and building upon.

I will record names of students who participate, use sentence frames, and discuss strategies.
<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Description</th>
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<tbody>
<tr>
<td>5 min.</td>
<td>Number Talk Debrief</td>
<td>Students and teachers talk about student participation and mathematical ideas. Students give feedback to one another in an Academic Conversation. Ask: Who would like to offer some feedback to a learner in our community? Ask: What can we do to make our Number Talks stronger and more helpful to students? How can we improve them? What worked/didn’t work?</td>
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<tr>
<td>5-10 min.</td>
<td>Reflection: Ideas for Improving Number</td>
<td>Teacher will facilitate an independent writing activity. Teacher asks: How can we Students will write a post-it with their ideas and share-out in</td>
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<tr>
<td>Talks</td>
<td>improve our Number Talks? What should we try next time?</td>
<td>a T-P-S. Students will add their post-its to our poster. Students will share their ideas whole class.</td>
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<tr>
<td>15-20 min</td>
<td>Extension Activity</td>
<td>Teacher distributes a similar equation and says: Choose a method to solve this problem that you did not use in the Number Talk and solve the equation. Show your work and label the strategy. Collaborate with your table teams. Students will work in table teams to solve the equation on the hand-out. Students will discuss and apply multiple strategies. I will use these hand-outs as exit tickets to assess student learning.</td>
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</table>

**Extensions to the full lesson:**

Following the Academic Conversation, students will be asked to solve a similar equation using a method differing from the one they used in the Number Talk. Students will work with other students collaborating and applying these strategies.

**Differentiation Strategies:** How will this lesson be differentiated for all students?

Students will have the choice to use Accountable Talk sentence frames to support their speaking. Students will perform various roles to support the flow of Academic Conversation. Students’ mathematical thinking will be modeled on the whiteboard to support visual learners. Students will be able to call on other students for clarification and support when needed.

**Assessment:** How will student progress be measured? What evidence of student learning should be collected?

Participation debrief will follow the Number Talk. Students will provide feedback for one another.
Teacher will track use of Accountable Talk sentence frames and features of Academic Conversation during the Number Talk.

Teacher and students will refer to the Anchor Chart of Academic Conversation Behaviors, discussing eye contact, complete sentences, etc.

Teacher and students will discuss the students’ feedback and teacher’s observations during the debrief conversation.

Students will apply different methods to a second problem. Teacher will collect student work.

**Materials/Sources:**

- Whiteboard and markers
- Accountable Talk sentence frames
- Timer
- Anchor Chart for Academic Conversation
- Tracker for Accountable Talk - to be shared during Debrief Conversation
- Steps to Self-Control Clip Chart
- **Number Talk Poster**
- **Accountable Talk Sentence Frames**
- **Anchor Chart of Academic Conversation Roles and Behaviors**