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Revised/Updated

NGSS Lesson Planning Template

Grade: 2	**Topic:** Math Word Problems	**Lesson # _____ in a series of _____ lessons**

NGLS: 2.NBT.B.5 Fluently add and subtract within 100 using strategies based on place value, properties of operations, and/or the relationship between addition and subtraction

Specific Learning Outcomes: Students will be able to use a strategy and model of their choice to solve word problems.

Narrative / Background Information

Prior Student Knowledge:

- Students can add and subtract within 100.
- Students can solve using a strategy and/or model.
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Resources: word problem activity sheets, strategy posters: Make a friendly number, Make a ten, Decomposing, Composing, Compensation, Counting up, Counting back Model posters: open number line, drawing pictures of base ten blocks, base ten block manipulatives, individual hundred charts (paper and online), classroom hundred chart, student math resource folders (paper and online), mathematical practices resource (paper and online)

Possible Preconceptions/Misconceptions: Students adding both numbers given and not thinking about how the problem is missing the addend, students writing an equation with a symbol for the unknown number that does not match the word problem.

LESSON PLAN – 5-E Model

Engage

- Teacher and students will sing math song. Teacher can also create dance movement to go along with song.
- Review student hand signals for accountable talk – thumb up if student has solution, two thumbs up if student has solution and can explain how they
- Teacher writes Number Talk on board:32+48

EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions:

- Students will use a whiteboard to complete their solutions. Students can also use iPads to complete the task on there as well. If students opt for whiteboard, students can take a picture of the work with their iPad in order to project it onto the board.
- Students show accountable talk hand signals. Teacher refers to visuals of hand signals and resources.
- Turn and talk to partners to discuss solution and strategy that they used. Students use discussion sentence starters.
- Students share solutions and strategies as teacher records. Students also have the option to share their screen to display their work on the board, as well.
- Teacher will ask students to point out strategies used they notice, and where they notice each strategy (making a friendly number, making a ten, compensation, decomposing, composing, counting up, counting back)

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EXPLAIN: Concepts Explained and Vocabulary Defined:

- Teacher will point out posted math questions to support discussions:
  - What do you need to find?
  - What information could you use to solve the problem?
  - How do you use your tools to help you solve the problem? (What strategies did you use for the model?)
  - How do you know your solution is correct?
- Teachers circulate student groups. Teacher leads student group to read and discuss word problem.

Teacher guides student group for scaffolding.

Vocabulary: equation, solution, strategy, model, digit, value

ELABORATE: Applications and Extensions:

Group 1	Group 2-3	Group 4
Teacher directed activity using 100 chart, mathematical practice resource, and base ten manipulatives if needed. Teacher will assist in reading mathematical problem. Students will show mathematical thinking by using a strategy/model to solve missing sum addition word problem. Students will write an equation using a symbol to represent the unknown that matches the word problem, and will write a math statement to share solution in a sentence with teacher support. *Rory and his mom were driving through Queens. They drove 12 miles to the store. Then, they drove 28 miles to the park. How many miles did they drive altogether?* Extension: Rory and his mom drove another 9 miles. How many miles did they drive altogether?	Students will independently read mathematical problem. Students will show their mathematical thinking using a strategy and model of their choice to solve a missing addend addition word problem. Students will write an equation using a symbol to represent the unknown that matches the word problem, and will write a math statement to share solution in a sentence. *Rory and his mom were driving to the Empire State Building. The Empire State Building is 41 miles away. They have already driven 19 miles. How many more miles do they have to drive?* Extension: Rory and his mom wanted to drive to Central Park. They drove another 17 miles. How many miles did they drive altogether?	Students will independently read mathematical problem. Students will show their mathematical thinking using any strategy and using two different models of their choice to solve a missing addend addition word problem. Students will write an equation using a symbol to represent the unknown that matches the word problem, and will write a math statement to share solution in a sentence. *Rory and his mom were driving to the Bronx Zoo. The Bronx Zoo is 79 miles away. They have already driven 21 miles. How many more miles do they have to drive?* Extension: Rory and his mom wanted to drive to the Museum of Natural History. They drove another 28 miles. How many miles did they drive altogether?

EVALUATE:

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Formative Monitoring: Group discussions and Questioning

Summative Assessment: Number talk work, Independent work, Exit Ticket

Exit Ticket: Students will answer the question "What mathematical practice did you use? How do you know?" Exit ticket will have sentence starters as a scaffold for student writing.

Teachers review student work and share out 1-3 pieces of student work from independent practice on overhead projector.
Teachers and students take turns giving each piece of student work feedback.
Students will use TAG to tell something positive, ask a question, and give a suggestion.
Student work shared – students pick a cheer to celebrate for sharing their work.

Materials Required for This Lesson/Activity			
Quantity	**Description**	**Potential Supplier (item #)**	**Estimated Price**