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| Subject: | Mathematics |
| Grade Level: | 2nd grade |
| Title of Lesson: | Frog Math: Addition & Subtraction |
| Standards: | MA.2.A.2.1: Recall basic addition and related subtraction facts. |
| Objectives: | Content:Students will deepen their understanding of the concept of addition and subtraction through oral storytelling with the use of frog manipulatives. They will connect addition and subtraction stories to math equations, and write the equations.Language:Students will use key vocabulary while telling their addition and subtraction stories: first, then, together, plus, and equals. They will state the equation for the story, appropriately. |
| Learning Strategies: | Inside/outside circleModelingCooperative learningInteractive learningmix and match activity |
| Key Vocabulary: | First, then, together, plus, equals |
| Materials: | * Chart paper
* Flannel board with frog manipulative pieces
* Markers
* Dry erase markers
* White boards
* Frog shaped index cards
* Scissors
* Socks
* Frogs Jump book
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| Stage of Language Acquisition: | Early Production (Level 2) |
| Motivation:(building background) | The students have had experiences making stories that tell about things being added and subtracted together. They have been studying addition and subtraction concepts and number sense for a couple weeks. Now the class will try to incorporate language expressions as in (first, then, together), with the story and write the math equations. Students will develop concepts for addition and subtraction by using frog manipulatives, modeling, and discussing a variety of problem situations.The teacher will begin by reading the book Frogs Jump, which students have read previously. Refer to pictures for added visual support. The teacher will read the book once and then as a class, we will read the book. Focus on key vocabulary. |
| Presentation:(comprehensible input, lesson delivery, use of learning strategies, HOT skills, interaction) | 1. The teacher will review the objectives and tell students that they will be making addition and subtraction stories using the flannel boards and practicing using three important words (first, then, together).
2. The teacher will explain that they will also be writing the equation that goes with the addition or subtraction story.
3. Using a flannel board, the teacher will model how to tell an addition and subtraction story using the three key vocabulary words.
4. The teacher will scaffold the lesson by having the key words written on the board as a visual cue for the students’ storytelling.
5. The teacher will write the corresponding equation on a whiteboard, for students to see how it can be written two ways.
6. The teacher will check for understanding during the modeling by including students in the story telling process.
7. The teacher will then ask the students to tell a story and help with writing the equation.
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| Practice and Application:(meaningful activities, feedback) | 1. The teacher will arrange students in diverse groups by language and ability to allow for optimal interaction. The groups will be of four and give each group one whiteboard and marker.
2. The teacher will allow for students to receive support and assistance from peers during group configurations.
3. The teacher will tell an addition and a subtraction story using the flannel board and ask the student groups to work together to write the corresponding equation.
4. There will only be one student writing, while the other three provide guidance.
5. The students will then pass the white board and marker to a teammate and repeat they will process.
6. This will continue until all group members have had a turn writing an equation.
7. During this time, the teacher will circulate and assess the students understanding and correct any misconceptions among the teams.
8. To help students apply their math knowledge, the teacher will do an inside/outside circle activity.
9. During the circle formation, the inside group should be the students requiring more support, while the outside circle should be the group that can give assistance. By establishing the groups in this manner, the circles can rotate, while the diverse partnering will remain.
10. The students on the inside of the circle will hold the white board and the marker, while the students on the outside circle hold the flannel board.
11. Ask the students with the flannel board to tell an addition or subtraction story to their inside partner, using the words first, then, and together.
12. As they finish their story, have the partner write the equation to match the addition or subtraction story.
13. Once they are complete, the teacher will instruct the partners to exchange materials and begin again.
14. Repeat this process so that the students have numerous opportunities to practice integrating the content and the language objectives by telling an addition or subtraction story.
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| Review and Assessment:(review objectives and key vocabulary) | 1. The teacher will give out half a frog shaped index card to each student for a mix and match activity.
2. Half of the students will receive the half of the index card with an equation, while the other half of the students will receive the half of the index card that has the equation’s answer.
3. The teacher will ask two students to model the trading process by having one student asking, “What do you have?” and the other student replying, “I have six plus two” (or whatever the card says).
4. Next, the teacher will ask students to reverse the questions, and then have them say, “Let’s trade.”
5. Because all of the index cards are shaped like frogs some students will have heads of frogs while others will have the bottom halves.
6. Conduct the activity and then have the students begin mixing.
7. The teacher should provide enough time so that students have a chance to read many of the different equations and answers.
8. Say, “Freeze!” to stop the mixing and then tell the students to find their match.
9. Those students that have matched will move to sit on the edge of the rug, while those that are still seeking their match will remain in the center of the rug.
10. When all of the students have found their matches, the teacher will ask each team to report out their equation and their answer. Depending on the students understanding of the concept the teacher will repeat the entire process for additional practice with other or harder story problems.
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| Extension: | For students that are understanding this process they will be given an “I have” “Who has” game to reinforce their understanding. They will be able to know if they complete the activity correctly by having the last card connect back to the first card they started with. |