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| **Time** | **What Students Will Do** | **What Teacher Will Do** | **Rationale** |
| 3 minutes | * Enter room * Find their seats from seating chart displayed on Elmo * Answer starter | * Greet students * Ask them to sit in their new groups * Hand out starter paper * Read starter out loud from the board: “If you could build a giant playground for you and your friends, what would you put in it?” * Ask students to write a response in their math notebook | * Students are used to doing a starter each morning, so this sticks with the routine * Low-stakes writing encourages students to write without the fear of being graded on it * The starter will connect them to today’s lesson |
| 4 minutes | * Volunteer to share starters * Listen to each other’s answers * Ask each other follow-up questions if desired | * Call on volunteers to share starters * After everyone who wants to has shared, share that I would want there to be a huge seesaw that multiple people could stand on | * Students get to share their ideas while practicing their speaking and listening skills * My seesaw comment ties us into the next activity |
| 1 minute | * Listen to the teacher talk | * Draw a balanced seesaw on the board * Explain to students that for a seesaw to be balanced, both sides have to weigh the same. However, not all people and objects that you put on the seesaw weigh the same   + Draw an unbalanced seesaw on the board to illustrate this * Sometimes it takes some thinking to figure out how to balance the seesaw. Today we’re going to be looking at lots of different examples of balanced seesaws and figuring out how exactly they stay balanced | * This basic explanation of a seesaw ensures that all students understand that both sides have to be equal for it to balance * Students are told what they will be doing today |
| 3 minutes | * Volunteer answers about the seesaw being balanced or unbalanced * Draw the unbalanced seesaw in their notebook * Draw the balanced seesaw in their notebook | * Draw an unbalanced seesaw on the board with Mr. Strogoff on one side and his daughter Redeit (whose dance videos they’ve seen) on the other side. Ask students if they think this scale would be unbalanced or balanced. Take answers – reach the consensus that this would be unbalanced because Mr. Strogoff clearly weighs more than Redeit. * Ask students to copy this drawing into their notebook and mark it as unbalanced * Say that I have figured out a way to balance the seesaw. Draw a balanced seesaw with 2 Mr. Strogoffs and 1 Redeit on one side, and 5 Redeits on the other side.   + Use pictures of Mr. Strogoff and Redeit that I can move to each side of the seesaw one the board * Ask students to also copy this drawing into their notebook and mark it as balanced. * Now ask students to figure out the relationship between Mr. Strogoff’s weight and Redeit’s weight: “One Mr. Strogoff weighs the same as how many Redeits?”   + Write this question on the board * Ask students to work individually for 3 minutes before they work with their group. Remind them to record their thinking in their notebook. | * By drawing both an unbalanced and balanced seesaw, this further enforces the idea of both sides needing to be equal * Using Mr. Strogoff and his daughter (who very clearly are different weights) as an example puts the idea of balance into context for the students * This will help students start to figure out how to express equivalent relationships using two sides of a seesaw to (unbeknownst to them) represent an equation. |
| 6 minutes | * Work on their own to figure out the weight relationship for 3 minutes. Record their thinking in their notebook. * Extension for students done early: How can you draw your answer? How can you write it using a full sentence? How can you write it using variables and an equal sign? * Talk with their group for 3 minutes. Each person shares their answer and how they got it, or if they haven’t got an answer then share what they’ve done so far. | * Put manipulatives at each table for students to use if they want * Circulate around the room and make sure that students are writing down or drawing their thinking. Give extension to students who finish early. * Tell them when the three minutes are up. Ask them to talk to their group about what they’ve figured out so far. Each person should share their work and the group should come to a consensus. Tell them they’re going to be asked to share their answers and how they solved it. * Make sure students are talking to each other | * The individual work allows students time to think and formulate thoughts for themselves, while the group work then allows them to either get help from their peers or practice articulating and defending their thoughts. |
| 8 minutes | * Share answers with the class. Use the Elmo or board to show the class how they got the answer. | * Ask groups to report out. First take a volunteer to begin. Have students share their answer and come to the Elmo or board to show how they figured it out.   + They can use the pictures on the board if they want * Ask students if they agree or disagree with that answer. If agree, did they use a different method or the same method? Have a few more students share answers/methods. | * By having the students share their answers and methods with the class, it situates them as the teacher. Asking them to explain their method forces them to think more deeply about their thinking. It also helps them with their presentation skills. |
| 15 minutes | * Work on the problems, using their groups as resources * Show all their work on their papers. | * Hand out worksheet with 4 different balancing problems. * Tell students that they can work with their group to solve the problems, but each student must fill out their own sheet and show all their work * Encourage them to draw or use manipulatives if they find that helpful * Circulate amongst groups. Encourage cross-comparison between different groups if I see groups with the wrong answer. * Give more time if students are working hard and need it | * Students will have time to work through problems that increase in difficulty |
| 12 minutes | * Share their answers and methods for the first three problems using the Elmo/board. | * Bring the class back together and go over the first three problems. Ask for their answers. Once there’s a consensus, ask for a few volunteers to show their methods. | * Again, students are positioned as the source of knowledge, as they must clearly explain their thinking. |