Balance Card Match Lesson

Learning Objectives:
Students will be able to

- Represent multiplication and addition expressions with cubes
- Explore, identify and explain equivalent expressions
- Communicate understanding of operations through drawings and action (balance).

Materials:

- Pan balance
- Unifix cubes
- Expression cards
- Magnet expression cards
- 8 pieces of card stock
- Markers

Instructional Plan:

Tell students that they are going to be working on a matching challenge and that the matching involves expressions. Ask them if they know what an expression is and have them explain their understanding. Consider showing them some of the cards that they will be using to help describe expressions. Help students understand that an expression is a representation of a value and that the expressions they will be working with will involve addition and multiplication of whole numbers.

Explain to students that they will be trying to make matches of these expressions and will be using a balance to help find and test these matches. Model for students how to place cubes on the scale and draw a representation of these two expressions: 2 x 5 and 4 + 6. Show how if the second expression had been 4 + 5 that the balance would have tipped. Help students understand how to use drawings to show the action of each operation.

Let students work in pairs to explore the expressions and find matches. They should record representations when matches are found (use worksheet for this). As students finish their matching, pose two extension questions:

1. Can you explain why these cards match?
2. Can you create cards of your own that would match?

As students are finishing partner work, distribute card stock and each of the eight expressions to pairs of students and ask them to draw their representation of the expression on the card. Post expressions and drawings on the board in two separate groups.

Bring students together as a whole class to discuss the expressions and drawings. Have students come to the board to show pairs of expressions and the drawings that should accompany each of these expressions. Ask students to explain how the drawings show the operations. Once the pairs and drawings are arranged and discussed, revisit the previous extension questions. Focus on having students explain associative, commutative and distributive properties through visuals and the balancing experience.