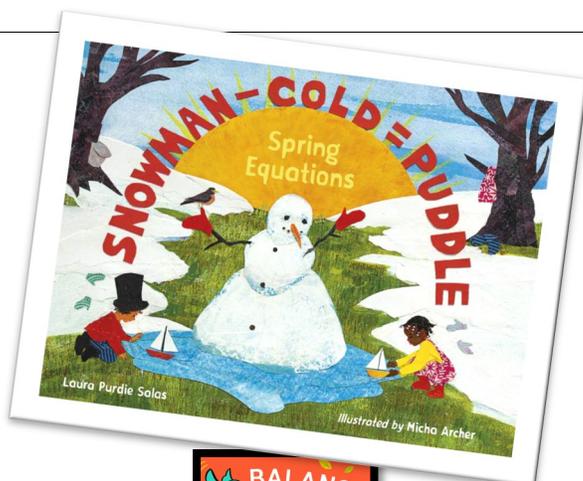


Writing Trait:

Learning Intention:

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Using Equations to Describe Addition and Subtraction



Before Reading

An equation is a way to describe the same quantity in two different ways. Visually, it can be thought of as a balance, since neither of the two representations is worth more, or less, than one another. Consider using the language **the same as**as often as you say **equals**when

referring to the symbol **=**

Equations describe a relationship. For example, if 10 is decomposed, it could be decomposed into a large number and a small number (e.g. 9 and 1 or 8 and 2) or into two mid-sized numbers (e.g. 4+6 or 5+5)

During Reading

As you read Balance the Birds consider that students benefit by reading equations and having equations read to them in meaningful ways. We can read $5 = 2 + 3$ "5 is the same as or equal to 2 plus 3" but there is also value in reading it as "5 can be separated into a 2 and a 3"*decomposition*.....

Marian Small Uncomplicating Algebra K-8 pg. 12

Snowman-Cold= Puddle the inside book jacket describes this book best (so much to enjoy here):

book + reader = wonder

After Reading

Provide pan balances and unifix cubes. Invite students to use the balance to model various equations.

Then invite them to move cubes to demonstrate a different way to show their 'whole quantity' (i.e. 10 or 12)

Ask students: *I need 13 cubes but I don't have that many yet. If I only need a few more to have 13, how many might I have now?*

Ask students: *What other combinations make 8? Can you show 8 with balance? What happens to the balance when you choose unequal parts?*

On the pan balance, place 10 cubes on one side and 3 cubes of one color and 7 or another on the other side. Ask students what equation this shows ($10 = 7 + 3$)

Length balance can be modelled using Cuisenaire rods and seeing that a grain made up of a 4-rod and a 3-rod matches in length, a train made up of a 5-rod and a 3-rod. Examples to try: $8 + 3 = 3 + 8$ or $4 + 8 = 2 + 10$ (another way of saying that $(2 + 2) + 8 = 2 + (2 + 8)$)

Reading equations: students benefit from reading equations or having equations read to them in meaningful ways. Although we can read $7 = 10 - 3$ as "7 = 10 minus 3" there can be value in reading this equations as "7 is what is left after 3 is taken away from 10". M.S. p. 19