Webinar Guide

Insight into Equality

Elementary Mathematics Professional Learning

"Changing one or both sides of an equal sign for certain purposes while preserving the "equals" relationship is the secret of mathematical operations."

- (Liping Ma, 1999)

This webinar guide is designed for use by instructional leaders and professional learning communities or as a self-paced study to explore Equality in Elementary Mathematics.

Use this guide after or while viewing the *Insight into Equality* webinar:

Link to archived webinar

Synopsis: This webinar provides an overview of equality, focusing on the foundational understandings of equality in the elementary years.

Key understandings

- Equality is a relationship, not an operation
- Equality is the first relationship students should learn and understand
- Operations emerge from understanding equality

Instructional practices

- Students need to see equations written in a variety of formats:
  - 3 = 3 24 = 24
  - 6 = 4 + 2 24 = 6 x 4
  - 3 + 3 = 4 + 2 2 x 12 = 6 x 4
- Our choice of vocabulary, when referring to the equal sign, is very important. Use phrases such as:
  - "is equal to"
  - "is the same amount as"
  - "is the same quantity as"

Questions for discussion

- What does the equal sign mean?
- Is the following True or False, and how do you know?

$$3 + 2 = 5 + 1$$

Reflection

- How might you know if your students have a solid understanding of equality?
- What can you do if your students do not understand what equality means?

For more information

- Please visit our online learning guide at:
  - http://learning.arpdc.ab.ca/
- Visit your local consortium's website to view upcoming learning opportunities, or to discuss customized follow-up possibilities:
  - https://arpdc.ab.ca

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