ESTABLISHING PURPOSE

1 **What are the key content standards I will focus on in this lesson?**

Content Standards:

Nebraska Mathematical Standards

MA 1.2.1.a. Use the meaning of the equal sign to determine if equations are true and give examples of equations that are true (e.g., 4 = 4, 6 = 7 − 1, 6 + 3 = 3 + 6, and 7 + 2 = 5 + 4).

MA 1.2.1.d. Determine the unknown whole number in an addition or subtraction equation (e.g., 7 + ? = 13).

MA 1.1.1.f. Compare two two-digit numbers by using symbols <, =, and > and justify the comparison based on the number of tens and ones.

MA 1.2.2.a. Decompose numbers and use the commutative and associative properties of addition to develop addition and subtraction strategies including (making 10's and counting on from the larger number) to add and subtract basic facts within 20 (e.g., decomposing to make 10, 7 + 5 = 7 + 3 + 2 = 10 + 2 = 12; using the commutative property to count on 2 + 6 = 6 + 2; and using the associative property to make 10, 5 + 3 + 7 = 5 + (3 + 7) = 5 + 10).

MA 1.3.1.c. Use two-dimensional shapes (e.g., rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) to compose and describe new shapes.

Nebraska Mathematical Processes:

- Models and represents mathematical problems.
- Makes mathematical connections.

2 **What are the learning intentions (the goal and *why* of learning stated in student-friendly language) I will focus on in this lesson?**

- Content: I am learning to understand the many ways mathematical relationships can be expressed and defended.
- Language: I am learning to understand the mathematical ways to read, write, and talk about math symbols.
- Social: I am learning to understand the decisions we make and how they help us grow as individuals and a community of learners.

3 **When will I introduce and reinforce the learning intention(s) so that students understand it, see the relevance, connect it to previous learning, and can clearly communicate it themselves?**

- Turn and tell
- Conference questions
- Centers checklist with self-evaluation

SUCCESS CRITERIA

4 **What evidence shows that students have mastered the learning intention(s)? What criteria will I use?**

I can statements:

- *I can read and write mathematical symbols [=, +, -, ()] to show equality.*
- *I can read and represent each side of an equation.*
- *I can decide if an equation is true and justify my decision.*
- *I can explain the meaning of equations with words and models.*

5 **How will I check students' understanding (assess learning) during instruction and make accommodations?**

Formative Assessment Strategies:

- *Conference/observation checklist*
- *Student work*
- *Centers checklist self-evaluation*

Differentiation Strategies:

- *Choice of centers to differentiate the content by interest*
- *Materials to differentiate the process and product by interest*

INSTRUCTION

6 **What activities and tasks will move students forward in their learning?**

- *Math talk*
- *Modeling*
- *Conferences*
- *Needs-based strategy groups*
- *Sharing tools and representations*

7 **What resources (materials and sentence frames) are needed?**

Anchor chart of properties

Anchor chart of levels of justification

Math binders

Centers checklist

True-or-false statements

Open sentences

Playing cards

Cuisenaire rods

Number balances

Weights and scales

Pattern blocks

Two-dimensional paper shapes

Number lines

Graph paper

Colored pencils

Scissors

Glue

8 **How will I organize and facilitate the learning? What questions will I ask? How will I initiate closure?**

Instructional Strategies:

- Math talk
- Modeling
- Conferences
- Needs-based strategy groups
- Turn and tell
- Centers checklist self-reflection

Scaffolding Questions:

- Why does this value complete this equation?
- What other values are possible?
- How could you model this relationship?

Extending Questions:

- How can you use properties to prove this statement is true or false?
- How could you record this relationship more efficiently?

Self-Reflection and Self-Evaluation Questions:

- Green stoplight: I've mastered it!
- Yellow stoplight: I'm still working. I need to revise.
- Red stoplight: I am stuck or confused.