

Jackie Hain

Subject: Mathematics: Equivalent Names for Numbers

Grade Level: 1st Grade

1 hour, 15 minutes

Goals/Objective(s): SWBAT model equivalent names for numbers.

Purpose: So students can identify numbers written in various ways.

Students will work in pre-selected groups of 3 on a task. Each member will play a role in the group and the whole class will work toward creating name-collection boxes for given target numbers.

PA State Standard for Numbers, Number Systems and Number Relationships:

2.1.1.B: Represent equivalent forms of the same number through the use of pictures and concrete objects (including penny, nickel, dime, and quarter), up to 100.

Materials and Preparation:

Chart Paper

Black marker

Tape

5 individual white boards

5 markers

5 erasers

Coins (pennies, nickels, dimes)

Snap cubes and pan balance

Cubes and longs

Classroom arrangement and management issues:

This will take place in the classroom.

The lesson will start as full group instruction on the carpet, then move into small groups sprinkled throughout room for independent/small group practice. Finally, it will conclude as full group on carpet.

Continue implementing the norm of red, yellow, green cards.

Emphasize the group work and encourage taking turns, helping and supporting each other. Each person will be held accountable for their role in the group's task.

Plan:

“The hook” (20 minutes)

“We are going to be discussing equivalent names for numbers. Does anybody know the word *equivalent*?” Brief discussion.

Use large white board to show different ways to create the sum of 7.

- Address turn-around facts. Show written both horizontally and vertically.

“We are looking for different ways of making our target number. These may all look different, but their sums are all 7.” *10min*

On a desk in front of carpet:

Using a pan balance and snap cubes, show that 5 snap cubes are equivalent to a stack of 2 and a stack of 3.

Repeat with 6 then 13.

“Even though they look different, they are equivalent.” *10min*

“The body of the lesson” (45 minutes)

Create a *name-collection box* for 10 and talk through it:

How can we show 10, our target number?

- Addition facts
- Subtraction
- Money
- 10 stars, 10 circles, 10 triangles (pictures)
- Dominos
- Write the word *ten*
- Tally marks
- Cubes and longs (1 long or 10 cubes) *10min*

*Prompt the different ways.

How can we show 13?

Use a name collection box for someone familiar:

Teacher Amy

- Aunt Amy
- Mom
- Ms. McGowan

“It is all the same person, it is all Teacher Amy. The same thing or person can have different names.” *5min*

“Now, we are going break into groups. We are going to show the same number in different ways.”

Group 1: Addition facts (small white board)

Group 2: Subtraction facts (small white board)

3: Money (coins)

4: Pictures (small white board)

5: Dominos (small white board)

6: Snap cubes and pan balance

7: Cubes and longs

8: Tallies and number word (small white board)

Stations will run for 5 -7 minutes each. Each student has a role at their station: recorder, worker, and presenter. Recorder will write on white board if necessary, worker will tell what to write, presenter will share their work with whole group. Each student will have a chance at each role.

It is important to share after each station because not every group will attend each task (each group will attend 3 stations) and sharing can hold students accountable for productivity.

Students will move stations in a clockwise fashion. Constantly reinforce: “Same number, different way of showing it.” Target numbers: 6, 13, 17. *30min*

“Closure (if appropriate)” (10 minutes)

Bring students back to full group. Quick debrief. *5min*

Exit ticket. Give students a name-collection box with target number 9 to do independently. Not for a grade but for teacher to see who grasped the concept. Remind students of the different stations we just did and to use those strategies for their name-collection box. *5min*

Assessment of the goals/objectives listed above:

Is the child asking relevant questions?

Is the child making meaningful contributions to the conversation?

Are the groups being productive? Use the excel sheet of the pre-selected groups (based on math level and social aspect) to make notes of what is working/not working.

Use information from exit slip to create small groups to go over the concept. Decide how much of this lesson will need to be reviewed in the next lesson. Exit slip will be used to determine when it is necessary to revisit the concept.

Anticipating students’ responses and your possible responses:

Students may need support making different combinations of equivalents using strategies other than addition. It is common that all these strategies and tools are introduced separately (one day is a lesson on subtraction, another day is a lesson using dominos, another day and this particular lesson asks the students to bring all this together in a more fluid approach. Students may find it difficult to think about money, snap cubes, and tallies in the same lesson. Students not recalling the many different methods they could use to represent the target number could be an anticipated challenge; a hands-on activity can address that concern as well as having students share their results. Each student having the chance to talk out loud serves as a strategy for comprehension and mastery of the goal for this lesson.

When basic concepts are not yet mastered, this lesson could be overwhelming. For example, those students who are still not comfortable with subtraction or money need extra support and direction when this specific standard is addressed. Manipulatives and teacher check-ins could be helpful for the students who are still working on basic concepts, as well as carefully selected group members who can help and guide their classmates.

Accommodations:

Build on what any child says – work with their suggestions and ideas.

Carefully select groups so students can demonstrate their highest potential.