



## Zero Math

by Debbie Allen Lewiston City Library

Book: Zero by Kathryn Otoshi

### Idaho Content Standards/ Kindergarten/Mathematics

Standard 1: Number and Operation

Goal 1.1 Understand and use numbers

(Objective 2) K.M.1.1.2 Show the verbal, symbolic, and physical representations of a number up to 10.

### Objectives:

The child will be able to put the plastic numbers in correct 1,2,3 order up to #10.

The child will show the verbal, symbolic and physical representations of numbers 1-10.

The child will create zero (0) using the modeling clay.

### Material Needed:

3-6 sets of plastic numbers 1-10 (magnetic or not) if doing as a station activity or ideally 1 set per child if doing a whole group activity (kids could share numbers)

Modeling clay... any color

Card stock Number/Dot Sheets (I put out 4 sets of sheets and kids used one sheet at a time) they worked fine w/out being laminated and then got thrown away.

Print from Word document "Zero to 100 number dot sheets"

## Group Activity and Story time

**Read:** "Zero"

Children are given a set of plastic number 1-10, to play with, look at and put in numerical order.

Teacher/parent should count with the kids, 1,2,3,4,,5,6,7,8,9,10.

(a)

finger play or rhyme w/b good here)

Pick each number up and say it out loud, show everyone which number you are holding...

start with 1, repeat up to 9 ( smart board or white board w/b good to use here)

1. Children are given a chunk of clay and encouraged to roll the clay into a ball.
2. Children make a 0 out of clay w/hole in center, leader should model how to do this.
3. Kids line up the plastic numbers... if not done already, it may take some time to help children get them in the correct order, again time to count 1-10 over and over.
4. Children try to turn the clay 0 into the other numbers as the story does... "8" & "9" encourage children to look at the 8 or 9 to see how it looks, could discuss the curves, etc, the round edges, 8 is sort of like two 0's one on top of the other...
5. As you read about Zero rolling and knocking into the other numbers have kids mix up the numbers.
6. "Everyone counts" Have kids put numbers back in order 0,1,2,3,4,5,6,7,8,9
7. Now take the 0 and put it behind the 1, = 10, behind the 2=20, etc.

### ***Talk, Predict, and Discuss, Questions? ...What comes next?***

8. If children (older kids) want to make more 0's and keep adding behind the other number they can make larger numbers. (more 0's out of clay)

100            1,000            10,000 100,000            1,000,000 a million ☺

See zero brings more value to numbers.

Write the number and the *number word* on a Smart Board, white board or big sheet paper.

Point and read the words and have the children find the correct plastic number. Also draw

dot for one 1 and 5 dots for ten...10, etc.

1

Ask children if they would rather have 1 piece of candy or 10 pieces. 10 pcs or 100 pcs, etc.

This helps them understand smaller/larger, greater than-less than...etc.

### **Station Activity:**

Set out the Card stock Number/Dot sheets and clay and let the children roll little clay balls (dots) and place them on the dots on the paper. I had a five year old boy sit and roll 100 blue dots and fill in the dot sheet.

After speaking with him he certainly understood the concept of 100. ☺