Developing Number Sense JK - 5

Morse School Parent Workshop
November 20, 2013

Welcome!

How many species of butterflies are there in the world? Count to find out.

Agenda:

- Welcome
- Counting Butterflies
- Goals
- Critical Learning Phases
- Increasing Number Sense
- Activities that promote number sense

How Many?

- *What did you need to know about numbers in order to be successful in your count?*
- *What counting strategies did you use?*
- *What other skills did you need in order to be accurate in your count?*

Today's Take-Away

- Better Understanding of how children develop number sense

- Helping your child at home

- Take Home Learning Activities

Number Sense

".... good intuition about numbers and their relationships. It develops gradually as a result of exploring numbers, visualizing them in a variety of contexts, and relating them in ways that are not limited to the traditional algorithm."

H. Howden, "Arithmetic Teacher" 1989

Critical Learning Phases for Numbers to 100

- Counting

- Number Relationships

- Number Composition and Decomposition to 20

- Numbers as Tens and Ones

Recognizing Parts of Numbers to 10 in Arrangements

Subitizing: What Is It? Why Teach It?

Subitize It!

Tell me fast...

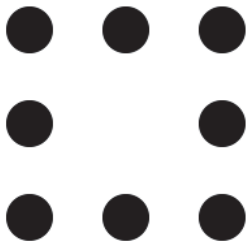- How many dots?

- How did you see it?

Subitize It!

Subitize It!

Turn and Talk to your neighbor:
- How many dots?
- How did you see it?

Subitizing in Kindergarten

What does this look like in the classroom?

- Kindergarten Classroom at the end of the year.
- What evidence of number sense do you notice?
- What math language is being used?
- How do these activities build a sense of quantity?

Moving Forward in Relating Numbers

Developing Number Sense…
Grade 1

Moving Forward in Relating Numbers

Developing Number Sense…
Grade 2

Moving Forward in Relating Numbers

Developing Number Sense…
Grade 2

Mr. Rick and I had 24 cookies. We shared them with 17 friends. How many cookies did we have left?

Moving Forward in Relating Numbers

Developing Number Sense…
Grades 3 - 5
Extends to Fractions and Decimals

Using Number Sense to "Memorize" Math Facts

- Doubles
- Doubles Plus One (Near Doubles)
- Make Ten Strategies
- Nifty Nines
- Elevens
- Twelves
- Double and Double Again (Fours and Eights)
- Double and One More Set (Threes)
- Half then Double (Any fact with an even factor)
- Add One More Set (Use what you know)

Moving Forward in Relating Numbers

Developing Number Sense Activites...

JK/K: Inventory Bags

Grade 1:   Double Compare

Grade 2:   Collect $1.00

Grades 3-5:   "Memorizing" Facts with Number Sense

At Home Activities

Handouts
- Title 1 Materials
- Games directions
- Subitizing article
- Richardson Learning Phases

Developing Number Sense in the Primary Grades

Thank you for coming!

Our next session will be on Problem Solving with whole numbers.