

# Place Value: K-3

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## Contents of Box

- 6 "Hundreds, Tens, Ones" Charts. 2 Yellow, 2 Red and 2 Green
- 1 set of beansticks (using kidney beans)
- 1 set of toothpick counters (ones, tens and hundreds)
- 1 yellow set of flip cards showing ones, tens, hundreds)
- 6 "elevator" bead strings
- 1 (green) easy set of "GO FISH" laminated cards
- 1 (yellow) harder set of "GO FISH" laminated cards

*Description, uses and objectives from Curriculum Guide are listed for each activity*

## Hundreds, Tens and Ones Charts

### Description

There are six laminated bristol board charts divided into three sections: **Hundreds, Tens and Ones**. In three of the charts (one of each colour) the "ones" column is divided into ten horizontal sections. These charts are to be used with young (beginner) students. It will help them visually see and understand how many "ten" is. Once they know this, they can move to the unmarked charts.

### Uses

1. Students can play a game similar to "Race to One Hundred", where they roll a dice, put the number of beans that correspond to the number on the dye, onto the chart and keep doing this until they reach one hundred. One student rolls first, then the other. The students add the number of beans each time. If they reach ten they put a "ten" rod of beans under the tens column and take off the ten individual beans under the ones column.

For example: The 1st player rolls 5, 2nd player 4, 1st player rolls 3.....put a 10 bean rod in tens column and leave 2 individual beans in the ones column.  $5 + 4 + 3 = 12$  12 is equivalent to 1 ten and 2 ones.

2. Popsicle stick sets or toothpick sets can also work with this game.

### Objectives

1. N-29 Read, write the symbols for and express orally, numerals less than: a) 100 b) 1000 (Pg. 49).
2. N-32 Understand the place value positions as increasing powers of ten to a) 3 digits (Pg. 49).

3. N-34 Understand that the quantity represented by a multi-digit numeral is the sum of the quantities represented by each digit to a) 2 digits b) 3 digits (Pg. 50).
4. N-33 Understand that each digit of a number represents the product of the digit and the appropriate power of ten to a) 3 digits (Pg. 50).
5. N-23 Recognize quantities (up to 5) by visual inspection (not counting) (Pg. 48)

## **Bean Sticks/Toothpick Sets**

### **Description**

- Bean Sticks
  - one bean = one unit,
  - ten beans = ten units,
  - 100 beans = one hundred units

Glue 10 beans onto a popsicle stick. (Make at least 10 of these) Glue 10 popsicle sticks together and glue 100 beans onto this raft.

- Toothpicks (Popsicles sticks bundled together will work as well)
  - have 10 individual sticks
  - wrap 10 sticks together with elastic (make ten of these)
  - wrap 100 sticks together with elastic (10 bundles of 10)

### **Uses**

- Can use with "Hundreds, Tens and Ones" Charts
- Individual Counting
- Develops concepts of place value (ones, tens and hundreds)

### **Objectives**

1. N-23 Recognize quantities up to five by visual inspection (not counting) (Pg. 48).
2. N-40 Demonstrate addition by joining sets using manipulatives (Pg. 51).

## **Flip Card Set**

### **Description**

The Flip card sets can be made with heavy paper such as Manila Board. The hundreds cards will be the longest

equaling three ones cards. For example hundreds card= 30 cm, tens =20 cm and ones =10cm. It is recommended that the cards be made tall enough to fold over so the cards will stand up. The hundreds cards will have numbers through 100-900 written on them, middle parts (Tens) will have from 10-90 on them and ones will have 1-9.

These cards allow students to take cards off or put them on to make numbers while being aware of place value. The cards concretely show the different place values. For Example, 357 would look something like this with the cards apart. 300-50-7 and once the cards are placed on top of each other in order of place value the number 357 will appear.

## Uses

1. Students can use flip cards to make numbers
2. Will help students "see" place value because the one place value cards are smaller than the hundreds place value cards.

## Objectives

1. N-29 Read the symbols for, and express orally numerals less than a) 100 b) 1000 (Pg. 49).
2. N-32 Understand the place value positions as increasing power of ten to a) 3 digits (Pg. 49).
3. N-33 Understand that each digit of a number represents the product of the digit and the appropriate power of ten to a) 3 digits (Pg. 50).
4. N-35 Compare and/or order numbers by using place value (Pg. 50).

# Elevator Bead Strings

## Description

There are two differently coloured beads on each string and ten of each colour, therefore twenty beads on each string. Each bead is threaded through with string. The string should make an X shape through each bead. The beads, once threaded can be moved up or down on the strings and they will stay where they are moved to.

## Uses

1. Students can have their own string at their desks to help with their addition and subtraction.
2. When learning place value students can use one colour to be 1-10 and a different colour for beads 11-20. They can see what "one " looks like and what a " ten " looks like.

## Objectives

1. N-40 Demonstrate addition by joining sets using manipulatives (Pg. 51).
2. N-29 Group by a)10's and 1's (Pg. 49).

# Go Fish Cards

## Description

Sets of laminated bristol board cards (Green-easy) (Yellow-harder) to be used to show children place value.

1. The Green set will include numbers which would be appropriate for beginners learning place value. Numbers 1-20 and then 20, 30, 40 ect.
2. The Yellow set will include numbers appropriate for students which are able to work with more challenging place value combinations. These cards will include a variety of numbers which will be up to the teacher to develop according to his/her students level of understanding. Numbers such as 45, 57, 98, 194, 210, 1012...ect would be challenging for the yellow set of place value cards

## Uses

1. Students (in small groups) are dealt a few cards. The rest of the cards will be put in the middle to "fish" from. The game proceeds just like "Go Fish" but the students are matching the numeral representation with the corresponding symbolic representation.
2. Students should keep working on the game until they understand why the cards match. and until they can match them rapidly and with ease.
3. Once the green set is mastered students can move on to the yellow set. (A red set might be made with numbers more challenging than green, but below the difficulty of yellow).

## Objectives

1. N -15 Demonstrate and explain correspondence (Matching) by using a) One to one matching (Pg. 47).
2. N-29 Read, write symbols for and express orally numerals less than a) 100 b)1000
3. N-32 Understand the place value positions as increasing powers of ten to a) 3 digits b) 4 digits (Pg. 49).
4. N-33 Understand that each digit of a number represents the product of the digit and the appropriate power of ten to a) 3 digits b) 4 digits (Pg. 50).
5. N-34 Understand that the quantity represented by a multi-digit numeral is the sum of the quantities represented by each digit to a) 2 digits b) 3 digits (Pg. 50).
6. N -23 Recognize quantities up to five by visual inspection ( Not Counting). (pg. 48).

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