

### Curriculum topics:

- Counting
- Number Words
- Place Value
- Problem Solving

### Subjects:

**Mathematics,  
Language Art**

### Grade range:

**Pre-K – 2**

### Who we are:

Resource Area for Teaching (RAFT) helps educators transform the learning experience through affordable “hands-on” activities that engage students and inspire the joy and discovery of learning.

For more ideas and to see RAFT Locations

[www.raft.net/visit-raft-locations](http://www.raft.net/visit-raft-locations)

In collaboration with:



**JUNIOR LEAGUE  
OF SAN JOSE**

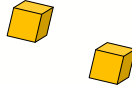
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# Roll It!

Roll a number: then build it, spell it, and expand it.

### Roll It! Board

Level One

Roll it (Number rolled)	→	2 ones
Built it (Base Ten form)	Spell it (word form)	
	two	



In this amusing and exciting activity young learners explore about place value. Younger learners start with level one, showing what they know about counting and quantity. They then progress to level two where they demonstrate understanding of counting, quantity and expanded notation.

## Materials required

For each activity station (for 2 students):

- Dice, 10-sided (preferred) or 6-sided, 2, with numerals rather than dots. Use different colors if possible. (Optional: Write numbers on blank cubes to create dice.)
- **Roll It** sheets, 2, (download at <http://www.raft.net/raft-idea?isid=748>)
- Erasable markers or pencil
- Optional: laminator, clear page protectors, or small white boards
- Base Ten base blocks or similar mathematical manipulatives
- Flash cards or index cards with number words

 **WARNING:**  
**CHOKING HAZARD—Small parts**  
**Not for children under 3 yrs.**

## Preparation before the activity

**Prepare Boards:** Print out **Roll It** sheets, choose level 1 or level 2, depending on the students’ skill level. To make reusable boards - laminate or put in clear page protectors. Alternatively, draw the **Roll It** sheet onto small white boards.

## Curriculum Standards:

Taking Turns & Cooperative play  
(Early Education: Desired Results Dev. Profile(DRDP-R), Self-Social Development, 5 & 8)

Fine Motor Skills  
(Early Education: Desired Results Dev. Profile(DRDP-R), Physical Development, 40)

Number sense of quantity & counting  
(Early Education: Desired Results Dev. Profile(DRDP-R), Mathematics Development 32 & 33)

Place Value  
(Common Core Math Standards: Number and Operations in Base Ten, Grade K, 1; Grade 1, 2)

Write numbers  
(Common Core Math Standards: Counting and Cardinality, Grade K, 3)

Connect counting to cardinality  
(Common Core Math Standards: Counting and Cardinality, Grade K, 4)

# To do and notice (for 2 students)

**Level One:** (Use one die; each student uses a level one *Roll It* board.)

- 1 The youngest student rolls the die first. Both students write the rolled number in the box in the top right corner on their board.
- 2 Each student does the following on their own board:
  - a) In the “Build it” section - place math manipulatives equal in quantity to the rolled number
  - b) In the “Spell it” section – write the name of the number. (Show students flash cards with number names, if needed.)
- 3 Repeat, alternating the student who rolls the die, until students are ready to go to level two.

**Level Two:** (Use two dice; each student uses a level two *Roll It* board.)

- 1 Designate one die as “tens”, the other as “ones”; mark die if needed. The youngest student goes first, rolling one die. Both students write the rolled numbers on their *Roll It* boards.
- 2 Each student does the following on their own board:
  - a) In the “Build it” section – show quantity with manipulatives.
  - b) In the “Spell it” section – write the name of the number.
  - c) In the “Expand it” section write the number in terms of tens and ones. For example, 24 would be written as 20 and 4.
- 3 Repeat until students are confident with the material.

## The math behind the activity

Place value may seem like a complex idea for young learners however starting one step at a time can help students gain experience in place value. *Roll It* helps with exposing students to the concept of place value in a fun and exciting way.

*Roll It* also provides a way that younger learners can practice and understand counting (building it), the spelling of numbers words, and quantity (expand it).

## Learn more

- Add another die to the activity to represent hundreds.

**Related activities:** See RAFT Idea Sheets:

**Place Your Number Value -**

<http://www.raft.net/ideas/Place Your Number Value.pdf>

## Resources

Visit [www.raft.net/raft-idea?isid=748](http://www.raft.net/raft-idea?isid=748) for “how-to” video demos & more ideas! See these websites for more information on the following topics:

- **Math related teacher resources -** <http://www.aaamath.com>

## Acknowledgements:

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