

# Whole Number Game Time

## Summary

These math games provide students many opportunities to develop a better understanding of whole numbers.

## Main Core Tie

Mathematics Grade 1

[Strand: NUMBER AND OPERATIONS IN BASE TEN \(1.NBT\) Standard 1.NBT.2](#)

## Additional Core Ties

Mathematics Grade 1

[Strand: NUMBER AND OPERATIONS IN BASE TEN \(1.NBT\) Standard 1.NBT.3](#)

## Materials

### Roll to 100

Three-section plastic dinner plate for each pair

100 Unifix® cubes per pair

- [Roll to 100](#)
  - *One to One Hundred*
- Two dice per pair

### Big O

16 dominoes per pair

- [Big O](#)

### Bull's Eye

Bull's Eye Chart

- [Bull's Eye](#)
- 10 paper clips per student

### Nice Dice

Two dice per pair

- [Nice Dice](#)
- 66 Unifix® cubes per pair

### Give Me a Dollar

20 plastic pennies and dimes per pair

- [Give Me A Dollar](#)
- [Penny Bank](#)
- [Dime Bank](#)

Money die (3 sides labeled 1 cent, 3 sides labeled 10 cents)

## Additional Resources

### Books

- *One to One Hundred*  
, by Teri Sloat; ISBN 0-590-48661-6
- *Alexander Who Used to Be Rich Last Sunday*  
, by Judith Viorst; ISBN 0-590-46896-0
- *The Penny Pot*  
, by Stuart J. Murphy; ISBN 0-06-446717-1

## Background for Teachers

These activities are to be taught to a whole class or small group and then practiced independently in centers, stations, or workshop time. Students should have been introduced to the concept of tens and ones in previous lessons. By using manipulatives and having many opportunities to practice students develop a better understanding of whole numbers.

## Intended Learning Outcomes

5. Understand and use basic concepts and skills.

## Instructional Procedures

### Invitation to Learn

Begin by reading *One to One Hundred*. This book starts out with a counting by one pattern to ten. After nine the pattern changes to counting by ten to 100. After reading the book one time through, pick any "counting by ten" page and any "counting by one" page and combine them to have students add "tens" and "ones".

### Instructional Procedures:

#### Roll to 100

Pair up students and provide each pair with a three-section plate, two dice, 100 Unifix® cubes and a [Roll to 100 worksheet](#).

Ask students how many times they would have to roll two dice before they would get to 100.

Students record their estimates on the Roll to 100 worksheet.

Partner one rolls the two dice and adds the dots together.

Partner one gets the number of cubes equal to the total.

Cubes are put in one of the sections of the three-section dinner plate. Any cubes less than ten are kept separate and placed in one small section. Any time a stack of ten can be made, cubes are hooked together and placed in the big section of the plate.

Partner two puts a one in the number of rolls column, reads the total and records the total in the total column of the *Roll to 100* worksheet.

Partner two rolls the dice and adds the dots.

Partner two gets the number of cubes equal to the total for the roll and adds them to the total from roll one.

Partner one puts a two in the number of rolls column, reads the new total, and records the total in the total column of the *Roll to 100* worksheet.

Repeat steps three to nine until they have rolled to 100.

Compare the number of rolls it took with their estimated number of rolls.

#### Big O

Pair up students and provide each pair with sixteen dominoes and a [Big O worksheet](#).

Each person picks a domino and lays it horizontally.

The first square of the domino defines how many tens.

The second square defines how many ones.

Each partner should lay their domino in the direction that will give them the greatest number.

Each partner will draw the domino and record their number in expanded and standard form on the Big O worksheet.

The person that has the biggest number gets to take their partner's domino.

Two new dominos are chosen and compared.

The player with the most dominos at the end of the game wins.

#### Bull's Eye

Put the Bull's Eye chart on the floor.

To make a Bull's Eye chart draw two circles. The outside circle is labeled "1s". The inside circle

is labeled "10s"

Give each student participating 10 paper clips.

Students take turns tossing the paper clips onto the Bull's Eye and then total their score. Ten points are awarded for each paper clip that lands in the tens circle and 1 point is awarded for each paper clip that lands in the ones circle.

Students record their score on the [Bull's Eye record sheet](#). The student with the highest score for that round gets a point.

At the end of the game, the student with the most points wins the game.

#### Nice Dice

Pair up students and provide each pair with two dice and a [Nice Dice paper](#).

Player one rolls two dice and arranges the dice to make the greatest number.

Player one makes that number with Unifix® cubes.

Player two rolls two dice and arranges the dice to make the greatest number possible with cubes.

Players compare their numbers to see who has the greatest number. Totals are recorded on the Nice Dice record sheet. The player with the greatest number gets to circle their number.

#### Give Me a Dollar

Pair up students and provide each pair with materials.

Player one rolls the money die and gets the coin. If "one cent" is rolled the player puts a penny in the Penny Bank. If "ten cents" is rolled the player puts a dime in the Dime Bank.

Player one records the total money in their bank.

Player two takes a turn.

Players continue taking turns.

If a player collects ten pennies they exchange their pennies for a dime and put it in the Dime Bank.

When a player earns ten dimes they say, "Give Me a dollar!" The first player with a dollar wins the game.

#### Extensions

##### Curriculum Extensions/Adaptations/ Integration

For the activities *Roll to 100* and *Give Me A Dollar* the amount the students are trying to reach could be lower. Instead of rolling to 100, students could roll to 50.

For the activities *Big O*, *Bull's Eye*, and *Nice Dice* the winning number could be the smallest number rather than the greatest number.

Many of these activities are easy to integrate into writing activities. Students could describe their part in the activity, make predictions, and write about the outcomes.

For the activity Nice Dice, playing cards one to nine could be used instead of dice. Thirty craft sticks with the digits zero to nine written on them could be placed in a can and picked two at a time.

Base ten blocks could be used instead of Unifix® cubes to give students a different visual representation.

For the activity *Give Me A Dollar* read the story *Alexander Who Used to Be Rich Last Sunday* before playing the game. Before, or after, the *Give Me A Dollar* activity do a fluency development lesson by having the students create a list of the many, varied and unusual things they could buy for a dollar.

For the activity Give Me a Dollar use a regular die. Students get a number of pennies equal to the number of dots on the roll. Each time a student gets ten pennies they trade in for a dime and put the dime in the penny bank. When they get ten dimes the game is over.

#### Family Connections

All of these activities would be excellent homework assignments for students to do with their families. Copy the description of the activity and send it home with the students along with any necessary supplies. This is a fun way to involve family members in math education. After the Give Me A Dollar activity give the students a grocery store add to take home and make a grocery list of things they could buy for one dollar.

### Assessment Plan

All of the activities have a worksheet that students complete while working on the activity. These worksheets are excellent sources of assessment that can be evaluated for diagnosis and prescription for future activities.

Students can be asked to respond to questions in their journal that would give evidence of understanding. Some possible questions are:

- If you have the numbers 47 and 74, how can you tell what number is greater?
- Have students explain what 48 gumballs sorted into groups of tens and ones would look like. Why would you want the gumballs sorted into groups of tens and ones?
- Write the number 72 in expanded form and explain why you wrote the number like that.
- Are three tens the same amount as thirty? Explain why or why not.

### Bibliography

#### Research Basis

Marazano, R.J., Pickering, D.J., & Pollock, J.E. (2001). *Classroom instruction that works*. Research and theory related to practice, pg. 66-71. Alexandria, VA. McRel.

This section of the book states the importance of practice and how it is necessary for learning knowledge of any type. The two generalizations from the research on practice are that mastering a skill requires a fair amount of focused practice and while practicing, students should adapt and shape what they have learned using manipulatives and hands on activities.

National Association for the Education of Young Children. (1987). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8*. Washington, DC: NAEYC.

Most six-year-olds and many seven-and eight-year-olds may be more mature mentally than physically. Therefore, hands-on activity and experimentation is more appropriate for this group than fatiguing mechanical seatwork.

### Authors

[Utah LessonPlans](#)