

# RAFT IDEAS

**Topics:** Coordinate Pairs, Graphing, Location Identification

## Materials List

- ✓ 35 brown beads
- ✓ 10 red beads
- ✓ 5 white beads
- ✓ Playing board with 10 x 10 grid, labeled on the X-axis and Y-axis
- ✓ Double-10 die or 2 10-sided dice of different colors

This activity can be used to teach:

Common Core Math Standards:

- Graphing and coordinates (Grade 5, Geometry, 1 & 2; Grade 6, Number System, 6)
- Problem Solving and Reasoning (Mathematical Practices Grades 4 - 6)



# Squirreling it Away

Who Can Gather the Most Nuts?



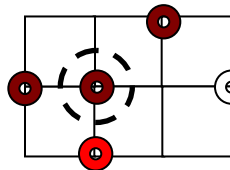
Players roll to gather the most “nuts” for winter.

## Before Playing the Game

If appropriate, teach or review X, Y Coordinate graphing before playing the game. Remind students that the X-axis is horizontal and the Y-axis is vertical.

## Playing the Game (for 2-4 players)

1. Prepare the game board for play by placing all nuts (“beads”) on coordinates, 1 bead per coordinate.
2. The first player rolls to determine coordinates for gathering. When using a double-10 die, read the number on the larger die for the “X” coordinate and read the number on the smaller die for the “Y” coordinate. The player collects all beads at the coordinates or within 1 space of the coordinates.



Example: If the player rolled the coordinates for the bead in the circle, she would take that bead, the other 2 brown beads, and the red bead. The white bead would remain in play because it is 2 spaces away from the rolled coordinate pair.

3. Play continues clockwise until only 3 red beads remain on the board.
4. Winning the game: Players count the “nut points” that they have “gathered” during game play. Player with the highest score wins:

- Brown beads = 1 point
- Red beads = 2 points
- White beads = 3 points

## The Math Behind the Activity

17<sup>th</sup> century French mathematician Rene Descartes developed coordinate graphing as a means of identifying and analyzing locations. This simple form uses only 2 positive integers to identify a location. By convention, the “X” coordinate is written first, followed by the “Y” coordinate.

**Web Resources** (Visit [www.raft.net/raft-idea?isid=403](http://www.raft.net/raft-idea?isid=403) for more resources!)

- Teacher designed math courses from the New Jersey Center for Teaching & Learning – <https://njctl.org/courses/math>

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