## Math 6 - Act. 22: The Dice Game

## Summary

This dice game will help students better understand basic concepts of probability.
Group Size
Small Groups

## Materials

Dice (one set of two per group of four students)
1 number graph paper per student
1 tracking paper per student
Counters (20 per student - more if using consumables such as Smarties)
Graph paper (one or more per student)
Additional Resource
Addison Wesley Math, Level 6, Guided Problem Solving 12-5 by Scott Foresman

## Background for Teachers

There is a widely misunderstood notion that all numbers (2-12) have an even chance of occurrence with one roll of the dice. This activity helps student to see the results of a series of rolls.

## Intended Learning Outcomes

1. Demonstrate a positive learning attitude toward mathematics.

## Instructional Procedures

Invitation to Learn
Who can be the first to clear their board? (Games are selfmotivating).
Instructional Procedures
Pass out numbered graph paper (included).
Instruct students to place 20 counters on the squares, one per square beginning next to the numbers, and then transfer their set up to a tracking sheet.
Taking turns, each student rolls the dice and removes one disc from the number column that matches their rolled results.
The first student to remove all the discs wins.
Have students play a series of at least three games, tracking their layout patterns each game. Curriculum Integration
Heredity

## Extensions

Possible Extensions/Adaptations
Do even or odd numbers occur more often with a roll of two dice? There are six possibilities of even numbers and only five possibilities of odd numbers. Why then do odd numbers occur more often?
Have students create and complete a diagram showing results.
Use spinners instead of dice.
Homework \& Family Connections
Have students challenge their parents/families to play the game.

Ask the question, if you were to place a bet on a single spin of a roulette wheel, on which number would you place all your money and why?

Authors

Utah LessonPlans

