

Colour dice: Will my colour come up?

Primary Lesson Plan



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Source

[Chance and Data Investigations Volume 1](#) (page 10)

Charles Lovitt and Ian Lowe (published by Curriculum Corporation, 1993)

Learning area

Mathematics

Level

Early primary (K3)

Description

A unit of work in this area will help students investigate the results of rolling a coloured die. Ideas of probability, investigating and graphing emerge. One lesson from such a unit is presented here.

Purpose

To see and record the colours that occur with the roll of a coloured die.

Lesson duration

30 minutes

Possible outcomes

In relation to *Mathematics — a curriculum profile for Australian schools*, a unit of work in this area could lead to the achievement of outcomes in the following strand:

Chance and data

- Understanding, estimating and measuring chance variation
- Collecting data
- Organising data
- Displaying and summarising data
- Interpreting data

There will also be links with other learning areas such as English.

Materials required

- 1 die (with 6 different coloured faces) for each group of 4 children. (It may help to use the colours red, yellow, blue, green, black and white. Coloured dot stickers can be stuck on the different faces of the die).
- lots of coloured cubes; at least 30 per group. Colours need to match the coloured dice faces. (Unifix cubes are ideal.)

Extension activity only

- coloured paper squares, matching the dice faces and cubes
paste
- a large sheet of paper

Procedure

1 Explain the game

Ask the students to sit in a large circle.

Show them:

- a coloured die, each face with a different colour
- a pile of at least 30 cubes, with colors matching the faces of the die

Roll the die. Look at the colour on top. Put out a cube of the same colour. Select different students to have a turn at rolling the die and selecting a matching cube. Encourage them to discuss what is going on. What colour do they think will turn up next? Why?

2 Class discussion

After about 10 turns of rolling the die, discuss the results, asking some of the following questions:

- Did one colour turn up more often than other colours?
- Why do you think this happened?
- Which colour was it?
- Why do you think this colour turned up more often?
- Did any of the colours not turn up?
- Why do you think this happened?
- Would the same thing happen if we rolled the dice another 10 times?

Let's find out!

3 Small-group work

Divide students into groups of 4. Give each group a die and a pile of cubes. Get them to play the game, taking it in turns to roll the die and put out a matching cube. Encourage them to talk about the process. The teacher can move from group to group, discussing the results.

Extension activity

After 20 turns of the game, students can sort the 20 cubes in rows of different colours. Show the students how to use the coloured squares to make a graph that represents the rows of colored cubes. Paste the coloured squares in rows on a sheet of paper, and label with the colour name.

Suggested follow-up activities

Students can predict the results before commencing the game. Record their predictions, and see how accurate they are.

- Combine 2 groups' results. What do think will happen when we combine the results of 2 different groups?
- Make a graph from the results of the whole class.
- Play the game using a die where some of the faces are the same colour (red, blue, green, yellow, yellow, black). Will this make a difference to our results? How? Why?