

Odd and even

Primary Lesson Plan

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Source

[Working Mathematically: Investigations](#)

Learning area

Mathematics

Level

Lower primary

Description

Students play a game requiring them to select groups of odd or even numbers of objects with the aim of reaching a total which is an odd number. They then carry out a more formal investigation of patterns in additions of odd and even numbers. The game and the investigation in this activity are selected from a number of such activities in a unit called 'Odd's a funny thing' in the above publication.

Purpose

To encourage students to ask questions and formulate rules about odd and even numbers.

Duration

1 or 2 sessions

Possible outcomes

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

- **Working mathematically**
 - Investigating
 - Conjecturing
 - Using problem solving strategies
 - Applying and verifying
 - Using mathematical language
- **Number**
 - Count and order
 - Number patterns
 - Applying number

Materials required

Sets of 15 items for each pair of students. Items such as beans, counters, cubes, gumnuts or acorns would be suitable.

Procedure

1 Setting the scene

This activity is best undertaken when the concept of odd and even arises as a result of some other class activity, such as a discussion of odd socks, shoes or gloves. For example, the class is working with a collection of socks and some are recognised as 'odd'. Pose the question, 'If all the socks were exactly the same, could we still have odd ones?'

2 A game

This game involves recognition of odd and even numbers and making and testing predictions. It is played in pairs.

Equipment:

15 items, such as beans, counters, cubes, gumnuts or acorns.

Rules:

In turn, each player takes 1, 2 or 3 objects until no objects are left. The winner is the person who has an odd number of objects.

After playing the game several times, students begin to look for ways to win. Students discuss their ideas and test them with other pairs of students.

3 Investigation

Students work individually or in pairs to carry out the following investigation. They may use calculators if they wish.

- Pick any two odd numbers. Add them.
- What did you notice? Try some more.
- Pick any two even numbers. Add them.
- What did you notice? Try some more.
- What happens with one odd number and one even number?
- Talk to another student about what you noticed.
- What rules can you make?

Related products

[*Working Mathematically: Investigations*](#), is one of a number of products of the Mathematics Curriculum and Teaching Program of Curriculum Corporation. The following products are relevant to the teaching of mathematics in primary schools:

- *Working Mathematically: Space*, an interactive CD-ROM for upper primary and secondary students
- [*Maths Task Centre Kit*](#) for primary and secondary students
- [*Chance and Data*](#), a set of books, computer disks and video for primary and secondary students