

Sharing and Grouping Boards

- : **2 groups**
- : **3 groups**
- : **4 groups**
- : **5 groups**

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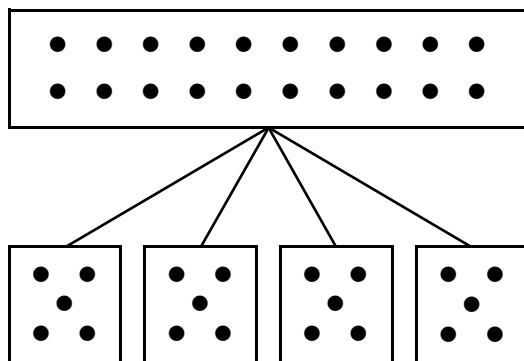
Sharing and Grouping Boards

BOSNSW Syllabus Strand: Number

Syllabus Sub-Strand: Multiplication and Division (pp. 52-56)

Syllabus Outcomes: NES1.3, NS1.3, NS2.3 - Unit 1

Modelling division



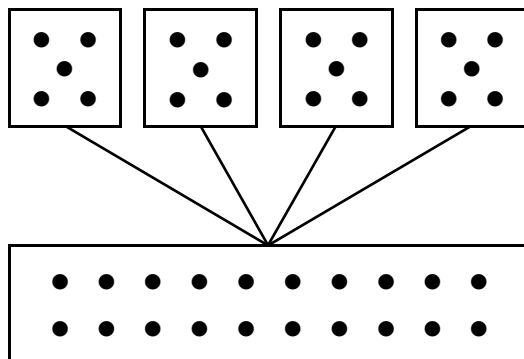
Use manipulatives to model $20 \div 4 = 5$

- **NES1.3:** using the term 'sharing' to describe the distribution of a collection of objects
- **NES1.3:** recording sharing informally using pictures, numerals and words
- **NS1.3:** division by sharing a collection of objects into equal groups eg 20 objects shared between 4 friends
- **NS1.3:** modelling division as repeated subtraction eg $20 - 5 - 5 - 5 - 5$
- **NS1.3:** recording division problems using drawings, numerals, symbols and words
- **NS2.3:** Divide 20 counters into 4 equal groups

Possible questions:

- **NS1.3 {Sharing - how many in each group}**
If 20 lollies are shared between four students, how many does each get?
- **NS1.3 {Grouping - how many groups are there?}**
If I have 20 lollies and each child is to get five, how many children will get lollies?

Modelling multiplication



Use manipulatives to model $4 \times 5 = 20$

- **NES1.3:** using the term 'group' to describe a collection of objects
- **NES1.3:** recording grouping informally using pictures, numerals and words
- **NS1.3:** modelling multiplication as equal groups eg 4 groups of 5 altogether makes 20
- **NS1.3:** finding the total number of objects using repeated addition eg 4 groups of 5 is the same as $5 + 5 + 5 + 5$
- **NS1.3:** finding the total number of objects using skip counting eg 5, 10, 15, 20
- **NS1.3:** recording multiplication problems using drawings, numerals, symbols and words

- **NS2.3:** linking multiplication and division facts using groups or arrays
eg 4 groups of 5 is 20 $\rightarrow 4 \times 5 = 20$ 20 shared among 4 is 5 $\rightarrow 20 \div 4 = 5$
- **NS2.3:** Students should come to realise that division 'undoes' multiplication and multiplication 'undoes' division
- **NS2.3:** Students should be encouraged to check the answer to a division question by multiplying their answer by the divisor.
- **NS2.3:** To divide, students may recall division facts or transform the division into a multiplication and use multiplication facts eg $20 \div 4$ is the same as $\square \times 4 = 20$.

Making this resource (class set of 15)

Option 1: use a black texta to draw the four mats on the four sides of a manila folder \rightarrow you will need 15 manila folders, 1 black texta.

Option 2: p/c the four mats single sided on white paper then glue to the four sides of a manila folder \rightarrow you will need 60 sheets of white A4 paper, 15 manila folders.

