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# Support Materials: Maths K–6 CD-ROM


The latest support material for the K–6 Mathematics syllabus will be released to schools as a CD-ROM in Term 3.

Features of the CD-ROM include assessment activities, which are embedded in the sample units of work. These assessment for learning activities clearly identify the key elements to be considered by teachers in planning assessment activities for their students.

Each activity identifies the Stage for which the activity has been designed, the relevant syllabus strands and the relevant content section of the syllabus.

Teachers can use the content section for programming. It includes the Key Ideas, the relevant Knowledge and Skills, and suggestions for the integration of the processes of Working Mathematically. A link to the relevant sample unit of work is also included.

The sample assessment activities have been prepared by practising teachers and trialled in NSW schools. Each activity has been constructed to show how students can demonstrate their achievement of more than one syllabus outcome in a single task.

As part of each assessment for learning activity there is a section on teacher feedback to students. Feedback enables students to recognise their strengths and weaknesses and to plan with their teacher the next steps in their learning.

## Work Samples

Three student work samples for each activity are provided on the CD-ROM. Work samples, along with other evidence of student learning, assist teachers to monitor the progress of individual students and to make on-balance judgements about achievement in relation to Stage outcomes.

The student work samples have been annotated to show what the teacher has observed. The annotations relate to the syllabus outcomes, indicators and syllabus content. In addition to a statement about what a student can do, each work sample indicates areas for development. The 'Where to from here?' section for each work sample contains advice to teachers on how to consolidate and extend student learning.

This could be used to guide the teacher in developing other activities to help the student progress in their learning. There is also a copy of each student work sample without annotations. This can be used for professional development activities with teachers.

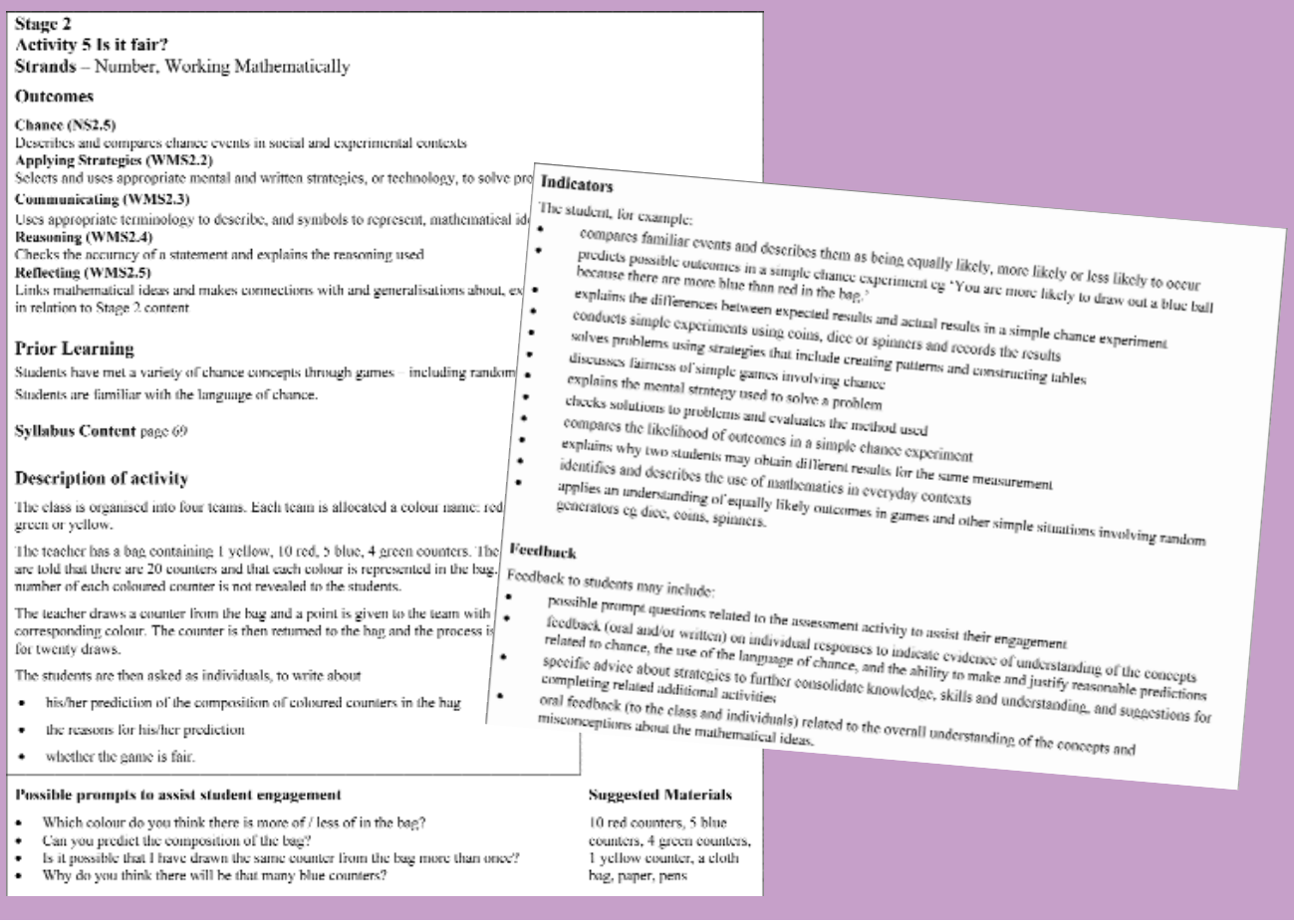
### The CD-ROM contains:

- assessment activities with annotated student work samples
- Mathematics K–6 Sample Units of Work
- Mathematics K–6 Principal's Package
- Parent Support Document Introducing the Mathematics K–6 Syllabus to Parents and School Community Members
- Mathematics K–6 Syllabus.

**The Assessment Activities include:**

- eight assessment activities for Early Stage One
- five assessment activities for Stage One
- six assessment activities for Stage Two
- six assessment activities for Stage Three.

# Sample Assessment Activity from Maths K–6 CD-ROM



**Stage 2**
**Activity 5 Is it fair?**
**Strands** – Number, Working Mathematically

**Outcomes**

**Chance (NS2.5)**
Describes and compares chance events in social and experimental contexts
**Applying Strategies (WMS2.2)**
Selects and uses appropriate mental and written strategies, or technology, to solve pro
**Communicating (WMS2.3)**
Uses appropriate terminology to describe, and symbols to represent, mathematical id
**Reasoning (WMS2.4)**
Checks the accuracy of a statement and explains the reasoning used
**Reflecting (WMS2.5)**
Links mathematical ideas and makes connections with and generalisations about, ex
in relation to Stage 2 content

**Prior Learning**

Students have met a variety of chance concepts through games – including random
Students are familiar with the language of chance.

**Syllabus Content** page 69

**Description of activity**

The class is organised into four teams. Each team is allocated a colour name: red
green or yellow.

The teacher has a bag containing 1 yellow, 10 red, 5 blue, 4 green counters. The
are told that there are 20 counters and that each colour is represented in the bag.
number of each coloured counter is not revealed to the students.

The teacher draws a counter from the bag and a point is given to the team with
corresponding colour. The counter is then returned to the bag and the process is
for twenty draws.

The students are then asked as individuals, to write about

- his/her prediction of the composition of coloured counters in the bag
- the reasons for his/her prediction
- whether the game is fair.

**Indicators**

The student, for example:

- compares familiar events and describes them as being equally likely, more likely or less likely to occur
- predicts possible outcomes in a simple chance experiment eg 'You are more likely to draw out a blue ball because there are more blue than red in the bag.'
- explains the differences between expected results and actual results in a simple chance experiment
- conducts simple experiments using coins, dice or spinners and records the results
- solves problems using strategies that include creating patterns and constructing tables
- discusses fairness of simple games involving chance
- explains the mental strategy used to solve a problem
- checks solutions to problems and evaluates the method used
- compares the likelihood of outcomes in a simple chance experiment
- explains why two students may obtain different results for the same measurement
- identifies and describes the use of mathematics in everyday contexts
- applies an understanding of equally likely outcomes in games and other simple situations involving random generators eg dice, coins, spinners.

***Feedback***

Feedback to students may include:

- possible prompt questions related to the assessment activity to assist their engagement
- feedback (oral and/or written) on individual responses to indicate evidence of understanding of the concepts related to chance, the use of the language of chance, and the ability to make and justify reasonable predictions
- specific advice about strategies to further consolidate knowledge, skills and understanding, and suggestions for completing related additional activities
- oral feedback (to the class and individuals) related to the overall understanding of the concepts and misconceptions about the mathematical ideas.

**Possible prompts to assist student engagement**

- Which colour do you think there is more of / less of in the bag?
- Can you predict the composition of the bag?
- Is it possible that I have drawn the same counter from the bag more than once?
- Why do you think there will be that many blue counters?

**Suggested Materials**

10 red counters, 5 blue counters, 4 green counters, 1 yellow counter, a cloth bag, paper, pens