

Diagnostic TASK

FOCUS

Understand Operations

- Key Understanding 1

Kangaroos and Comparing Bananas Years/Grades K–3

Purpose

To see how students represent simple addition and subtraction problems.

Equipment

The worksheet, calculator, pencils and paper, blocks or counters, objects that realistically represent the items in the problem, i.e. bananas, biscuits and smarties.

Producing work samples

Individual interview

Individual interviews would be appropriate for this task. Read the problem to the child and ask them to restate the problem in their own words to make sure they understand the problem. Offer the following items to the child in the order below.

- A calculator or pencil and paper.
- If they cannot use these items, offer them blocks or counters etc
- If they cannot use these then offer realistic objects selected for that problem, e.g. biscuits for the first problem.

If the child solves it mentally, ask them to write down the numbers and symbols that show what they did in their head. If a child uses a picture or diagram ask them to write down the numbers and symbols that show what is happening in their picture. After they have written the numbers and symbols, ask the child to read out what they have written. Write down what they say. If the problems seem too easy for some children, you may choose to make the numbers larger.

Whole class or small group activity

This task may be administered as a whole class or small group activity, although it will be difficult to get in-depth information as a whole class activity. As for the individual interview, read the problems to the children while they follow on their sheet. Withhold materials until it becomes obvious that a child cannot proceed without them. It may be necessary to do some follow-up individual interviews to clarify what children are thinking.

Kangaroos

Name _____ Year/Grade _____ Date _____

There were 3 kangaroos drinking at a river. 2 more kangaroos came to drink at the river. How many kangaroos are drinking at the river?

Sann had 9 biscuits and then gave his brother 5 of them. How many biscuits does he have now?

There were 9 rabbits and 7 pieces of carrot. Are there enough carrots for all of the rabbits? How many rabbits miss out?

Comparing Bananas

Name _____ Year/Grade _____ Date _____

Dan had 8 bananas. Tracy had 3 more than Dan. How many bananas did Tracy have?

Fran had 7 smarties. Tom gave her some more. Now she has 19. How many did Tom give Fran?

Gloria went shopping. She spent \$16 and when she arrived home she had \$18 left. How much money did she have to start with?