For Ages 7 - 9

Everyday Maths Book 1

Mathematics problems set in a real world context.

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Teachers' Notes

The activities in this book are designed to present real-life problems in a realistic context so as to provide children with situations in which everyday maths comprehension skills are required. The tasks also provide a foundation for the development of problem solving skills and strategies.

The activities are based around a set of recurring characters who find themselves exposed to a range of real-life problems that need to be solved; the sort of problems that students may one day encounter. Many of the activities can be described as maths comprehension questions where students are presented with the facts and need to determine ways to manipulate them in order to solve the problem.

Ideally the pages should be completed in order as several of the activities are related. Activities with two parts must be completed together as the information from one page will be required when working on the second page. Photocopy these back and front.

Many pages also include a challenge activity which is often an extension of the main problem. Included at the end of the book are a list of brain-teasers that explore lateral and rational thinking. The answer is usually not as obvious as it looks. The ten brain-teasers can be photocopied and individually glued on to card so as to create a set. Students might like to think up their own brain-teasers to add to the set.

Problem Solving Strategies

There are many strategies for solving every day maths problems. Some of the main problem solving strategies have been explained below. In some cases examples of problems are given where the particular strategy can be applied.

Guess and check: Probably the first strategy children might try and definitely the easiest. By making a guess and checking their answer children have a point of reference on which to base all other guesses.

An example : A paddock contains two kinds of crazy creatures - Trogs with three legs and Quags with four legs. There are 31 legs altogether. How many Trogs and how many Quags are in the paddock?

Act it out: Students quite often need to visualise the problem, especially where people or objects are concerned. Counters, coins and students can be used to help solve the problem.

An example: There are 12 players in the tennis championship. Each player stays in the competition until they lose a game. How many games must be played to find the club champion?

Make a model: When problems cannot be acted out the next best thing is to make a model using cubes, matches and so on.

Make a drawing, diagram or graph: Graphs and diagrams are particularly useful for trying different combinations or clarifying information.

An example: Fast Harry's gives away one free drink with every four hamburgers. If a family buys 24 hamburgers, how many free drinks will they receive?

Look for a pattern: This strategy can be used in many number and space activities to help simplify the problem:

Number patterns: One child has two shoes, two children have four shoes, how many do eight children have?

Spatial patterns: How many squares are there on a checker board?

Name ....

A Weighty Problem

The Measure family are flying overseas for a two month holiday and Mrs Measure has asked Mary to pack a box of books and school things that she will need. The box must not weigh more than 8 kilograms.
Mary has weighed all her things using the bathroom scales and needs your help to work out what she can pack. Use the table to help you:

Object	Weight
Atlas	2 kg
Dictionary	1 kg
Portable CD Player	1 kg
Fairytale Storybook	2 kg
Paint Set	1 kg
Tennis racquet	3 kg
Box of CDs	2 kg
Nintendo	3 kg
Writing set	1 kg
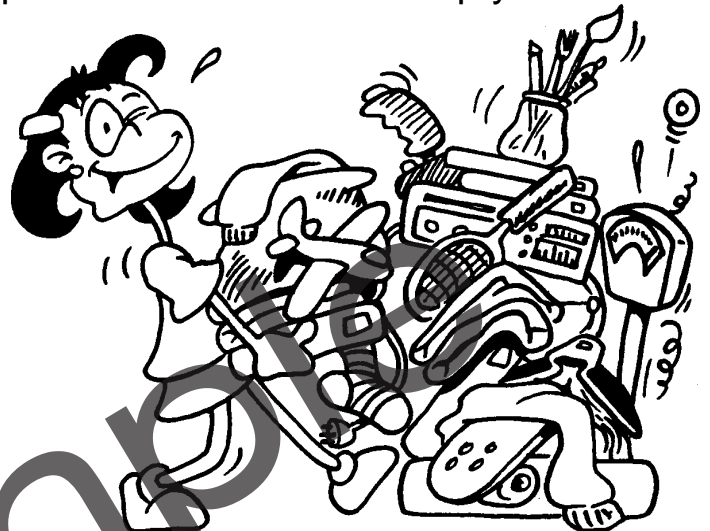
Help Mary with these problems:

1. Mary says she must take the tennis racquet and the atlas. How

   many more kilos will she be able to add? ....

2. Mary has decided to take the Nintendo and the paint set. She also

   wants to take the tennis racquet. Will she be able to fit in the writing

   set? ....

3. Mary wants to take as many items as possible without going over 8

   kilograms. List everything she can take: ....

   ....

   ....

Challenge:

What two items must either both be packed or both be left behind?

Name ....

Bus Stop 1!

Crazy Charlie, Counting Carrie and Neil Number are travelling to the beach on the weekend. They need to catch the bus from Square Station. Help them with their questions by using the bus timetable below:

Buses to Sandy Beach

Square Station	Round Station	Sandy Beach
8.00 am	8.03	**8.15**
8.30	8.33	**8.45**
9.00	9.03	**9.15**
9.15	9.18	**9.30**
9.30	9.33	**9.45**
10.00	10.03	**10.15**
10.15	10.18	**10.30**
10.30	10.33	**10.45**

Buses from Sandy Beach

| Sandy Beach	Round Station	Square Station
4.00 pm	4.12	**4.15**
4.15	4.27	**4.30**
4.30	4.42	**4.45**
5.00	5.12	**5.15**
5.15	5.27	**5.30**
5.30	5.42	**5.45**
6.00	6.12	**6.15**
6.30	6.42	**6.45**
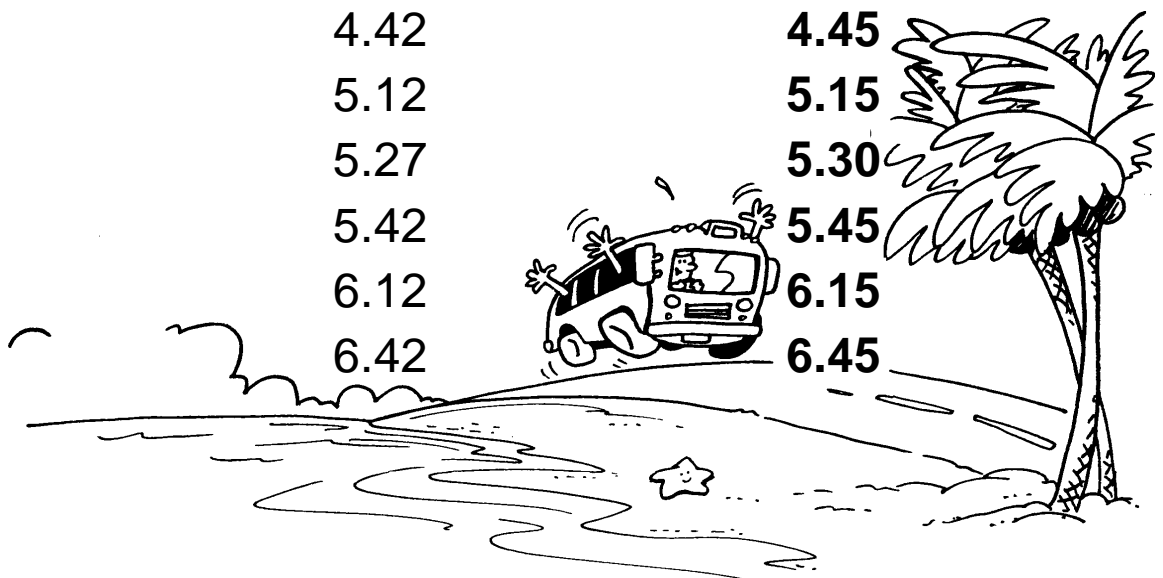
Area and Perimeter 1

Materials: 1 cm blocks, string.

Spacy Sam loves exploring spaces. On a recent trip to the zoo he noticed that the enclosures came in all shapes and sizes. He decided to trace the models of some of the enclosures from the sign at the front. Use Spacy Sam's models below to help answer the questions over the page.
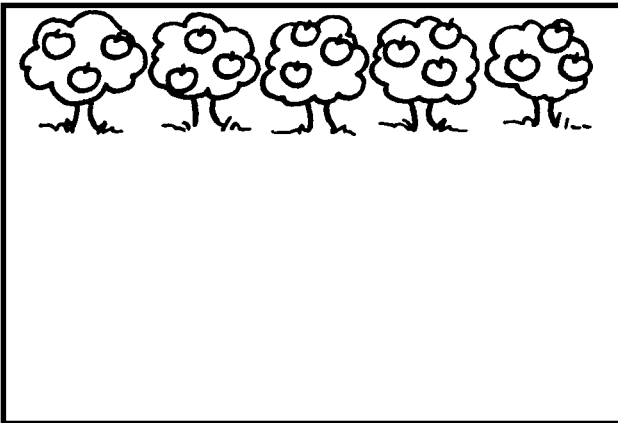
elephant

rhinoceros

giraffe

Sample

monkeys

birds

tigers

panda

lions
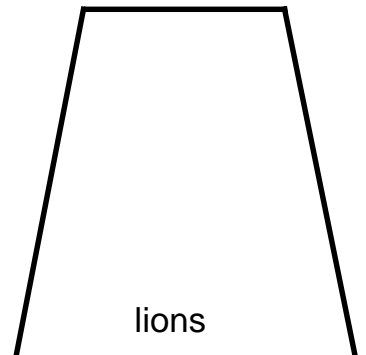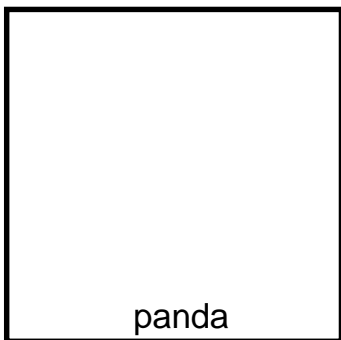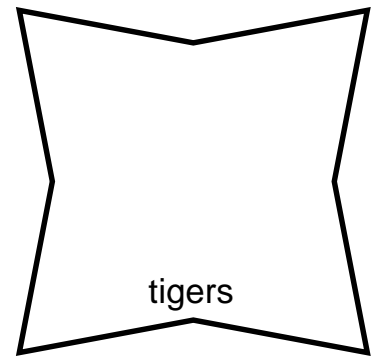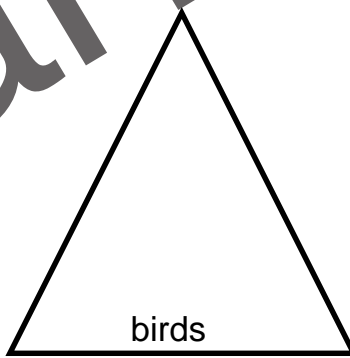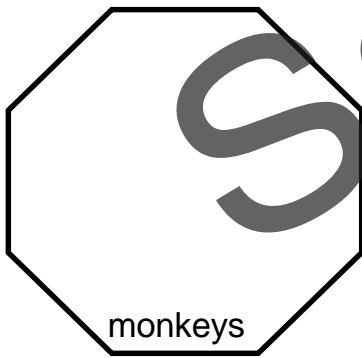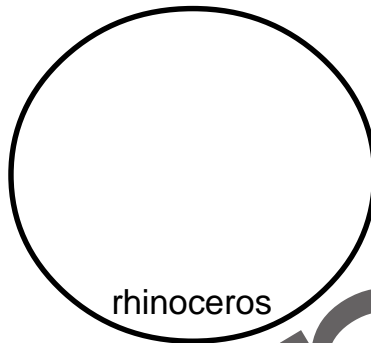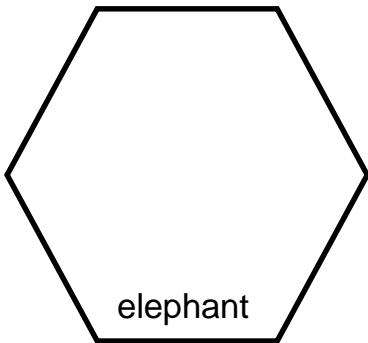
Name ....

Farmer Frank's Orchard

Farmer Frank has many orchards on his farm. Draw the trees for each orchard.

The first one has been done for you.

4 rows of 5 apple trees.

2 rows of 10 pear trees.

5 rows of 6 peach trees.

2 rows of 4 apricot trees.

1. Which orchard has the least number of trees? ....

2. Which orchard has the most trees? ....

3. Which orchard has the longest perimeter? ....

   Hint: Count the number of trees along the fences.

4. Which orchard has the shortest perimeter? ....

💡 **Challenge:**

A rectangular orchard has 8 rows of trees and each row has 5 trees along it. How many trees are there altogether?