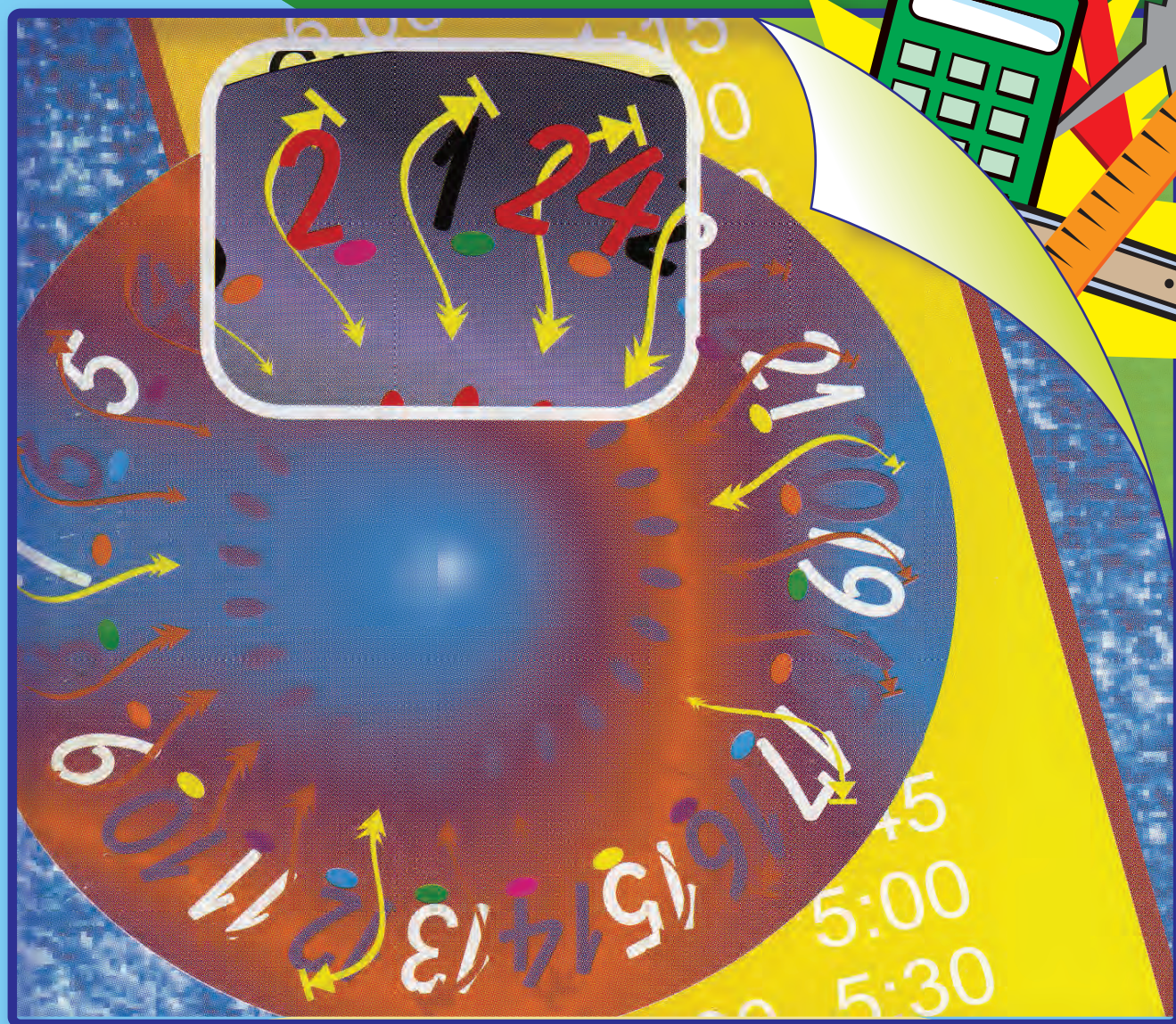# Mathematics

Activity Book 2

Everyday Math for the Real World

Teacher Edition

GRADES 3-4

NewPath LEARNING®

Contents

Teachers' Notes

The idea of Problem Solving activities often conjures up images of numbers and objects that have no direct meaning for students other than teaching the basic problem solving strategies. 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 every day problem solving and comprehension skills are required.

The activities are based around recurring characters who find themselves exposed to a range of problems that need to be solved; the sorts of problems that students may one day encounter.

Most pages include a challenge activity, usually an extension of the main problem, which will further consolidate comprehension skills. Included throughout the book are brainteaser pages which focus on a particular problem solving strategy, highlighted at the foot of the page. These brainteasers can be copied and individually glued on to cardstock so as to create a set. Students might like to think up their own brainteasers to add to the set.

Problem Solving Strategies

There are many strategies for solving every day math 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:
I am thinking of two consecutive numbers that when multiplied give 182. A guess might be to try 14 x 15 which would give 210. Obviously the next guess would try lower numbers.

	14					
	15					
Total	210					

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

Some examples:
There are 48 players in the darts championships. Each player stays in the competition until they lose a game. How many games must be played to find the club champion?

A caterpillar crawls up the tree 2 m every day. Every night it slips back 50 cm. The tree trunk is 10.5 m tall. How long will it take for the caterpillar to reach the top of the trunk?

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:
Jack has a rectangular field that has an area of 360 m. What are the possible dimensions of the rectangle?

Garage Sale

Crazy Charlie's Mom was tired of Charlie's old toys and bikes lying around the shed and warned that Charlie better do something fast or she would throw out everything. Crazy Charlie knew that although he didn't really want any of his old toys, he would be able to get some money for them.

He labeled each object with a price and had quite a few customers attend the sale.

❏ Use the information to help answer the questions below.

$20

$3

$3

$4

$15.50

$12

$8

$7.50

$1 each

$1.50 each
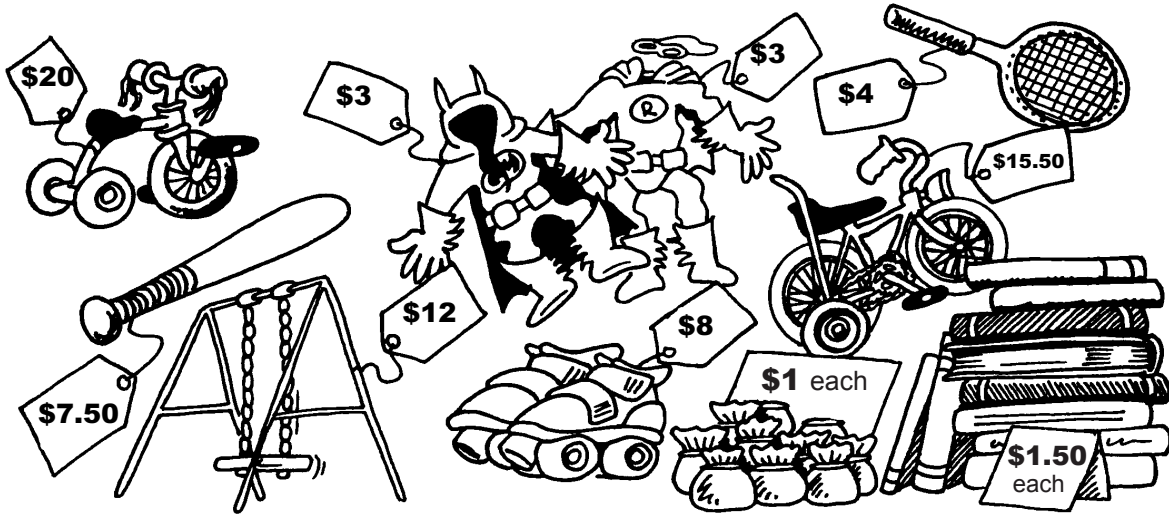
1. Counting Carrie spent her pocket money on the Batman and Robin costumes and some old books. If she spent $9.00 altogether, how many books did she buy?..

2. Mary Measure spent a total of $5. If she only bought two items, what did she buy?
   ....

3. Spacy Sam spent all of his $20 on the old bike, a book on horses and some lucky dips. How many lucky dips did he end up with? ....

4. Arty Ash bought the rollerskates and managed to get the swing for half price. How much change did he get from $20? ....

5. Neil Number didn't buy any lucky dips or old books but managed to spend $27.50. What did he buy?...

6. Crazy Charlie's cousin bought the left-over items. How much did he spend and what did he buy?...

Challenge:
How much money did Crazy Charlie end up with?..