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Introduction

What Is *Maths Snacks*?

The enjoyment of a snack during a classroom break time is a familiar sight in most schools. The activities in *Maths Snacks* provide teachers with a controlled way to introduce maths concepts while making maths time inviting, challenging, and fun. The methods used in this book help children make sense of mathematical concepts by allowing them to manipulate food items in order to solve problems. Careful observation of students as they work through the problem-solving process provides the teacher with a clearer picture of their mathematical thinking processes.

The activities in *Maths Snacks* can be assigned at specific times of the year, or they can be used on a regular basis as extensions or reinforcement pages in an existing maths program.

The Benefits of *Maths Snacks*

The manipulative approach used in this unit has multiple benefits, the most important of which is the instant success students experience.

You can stretch the minds of the gifted students by asking them to solve their problems using a less familiar solution method. They can also work on giving clear, detailed solution sentences, or they can teach a younger student how to draw pictures or count to solve. Challenge students to use the writing process to create related problems for the snack being used. Even the students most difficult to manage are interested in the lesson when something worthwhile is being asked, solved, and ultimately eaten!

Success with this program can be measured in several ways. As students work through the problems, ask yourself these questions: Are students experiencing greater ease in finding solutions? Are they experimenting with a variety of problem-solving strategies? Are peer and teacher modelling an integral part of the problem-solving process? Are students challenged and motivated by the program? Are students actively involved in group discussions involving the solutions? Do students transfer the problem-solving techniques they learned in maths to other areas of the curriculum? If your answer is yes to these questions, your students are already on the road to success.

Planning and Assessing with the *Maths Snacks* Program

Planning for maths snacks lessons requires a few simple steps. Before you begin the activities, send a letter to parents informing them about the program and how their children will participate. A sample letter is provided on page 10. Parent involvement is encouraged. The parent letter on page 11 outlines ways parents can become involved in their children's academic growth. Use the Maths Snacks Planner (page 13) and the List of Potential Snacks (page 14) to organise each lesson and the materials you will need. Assessing your students' mastery of maths concepts and understanding of problem-solving strategies can be achieved in several ways. Some of these methods are outlined on pages 15–18.

Introduction *(cont.)*

Using the Maths Snacks Student Activities

There are 93 lessons in this book. The problem-solving activities provide reinforcement in the following maths areas: patterning, addition, subtraction, multiplication, division, fractions, measurement, geometry, money, time, graphing, and estimation. Each activity lists the food item(s) you will need to solve the problem presented on the page. An activity may be completed individually by a student, as a group effort, or as a class endeavour. Adapt the lessons to meet your students' needs. Most of the lessons provide space for students to illustrate the problem and visualise ways to solve it. Once a picture or diagram has been drawn to show a possible solution, the student demonstrates an understanding of the problem and its solution by writing solution sentences and the number answer to the problem. Challenge activities which extend the problem-solving strategies are provided at the bottom of the student activity pages. Food items are not used with the challenge activities.

Decide in advance the most effective method for presenting the lesson. You may wish to present the snack, read the problem to the class first, and then distribute snacks and student activity sheets. Plan a procedure that works best for you and your students. It is important to note that not all students will write or draw something coherently or completely on their student pages. To assess their understanding and assist students with the problem-solving process, provide strategies and questioning techniques for solving problems. Suggestions are provided on pages 6–9.

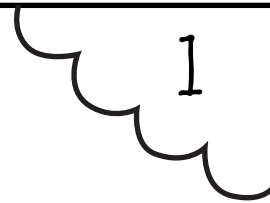
The Blank Student Activity Form on page 12 can be used to create additional lessons for your students. Depending on your students' abilities, you may wish to have them use the form to write a problem for the class to solve. The Sample Parent Letter on page 10 suggests how parents can help their children complete this activity.

Students will handle food items as they complete the student activity lessons. Establish health and safety guidelines with your students before you begin the unit. Students should wash their hands before handling food items and place food on a clean surface such as a paper towel, etc. In addition to these precautions, be sure to check for any students who are allergic to the food items you will be using.

Using the Extensions, Tools, and Incentives

This section provides extension ideas, maths manipulatives and charts that can be used to help students solve the activity page problems, incentive charts to plot students' progress through the lessons, and awards for a job well done. Reproduce pages as your students need them or copy the section and distribute it as a booklet for students to use throughout the unit.

Awesome Alphabet



Food: alphabet cereal

Using your alphabet cereal letters, spell your name. Now, create your name in pattern form with your pencil.

Example: **E, L, I, Z, A, E, L, I, Z, A, E, L, I, Z, A, E, L, I, Z, A**

Show five other patterns by using any letters from your cereal. (Repeat each pattern three times.)

1.

2.

3.

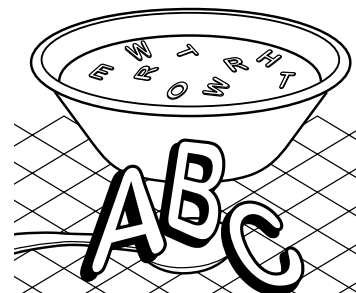
4.

5.

Solution Sentences: _____

Cereal Challenge: Whose name in the class would have the longest pattern?

Why? _____

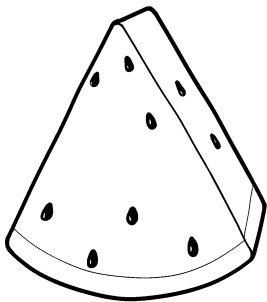


Mouthwatering Watermelon

6

Food: watermelon slices

Today we have a huge watermelon to share with our class. Each of you will receive one slice of watermelon on a paper plate. Take all the seeds (dark and light) out of your watermelon slice. Separate the two kinds of seeds. Count each group. Draw a picture of the two groups of seeds. How many seeds are there in all?



Solution Sentences: _____

Number
Answer

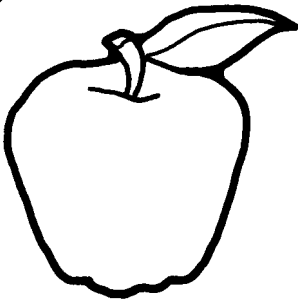
Seedy Challenge: Work in a group with two other students. Find the total number of light and dark seeds you have. Write additional problems to show each.

Apple Chewing Time

79

Food: any variety of apples

Our maths snack today is an apple. You will need a clock with a second hand. Time how many seconds it takes to thoroughly chew a bite of the apple. If you take 10 more bites to finish the apple, how many seconds of chewing have you done? Show how you would solve this problem.



Solution Sentences: _____

Number
Answer

Chewy Challenge: If every student in the classroom takes the same number of bites and the same time to chew each bite of apple, how many total minutes does the entire class take to finish their apples?