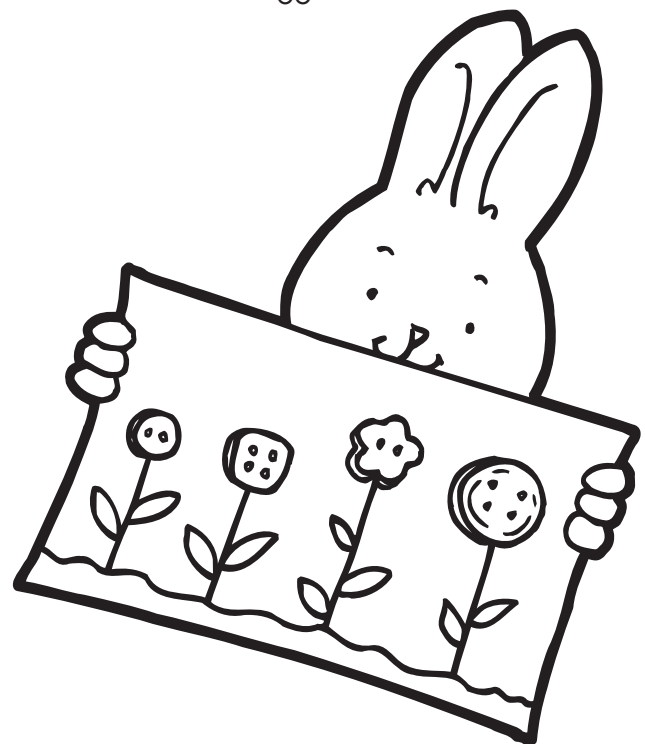


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INTRODUCTION

When you ask adults to think of a happy memory from childhood, most will give an answer that relates to the outdoors. Children's first look at science often comes while playing outdoors, observing nature and playing with plants. This book focuses on learning science processes by observing plants, both indoors and out.

To help children learn about plants, this book contains many 'quick tricks' – simple activities with everyday items. Wherever children live, they can observe differences in plants in each season of the year. Observing these changes and also noticing the things that don't change are all part of scientific investigation.

The quick tricks will help your children learn that most plants have three main parts – the root, the stem and the leaves – and that many plants also have flowers that turn into fruits with seeds. They'll learn that some plant parts and seeds are edible and that it's dangerous to eat others. Help them understand that they can only eat plants and seeds that a grown-up identifies as safe.

Preschool children learn best from hands-on experiences with learning materials. Therefore, your children will be encouraged to handle plant materials and to talk about what they learn.

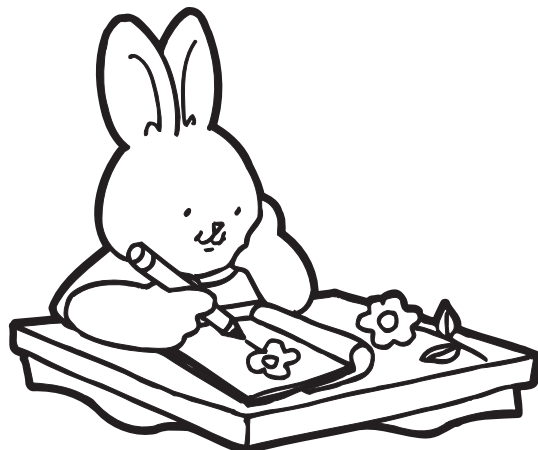
Be flexible when working with children; be ready for the unexpected. If you go outdoors to gather leaves and the children discover blossoming wildflowers, take advantage of the learning opportunity that presents itself. Inspect the flowers; discuss their colours and shapes.

The first chapter, 'General Materials', tells how to make or use items that will be used in various 'tricks' throughout the book. Read and use this chapter first. After that, you can use the quick tricks in any order.

These quick trick activities are meant to be enjoyed in a casual, informal setting and atmosphere. The emphasis is on having a positive learning experience, not in getting a right or wrong answer. If children offer incorrect information, ask them how they figured that out. Suggest other ways to explore and ask questions that lead the children to accurate information.

The final chapter includes quick tricks that help you spread the plants theme across the curriculum. These activities help children increase their maths and language skills and enhance their visual discrimination.

Most chapters include a letter for parents. The letters inform parents of what the children are learning at school and offer a quick trick for continuing the learning at home.



GENERAL MATERIALS

The quick tricks in this chapter focus on materials that you will use in future chapters.

Wow! That's Big!

A Quick Trick with a Magnifying Glass



Gather These Materials:

magnifying glasses of various sizes and strengths

Where: anywhere

How: Introduce children to the magnifying glasses. Explain that they come in different sizes and shapes, but all of them do the same thing. They help us see things more closely by making the items appear larger.

You may need to work one-to-one to help children understand how to use the glasses. Children who have seen cartoon pictures of investigators want to hold the glass up to their eye to look into it. Help them focus on an object then bring the glass close to the object in a line between their eye and the object. Show them how to move the glass back and forth slowly towards the object until they 'see' an enlarged image. Let them practice with various magnifying lenses.

Caution: Be careful using magnifying glasses outdoors. If the lens is held in one position with the sun coming through the lens, it concentrates the sun's light and heat onto one place. That place can quickly catch fire.

Variation:

Have children look at a leaf without using a magnifying glass and have them draw the leaf. Now, have them examine the leaf while using a magnifying glass. Have them draw the leaf as it appeared with the magnifying glass. Discuss how the pictures are different. Provide the children many opportunities to explore with magnifying glasses.

This activity also helps children learn about:

tools that can help us when we explore science.





Making Clipboards

A Quick Trick with Cardboard and Paper Clips

Gather These Materials:

ruler
heavy cardboard
sharp scissors or a Stanley knife, for adult use only
spring-type (Bulldog) paper clips, one for each child

Where: anywhere

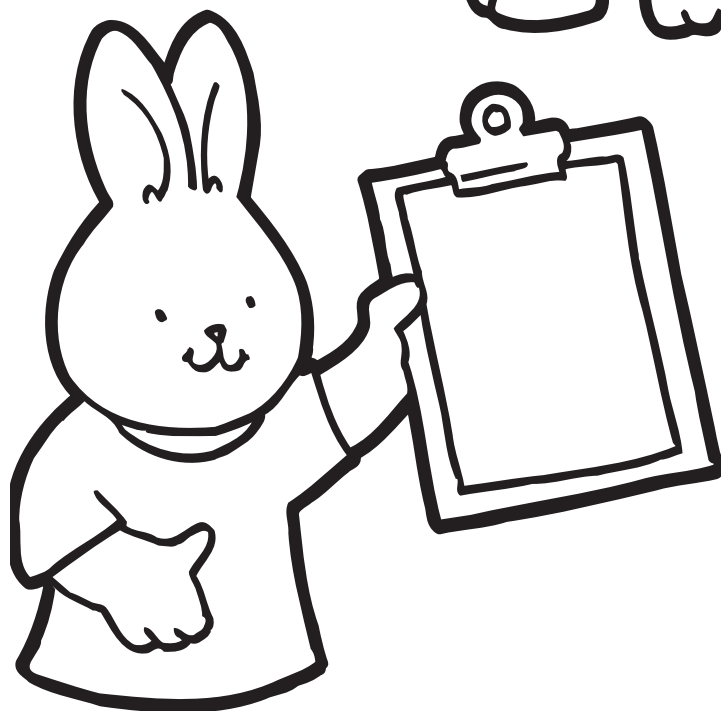
How: This is an adult activity.

For each child, measure the cardboard and cut a 24 cm by 32 cm piece for each child. Clip a large, spring-type paper clip to one narrow end of the cardboard. (Substitute two jumbo, vinyl-clad paper clips if necessary.)

To use the clipboards, use the clips to hold plain paper in place on the boards.

Variation:

Use a magazine instead of cardboard. Clip the spring-type clip to the magazine to hold plain paper on the clipboard.



Junior Journal

A Quick Trick with Paper Bag



Gather These Materials:

sharp scissors, for adult use only
paper bag for each child
plain paper, 12 pieces for each child
spring-type clothes pegs or jumbo paper clips
hole punch
wool
twist ties
textas

Where: at a table

How: The adult cuts open and then flattens paper bags into one large sheet. From this, cut pages the size of a sheet of plain paper. Cut two pieces for each child.

Give each child 12 sheets of paper and two pieces of paper-bag paper. Demonstrate how to stack the papers with one piece of paper-bag paper on the top and one on the bottom. Have each child do the following: With a partner, hold the sheets of paper steady while the partner clamps the papers together by putting a clothes peg on each of the four edges of the stack. Repeat for the partner's stack of papers.

The adult does the following with each child: Punch holes about 2.5 cm apart along one long edge of each paper stack. Tie one end of an 45 cm length of wool to the centre of a twist tie. Fold the twist tie in half, and then twist it tightly shut (for a sewing needle). Tie the other end of the wool through an end hole in the paper stack.

Have each child sew wool through the holes of their paper stack, sewing a 'binding' for the book. Don't worry about precision or neatness. Just remind the children to always sew through the 'next' hole and to pull the wool snugly between each stitch. Help the children cut off the 'needle' and tie off the remaining end of the wool. Have the children copy the word 'Journal' onto the covers of their books.

Variation:

Stack a few index cards and staple one edge to make a small, hand-size journal.

This activity also helps children learn about:

a creative way to reuse a paper bag.

