

# From Your Friends at The MAILBOX®

# **About This Book**

It's hard to believe we could improve on our best-selling series of monthly idea books—but we have! In this edition, you'll find the following exciting new features added to our irreplaceable collection of curriculumbased ideas!

- A Web site containing even more classroom resources complements the hundreds of activities provided in each book. (To access this incredible site for free, follow the simple instructions found on page 1.)
- A skill line for each idea provides a curriculum reference at a glance.
- A comprehensive index makes selecting and planning activities a breeze!

We think you'll agree that these new features make this series of monthly books the best ever!

Managing Editors: Scott Lyons, Allison Ward

Editor at Large: Diane Badden Staff Editor: Cindy K. Daoust

**Contributing Writers:** Barbara Backer, Jan Brennan, Vicki Dabrowka, Stacie Davis, Diane Gilliam, Linda Gordetsky, Ada Hanley Goren, Lucia Kemp Henry, Lori Kent, Angie Kutzer,

Carrie Lacher, Linda Ludlow, Suzanne Moore, Sharon Murphy, Mackie Rhodes

Copy Editors: Sylvan Allen, Lynn Bemer Coble, Gina Farago, Karen Brewer Grossman,

Karen L. Huffman, Amy Kirtley-Hill, Jennifer Rudisill, Debbie Shoffner

**Cover Artists:** Clevell Harris, Donna K. Teal **Art Coordinator:** Theresa Lewis Goode

**Artists:** Jennifer T. Bennett, Cathy Spangler Bruce, Pam Crane, Theresa Lewis Goode, Nick Greenwood, Clevell Harris, Lucia Kemp Henry, Susan Hodnett, Ivy L. Koonce, Sheila Krill, Rob Mayworth, Clint Moore, Greg D. Rieves, Rebecca Saunders, Barry Slate, Donna K. Teal

**Typesetters:** Lynette Dickerson, Mark Rainey

Indexer: Elizabeth Findley Caran

**The Mailbox® Books.com:** Kimberley Bruck (manager); Debra Liverman, Sharon Murphy (associate editors); Jennifer L. Tipton (designer/artist); Troy Lawrence, Stuart Smith (production artists); Karen White (editorial assistant); Paul Fleetwood, Xiaoyun Wu (systems)

President, The Mailbox Book Company™: Joseph C. Bucci Director of Book Planning and Development: Chris Poindexter

Book Development Managers: Elizabeth H. Lindsay, Thad McLaurin, Susan Walker

Curriculum Director: Karen P. Shelton

**Traffic Manager:** Lisa K. Pitts **Librarian:** Dorothy C. McKinney

Editorial and Freelance Management: Karen A. Brudnak

Editorial Training: Irving P. Crump

Editorial Assistants: Terrie Head, Hope Rodgers, Jan E. Witcher

©2002, 1996 by THE EDUCATION CENTER, INC.
All rights reserved.
ISBN10 #1-56234-152-9 • ISBN13 #978-156234-152-7

Except as provided for herein, no part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or storing in any information storage and retrieval system or electronic online bulletin board, without prior written permission from The Education Center, Inc. Permission is given to the original purchaser to reproduce patterns and reproducibles for individual classroom use only and not for resale or distribution. Reproduction for an entire school or school system is prohibited. Please direct written inquiries to The Education Center, Inc., P.O. Box 9753, Greensboro, NC 27429-0753. The Education Center, \*The Mailbox\*\*, the mailbox/post/grass logo, and The Mailbox Book Company™ are trademarks of The Education Center, Inc., and may be the subject of one or more federal trademark registrations. All other brand or product names are trademarks or registered trademarks of their respective companies.



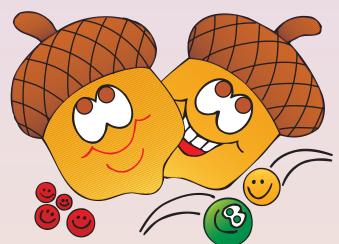
Dig into this cross-curricular unit and uncover the magic of seeds with your little ones. Young minds will sprout new knowledge about the importance of seeds in their world.

ideas contributed by Diane Gilliam and Angie Kutzer

# Seed Start-Up

#### Observing similarities and differences in seeds

Gather several different kinds of seeds and put each kind into a separate container. To begin the seed study, pass the containers around the group and direct your little ones to inspect each variety. Discuss the similarities and differences among the seeds. Emphasize that while the varieties may look different, they are all seeds. Then give your youngsters more information by reading the book All About Seeds (Now I Know series), by Susan Kuchalla. Now that the roots of the unit have been established, "grow" on with the next activities!

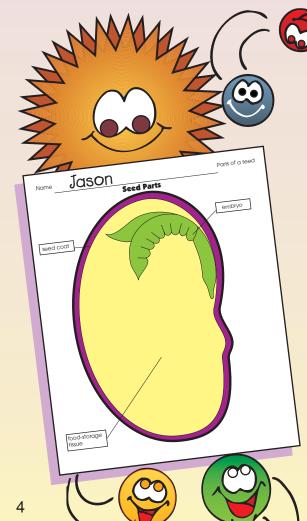


# Take a Closer Look

#### Investigating the parts of a seed

Discovering seed parts is easy with this activity. To prepare, soak a bag of dried lima beans in water overnight and duplicate the seed diagram on page 10 for each child. Also, enlarge a copy of page 10 for demonstration purposes.

Explain to your little ones that all seeds have three parts in common: the *embryo*, the *food-storage tissue*, and the seed coat. Give each child a lima bean and a seed diagram. Point to the seed coat on your enlarged diagram. Inform your children that the seed coat protects the inside of the seed from injury, insects, and loss of water. Instruct each student to color the seed coat on her diagram purple; then have her carefully remove the seed coat from her bean. Next, point to the embryo on your diagram. Tell your children that the embryo is the part of the seed that is the baby plant. Instruct each child to color the embryo on her diagram green; then have her open her seed and find the embryo. Point to the food-storage tissue on your diagram. Explain that the foodstorage tissue contains all the food needed for the baby plant to begin to grow. Instruct each student to color the foodstorage tissue on her diagram yellow; then have her find the tissue in her bean. This dissection activity is sure to make your little ones more "part-smart" about seeds!



# **Down and Dirty □**

#### Creating an environment that supports seed growth

Now your youngsters are ready to dig into the dirt and plant their own seeds. You will need to round up a bag of potting soil, individual containers, some seeds (bean seeds sprout quickly), and misting bottles. Set up this planting station in your sand table or outside for easy cleanup. Duplicate, color, and cut apart the cards on page 11 to use in a pocket chart.

Before the planting begins, share the book *How a Seed Grows* by Helene J. Jordan. After reading the book, display the planting cards sequentially in a pocket chart. Explain the necessary steps in planting a seed. Leave the cards in the chart for future reference. Invite each child to plant her own seed using the materials provided. You will also need to plant five extra seeds for the experiments in the "Seed Needs" activity on page 6. Dig in!



# A Planter's Guide

### Sequencing the planting process

Invite your new planting pros to assemble their own how-to booklets. For each child, duplicate a set of cards from page 11 and cut seven flowerpot shapes, about seven inches high, from construction paper. Write the title "How to Plant a Seed" on one pot cutout for each child. Distribute the pot cutouts and the card sets to your children. Direct each child to cut the cards apart and glue a card onto each pot cutout. Explain that the cover should go at the beginning of the book; then have him sequence his pot pages behind it. Once they're in order, staple the booklets together on the left side and encourage your children to use their booklets to teach their families how to plant like a pro!

# **Recording Growth**

#### Measuring the growth of a plant

Observing, measuring, and recording data are valuable science skills. Give your little ones an opportunity to practice these skills with this journaling activity. To prepare, make enough copies of the journal sheet on page 13 so that each child has four sheets. Store these sheets in a plastic flowerpot. Fill another pot with linking cubes. Place both pots near the sprouting plants from the "Down and Dirty" activity. Periodically, invite each student to go over and complete a journal sheet by drawing a picture of his plant, making a rod of cubes equal to his plant's height, coloring the same number of cubes on the journal sheet, and signing his name. Date and save the sheets for each child. When four observations have been made, urge him to take his journal and his plant home to enjoy.





#### Seed Needs

#### Understanding the basic needs of a plant

Discuss with your students that just as people need food, clothing, and shelter in order to grow and survive, seeds need sun (or light), water, and soil in order to grow into healthy plants. Then explore the needs of seeds by setting up these fun experiments.

A Seed Needs Light: Use three of the planted seeds from the extras you planted during "Down and Dirty" on page 5 to show that seeds need light in order to grow into healthy plants. Place one container in a closet or cabinet so that it receives no light. Cut a small hole toward the bottom of a paper bag and invert the bag over another container so that it receives only a little light. Place the third container in full sunlight. Have students water all the seeds as needed and check periodically for any changes. In a week or so, the seed in sunlight should have grown into a healthy, green plant; the seed in the bag should have grown into a limp, yellowish plant; and the seed in the closet will have only grown a little, if any.

A Seed Needs Water: Once the other two extra seeds you planted have grown into small plants, use them to show that seeds need water in order to grow. Label the containers as shown. Have a child water the designated plant daily. Direct the whole class to take a daily peek to see what is happening.

# **Stylish Seeds**

#### Creating an awareness of different seed types

Encourage your little ones to make a fashion statement with these seed pendants. Provide simple shape patterns, tagboard, glue, yarn, hole punchers, scissors, and an assortment of dried beans and seeds. To make a necklace, have each child choose a shape pattern to trace and cut from tagboard; then punch a hole in his shape cutout. Direct the child to apply a layer of glue to the cutout and cover it with seeds and

beans—being careful not to cover up the hole. Challenge more advanced students to make patterns or designs on their cutouts. When the glue has dried, help the child cut a length of varn and thread it through the hole. Assist him with tying the yarn's ends together. These snazzy

pendants will be the rage of the room!



#### **Seed Safari**

#### Investigating seed distribution

Sprinkle your young sprouts with a little more knowledge about seeds by discussing how seeds travel. On the chalkboard, list all volunteered answers to the question, "How do seeds get around?" Then have your children evaluate their answers after you read *Seeds Get Around* by Nancy White. (This book can be ordered from Newbridge Communications, Inc., at 1-800-867-0307.)



Once your little ones are versed on seed travel, teach them the following song to enhance their understanding.

(sung to the tune of "London Bridge")

See the small seeds falling down, Falling down, falling down. See the small seeds falling down. Grow, seeds, grow.

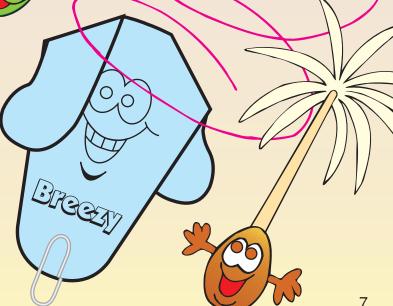
See the winged seeds in the wind, In the wind, in the wind. See the winged seeds in the wind. Fly, seeds, fly.

See the big seeds in the sea, In the sea, in the sea. See the big seeds in the sea. Float, seeds, float.

See the hooked seeds on my socks, On my socks, on my socks. See the hooked seeds on my socks. Ride, seeds, ride.



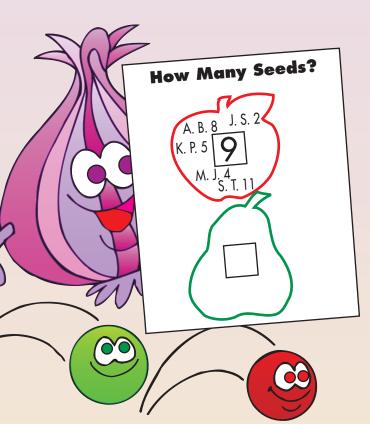
A draft of laughter will gust through the classroom after your little ones make their own Breezy, a twirling winged seed. For each child, duplicate the pattern on page 13 onto construction paper. Have each child cut out her pattern. Assist her in using the dotted lines as a guide to fold one wing forward and the other wing backward. Show her how to attach a paper clip to the bottom of Breezy. Hold Breezy up as high as possible; then let go and watch the seed go swirling and twirling to the ground. After some free exploration time, encourage your students to use Breezy at home to explain to their families one way that seeds travel.



### The Green-Bean Scene

Counting and comparing numbers

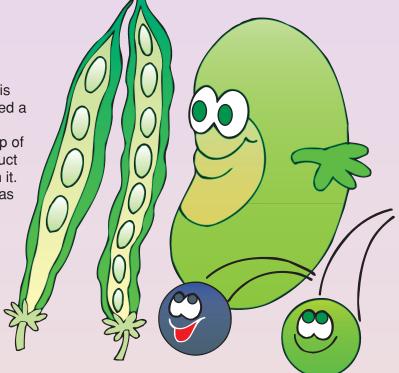
Green beans will help your little ones "suc-seed" in this counting and comparing activity. To prepare, you will need a bag of fresh green beans (peas still in the pod can be a substitution) and a bag of jelly beans. Seat a small group of children in a circle around the bag of green beans. Instruct each child to choose a bean pod from the bag and open it. Have him count the seeds in his pod. When everyone has counted, ask "Who has the most (fewest, same number of) seeds?" The child with the most gets a jelly bean. In case of a tie, both children get jelly beans. Continue until all children in the group have jelly beans to eat.



# **Show Me Your Seeds!**

Strengthening the home-school connection

Germinate some parent involvement and create an informative display with this activity. Duplicate a parent note and a seed display card from page 12 for each child. Prepare a bulletin board background with the seed essentials—sun, soil, and water—and title the display "Look at Our Seeds!" As students bring in their seed collections, invite each child to show her favorite seed to the class. Glue or tape this seed to a seed display card and label it. Pin the card to the soil section of the bulletin board. Your youngsters will enjoy seeing the class collection grow!



#### **Estimation Situation**

Observing that fruits hold seeds, making and verifying estimates

Gather several seedy fruits (such as an apple, a pear, a peach, a plum, and an orange), a marker, and chart paper and set up this estimation situation. Draw a simple, enlarged outline of each fruit on the chart paper. Also, draw a box in the middle of each outline. Hold up one fruit and ask your children to estimate the number of seeds it contains. List volunteers' initials and estimations inside the fruit outline. Then cut the fruit open and dislodge the seeds. Count the seeds together. Go back through the listed estimates and circle any correct guesses. Record the actual number of seeds inside the box. All of that estimating will make a youngster hungry, so be sure to share the fruits of their labor!

