

**Grades K-I** 

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# **California Foundation for Agriculture in the Classroom**

**Vision**: An appreciation of agriculture by all.

**Mission**: To increase awareness and understanding of agriculture among

California's educators and students.



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2<sup>nd</sup> Edition

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# **Purpose**

The purpose of this unit is to provide an agricultural theme to reading, writing, and science concepts that are taught in the classroom. The lesson using *The Tale of Peter Rabbit* and other stories by Beatrix Potter encourage students to think about where their food comes from, distinguish between fact and fiction, and write about personal experiences they have while caring for gardens of their own.

# **Time**

Four 20-minute story-reading sessions

Five 40-minute sessions

Ten 10-minute garden-care and journaling sessions

### **Materials**

### Introductory Activity

- Books by Beatrix Potter (page 8)
- Markers, crayons, colored pencils, pastels, water colors, gel pens
- White paper (one per student)

### Let's Read Some Books

• Books authored by Beatrix Potter (page 8)

# **Introductory Activity**

Share information about a very special author, Beatrix Potter.
 Some facts about her life are stated below. Other information about Beatrix Potter can be obtained from books sited in the literature listed on page 8.

Beatrix Potter lived with her parents in London, England. During her era, young women grew up and stayed at home with their parents until they were married. This is what Miss Potter did. The top floor of the Potter home, which was originally the nursery, became Beatrix Potter's studio, where she drew, and kept her artwork and pets. She was a fine artist and enjoyed using her pets as models. Her first book, The Tale of Peter Rabbit, was originally a fold-out story card, which she wrote and drew for a friend's ill child. Her friend suggested that she make it into a book and have it published. This she did. Keeping in mind that children have small hands, all of Potter's books were very small. Collections of Miss Potter's pocket-sized storybooks, with unique green covers, can still be borrowed from public libraries today.

- Without reading the stories, show the students a couple of Beatrix Potter storybooks. Allow students to observe her artwork and the medium she used for her drawings.
   Mention that illustrators choose which medium they would like to work with—pastels, crayons, water colors, etc.
- Distribute one piece of unlined white paper to each student. Have the children select a medium for their artwork (crayons, markers, gel pens, pastels, colored pencils) and then draw a picture of an animal they might use as a character in a book they author.

# **Let's Read Some Books**

Throughout the next week, read and discuss several of Beatrix Potter's books including *The Tale of Peter Rabbit*. See the literature listings on page 8 for other Beatrix Potter titles.

After reading each story, select a language arts topic to develop with your students. Have the children:



### **Rabbits**

- "Bunny Hop" music (optional)
- Broad-tipped markers, assorted colors
- Butcher paper
- Cassette tape or CD player (optional)
- Food for *Rabbit Food Taste Test*—parsley,
  lettuce, carrots with tops,
  beets, radishes, peas
- Masking tape
- Scissors

### The Garden

- Butcher paper
- Clear contact paper or laminating equipment (optional)
- Colored pencils
- Duct tape or masking tape
- Gravel
- Index cards, unlined
- Markers, colored
- One-gallon plastic milk carton with top cut off (one per student)
- Seed packets with seeds (such as pumpkin, zucchini, radish, turnip, carrot, basil, and parsley)
- Soil amendments (top soil, sterilized manure, sand, vermiculite)
- Sunny outdoor location for gardens
- Tongue depressors
- Watering equipment

- Point to details they see in pictures.
- State descriptive words they heard in the story.
- Identify the front cover, back cover, title page, author, and illustrator of the book.
- Point to upper and lower case letters you are working on.
- Show classmates specific words you ask them to find on a page.
- Tell you which parts of the story could be real and which parts are pretend.

### **Rabbits**

 Make a scatter graph of things your students already know about rabbits.



If possible, invite 4-H or FFA rabbit owners to share their rabbits with your class. Discuss eating habits, diet, breeds, behaviors and care. Perhaps one of your students has a rabbit that can be brought to class.

- Teach and practice the "Bunny Hop" dance routine.
- Have a "Rabbit Food Taste Test" where the children try different kinds of "rabbit food" (lettuce, parsley, etc.). Record taste test results on graphs you prepare.





# **Content Standards**

# Kindergarten

### Science

Physical Science • 1, 1a Life Sciences • 2, 2b, 2c Investigation and Experimentation 4, 4a, 4e

### Reading/Language Arts

Reading • 1.0, 1.1, 1.4, 1.5, 1.17, 2.1 2.2, 2.3, 2.4, 3.0, 3.1, 3.3 Listening and Speaking 1.1, 2.3

### Grade I

### Science

Life Sciences • 2, 2b, 2c, 2e Investigation and Experimentation • 4, 4a, 4b

### Reading/Language Arts

Reading • 1.0, 1.1, 1.2, 1.3, 3.2

Written and Oral English

Language Conventions
1.5, 1.6

Listening and Speaking
1.3, 2.4

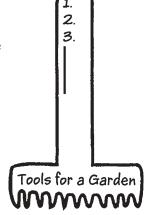
- Discuss why rabbits are mammals and the characteristics of all mammals.
- Conclude your unit by making a list of new information the students have learned about rabbits (see graph examples).



# **The Garden**

# What Do We Need? What Will We Grow?

- Make a scatter graph of items that can be grown in a garden.
- Make a list of items the students need in order to plant a garden.



### **Seeds**

- At a learning station with a parent volunteer, have the children observe various types of seeds they could plant in their gardens.
   Seeds may include pumpkin, zucchini, radish, turnip, carrot, and parsley. Possible discussion topics are stated below:
  - Discuss seed size and seed shape. What do they look like?
     What do they smell like?
  - Is there a relationship between seed size and plant size?
  - Which packages contain the most seeds? The least seeds?
  - What are some benefits and challenges with planting small seeds? Large seeds?



# Making the Garden

Assist students in making individual gardens.

- Distribute one container, a bottom of a water or milk jug, to each student.
- Have the students choose two types of seeds to plant in their personal gardens.
- Have students make plant stakes for each seed they will plant by drawing a picture of the item on an index card with colored pencils. Attach a tongue depressor to the back of the index card with duct or masking tape. If you would like, laminate the stakes or cover them with clear contact paper. Set these aside for later use.
- Carrots
- As a class, prepare the soil—top soil, manure (sterilized), sand, and vermiculite are items that can be mixed together. Speak with a local nursery about the quantities of each. While preparing the soil, ask:
  - How does the sand feel? The vermiculite? The manure?
  - Is soil made of only one type of substance?
  - If you were digging in the soil in a farm field, what might you find?
- At planting time, have each student place about 2" of gravel at the bottom of his or her container (gravel from the play yard will do) and then fill the remainder of the container with the prepared soil (about 6" deep). Make sure that the students do not fill the containers so high that the soil will run off when watered.
- Using parent volunteers, have the students plant the seeds. The
  parents should teach the students how each particular seed needs
  to be planted, watered, etc. The plant stakes should be added at
  this time.
- Have the children begin each day by putting their gardens outside in the sunlight, checking to see if the garden needs watering, and then watering if necessary.



## Journaling and Discussing

- Each morning the students should draw and/or write in their journals. Encourage the proper use of periods, exclamation points, capitalization, and pronouns. Teachers and parents can assist the students with journal-writing at various times during the "season." Journal entry topics may include:
  - "What I Have Done Today"
  - "What is Happening in My Garden"
  - "How My Garden is Like a Farm"
  - "Why My Garden is Different Than a Farm"
- Class word lists can be made to assist in journal-writing. A word list example is shown below:

Who	What	When	Where
I	planted	today	in my garden
me	watered	yesterday	outside
he	grew	tomorrow	in the sun

- Daily, have a discussion on a specific topic. Suggested topics are listed below.
  - What needs to be done to protect the garden plants from pests such as bugs, rabbits, birds, and mold?
  - What are roots for? Why do they grow down?
  - Why do plants wilt?
  - Why do plants need sun? Or do they?
  - What happens if one adds too much water?
  - What happens if plants are too close together?





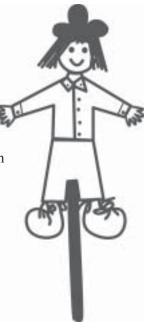
- Are the leaves of all plants alike?
- Do all seeds sprout?
- What does a plant need to survive?
- Does air temperature affect plants?
- What seeds are growing the fastest? Why do you think they are growing the fastest?
- After about three or four weeks, allow the children to take their journals and gardens home. Some of the plants can be transplanted into family gardens. Smaller plants, such as radishes, can remain in the container and placed in a well lit area. Take in the looks of pride as children walk out of school with their gardens... all because of Peter Rabbit!

# **Assessment**

• At the end of the unit, have the students write or draw stories about a seed that is planted in a garden. Have the "seed" do the talking. Encourage students to include factual information.

# **Variations and Extensions**

- Make a scarecrow for the garden.
- Invite a produce manager from a local grocery store to perform taste tests with the children.
- Make a "Peter Rabbit" salad for a luncheon treat.
- Invite other classes and administrators to visit your students' gardens.
- Have the students measure and record the length of their plants.
- Invite farmers to speak to your class about commodities they grow.





- Take digital pictures of the children with their gardens. Give one picture to each child who will write a sentence about it. Compile and make a class book.
- Show a video of *The Tale of Peter Rabbit* and compare and contrast the video and book.
- Use donated seeds from nurseries and make mosaics.



# **Student Literature**

Azarian, Mary. A. *Gardener's Alphabet*. Houghton Mifflin Company, 2000. From A-Z, the garden is depicted with spare words and striking graphics. A must for all primary classrooms.

Cherry, Lynne. *How Groundhog's Garden Grew*. The Blue Sky Press, 2003. Little Groundhog loves to eat fresh vegetables he finds in his neighbor's garden until he learns about planting a garden of his own.

Denyer, Susan. *At Home With Beatrix Potter: The Creator of Peter Rabbit*. Harry N. Abrams, 2000. Enjoy learning about Beatrix Potter through colorful photographs, detailed text, and accurate history.

Ehlert, Lois. *Eating the Alphabet: Fruits and Vegetables from A to Z*. Harcourt Brace Jovanovich, 1989. An alphabetical tour of the world of fruit and vegetables from apricot and artichoke to yam and zucchini.

Hallinan, Camilla. *Ultimate Peter Rabbit*. DK Publishing, 2002. This illustrated book covers more than just the story behind Peter Rabbit. It also makes the reader think of the what-ifs and might-have-beens if things were different for Beatrix Potter.

McMilla, Bruce. *Eating Fractions*. Scholastic Press, 1991. Food is cut into halves, thirds, and fourths to illustrate how parts make a whole. Enjoy a photographic feast of fractions as two playful youngsters eat their way through.

Peterson, Cris. *Harvest Year*. Boyds Mills Press, 1996. Full color photographs and clear, concise text take readers month-by-month through a sampling of the wide diversity and volume of crops grown throughout the United States.

Potter, Beatrix. *The Complete Adventures of Peter Rabbit*. Frederick Warne & Co., 2003. Beatrix Potter's four stories that feature Peter Rabbit are brought together in one volume, so that Peter's escapades can be read as a continuous saga.

Potter, Beatrix. *The Tale of Peter Rabbit*. Puffin Books, 1991. Enjoy this easy-to-read version of Peter Rabbit and his adventures in Mr. McGregor's garden.

Potter, Beatrix. *The Tale of Peter Rabbit*. Frederick Warne & Co., 2002. This story describes the adventures of Peter Rabbit in a beautiful Victorian garden owned by Mr. McGregor.

Stevens, Janet. *Tops and Bottoms*. Harcourt Brace and Co., 1995. Folktale involves a hare and a bear as they plant and harvest vegetables.



# **Teacher Resources and References**

# California Foundation for Agriculture in the Classroom

The Foundation offers a variety of resources that assist educators in incorporating agriculture into existing curricula. These include resource guides, lesson plans, and fact sheets.

California Foundation for Agriculture in the Classroom

2300 River Plaza Drive Sacramento, CA 95833 Phone: (800) 700-2482 Fax: (916) 561-5697 E-mail: cfaitc@cfbf.com Web site: www.cfaitc.org

# Life Lab... A Growing Adventure

Life Lab Science Program offers a variety of publications and professional development opportunities for educators using the garden as an outdoor classroom or living-laboratory for hands-on learning.

Grades K-6 Free information packet

Life Lab Science Program 1156 High Street Santa Cruz, CA 95064 Phone: (831) 459-2001 Fax: (831) 459-3483

E-mail: lifelab@zzyz.ucsc.edu Web site: www.lifelab.org

# **National Gardening Association**

This organization has a numerous resources that can assist in any gardening program you wish to implement at your school.

Grades K-adult Free information

National Gardening Association 1100 Dorset Street South Burlington, VT 05403 Toll free (800) 538-7476 Fax: (802) 864-6889

Web site: www.kidsgardening.com

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# **Teacher Resources and References**

### **Resources for Garden Based Education**

This catalog lists a variety of resources, seeds, and equipment, which can be ordered to enhance garden-based education.

Grades preK-6 Free catalog

Gardens for Growing People Post Office Box 630 Point Reyes, CA 94956 Phone: (415) 663-9433 Fax: (916) 663-9433

# Seeds of Knowledge for a Harvest of Understanding

This 18-minute video provides the know-how needed to start a school garden. Guidance on the key gardening elements—light, air, water, and soil—are discussed in an easy-to-follow video with actual footage of several school garden start-ups. The California Fertilizer Foundation also has garden grants available.

\$10 includes s/h plus tax

California Fertilizer Foundation 1801 I Street, Suite 200 Sacramento, CA 95814 Phone: (916) 446-3316 Fax: (916) 446-3067 E-mail: saram@cpha.net

Web site: www.calfertilizer.org

### **Teacher Help**

Teacherhelp.com has several lessons and Web links on *The Tale of Peter Rabbit*. Reference this web site for more ideas on how to incorporate Peter Rabbit and agriculture into your teaching.

Teacher Help www.teacherhelp.com



# **Teacher Resources and References**

# The Tale of Peter Rabbit and Benjamin Bunny

This 2001 video brings the timeless escapades of the mischievous cousins, Peter Rabbit and Benjamin Bunny, to life. CD included.

Grades PreK-1 Approximately \$10

Goodtimes Home Video Available on-line from Amazon.com

# **Western Growers Association Garden Grants**

Garden grants and supplies are available. Download an application and qualifications from the Web site.

Grades K-adult Free grant application

Western Growers Association

Attn: Danielle Blacet 1005 12<sup>th</sup> Street, Suite A Sacramento, CA 95814 Phone: (916) 446-1435 Fax: (916) 446-0181

E-mail: dblacet@wga.com Web site: www.wga.com



# Content Standards for California Public Schools Addressed in *A Garden Plot – The Tale of Peter Rabbit\**

Obtained from the California Department of Education

Standard	Description		
Science			
Physical Science 1	Properties of matter can be observed, measured, and predicted.		
Physical Science 1a	Objects can be described in terms of the materials they are made of and their physical properties.		
Life Sciences 2	Different types of plants and animals inhabit the earth.		
Life Sciences 2b	Stories sometimes give plants and animals attributes they do not really have.		
Life Sciences 2c	Identification of major structures of plants and animals.		
Investigation and Experimentation 4	Scientific progress is made by asking meaningful questions and conducting careful investigations.		
Investigation and Experimentation 4a	Observe common objects by using the five senses.		
Investigation and Experimentation 4e	Communicate observations orally and through drawings.		
Reading/Language Arts	3		
Reading 1.0	Know about letters, words, and sounds. Apply this knowledge to read simple sentences.		
Reading 1.1	Identify the front cover, back cover, and title page of a book.		
Reading 1.4	Recognize that sentences in print are made up of separate words.		
Reading 1.5	Distinguish letters from words.		
Reading 1.17	Identify and sort common words in basic categories.		
Reading 2.1	Locate the title, table of contents, name of author, and name of		



Kindergarten (continued)			
Description			
Use pictures and context to make predictions about story content.			
Connect to life experiences the information and events in text.			
Retell familiar stories.			
Listen and respond to stories based on well-know characters, themes, plots, and settings.			
Distinguish fantasy from realistic text.			
Identify characters, settings, and important events.			
Understand and follow one- and two-step instructions.			
Relate an experience or creative story in a logical sequence.			



Standard	Description
Science	
Life Sciences 2	Plants and animals meet their needs in different ways.
Life Sciences 2b	Both plants and animals need water, animals need food, and plants need light.
Life Sciences 2c	Animals eat plants or other animals for food and may also use plants or even other animals for shelter.
Life Sciences 2e	Roots are associated with the intake of water and soil nutrients and green leaves are associated with making food from light.
Investigation and Experimentation 4	Scientific progress is made by asking meaningful questions and conducting careful investigations.
Investigation and Experimentation 4a	Draw pictures that portray some features of the thing being described.
Investigation and Experimentation 4b	Record observations and data with pictures, numbers, or written statements.
Reading/Language Arts	
Reading 1.0	Understand the basic features of reading. Select letter patterns, and know how to translate them into spoken language by using phonics, syllabication, and word parts. Apply this knowledge to achieve fluent oral and silent reading.
Reading 1.1	Match oral words to printed words.
Reading 1.2	Identify the title and author of a reading selection.
Reading 1.3	Identify letters, words, and sentences.
Reading 3.2	Describe the roles of authors and illustrators and their contributions to print materials.
Written and Oral English Language Conventions 1.5	Use a period, exclamation point, or question mark at the end of sentences.
Written and Oral English Language Conventions 1.6	Use knowledge of the basic rules of punctuation and capitalization when writing.



Grade I (continued)				
Standard	Description			
Listening and Speaking 1.3	Give, restate, and follow two-step directions.			
Listening and Speaking 2.4	Provide descriptions with careful attention to sensory detail.			

<sup>\*</sup> For a complete listing of the Content Standards for California Public Schools, contact CDE Press, Sales Office, California Department of Education, Post Office Box 271, Sacramento, CA 95812-0271; (916) 445-1260, www.cde.ca.gov.