

Teaching Science Standards using Children's Books



VEMA

November, 2005

Williamsburg, VA

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Habitat Station

Desert Animals

<http://www.desertusa.com/animal.html>

List three different animals from each column. Choose only the names with a black circle in front of them.

Mammals	Birds & Fish	Reptiles & Amphibians

Scroll back to the top and click on Plants/Wildflowers. List three different plants from each column.

Wildflowers	Cactus & Succulents	Trees, Shrubs, & Grasses

SOL Sc2.5

NAME:

Habitat Station

Golden Book Encyclopedia: Rain Forest

1. In the first paragraph, find the three continents that have tropical rain forests in them and write them here:

1.

2.

3.

2. Scroll down and look in the section called **Plants of the Rain Forest**. Trees in a rain forest grow very tall. What do we call the part of a rain forest where the tops of the trees are?

3. Scroll down and find the word *epiphytes*. What are they called?

4. Scroll down to the section called **Animals of the Rain Forest**. More than half of the animals in the rain forest are what kind of animal?

5. What is the world's largest snake?

If you have time, you may click on the movie and watch it play. You may also explore the links.

Resources for Habitat

Author	Title	Publisher	Year	Annotation
Brenner, Barbara	One small place in a tree	HarperCollins	2004	A hole in a tree becomes a habitat for many creatures.
Cherry, Lynne	Great kapok tree	Harcourt	1990	Protecting the Amazon rain forest
Cone, Molly	Squishy, misty, damp & muddy	Clarion	1996	Wetlands
Dunphy Madeleine	Here is the African savanna	Hyperion	1999	“House that Jack built” pattern; grassland habitat
Dunphy, Madeleine	Here is the wetland	Hyperion	1996	“House that Jack built” pattern; wetland habitat
Fleming, Denise	In the tall, tall grass	Holt	1991	Very basic look at what’s in the backyard
George, Lindsay	Around the pond: who’s been here?	Greenwillow	1996	Guessing pattern identifies animals around a pond
George, Lindsay	Around the world: who’s been here?	Greenwillow	1996	Miss Lewis, on a trip around the world, writes back to her class to guess about animals she sees.
Glassman, Jackie	Arctic animals	Grosset & Dunlap	2002	Animals in arctic habitat; includes adaptation
Kalman, Bobbie	Food chains and webs?	Crabtree	1998	Basic non-fiction defines terms
Langstaff, John	Over in the meadow	Harcourt	1967	An old rhyme that works nicely
London, Jonathan	Ice bear and little fox	Dutton	1998	Life of two Arctic animals
Relf, Patricia	Magic school bus hops home	Scholastic	1995	Miss Frizzle’s class learns what makes a habitat
Ryder, Joanne	Jaguar in the rain forest	Morrow	1996	Just-for-a-day book; vivid pictures
Sayre, April Pulley	Tropical rain forest	Scholastic	2002	Lovely photos
Sayres, Meghan	Shape of Betts Meadow	Millbrook	2002	Restoration of a meadow
Steinberg, Laya	All around me I see	Dawn	2005	Camping, hiking, and dreaming about what she’s seen
Wilson, Anna	Over in the grasslands	Little, Brown	1999	“Over in the meadow” pattern with African savanna
Yolen, Jane	Welcome to the green house	Putnam’s	1993	Gorgeous illustrations; they’ve also done “ice house” and Everglades

Recommended Series

First Reports from Compass Point Books.

Titles: Coral reefs, Deserts, Grasslands, Mountains, Oceans, Rain Forests, Tundra, Wetlands

Habitats from Children’s Press

Titles: Arctic tundra, City park, Coral reef, Douglas fir, Limestone cave, Ocean tide pool, Saguaro cactus, Swampland

Jerry Pallotta Alphabet books from Charlesbridge

Titles: Desert, Freshwater, Ocean, Underwater

Life in the... from Two Can Children’s Books

Titles: Deserts, Oceans, Polar Lands, Rain Forest, Mountains, Plains, Islands, Coastlines, Woodlands

Look who lives in... from Peter Bedrick Books by Alan Baker

Arctic, Desert, Ocean, Rain Forest

Rookie read-about Science from Children’s Press by Allan Fowler

Life in a... pond, tide pool, wetland

Beginning research! Take clip art/outline pictures of animals, each about a fourth of a regular sheet of paper. Put them in a basket and have each student draw one out. Then, have the students do research in non-fiction books and/or primary encyclopedias to find out that animal’s habitat and draw a picture of the habitat. Then each student can paste the picture of his or her animal on top of the drawing, color it, and write two sentences about the animal.

Activities for Plants

1. Plant Alphabet Book

Share The Flower Alphabet Book by Jerry Pallotta (Children's Press, 1991). Have the students choose a plant, using a dictionary for ideas. They write 1-3 sentences and draw a picture; put them together to make a book to put in the classroom or school library.

2. Planting seeds or bulbs

At any season of the year, it is fun and instructive to grow things in the classroom. In the fall, you might grow amaryllis or narcissus bulbs from a garden center or florist. Show the bulb and talk about the fact that it has food stored inside to make flowers and leaves. *Colchicum* is one bulb that grows just sitting on a counter or in a pot with no soil or water that really makes this point. It needs to be planted in soil AFTER blooming in order to replenish the bulb. The book by Ken Robbins, A Flower Grows, shows the stages in the bloom of the amaryllis.

For seeds, it works very well to plant them in plastic cups, with the seed between the plastic and the soil. The stages of growth are seen fairly clearly, although condensation inside the cup can interfere. One Bean by Rockwell demonstrates the growth of a bean seed and makes a good companion for this activity. Seeds that grow reliably and fairly quickly are beans, marigolds, and radishes. The seeds for those are also fairly inexpensive. In the spring, you might plant flower seeds in time for Mother's Day gifts. For marigolds, allow 4 – 6 weeks. For other plants, check the seed package.

If you have a nice wide sunny windowsill, consider growing a row of pots of the vegetables in Mr. MacGregor's garden from The Tale of Peter Rabbit by Beatrix Potter. Onions, radishes, parsley, French beans, cabbages all grow from seed in various amounts of time but fairly easily and reliably. You might want to bring in a hoe to demonstrate what it is when you read the book.

3. Dot-to-dot

You can make a dot to dot from a picture of a plant or flower by using blank transparencies or the scraps trimmed from laminating. Place the plastic over the picture and go around the outside edges using numbers. Be sure that you number each indentation. You can copy on the copier. Add text and use it as part of a lesson on plant parts or edible/inedible plants.

4. Craft: Garden Pockets (from Davis: Multimedia Storytimes)

For each pocket, you will use 1½ 6-inch paper plates. Color the half plates as grass and the whole plates as sky. Punch eight holes around the edge of both plates and use yarn to lace them together. Cut pictures of plants and flowers from magazines or catalogs or make paper flowers to tuck in the grass pocket.

5. Plants Stations, First Grade

Sorting station: SIGNS, TRAY OF PLANT PARTS

Have an assortment of plant pieces and parts and have them sort them into roots, fruit or seeds, leaves. Items from the yard. A bulb. From the produce section: apple, carrot, coconut, peanut, potato, cabbage or lettuce leaf. Have at least 15 items on a tray. Needs full-time attention.

Picture dictionary station: PICTURE DICTIONARIES (My First Dictionary by Betty Root, DK) PAPER, PENCILS

The student looks through the dictionary and finds pictures of plants that can be eaten and lists the words. Mark pages that have them so they can find at least 4 or 5 quickly and easily. Pages 5,7,13, 15, 53, 57. Needs half-time attention.

Flowering/Non-flowering station: PICTURE OF MUSHROOM AND BROWN-EYED SUSAN. CRAYONS. Needs half-time attention.

Books station. BOOKS, NONFICTION AND FICTION, ON PLANTS. No attention needed.

Resources for Plants

Author	Title	Publisher	Year	Annotation
Anthony, Joseph	Dandelion seed	Dawn	1997	Virginia author & illustrator tell of the dandelion
Anthony, Joseph	In a nutshell	Dawn	1999	Life cycle of a tree demonstrates change in environment over time
Bash, Barbara	Desert giant	Sierra Club	1989	Saguaro cactus
Carle, Eric	The tiny seed	Picture Book Studio	1987	Carle's signature collages describe the life cycle of a plant
Cherry, Lynne	How groundhog's garden grew	Blue Sky	2003	Growing vegetables
Davis, Aubrey	The enormous potato	Kids Can Press	1998	A farmer grows a huge potato that can feed the whole town
Fleming, Candace	Muncha, muncha muncha	Atheneum	2002	Sharing a vegetable garden with rabbits
French, Vivian	Oliver's vegetables	Orchard	1995	Oliver learns about vegetables in his grandfather's garden
Gibbons, Gail	Pumpkin book	Holiday House	1999	All about pumpkins
Gibbons, Gail	Tell me, tree	Little, Brown	2002	All about trees for kids
Haas, Jessie	Sugaring	Greenwillow	1996	Making maple sugar
Hall, Zoe	Apple pie tree	Blue Sky	1996	Life cycle of the apple tree
Hall, Zoe	Fall leaves fall	Scholastic	2000	Very basic description of autumn leaves
[various]	Jack and the beanstalk			Traditional tale pairs nicely with plant units
King, Elizabeth	Backyard sunflower	Dutton	1993	Life cycle of a sunflower
Kite, L. Patricia	Dandelion adventures	Millbrook Press	1998	Growth of dandelion seeds in different places
Krauss, Ruth	The carrot seed	HarperCollins	1945	Old favorite about perseverance also shows the patience necessary for sprouting seeds
Pattou, Edith	Mrs. Spitzer's garden	Harcourt	2001	Gardening and teaching
Robbins, Ken	A flower grows	Dial	1990	Lovely hand-tinted photos and brief text chronicle the growth of an amaryllis
Rockwell, Anne	One bean	Walker	1998	Very simple text and pictures outline the growth of a bean
Schaefer, Lola	Pick, pull, snap!	Greenwillow	2003	Gardening & seeds; gorgeous fold-out pictures
Stevens, Janet	Tops and bottoms	Harcourt Brace	1995	Trickster tale teaches about roots, stems, leaves
Stewart, Sarah	The gardener	Farrar, Straus	1997	A determined little girl brings plants and joy to her crusty city dwelling uncle
Udry, Janice	A tree is nice	HarperCollins	1956	Caldecott winner describes the uses of a tree
Wallace, Nancy	Seeds! Seeds! Seeds!	Marshall Cavendish	2004	Collage illustrations describe collecting, learning about, and planting seeds
White, Linda	Too many pumpkins	Holiday House	1996	Rebecca hates pumpkins, but grows a bumper crop
Ziefert, Harriet	The turnip	Viking	1996	Easy to read version of the traditional tale

Classroom Rainstorm

First, the storm begins slowly and then builds to a crescendo. Then, it will subside again.

1. Divide the students into 3 groups.
2. Select a leader, a student or yourself (especially the first time).
When the leader stands in front of a group, the group does the activity while the leader demonstrates. They continue with this motion until another activity is demonstrated for them to imitate.
3. The sequence of the rainstorm is as follows:
 - rub palms together, back and forth
 - snapping fingers
 - hand clapping
 - slapping thighs
 - stomping feet
4. After all 3 groups are stomping their feet, let the rainstorm subside by reversing the sequence. (i.e. slapping thighs, hand clapping, etc.)
5. This activity can also be conducted in a circle. the leader begins by rubbing palms together. The person to the left joins in and so on. When the leader sees the person on the right rubbing palms, she/he starts snapping fingers, etc.

Evaporation

Evaporation, evaporation

Water vapor going up.

Condensation, condensation

Cooling vapor in the clouds.

Precipitation, precipitation

That's the water coming down.

The water cycle, the water cycle

That's the water going round.

Some Poems About Weather

Who Has Seen the Wind?

by Christina Rossetti

Who has seen the wind?
Neither I nor you.
But when the leaves hang trembling,
The wind is passing through.

Who has seen the wind?
Neither you nor I.
But when the trees bow down their heads,
The wind is passing by.

Clouds

by Christina Rossetti

White sheep, white sheep
On a blue hill,
When the wind stops
You all stand still.
When the wind blows
You walk away slow.
White sheep, white sheep,
Where do you go?

Rain

by Robert Louis Stevenson

The rain is raining all around,
It falls on field and tree,
It rains on the umbrellas here,
And on the ships at sea.

Fog

by Carl Sandburg

The fog comes on little cat feet.
It sits looking over harbor and city
on silent haunches and then moves on.

Nursery Rhymes

The north wind does blow
And we shall have snow,
And what will poor Robin do then?
 Poor thing!
He'll sit in a barn
To keep himself warm,
And hide his head under his wing.
 Poor thing!

Doctor Foster went to Gloucester
In a shower of rain.
He stepped in a puddle up to his middle
And never went there again.

Cold and raw the north winds blow,
Bleak in the morning early;
All the hills are covered with snow,
And winter's now come fairly.

Rain, rain, go away!
Come again some other day.
Little Johnny wants to play.
Rain, rain, go away.

Resources for Weather

Author	Title	Publisher	Year	Annotation
Aardema, Verna	Bringing the rain to Kapiti Plain	Dial	1981	Drought and rain in Africa
Barrett, Judi	Cloudy with a chance of meatballs	Atheneum	1978	Humorous take on weather that brings food and drink from the sky
Burningham, John	Cloudland	Crown	1996	Fantasy about cloud children
Carle, Eric	Little Cloud	Philomel	1996	Little Cloud changes into many shapes, and then joins with other clouds to make it rain
Christelow, Eileen	The five-dog night	Clarion	1993	The colder the weather is, the more dogs it takes to keep warm through the night
Dussling, Jennifer	Pink snow and other weird weather	Grosset	1998	Strange facts
Gibbons, Gail	Weather words & what they mean	Holiday House	1990	Non-fiction introduction
Gray, Libba Moore	Is there room on the feather bed?	Orchard	1997	A rainy night finds animals sharing a bed with a wee fat man & his wee fat wife
Hopkins, Lee	Weather	HarperCollins	1994	Easy to read poetry about weather
Keats, Ezra Jack	The snowy day	HarperCollins	1962	Classic story of a small boy enjoying the snow
Kosako, Fumi, Ill.	Let's count the raindrops	Viking	2001	Poetry about weather & seasons
Locker, Thomas	Water dance	HarcourtBrace	1997	Gorgeous paintings and lyrical prose about water
Lyon, George Ella	Come a tide	Orchard	1990	Flooding in Appalachia
Martin, Bill	Listen to the rain	Henry Holt	1988	Describes the rhythms of the rain
Osborne, Mary Pope	Twister on Tuesday	Random House	2001	One of the magic tree house series; time travel to Kansas during pioneer times
Polacco, Patricia	Thunder cake	PaperStar	1990	Fear of a thunderstorm is overcome in Polacco's inimitable style
Prelutsky, Jack	It's snowing! It's snowing	Greenwillow	1984	Poems about snow and winter
Prelutsky, Jack	Rainy rainy Saturday	Greenwillow	1980	Poems about a rainy day
Rogers, Paul	What will the weather be like today?	Greenwillow	1990	Animals and people talk about today's weather
Schaeffer, Lola	This is the rain	Greenwillow	2001	Water cycle in the format of "This is the house that Jack built"
Shaw, Charles	It looks like spilt milk	HarperCollins	1991	Clouds assume various shapes
Stevenson, James	We hate rain	Greenwillow	1988	Grandpa tells Mary Ann and Louie about a big rain when he was young
Wallace, Nancy	Snow	Golden Books	1999	Beautiful cut-paper illustrations capture the beauty and fun of snow
Wiesner, David	Hurricane	Clarion	1990	Picture book description of a hurricane and its aftermath

Other resources

Why does it rain? A Wonders of Learning kit from National Geographic (1983); sound cassette with 30 booklets, activity sheets, guide

Sammy's science house. CD-ROM; Edmark, 1995. v. 1.13

The Weather Today



Temperature



If it is a very cold day color the thermometer blue. If it is very hot color it red.

Color the correct box for the weather today.

Precipitation

no rain or snow		
clear	rain	snow

Sky

Wind

clear	partly cloudy	cloudy or overcast

calm	windy

Internet Resources

Web-sites for Plants

www.nps.gov/plants/color/ wildflowers of Texas, Utah, and the Northwest; many of those are also familiar to Virginia

www.brainpop.com little movies about a variety of science topics; subscription site

<http://www.mcwdn.org/Plants/PlantsMain.html> A bit advanced, but information on seeds, leaves, photosynthesis, etc.

www.hhmi.org/coolscience/vegquiz/plantparts.html A cute on-line activity where students identify five vegetables as being leaf, stem, fruit, root, or flower.

<http://www.dltk-kids.com/crafts/spring/spring.html>

<http://www.dltk-holidays.com/spring/mflower.html> Crafts for spring include this one which makes a flower.

<http://www.picadome.fcps.net/lab/currl/plants/default.htm> Collection of links

<http://its.guilford.k12.nc.us/webquests/plantquest/> webquest on plants

<http://www.urbanext.uiuc.edu/trees1/> Pierre the acorn teaches about trees

Web-sites for Habitats

<http://mbgnet.mobot.org/> includes biomes and ecosystems from the Missouri Botanical Garden.

<http://www.urbanext.uiuc.edu/gpe/> 6 different mysteries explore plant life

<http://pbskids.org/backyardjungle/> Share backyard habitats with kids around the country

<http://www.biodiversity911.org/> World Wildlife Fund site has games and more about biodiversity

<http://www.nationalgeographic.com/geographyaction/habitats/> National Geographic has a good introduction and several different habitats to explore

<http://www.greenscreen.org/newsletter/greentimesjr.html> Basic articles on several topics, and check out the link for Teachers at the top.

<http://www.epa.gov/owow/kids.html> EPA site on watersheds for kids

http://www.pen.k12.va.us/VDOE/Instruction/Elem_M/Science/elementary_sci.html DOE's resources to support Science SOLs

Web-sites for Weather

www.weather.com Weather Channel web-site Nice for current weather conditions anywhere; good maps

http://www.cln.org/subjects/weather_inst.html Sites with lessons on weather from the Community Learning Network

<http://www.weatherwizkids.com> nice site done by a meteorologist; has Weather Words dictionary; games

<http://www.nws.noaa.gov/om/reachout/kidspage.shtml> National Weather Service kids page; links & information

<http://www.ucar.edu/40th/webweather> interactive page for kids; fun and informative

<http://www.fema.gov/kids/> FEMA's site focuses on disaster preparedness; very kid-friendly

Web-sites with animals clip art/coloring pages:

<http://www.alphabet-soup.net/dir6/coloring.html>

<http://www.theteachersguide.com/Freebies.html>

<http://www.AwesomeClipartForEducators.com/>

<http://classroomclipart.com/>