Our Natural World

MESS® Recommended Materials

Basic equipment
- handheld magnifying lenses
- tabletop magnifiers
- camera
- specimen viewers
- Petri dishes
- clear plastic test tubes with covers
- clear container with ventilated cover
- clipboards, paper, and pencils
- CD-player, tape-player, or computer
- pan balance

Additional equipment
- colander
- garden shovel or trowel
- clear plastic containers for collecting worms
- small paint brushes
- spray bottle
- littler tongs
- waste basket
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Live specimens
- an animal you can observe in the natural environment, a classroom visitor, or permanent class pet
- plant
- small animal or plant to explore with tools
- earthworms

Natural materials
- collection of natural items such as rocks, leaves, pinecones, and feathers
- several types of soil and sand
- rock collection
- collection of items associated with trees such as dead twigs, fallen leaves, and seeds
- leaf collection

Recordings, photos, and illustrations
- recordings of nature sounds
- pictures to correspond with nature sounds
- photos of living and nonliving things
- recycling symbol sign
- photos of bodies of water such as lakes, rivers, and streams
- photos of water associated with weather such as clouds, steam, rain, puddles, mud, snow, and ice
- pictures of animals and their habitats

Supplies
- paper bags
- plastic pags
- paper towels
- leaves or lettuce
- used coffee grounds
- soil for worms
- garbage bags

Additional materials
- color chips
- items to explore using magnifying tools
- assortment of common types of litter such as paper, aluminum cans, and plastic bottles and bags
- recyclable materials made of paper, metal, and plastic
- labels for paper, metal, and plastic
- materials to explore wind such as scarves or sheer fabric, flags, sticks with ribbon streamers, or long feathers attached to string
Books

Barner, Bob. *Bug Safari*. New York: Holiday House, 2006. A little boy, with magnifying glass in hand, has an adventurous trip following ants on their way to a backyard picnic. Information is accurate; bold, enlarged pictures add to the mystery. Additional information about the animals encountered is included.


Bono, Mary. *UGH! A Bug*. New York: Walker, 2002. Silly pictures and rhyming text provide a lighthearted introduction to the idea that humans are sharing space with a variety of small animals. The book aims to reassure young children that most of these small creatures will not bother people if left alone. It concludes with the message that “bugs” are happier when not in a jar (though teachers will need to redefine the term “bug” since worms are included).

Bourgeois, Paulette. *Garbage Collectors (In My Neighborhood)*. New York: Kids Can Press, 1998. This amusing and informative book explains recycling, waste reduction, and landfill sites via a fun story about Mabel and Sam and Mrs. Green’s false teeth. Story length and quantity of text are substantial for young children, but the story can be read in sections or abbreviated. The recycling section, in particular, can be read separately.

Brown, Ruth. *Snail Trail*. New York: Crown Publishers, 2000. This story, told and illustrated from the perspective of a slimy snail, is a good reminder of how different the world can look when you are small. The short route the snail traveled is shown—from a human perspective—on the last page. Spare text is descriptive, and colors are rich earth-tones.
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Christian, Peggy. *If You Find a Rock*. New York: Harcourt Children’s Books, 2000. Children of many ages are fascinated by plain old rocks, and this author will add to that enjoyment. Poetic text and tinted black and white photographs support the wonder of rocks large and small, close-up and faraway. The book encourages readers to do more than see rocks from a distance. Instead, readers should get up close, feel their textures, and consider imaginative purposes—skipping, climbing, even wishing.

Cole, Henry. *I Took a Walk*. New York: Greenwillow Books, 1998. This walk in the woods reminds readers how much there is to see if only we “look” closely. Single sentences tell about a casual meander from woods to meadow to stream to pond; then a foldout page at each stop details all the life there. The gentle greens, browns, and spots of color in the illustrations reward the careful observer with all kinds of plants and animals. A key at the end provides specifics that are not necessary to conversation about each scene.

Cooper, Elisha. *A Good Night Walk*. New York: Orchard Books, 2005. A walk in a suburban neighborhood, like this one, is not quite the same as a walk at the beach or in the forest. But let us “see what we can see, before it’s time for bed,” and perhaps hear and smell, too. The inclusion of both natural and non-natural things supports discussion about the differences between the categories. Watercolor and pencil illustrations provide details that add to the observation and conversation opportunities.

Cronin, Doreen. *Diary of a Worm*. New York: Joanna Cotler Books, 2003. Among the silly writings in this young worm’s life is some fair, albeit sometimes subtle, science. Numerous daily entries and the fun illustrations should make for enthusiastic discussion, even if some preschoolers may not understand the humor.

DePalma, Mary Newell. *A Grand Old Tree*. New York: Arthur A. Levine Books, 2005. A tree’s life cycle includes flowers, fruit, seeds, leaves, visitors, weather, and dying, all over time. Text is simple and straightforward. Illustrations are cheerful watercolors filled with enough detail to encourage continuing observations. Together they should generate conversation about what makes a tree “grand.”


Ehlert, Lois. *Feathers for Lunch*. New York: Harcourt Brace, 1990. “Feathers” is not exactly what the cat was hoping to eat for lunch, but his encounters while hunting for lunch make this a fun book about the natural world. The sounds made by the cat and birds are printed on the pages but can be ignored. Bold illustrations add interest. Details about “the lunch that got away” are included at the end.

Ehlert, Lois. *Pie in the Sky*. New York: Harcourt Children’s Books, 2004. Wouldn’t it be something if pies grew on trees? A child watches the changes in the “pie tree” from bud to flower to fruit. Bold paper-cutout collages invite exploration, while two levels of text—one describing obvious changes in the tree and the other providing more detailed observations—increase the discussion opportunities.

Ehlert, Lois. *Red Leaf, Yellow Leaf*. San Diego, CA: Harcourt Brace, 1991. This book examines the life of a sugar maple tree from the perspective of a child. The beautiful collages include details that invite exploration. The large text and clever use of print within the collages (e.g., labels, a license plate) provide great literacy practice. Background information about tree parts and instructions for planting a tree are included. 1992 NSTA Outstanding Science Trade Book for Children

Ets, Marie Hall. *Gilberto and the Wind*. New York: Viking Press, 1963. A little boy hears the wind whispering at the door and takes this as an invitation to play. His inability to control the wind is problematic. Simple black and white drawings on brown paper and appropriately limited text should elicit good discussion about similar situations.


Fleming, Denise. *In the Tall, Tall Grass*. New York: Henry Holt, 1991. Beginning with a caterpillar crunching and munching its way through the grass, brightly colored collages and rhyming text of active verbs describe the animals found in the grass throughout the day and into night. ALA Notable Children’s Book

  —*In One Tidpool*. 2002.
  —*Near One Cattail*. 2005.
  —*On One Flower*. 2006.
Each of these books details the plants and animals that live in a given habitat. Illustrations are large and richly colored, field notes provide additional information about the plants and animals featured in each book, and references are added for those who want to know more about each ecosystem. For young children, the cumulative, rhyming text becomes long but can be abbreviated to only the new verse each time.
Freeman, Marcia S. *Is It Alive?* Northborough, MA: Newbridge Educational Publishing, 2002. Beautiful large photographs introduce the concepts of living and nonliving things. Age-appropriate text defines “living” as things that grow, reproduce, consume food and water, and move. A glossary, index, and questions to think about are added at the end.

— *In the Garden: Who’s Been Here?* 2006.
During their explorations, two children and their dog find clues that other animals are, or have been, there also. Nature concepts such as life cycle, predator/prey, and habitat are illustrated. Large, richly colored illustrations invite close observation and conversation. Additional information about each book’s featured animals is provided.

Gilkey, Gail. *No More Garbage*. Barrington, RI: Windy Hill Press, 2003. Two young sisters walking in a nature park near their home find a small mysterious hole in the ground. When they find other children chasing a rabbit with a soda can caught on its foot, they finally figure out what the hole is all about and rescue the rabbit so it can return safely to its hole. Watercolor illustrations add gentle color to the simple story. The value of cleaning up garbage is obvious but nonetheless important.


Glaser, Omri. *Round the Garden*. New York: Harry N. Abrams, 1999. The water cycle is quietly demonstrated from a teardrop to a rain cloud that falls on the garden where more onions are growing! Words are very limited, colors are bold, and illustrations are simple but sufficiently detailed to hold interest.

Gregoire, Elizabeth. *Whose House Is This?* New York: Picture Window Books, 2005. The author introduces the concept of habitat by looking at animal homes—specifically webs, nests, and shells. In an introductory page, safety, storage, shade, and sleeping are all given as reasons for homes. Illustrations are bright and simple, yet encourage readers to look for clues to the title question. Text is appropriately limited, and can be extended by reading the occasional boxes of fun facts about the animals featured.
Hall, Zoe. *The Apple Pie Tree*. New York: Blue Sky Press, 1996. In spite of the apple emphasis in the title, the children’s tree has multiple uses in this book about growth and change. But the best part of the tree is the pie that can result in the autumn at picking time! Colorful collage illustrations detail the seasonal changes described in the appropriate text. Animal (including two children) activities add observation interest.

Hammersmith, Craig. *The Wind*. Minneapolis, MN: Compass Point Books, 2003. “What is wind?” “What makes wind?” “Can you see the wind?” This book answers these basic questions and may be enough for preschoolers. However, if teachers want to talk about advantages (energy production) and disadvantages (storms) of wind, some simple information is here also. Text is easily edited and photographs provide opportunities for conversation.

Hendry, Diana. *The Very Noisy Night*. New York: Dutton Children’s Books, 1999. Sounds during the night keep Little Mouse awake. Most of the sounds are natural ones—an owl hooting, the wind blowing—but his active imagination creates possibilities that Big Mouse’s explanations will not satisfy. In the end, only a cozy snuggle in Big Mouse’s bed satisfies. The familiar situation and fun drawings encourage conversation.

Himmelman, John. *An Earthworm’s Life*. New York: Children’s Press, 2000. The overarching emphasis in this volume of the Nature Upclose series is an earthworm’s life cycle over the seasons, but readers also learn about daily concerns. Text is limited to one short sentence per page which encourages close observation of details in the earth-tone drawings.

Himmelman, John. *A Ladybug’s Life*. New York: Children’s Press, 1998. Ladybugs are featured in this book from the Nature Upclose series, including ways the little animal’s life is impacted by nature—other insects, flowers, birds, changing seasons, and humans. Reproduction and survival are themes for the ladybug in the story, while the detailed illustrations show interdependence.

Hoberman, Mary Ann. *A House Is a House for Me*. New York: Viking Penguin, 1978. A rollicking rhyme describes all kinds of houses from ant hills and bee hives to toasters and tins. The book concludes with an earth-friendly message—“Each creature that’s known has a house of its own and the earth is the house of us all.” Detailed, gently-colored illustrations add fun and observation practice. Since not all of the examples relate to the natural world, some may wish to read the book selectively. 1983 National Book Award for Young People’s Literature
Hutchins, Pat. *The Wind Blew*. New York: Aladdin Paperbacks, 1974. And look at the consequences! Rhyming text details many things wind can disturb, from snatching a balloon to flying a kite to lifting the judge’s wig. Amusing illustrations add to the fun and stimulate laughter and conversation.

James, Betsy. *Tadpoles*. New York: Dutton Children’s Books, 1999. Molly spends her summer watching frog eggs grow into tadpoles and then frogs as her little brother learns to walk. She ultimately accepts the importance of returning her young frogs to their natural world.

Keats, Ezra Jack. *Regards to the Man in the Moon*. New York, Aladdin Paperbacks, 1981. Wondering what to do with some junk? Louie’s father Barney knows that junk, with a little imagination added, “can take you right out of this world.” Louie and Susie add the imagination and away they go, pretending that their vehicle takes them to outer space and inspiring all their friends to create their own adventures—all from junk.


Leedy, Loreen. *The Great Trash Bash*. New York: Holiday House, 1991. Hippo is mayor of a lovely little town with a nagging problem. A banana peel on the sidewalk finally clues him into the answer—too much trash. A town meeting produces a number of answers, but it is only when residents learn to reduce, reuse, and recycle that they clean up their town. The colorful illustrations and the comments from Beaston’s animal residents keep this useful lesson on “earth care” from being too preachy.

Lehn, Barbara. *What Is a Scientist?* Brookfield, CT: Millbrook Press, 1998. Simple text and color photographs describe how scientists learn from their senses, observe details, ask questions, communicate their findings, and have fun as they experiment. Children demonstrate each of the processes.

Lyon, George Ella. *ABCedar; an Alphabet of Trees*. New York: Orchard Books, 1989. Minimal but poetic text and earth-tone illustrations provide alphabetical examples of various tree leaves and fruits/seeds. Human hands holding the leaves allow relative size comparisons. Small black and white people and trees also provide relative size and shape information. An uppercase alphabet runs across each double-page spread. Because the text is so minimal, careful observation and conversation are required.

Lyon, George Ella. *Counting on the Woods*. New York: DK Publishing, 1998. A very simple counting poem and beautiful photographs portray features found during a walk in the forest. The book’s text and illustrations encourage close observation. Descriptive words stimulate the senses. Descriptive words are so engaging one can almost smell and feel the moss rug, hear the quiet, and sense of awe at the eggs in the blackbird nest.

Madden, Don. *The Wartville Wizard*. New York: Aladdin Books, 1993. This is a fun story about one conscientious man and what happens to a town where almost everyone litters and no one picks the litter up. The tale is long, but if edited for young children, the story line and detailed pictures provide a great environmental message and can generate much discussion.

Martin, Bill, Jr., and John Archambault. *Listen to the Rain*. New York: Henry Holt, 1988. Rain is such a common occurrence for most of us that few really listen to it. Slow and soft, splish and splash, roaring and pouring—all these descriptive words in spare rhythmic text, plus richly colored paintings, are used to describe rain.


McCarthy, Mary. *A Closer Look*. New York: Greenwillow Books, 2007. Bold, collage illustrations and simple, sparse text place an emphasis on observation. An isolated part of an object is shown with encouragement to “look!” The pages following pull back for a second and third look before revealing a ladybug (albeit “a bug”). A flower and hummingbird are treated similarly, until all three are put together on a plant, and eventually in a flower garden.

McDonald, Megan. *Insects Are My Life*. New York: Orchard Books, 1995. Amanda’s science is not always perfect, but her reverence for life among small things that crawl and fly is evident when she says “insects are my life!” Her relationships with her classmates are sometimes difficult because of her passion. Her situation improves when she makes an equally dedicated friend.
McMillan, Bruce. *Growing Colors.* New York: HarperCollins, 1988. Brilliant colors of the natural world are shown in vivid photographs of fruits and vegetables, some familiar to young children and some less known. Text is limited to the color names (all in capital letters of the appropriate color). A fruit/vegetable identification list is included.

McMullan, Kate, and Jim McMullan. *I Stink!* New York: HarperCollins, 2002. Told from the point of view of an enthusiastic city garbage truck, this story describes the truck, how it works, and what happens at the end of the day. Several pages detail the truck’s pick-ups alphabetically—apple cores and banana peels to yams and zipped-up ziti. Type variations and bold cartoon-like illustrations support the truck’s spirited monologue. Children will love the roars, burps, and whoo-ees. 2003 ALA Notable Children’s Book

Moore, Lilian. *While You Were Chasing a Hat.* New York: HarperFestival, 2001. The young girl who gives chase (with her father) when her hat is “whirled” away finds that the wind can make other things move, too. Text is sparse enough to complete just one long sentence over multiple pages of gently colored paintings. The hat is always in evidence, however, and young preschoolers will enjoy following its journey.

Moss, Miriam. *This Is the Tree.* Brooklyn, NY: Kane/Miller, 2000. Africa’s baobab tree is a great example of a plant providing shelter and nourishment for numerous animals. Its strange look is attention-getting in reality and within these colorful, detailed illustrations. A final two pages about the tree’s parts will provide additional information for teachers. 2001 NSTA Outstanding Science Trade Books for Children

Oppenheim, Joanne. *Have You Seen Trees?* New York: Scholastic, 1995. Brilliant watercolors add to the delight of this rhythmic, rhyming celebration of trees in all seasons. Each scene is worthy of a conversation about the details pictured there, even the silly literal-names page. The concluding facts about 16 different trees may also interest children.


Posada, Mia. *Ladybugs: Red, Fiery, and Bright.* Minneapolis, MN: Carolrhoda Books, 2002. With colorful illustrations and rhyming text (sometimes a bit forced), this book depicts the life cycle of an insect especially helpful to humans. Interesting details, including the orange liquid oozed from their legs, are provided in a concluding “More about Ladybugs” section. NSTA Outstanding Science Trade Book for Students K-12
Robbins, Ken. *Autumn Leaves*. New York: Scholastic, 1998. On the premise that leaves are more interesting to look at in autumn, the author first provides some leaf basics: they are connected to a tree by a stem and have veins, most are flat and thin, shape and size vary greatly, and some have rough edges and some smooth. Eventually a dozen specific tree leaves are shown, on and off the tree. The obvious differences in color, size, and shape among leaves invite close observation and interesting comparative conversation.


Rydell, Katy. *Wind Says Goodnight*. New York: Houghton Mifflin, 1994. A young child is trying to sleep but the sounds outside the bedroom are disturbing. In a rhythmic cumulative text, the wind takes charge in trying to quiet the various offenders. Large, gentle colored-pencil pictures of the nighttime are good observation opportunities and each “excuse” will provide a topic for conversation.

Ryder, Joanne. *A Fawn in the Grass*. New York: Henry Holt, 2001. A young child walking in the woods discovers several treasures, including a fawn hidden in the grass. Gentle watercolor illustrations and very sparse rhyming text give a leisurely feeling of wonder at all he sees. The close observer will find that fun details abound—like the ladybug on the child’s sandal.


Sayre, April Pulley. *Crocodile Listens*. New York: Greenwillow Books, 2001. What is this Nile crocodile listening for? Among the sounds of the warthogs, weaverbirds, and frogs, the mother crocodile hears the first cries of her babies as they hatch from their eggs. Realistic-looking, earth-tone drawings illustrate the story of the waiting and then the little crocodiles’ first days.

Schaefer, Lola M. *What’s Up, What’s Down?* New York: Greenwillow Books, 2002. This unique book first must be turned sideways and read from bottom to top—mole to moon—and then from top to bottom—moon to ocean floor! Different perspectives among the things in the natural world become clearer as the reader sees what is living above and below another plant/animal. The bright pastel illustrations appropriately support each up and down viewpoint, even adding arrows in case you forget which way you are reading.

Seuling, Barbara. *Whose House?* Orlando, FL: Gulliver Books, 2004. As a young child sits under a tree reading about animals, his imagination places him in each habitat. In the end, the white house with red roof, welcoming parents, cat, and familiar objects turn out to be perfect for a little person. Gentle illustrations, sometimes with silly pictures of the child in the animal home, provide good observation practice.


Stewart, Melissa. *When Rain Falls.* Atlanta: Peachtree, 2008. People tend to move or stay indoors when it rains, but what do animals do? The author’s spare but descriptive text shows a variety of animals from forest, field, wetland, and desert. Some are like people—they return to their houses: chickadees to their tree holes and foxes to their dens. But squirrels use their bushy tails as umbrellas, ducks have oily feathers so they just continue to float, and caterpillars and spiders usually find a leaf to hide under. The watercolor illustrations are perfect for a wet day and lend themselves to close observation.
Stein, David Ezra. *Leaves.* New York: G. P. Putnam’s Sons, 2007. A young bear experiences his first falling leaves and tries—unsuccessfully—to put them back on the tree. Autumn becomes winter, and following his own hibernation, he delights in the little green buds that herald spring. Both watercolor illustrations and simple text add to the sense of change that the little bear discovers.

Stockdale, Susan. *Nature’s Paintbrush: The Patterns and Colors Around You.* New York: Simon & Schuster Books for Young Readers, 1999. Unless colors and patterns are brilliant like a red-eyed tree frog or peacock’s tail, many people do not notice the colors and patterns in nature. This book calls attention to features like the spines on a cactus, bumps on a starfish, and eyespots on several fish, and explains each as camouflage, defense, or courtship. Text for each acrylic illustration begins with a question and then provides an appropriate answer. The “have-you-noticed . . . ?” questions and detailed paintings encourage conversation and observation practice.


Udry, Janice May. *A Tree Is Nice/Un arbol es hermoso.* New York: Harper Trophy, 1987. “Nice” is not a description usually given to trees, but it suggests many of the valuable roles trees can play. This simply and gently written book is illustrated with part black-and-white/part gently colored drawings, all showing why a tree, even if you have only one, is nice. Appropriate cautions about tree climbing can be added for young children. 1957 Caldecott Medal

Weninger, Brigitte, and Anne Möller. *Precious Water.* New York: North-South Books, 2000. A clear glass of water is the introduction to “all things need water.” Plants, animals, and people are all examples. Collage pictures and limited text are sufficiently detailed for good discussion.


Zimmerman, Andrea, and David Clemesha. *Trashy Town.* New York: HarperCollins, 1999. With a rhyming refrain, this is the story of Mr. Gilly, who collects the garbage in Trashy Town. Observant eyes may see several situations that never appear in the story but warrant discussion: the mice who appear on each page, the litter that shows around the trash cans, or why Mr. Gilly needs a bath after his day’s work. 2000 ALA Notable Children’s Book.