Ahhh... Summer! There’s nothing like those long, lazy days! What do you plan on doing with your time this summer? Video games? No way, too boring! Check out all these fun activities that are simple ways to get outside and explore your backyard a little closer.

There are ten different ideas in this notebook. You can do any or all of the activities you like. Use the ideas to get started on your own nature explorations. Imagine all the fun you’ll have this summer as you get up close and personal with insects, toads, and other creatures! As you pick your adventures, you’ll build lots of great memories of your time outdoors. Enjoy your nature explorations!
Activity #1
Tree-Mendous Mystery
Tree-mendous Mystery

What's so great about a dead log? Don't let this question stump you. Pick apart your own rotten log for clues.

What you need:

- 1 rotten log (or tree stump)
- 1 large stick
- 1 notebook
- 1 pencil

What you do:

1. As you and your child examine the log, draw or write what you see on a sheet of paper.
2. First, check the surface of the log. What do you see? You may see slime trails of snails or slugs. Also look for mosses, lichens, nutshells (from feeding squirrels), or holes bored into the log.
3. Peel off a piece of bark. What do you see? You may see ants or beetles, or you may find the tunnels that beetles chew into wood.
4. Use a large stick to pick apart any crumbly wood on the log. Now what do you see? Did you send spiders, centipedes, or pill bugs running? Do you spot any insect eggs or larvae?
5. If the log is hollow, carefully poke your stick inside. You may find nest materials or a snake skin.
6. Parent: Roll over the log with your foot. You and your child may find snake or lizard eggs underneath. Remember to gently return log to its original position.
7. What else did you find?

What you talk about:

Ask your child to use the notes the two of you took to answer these questions:

- What type of animals did you find in the rotten log?
- What were they doing there? (Many were finding shelter, food, or places to raise their young.)

Read more about it:

- Nature’s Cleaners by Bobbie Kalman
- Once There Was a Tree by Natalia Romanova
- Under One Rock by Anthony Fredericks

ACTIVITY #2
Creatures By the Foot
Creatures by the Foot

This fun activity will have you snooping around for creatures that may be living just under your feet! To conduct a simple creature survey in a one-yard grid, just follow these steps . . .

What you need:

- yardstick
- string
- scissors
- garden trowel (optional)
- chart (provided here)
- pencil or marker
- insect field guide (optional)

What you do:

1. Cut four one-yard pieces of string. Locate a grassy area, flowerbed, or other place with vegetation outside, and use the string to mark off a one-yard square.
2. Help your child find and count different types of insects, worms, or other creatures within the square yard. Be sure to look beneath the grass, on plant leaves, and under rocks.
3. Consider using a garden trowel to dig up a bit of soil and look for worms. Some creatures you are likely to find include ants, grasshoppers, beetles, and earthworms.
4. Use the chart on the next page and make a hash mark for every creature you find.
5. Your child can draw pictures of the creatures, and you can help write in the creatures' names. Use a field guide to help identify any unfamiliar insects.

What you talk about:

After you've counted the creatures in one square yard, ask your child:

- How many creatures do you think might live in two square yards?

Help your child count the hash marks two times to come up with a rough idea. Explain that scientists guess, or estimate, the number of insects in a large area the same way they just did.

Background information

The bug-counting technique in this activity is not unlike a method scientists use to gauge insect populations. They just study a larger sample area. By counting insect populations in a specific-size plot and multiplying the insect totals by the number of specific-size plots the habitat contains, scientists can estimate insect populations for an entire forest or meadow.

If you need help identifying any of the insects you see in your survey, these two books can help:

- *Insects* by Christina Wilsdon (a National Audubon Society First Field Guide)
- *Insects* by Christopher Leahy (a Peterson First Guide).

To read more about this, you might like the book *Creatures at My Feet* by Sherry Neidigh.
<table>
<thead>
<tr>
<th>Creature Name</th>
<th>Number Seen</th>
<th>Total</th>
<th>Draw Picture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: ladybug</td>
<td>3</td>
<td></td>
<td><img src="image" alt="Ladybug" /></td>
</tr>
</tbody>
</table>
ACTIVITY #3
Make a Toad House
Make a Toad House

Want to make a place for a local amphibian to hang out? Follow these directions for making a toad house.

You'll need an empty coffee can, cottage cheese container, or an old clay pot. Clay pots work best. You'll also need a trowel or something you can use to dig into the dirt.

The first thing to do is to find a place to put your toad house. There are a few things to keep in mind as you look for a good spot. Remember, toads require a cool, moist place to call their home. So, find a nice shady spot. They also eat bugs, so find a place where bugs hang out.

Now, you're ready to set up your house. When you've found your perfect spot, use the trowel to dig down an inch or so into the soil. Make sure that the size of the hole is larger than your pot or container. Now set the pot sideways into the hole and put the soil you dug up into the bottom side of the pot. This will keep the pot in place and secure, and will also serve as a nice bedding area for your toad.

That's it, you're done. All that's left is to wait and see what comes to visit.

Read about toads:

✓ Toads by Alyse Sweeney
✓ Frogs, Toads, and Turtles by Diane Burns
✓ Frogs, A Wildlife Handbook by Kim Long
✓ Eyewitness Amphibian by DK Books

(http://www.dnr.state.wi.us/org/caer/ce/eek/cool/ameliatoadhouse.htm)
Activity #4
Buddy Bingo Game
Buddy Bingo Game

Go on a walk around your house or neighborhood with your parent’s permission with a buddy. As you see each of the items on the bingo card, mark them off. Race to see who will be the first to get three in a row! You can play this game lots of times during the summer.

<table>
<thead>
<tr>
<th>Bee</th>
<th>Butterfly</th>
<th>Rabbit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pigeon</td>
<td>Any animal not on this card</td>
<td>Ants</td>
</tr>
<tr>
<td>Squirrel</td>
<td>Spider</td>
<td>Sparrow</td>
</tr>
</tbody>
</table>

(game card from *Your Big Backyard*, March 2006)
ACTIVITY #5
Nature Journal
Keep a Nature Journal

Keeping a nature journal is a great way for you to record what you’ve seen on your nature walks. There’s room for sketches, poems, notes, and even a feather or two. You can make your nature journal any way that you’d like. On the next few pages are some tips and tricks from the National Wildlife Federation’s website to help you get started. You can make as many copies of the fill-in-the-blank pages as you need to make your journal just for you.
Create Your Own
Nature Journal

Quick! Can you answer these questions:
• What birds did you see last week?
• Can you describe one wildflower or tree blooming near your home?
• What have the animals that live near you been up to lately?

If you can, hooray! If you can't that's okay. You can use a nature journal to describe neat things you see, hear, smell and touch outdoors. It can also help you keep track of changes that are going on with the plants and animals around you.

You can keep a nature journal no matter where you are...in your backyard...in your schoolyard...in a park...on a city street...looking out a window...anywhere!

Adapted from Ranger Rick® magazine.
Visit our website at www.nwf.org/gowild.
Notebook. Before you buy one, think about how you'll carry it. Will it need to fit in your pocket, a waist pack or a backpack? Also, do you want a notebook with paper bound in or a binder you can add pages to?

Paper. Do you want blank paper or lined paper? It may be easier to write on lined paper but drawings may look nicer (and be more fun) on blank paper. Or you can print out the journal pages that follow these instructions.

Something to write and draw with. You can sketch with your same pen or pencil you write with and then fill in colors at home. Just be sure to write down the color of the plant or animal that you've sketched.

Also, if you have a magnifying glass or binoculars, they can come in handy to look at things closely.

Go outdoors. Sit on your front porch, walk around the edge of a parking lot, go for a hike - just get outside! Take your journal supplies listed above. Ask friends if they want to come along.

Ask questions. What's different about today? What sounds do you hear? What do you smell? Can you see any animals? What are you doing? With words or drawing answer these questions in your journal.

Show and tell. When you draw an animal or plant, pay attention to all the details. Does it have stripes or dots on its back or head? How many petals are on the flower and how are they arranged? Also write down its size. Is it smaller than your little finger? Is it knee-high? Or is it taller than you? Colors are important too. Write down where you saw the plant or animal and exactly what it was doing.

Tape and glue stuff. Take pictures and tape them into your journal, like the one below. You can also tape and glue other things such as leaves or seeds.

Find that name. At home or in the library, you may want to use a field guide to look up the plants and animals you've seen. If you have described the animals or plant carefully, you can often find it in a field guide - or find something that's close. Or, you can have fun making up your own names to describe them!

Here's an example of what your nature journal might look like.
Today's date is: ____________  The time is: ____________

What is the weather like?

Where are you?

Who are you with?

What do you see?

What do you smell?

What do you hear?

What can you touch? How does it feel?

What else is special about what you are observing?
My Nature Journal

Record what you are observing using sketches, pictures, words, seeds, leaves . . . anything! But please be careful not to remove or disturb any natural items that might be useful to the critters you are observing, like nests, feathers, wildflowers . . .
Activity #6
Insect Jar
Insect Collections

Go a little buggy this summer by becoming a junior entomologist. You can get started by making a looking jar. This project is from *Insectigations* by Cindy Blobaum. There are lots of other great books you can check out at the library:

- *The Practical Entomologist* by Rick Imes
- *Everything Bug* by Cherie Winner
- *The Songs of Insects* by Lang Elliott
- *Bug Hunter* by DK Books
Insect cages come in all sorts of shapes and sizes and are made from a wide variety of materials. While netting is good for airflow, it makes it hard to see the small details on insects. If you want to observe an insect for a short time, a clear, plastic container is your best bet.

**Materials**

A large, clear, plastic jar with a lid (large peanut butter containers work well)
Drill with very small bit (or a barbecue fork)

Insects need air to breathe, just like every other animal. To make your looking jar ready for temporary insect visitors, you need to make plenty of air holes.

However, many of the plastics used today are brittle and will split if you try to punch holes in them. With the help of an adult, you can either drill very small holes in the lid and near the bottom edge of the jar or heat the tip of the barbecue fork over a flame and melt small holes in the lid and near the bottom edge of the jar.

The larger the mouth of the jar, the easier it will be to put insects in. After you have watched your insects and made notes and sketches in your journal, turn the jar on its side and open the lid. Don’t shake the jar to get the insects out, just wait a few minutes and they will be gone.
Field Research Tips
Many activities in this book should be done outdoors and with live insects. Since insects have a wide range of defense strategies, including biting, pinching, stinging, spraying, and spitting, here are a few tips and tricks to help you feel the most comfortable out in the field.

- If you are going to be collecting insects in tall grass or brushy areas, wear long, light-colored pants, a long-sleeved, light-colored shirt, closed-toe shoes, and a hat. These clothes will help protect you from scratches, scrapes, poison ivy, and insect attacks.
- It is a good idea to bring a simple first-aid kit with you. Tweezers, alcohol swabs, first-aid ointment, and bandages can be a big help.
- If you get stung by a bee, pull the stinger out immediately. To help ease the pain, put ice, baking soda, meat tenderizer, or barbecue sauce directly on top of the sting.
- Ticks are tiny creatures with eight legs. They can be as small as the size of a period to as big as the end of a pencil eraser. Most ticks need blood from a warm-blooded animal in order to continue their development or lay eggs. To discourage these bloodsucking ticks from feeding on you, tuck your pant legs into your socks. When you go inside, check all over your skin and in your hair to see if any ticks managed to sneak by. To remove a tick that is crawling on your clothes or skin, place the sticky side of a piece of tape on the tick. Lift up and fold the piece of tape in half (tick side in) to create your own piece of ticker tape. If a tick has its head stuck under your skin, have an adult use tweezers to remove it.

Do you have your journal and pencil ready? Are you dressed for adventure? Get ready to explore how insects are similar to and different from you as you attract, catch, study, mimic, and release insects in your area.
activity #7
So Many Seeds!
So Many Seeds!

What you need
- egg carton (optional)
- seed or plant field guide (optional)
- snack of sunflower or pumpkin seeds to accompany your search (optional)

What you do
1. Start collecting. Help your child hunt for seeds (and the berries and other fruits that may contain them). A walk through tall grasses may produce burrs or other seedy hitchhikers left over from last fall. Look up to find maple or sycamore wings. Search the ground for pinecones, acorns, and last year's apples. Berries on shrubs are great finds as well. Try to fill each section of the egg carton with a different variety. (Note: Some seeds are toxic. Don't eat the seeds you find.)

2. Take a good look. Find the seeds in any fruits you've found. Open up some of the bigger seeds to see what they look like inside. Have your child suggest reasons why acorns have hard casings and chestnut covers are thorny. (The coverings provide protection from weather and animals.)

3. Be seed detectives. Seeds have a better chance of getting enough food and light when they grow far from big plants like their parents. But how do they get there? Seeds can fly through the air or float in water to get to their new homes. They can hitch a ride on animals—in their fur or through their digestive system! Look at all the seeds you've gathered. Guess how each kind gets dispersed. Encourage your child to experiment. Toss seeds into the air, especially maple wings. Blow on dandelions. Shred an old pinecone to see what happens. Have your child guess the role different local animals might play in dispersing seeds.

Resources
Good books to read together include:
- A Seed Is Sleepy by Dianna Hutts Aston
- The Tiny Seed by Eric Carle
- A Fruit Is a Suitcase for Seeds by Jean Richards

Learn more about plants by playing a game at www.urbanext.uiuc.edu/gpe/index.html.

(Activity is from Your Big Backyard magazine, May 2008, page 30)
ACTIVITY #8
Hummingbird Feeder
Hummingbird Feeder

Summertime is hummertime! Invite hummingbirds to drop by for a visit.

What you need
- clean plastic bottle
- plastic straw
- red, yellow, and green craft foam
- red paint
- wire or string
- waterproof glue
- hummingbird nectar (see below)

What you do
1. Make a small hole about 1 inch from the bottom of the bottle. Push a straw through the hole.
2. Fill the bottle with water, put the cap back on, and adjust the straw until water fills it up without spilling out.
3. Empty the bottle and glue the straw in place with waterproof glue.
4. Make a flower out of craft foam. Cut a hole in the center of the flower. Then slide it over the straw.
5. Decorate the bottle with dots of red paint. Then tie a wire around the top of the bottle for hanging.
6. Fill the bottle with “nectar” and replace the cap. Hang the feeder outside in a shady spot.

Hummingbird “Nectar”
1. Mix 1/2 cup of sugar with 1 cup of hot water.
2. Stir until the sugar dissolves.
3. Add 1 cup of cold water.

(Activity is from Your Big Backyard magazine, May 2010, page 23)
Activity #9
Worm Hotel
Worm Hotel

Do you know why gardeners love worms? Make a worm hotel and find out!

What you need
- 1-gallon glass jar
- loose garden soil (not potting soil)
- sand
- water
- trowel or shovel
- piece of paper
- clean plastic container
- leaves
- lettuce
- brown paper bag big enough to fit over the jar
- some worms, of course!

What you do
1. Build the hotel. Loosely layer the soil and sand in the jar until it is three-quarters full. Moisten the soil mixture lightly.
2. Invite some guests. Worms are easy to find after it rains or in a damp part of the garden. Dig up four to six worms and put them in the plastic container with a little soil.
3. Check them in. Place the worms in the jar and put a few dead leaves and pieces of lettuce over them. Set the paper bag over the jar to block light but still let air in. Put the jar in a warm spot (55–75°F).
4. Provide room service. Worms need a little water, but too much will drown them. Water the soil by flicking some drops off your fingers. Every few days, remove any rotting food and add new lettuce or potato peelings.

What you talk about
1. Watch the worms. Before putting a worm in the hotel, have your child run wet fingers softly down the worm’s sides. Ask what it feels like. (Your child should discover stiff bristles called setae.) Then put the worm on a piece of dry paper. Listen carefully to the setae scratching as the worm crawls across the paper. Ask your child how the worm crawls. (It uses muscles to shorten its body and then lengthen it.) What do the setae do? (They help the worm move through soil.)
2. Pay a visit. After a few days, remove the bag. Do you see any tunnels? How have the layers of sand and soil changed? Can your child guess why gardeners love worms? (Worm tunnels help introduce air and water into the soil. Worms also enrich soil by breaking down leaves and grass.)
3. Let them go. Enrich the soil in your garden by letting the worms go after you finish watching them.

Books
To learn more about squirming worms, read:
- Diary of a Worm by Doreen Cronin
- Wormology by Michael Elsohn Ross
- Wonderful Worms by Linda Glaser

Web Sites
Find more squirmly fun at these Web sites:
- urbanext.uiuc.edu/worms
- yucky.discovery.com/flash/worm/index.html

(Activity is from Your Big Backyard magazine, April 2009, page 30)
Activity #10
Litter-Getters Crew
Litter-Getters Crew

Who’s a litter-getter? You can be! A litter-getter is someone who picks up litter wherever they are—home, at a park, or in a parking lot. Litter-getters help collect trash that hasn’t been thrown away or recycled properly. They are always careful to follow good safety rules and they always go with a parent or a buddy. See how much litter you can pick up this summer by checking off things from the Scavenger Hunt list as you find them.

Fast Facts About Litter from the No More Trash website:

✓ What is litter?

<table>
<thead>
<tr>
<th>Type of Litter</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast Food Waste</td>
<td>(33%)</td>
</tr>
<tr>
<td>Paper</td>
<td>(29%)</td>
</tr>
<tr>
<td>Aluminum</td>
<td>(28%)</td>
</tr>
<tr>
<td>Glass</td>
<td>(6%)</td>
</tr>
<tr>
<td>Plastic</td>
<td>(2%)</td>
</tr>
<tr>
<td>Other</td>
<td>(2%)</td>
</tr>
</tbody>
</table>

✓ How long does it take to break down into the earth?

<table>
<thead>
<tr>
<th>Object</th>
<th>Decomposition Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Styrofoam container</td>
<td>&gt; 1 million years</td>
</tr>
<tr>
<td>Plastic jug</td>
<td>1 million years</td>
</tr>
<tr>
<td>Aluminum can</td>
<td>200-500 years</td>
</tr>
<tr>
<td>Disposable diaper</td>
<td>550 years</td>
</tr>
<tr>
<td>Tinned can</td>
<td>90 years</td>
</tr>
<tr>
<td>Leather shoe</td>
<td>45 years</td>
</tr>
<tr>
<td>Wool sock</td>
<td>1 year</td>
</tr>
<tr>
<td>Paper bag</td>
<td>1 month</td>
</tr>
<tr>
<td>Banana peel</td>
<td>3-4 weeks</td>
</tr>
</tbody>
</table>

✓ How can I cut down on the amount of garbage I make?

- Use a refillable water bottle
- Use cloth napkins and rags instead of paper
- Use reusable plastic containers instead of zipper bags
- Use cloth shopping bags when at the store. Also, if you only have a few things, ask the cashier not to give you a bag.
- Find ways to make recycled art projects
- Start a compost pile with your parents help
- Be a litter-getter captain for your family and help everyone remember to recycle. Many things can be recycled if you know where to go. Check out the website earth911.com for ideas.
<table>
<thead>
<tr>
<th>Litter-Getters Crew Scavenger Hunt</th>
</tr>
</thead>
<tbody>
<tr>
<td>As you pick up litter, check off the items below. Keep track for the whole summer of things that you find. Recycle or find out the best way to dispose of the items you collect. Remember, don’t pick up items that have broken or sharp edges. If you aren’t sure if you should pick it up, ask the adult in your group!</td>
</tr>
<tr>
<td>Something that soaks up water</td>
</tr>
<tr>
<td>Something that travels</td>
</tr>
<tr>
<td>Something that can be tied into a bow</td>
</tr>
<tr>
<td>Something sticky</td>
</tr>
<tr>
<td>Something that floats</td>
</tr>
<tr>
<td>Something pointy</td>
</tr>
<tr>
<td>Something with cracks</td>
</tr>
<tr>
<td>Something that makes noise</td>
</tr>
<tr>
<td>Something that is a home for an animal, insect or other living thing</td>
</tr>
<tr>
<td>Something slippery</td>
</tr>
<tr>
<td>Something triangular</td>
</tr>
<tr>
<td>Something that starts with the letter Q, X, Y, or Z</td>
</tr>
<tr>
<td>Something that came from sun energy</td>
</tr>
<tr>
<td>Something that a living thing could use for food</td>
</tr>
<tr>
<td>Something that can change into something else</td>
</tr>
<tr>
<td>Something that came from plant</td>
</tr>
<tr>
<td>A piece of glass</td>
</tr>
<tr>
<td>Something that came from rocks</td>
</tr>
<tr>
<td>Something that is made of paper</td>
</tr>
<tr>
<td>Something made of wood</td>
</tr>
<tr>
<td>Something made of plastic</td>
</tr>
<tr>
<td>Something that is squishy</td>
</tr>
<tr>
<td>Something made of foam</td>
</tr>
<tr>
<td>Something that has rubber or another unusual texture</td>
</tr>
<tr>
<td>Something that can be recycled</td>
</tr>
<tr>
<td>Something you can make a craft project with</td>
</tr>
<tr>
<td>Something shiny or metallic</td>
</tr>
<tr>
<td>Something that came from a river, lake, or ocean</td>
</tr>
<tr>
<td>Something that is litter but you can still use</td>
</tr>
</tbody>
</table>