

Sample  
Package

Get OUTDOORS!

An **Educator's Guide to  
Outdoor Classrooms**  
in Parks, Schoolgrounds  
and other Special Places

Activities and Support Materials for K-12 Teachers and Other Educators

# get outdoors! sample package

Come explore this new educator's guide that supports teachers from K – 12 in getting their students outside and engaged in experiencing the outdoor classroom. Linked to many prescribed learning outcomes and the new BC Environmental Learning and Experience document, the guide includes “baby steps” for taking students outdoors – easy and powerful sensory awareness activities that help develop personal connections to nature. It also contains Teacher Tip Sheets and checklists covering group management, materials, field trip planners and the importance of the “100-Metre Field Trip”.

Activities include hands-on mapping, cultural explorations of special places, values exploration and secondary level projects. Developed over two years with input from dozens of experienced teachers and outdoor educators, it also contains current research on the many benefits of outdoor exploration in the development of children's physical, mental and spiritual health. Supported by WildBC, BC Parks, Parks Canada, Metro Vancouver, and the Ministry of Education.

Book a **get outdoors!** workshop through:

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# Best Outdoor!

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## An Educator's Guide to Outdoor Classrooms in Parks, Schoolgrounds and other Special Places



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Parks Canada  
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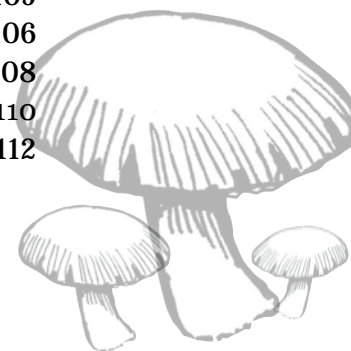
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*“Passion does not arrive on videotape or on a CD; passion is personal. Passion is lifted from the earth itself by the muddy hands of the young; it travels along grass-stained sleeves to the heart.”*

RICHARD LOUV, LAST CHILD IN THE WOODS

## Introduction to the Guide

### Welcome to the Great Outdoor Classroom!

This resource has been developed for teachers and other educators to support and inspire them to take learning outdoors. Many experienced educators have helped to create this guide, endorsing “tried-and-true” activities and combining them with practical, realistic teaching strategies. Almost all the activities can be done outdoors on the school grounds or in a local park, in recognition of the challenges of taking classes on more extended field trips. The activities have been piloted with students from Kindergarten to Grade 12 across BC, and for use by non-formal educators such as park interpreters and youth group leaders. The activities underline the main themes in the BC Environmental Learning and Experience framework (ELE, Ministry of Education, 2007) – those of Complexity, Aesthetics, Responsibility, and Ethics (C.A.R.E.). Relevant learning outcome links are included, as well as a process that maps out “baby steps” for taking students outdoors.

*“Come forth into  
the light of things.  
Let Nature  
be your teacher.”*

WILLIAM WORDSWORTH

### Background Information on Parks and Protected Areas in British Columbia

This section answers some basic questions about protected areas including why we need them, and describes the regional, provincial and national parks systems in BC.

### Section I: Simple Steps to Successful Outdoor Classrooms

#### Preparing Yourself and Your Students for the Joys and Challenges of Learning Outdoors

This section reviews current research on the benefits of outdoor exploration in the development of children’s physical, mental and spiritual health.

Barriers to taking students outside are addressed, and the concept of the 100 Metre Field Trip is supported: you don't have to go far to have engaging and instructive experiences out-of-doors. The Teacher Tip Sheets and Checklists were developed from a range of examples provided by educators, and address how to plan successful outdoor excursions that keep students (and the environment!) safe, while encouraging curiosity and creativity, and helping students make connections to the natural world.

## Section II: Get Out There! Easy Activities for Taking Groups Outside



This section highlights “classic best practices” – activities that provide easy, fun and powerful ways to explore an outdoor area, help raise awareness and develop relevant, personal connections to nature. These hands-on, sensory awareness activities require almost no materials and have been used successfully by environmental educators with groups of all ages. They are great “warm up” activities for any field trip, and great “wakeup” activities for quick daily breaks from classroom routines. Adaptations for older students are provided, as well as Critical Questions and Debriefing suggestions for discussion.

## Section III: Valuing Special Places and Family Treasures

### Protecting Natural and Cultural Treasures

This section engages students in exploring places that are meaningful to them, examines cultural connections to place and community and investigates values around protection and care. Four activities explore these concepts: listening to a guided imagery story about protecting things of importance, interviewing family members to explore cultural heritage, and writing and reading about personal experiences with special places. Worksheets support student-directed learning.

## Section IV: Exploring and Mapping Special Places

These activities explore biodiversity, habitat, and mapping. Students discover BC's biogeoclimatic zones by creating postcards, engaging in hands-on exploration of local biodiversity and developing community mapping skills, including creating base maps, keys, scale, and transects. Activities support student-directed learning, and target Science and Social Studies learning outcomes for intermediate and secondary students.

### The Appendices

Prescribed Learning Outcomes, by grade and subject level, additional resources, web links, further background material, along with detailed Park Planner Sheets for visiting provincial, regional and national parks across BC.

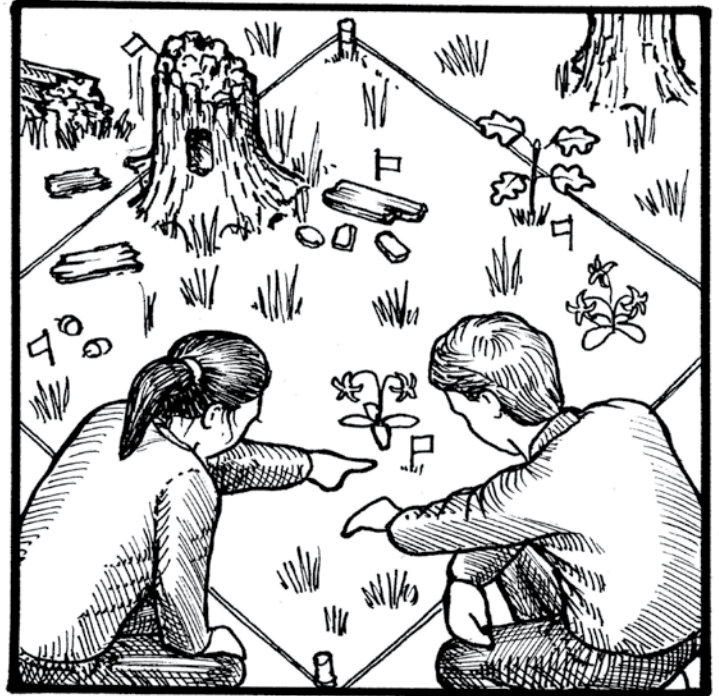
However you choose to use this guide, we wish you enjoyment and inspiration in your exploration of the great outdoors!

### Conceptual Framework

This resource was developed based on the following “big ideas” or key concepts, which provide a framework for each section and activity. They can be used to plan teaching units, guide the integration of outdoor learning across several subjects, and help students monitor their own learning projects.

**1 | CONCEPT 1: WE PROTECT THINGS THAT ARE VALUABLE TO US. OUR HERITAGE AND CULTURE INFLUENCE OUR VALUES.**

**2 | CONCEPT 2: HUMANS NEED PROTECTED NATURAL AREAS FOR THEIR SPIRITUAL, PHYSICAL AND INTELLECTUAL HEALTH BENEFITS, AND THEIR SCIENTIFIC, CULTURAL, ECOLOGICAL AND ECONOMIC VALUES.**





**3** | **CONCEPT 3: THE DISCOVERY, EXPLORATION AND ENJOYMENT OF LOCAL NATURAL AND PROTECTED AREAS PROVIDE VALUABLE LEARNING EXPERIENCES FOR STUDENTS.**

**4** | **CONCEPT 4: DIRECT, PERSONAL EXPERIENCE AND INVOLVEMENT WITH PARKS AND NATURAL AREAS IN OUR COMMUNITIES HELP DEVELOP ONE'S SENSE OF PLACE.**

**5** | **CONCEPT 5: PLACE-BASED EDUCATION, WHERE LOCAL CULTURE AND NATURAL HERITAGE ARE EXPLORED, RE-INTEGRATES AND RESTORES THE ESSENTIAL LINK BETWEEN PEOPLE AND THEIR COMMUNITIES.**

**6** | **CONCEPT 6: ACTIVE STEWARDSHIP, OR CARING FOR WHAT WE DON'T OR CAN'T OWN, IS IMPORTANT TO CONSERVE, RESTORE AND SUSTAIN PARKS, NATURAL AREAS AND OTHER SPECIAL PLACES.**

These concepts are closely aligned with the Environmental Learning and Experience (ELE) learning principles, published by the BC Ministry of Education (2007). These principles include Complexity, Aesthetics, Responsibility and Ethics (CARE) as follows:

**C**

**A**

**R**

**E**

**C** -a consideration of complexity and complex systems,

**A**- aesthetic appreciation,

**R**-responsible action and consequences of action, and

**E**-the practice of an environmental ethic.

The ELE's model of direct experience, critical reflection and negotiation are also supported and endorsed by the activities and teaching strategies within this guide.

[www.bced.gov.bc.ca/environment\\_ed/](http://www.bced.gov.bc.ca/environment_ed/)



*“Wonderful how completely everything in wild nature fits into us, as if truly part and parent of us. The sun shines not on us but in us. The rivers flow not past, but through us, thrilling, tingling, vibrating every fiber and cell of the substance of our bodies, making them glide and sing.”*

- JOHN MUIR

*“Forget not that the Earth delights to feel your bare feet  
and the winds long to play with your hair”.*

– KAHILIL GIBRAN

## Section I: Simple Steps to Successful **Outdoor** Classrooms

### Preparing Yourself and Your Students for the Joys and Challenges of Learning Outdoors

This first section reviews some current research on the benefits of outdoor explorations to the development of children’s physical, mental and spiritual health. Barriers to taking students outside are addressed, and the concept of the **100 Metre Field Trip** is supported: you don’t have to go far away to have engaging and instructive experiences out-of-doors. The Teacher Tip Sheets and Checklists were developed with the help of dozens of educators, and address planning successful outdoor excursions that keep students (and the environment!) safe, while encouraging curiosity, connection and creativity.

### In this Section:

- A) Why Should I take my Class **Outside**?
- B) **Beating the Barriers** to Going Outside:  
Challenges and Solutions from Teacher Experts
- C) Teacher **Tip Sheets**
  1. Outdoor Group Management Tips
  2. Sample Letter to Parents: Why Take Students Outdoors?
  3. A Note on Conservation: Model a Reverence for Nature
  4. Simple Outdoor Classroom Essentials: A List of Materials
  5. Field Trip Checklist
  6. Outdoor Field Trip Planner Sheet



## Teacher Tip Sheet 1 | Outdoor Group Management Tips

### Beating “Recess Syndrome” and Creating Effective Outdoor Classrooms

#### 1 BEFORE YOU GO: PLANNING, PREPARATION AND PRACTICE

Since most of us have not had opportunities to experience outdoor education, it’s important to teach and practice specific skills and behaviours needed for outdoor learning with students. Practice these indoors so everyone knows what to expect. Ask students to suggest ground rules and agree on them as a group. Use a whistle, duck call or other auditory signal to gather the group, and let them know it’s time to look and listen when they hear it. While doing tasks indoors, practice behaviours such as responding to the whistle, ensuring everyone can see you, and forming a circle to discuss activities. Note that some children may be uncomfortable or even fearful going outside: outlining a plan will help reassure them. The day before, explain where you’ll be going and what you’ll be doing. Discuss what to wear: good footwear (no sandals or heels!) and a wind/waterproof jacket are important.

#### 2 VISIT THE SITE BEFOREHAND AND PLAN YOUR PROGRAM WELL.

For field trips offsite, it is important to visit the location before taking your group there, even if it’s just to the local park down the street. Use the Field Trip Planning Sheet in this section to help you remember details. Find the easiest access points to a pond or field, note any unique features such as big trees to serve as boundaries and gathering places, and look for open areas for games. Write clear directions to the site for all adult drivers, note bus routes if applicable, and see if there is a map available to copy. Check the websites in the Appendices for detailed logistical information on visiting specific regional, provincial and national parks.

#### 3 SET THE STAGE

Once outside, set clear physical boundaries that students understand and will respect, e.g., “Don’t go past the big maple tree and the edge of the field”, or “If I can’t see you, you’ve gone too far”. Try out the whistle or other auditory signal and agree on a place to meet when the signal is given. Make sure all students can be seen and stress that they must be able to see you at all times.

#### 4 HEADING OUT: SMALL STEPS CLOSE BY

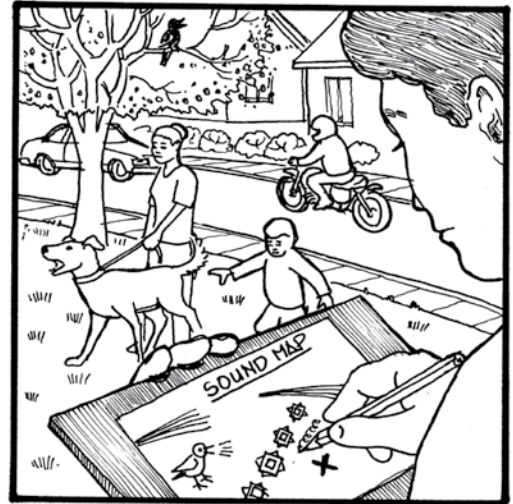
Start in the school grounds. Local explorations or “100 metre field trips” are particularly useful, as there is more opportunity to return, build on experiences and develop a sense of place. Also, students can visit them on their own time. Always begin by gathering the group in a circle and reviewing the planned activities. Keep students’ backs to the sun so they can see you. Then start with a short activity such as the Sensory Warm-up Circle or Rainbow Chips,



either of which takes just ten minutes. Later, increase your time outdoors to twenty minutes, then thirty minutes, and so on. This helps both you and the students feel comfortable and in control of each stage. A big bonus is that students tend to monitor their behaviour outdoors; they enjoy learning outside and want more opportunities.

## 5 USE WELL - DEFINED ACTIVITIES RATHER THAN LOOSE EXPLORATIONS

Gather the group together before each activity, explain and demonstrate the task, and set boundaries for exploration (“Stay between the fence and that row of trees”). Simple tools such as paint chips, magnifying glasses or toilet paper tubes used as “scopes” help focus students’ attention. Let them go while you mingle, admire and support their discoveries. End the activity back in a circle with a sharing and quick debrief. For longer outdoor durations, begin with an active game such as Habitat Freeze Tag (p. 47) or Decomposition Tag (p. 44), to allow students to burn off some energy and enable them to better focus on the more reflective activities.



## 6 BAD WEATHER BACKUP PLANS

Have some backup plans in case of poor weather, such as a shelter or big tree to retreat to, or a tarp strung between trees. You can still get out and do activities in the rain or cold as long as everyone’s appropriately dressed. Remember that paper goes to mush in the rain – bring big ziplock bags or waterproof stuff sacks to keep books and paperwork dry. Bring along some emergency raingear – inexpensive and reusable rain ponchos or big biodegradable garbage bags with holes cut out for head and arms, some plastic grocery bags to stuff into leaky boots or shoes, and a few hats. If the weather is terrible, postpone the trip: there’s no sense in having a miserable experience.

## 7 SAFETY RULES

Review some basic safety rules with the group before you head out on bigger adventures:

- ☛ Choose a buddy and keep that person in sight all day.
- ☛ If you get separated from the group, stay put! Hug a Tree – stay in one place and the group will find you more quickly.
- ☛ Ensure students are dressed properly, have adequate water and food, and know who has First Aid kits (the teacher and/or at least one parent/helper).

## Teacher Tip Sheet 4

## Outdoor Classroom Essentials

### A List of Materials

Taking students outside does not have to be a complicated endeavour with sophisticated and expensive “science equipment” or field trip gear. In fact, sometimes equipment can hamper a holistic outdoor experience, and the possibility of damaging or losing expensive tools can increase anxiety for teachers. Many experienced teachers, outdoor educators and park interpreters have contributed to the following list of tools that are inexpensive, effective and easy to make.

#### 1 THE BASICS: STAYING TOGETHER, DRY AND COMFY

**Attention-Getters:** Use a whistle, bird or duck call, a musical instrument like a penny whistle or rattle, or other audible signals to get a group’s attention when outdoors. Let them know it’s time to look and listen, or gather together when they hear it. It’s much easier on your voice and more fun than yelling!

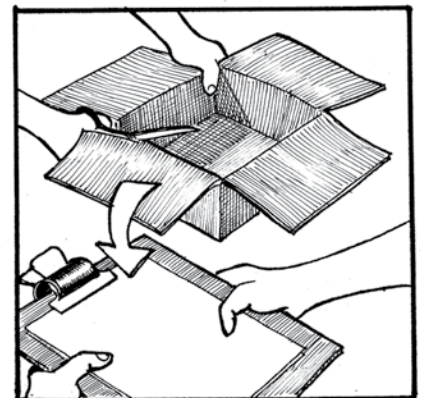


**“Sit-Upons” or “Wedgie Pads”:** Have your class make a set of these handy outdoor seats, to keep dry and comfy when sitting on damp or muddy ground. Use a piece of cardboard or collapsed cereal box, add a section of the daily newspaper or cushion foam (for added comfort!) and cover it with a large grocery bag. Tape the bag tightly shut with duct tape or other waterproof tape.

**“Butterfly-Clip-Boards”:** Make inexpensive and practical clipboards by cutting out rectangles of discarded cardboard, (cereal boxes work well) or using the covers of old three-ring binders with the cut edge duct-taped. Attach several pieces of paper to the board using a large bull-clip or butterfly clip fastener, or two big paper clips, and add a piece of transparency paper on top to keep things dry.

*“Sit-upons and bull-clip boards can also be used as fans or sun shades for students on hot days, to make sure everyone stays cool and able to concentrate.”*

– Rachel Walmsley



**Outdoor Writing:** On wet days, paper can “melt” or turn into mush very quickly. Provide participants with large zip lock bags or waterproof stuff sacks to store paper, clipboards and journals. Encourage the use of pencils, as ink will run in the rain.

**“Instant” Raincoats:** Great for those unexpected showers and/or unprepared participants! Buy a package of large garbage bags (the big orange or clear biodegradable leaf bags are a nice size, easier to decorate, and easier on the environment) and have students cut out holes for their head and arms. If you like, add decorations with duct or coloured tape and permanent markers. Bring along some grocery bags to stuff into leaky boots or shoes as well.

**Name Tags:** Have students make name-tags that reflect the theme of the field trip by using cut-out shapes (“tree”, “shell”, “animals”) or drawing pictures; make them for parent helpers too.

## FOCUSING AND COLLECTING TOOLS

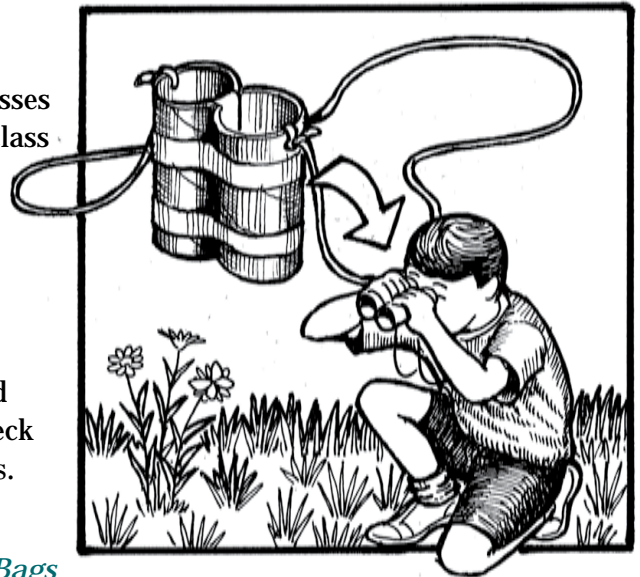
**Magnifying Loops:** Small, hand-held magnifying glasses are extremely useful. Save your pennies to purchase a class set. Look for the ones that fold in on themselves for protection, versus the ones that have handles and come in a ziplock bag: the bags get lost and the lenses get scratched quickly.

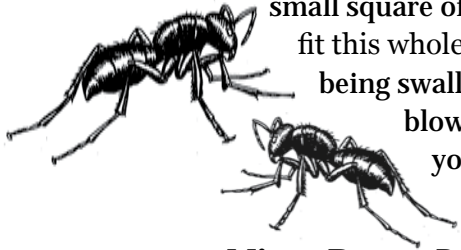
**Toilet Roll Scopes:** Collect empty toilet paper and paper towel rolls and use them as “spotting scopes” and “binoculars” (tape two toilet rolls together and add a neck string) to help younger children focus on specific things.

**Texture Bags:** Bring some cloth or paper bags for collecting textured natural items. *“I use Touchy-Feely Bags with all ages as a focusing tool. Use paper bags, lunch bags or cloth, and collect items from the area you’re going to...these can be around a theme like trees (leaves, cones, etc.) or a variety of things. Make five different bags with one item in each to pass around a circle. No one is to look in the bag, just slip their hand inside to feel the item, then hand it to the next person. Once all five bags have gone around the circle, you’re ready to go out and find the items!”*

- Roseanne Van Ee, Vernon, BC

**Texture Rings:** A texture ring is a donut-shaped piece of cardboard wrapped with different things to demonstrate texture: *“I use things like sandpaper, soft yarn, fuzzy fabric, plastic, etc., that kids can match to natural textures. They are great focusing tools!”* – Susie MacDonald, Prince George





**Insect collectors or “Pooters”:** Get some large “milkshake” straws (wide diameter) and smaller pop straws and cut them in half. Slip a small square of nylon stocking over the end of the smaller straw and fit this whole thing into the larger straw (the nylon mesh prevents bugs being swallowed!!) Practice sucking up small bits of paper and gently blowing or “pooting” them into a clear collecting jar - then try your pooting skills on insects. Remember to always release everything where you found it!

**Micro-Boxes:** Buy small plastic collection boxes that also magnify – they come in different sizes and make focusing easy.

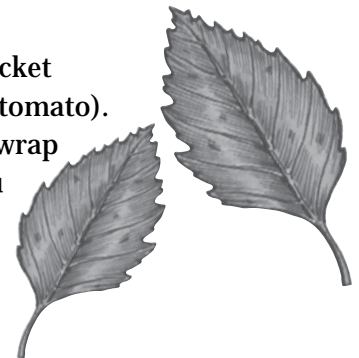
**Small clear containers:** For temporary collections, use pill bottles, film canisters and small deli containers. *“Empty film canisters make good collection boxes for dead insects, water samples or other little items that students want to look at under the microscope when we get back to class.”*  
- Erika Van Oyen, Kelowna

### 3 WATER EXPLORATION TOOLS

**Turkey basters** and large “milkshake” straws as gentle water insect collectors. *“Turkey basters are great for gently sucking up water sample critters. I use white ice cube trays or styrofoam egg cartons filled with water to separate critters for viewing.”* – Kim Fulton, Armstrong

**Dip nets:** Make your own using a broom handle or pole, a wire coat hanger, and some old nylon stockings with attached feet. Bend the coat hanger into an oval frame and flatten out the “hook” part. Fold the nylon over the rim, attaching it with small safety pins. Tape the flattened “hook” to the pole with duct tape and voila! *“Home-made dip nets are a lot of fun to make and use. Coat hangers, panty hose or cheese-cloth and an old hockey stick work well. Kids make them ahead of time and it creates excitement.”*  
– Kim Fulton, Armstrong

**Pond scopes:** Cut the bottom out of an ice cream bucket with a utility knife or use a large empty can (coffee or tomato). Cover the bottom and up the sides with heavy plastic wrap and secure with an elastic band and duct tape and you have an excellent tool to take a look into the pond.



### 4 GENERAL ESSENTIALS TO HAVE IN YOUR OUTDOOR “BAG OF TRICKS”

**Pencil sharpener** - pencils always break!

**Chalk** - for marking pavement

**Wax crayons** - for making bark / leaf / rock rubbings

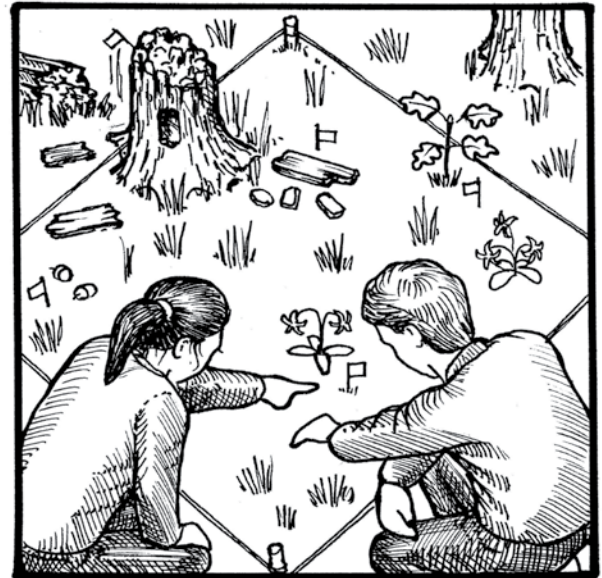


**Lengths of rope and string** - for defining the boundaries of quadrants, circles and transects for study; delineating mini nature trails; providing a walking guide for a group of young children or blind-folded participants (“Everyone hold onto the rope”); building food chains and webs

**Flagging tape** - to highlight boundaries, special finds or trails, and to use as “tail tags” for games

**Sunscreen, water and snacks** - have students bring their own and carry extra

**Weather instruments** - thermometer, rain gauge, wind gauge



## FIELD GUIDES

Contact your local Naturalist Club [bcnature.ca/index.html](http://bcnature.ca/index.html) for book donations: *“Individual members may donate their older versions when they buy the newest editions!”* - Mary Ellen Grant, Kamloops

## OUTDOOR TEACHING KITS

*The Environmental Educators Provincial Specialist Association (EEPSA) has a great website that includes a section on making outdoor teaching kits for students.*

[www.bctf.ca/eepsa/outdoorkits/outdoorkits.htm](http://www.bctf.ca/eepsa/outdoorkits/outdoorkits.htm)

- Steve Lott and Patrick Robertson, Vancouver

**Frances Vyse of Kamloops suggests having students bring from home to build class sets:**

**Scarves and bandannas** - for use as blindfolds, “tail tags” in games

**Small items** - for hiding along a path for a “non-nature” scavenger hunt

**Small clear plastic containers with lids** - to hold temporary collections

**Plastic insects and animals** - to create a collection of examples

**Pictures from magazines** - for class/individual projects





*“Every child should have mud pies, grasshoppers, water bugs, tadpoles, frogs, mud turtles, elderberries, wild strawberries, acorns, chestnuts, trees to climb. Brooks to wade, water lilies, woodchucks, bats, bees, butterflies, various animals to pet, hayfields, pinecones, rocks to roll, sand, snakes, huckleberries and hornets; and any child who has been deprived of these has been deprived of the best part of...education.”*

LUTHER BURBANK

## Section II: Get Out There! Easy Activities for Taking Groups Outside

### Getting Started: Activities to Introduce Sensory Awareness

This section of the guide contains hands-on, sensory awareness activities that have been used successfully by environmental educators with groups of all ages. These “classic best practices” help increase our ability to observe and be present in nature, emphasize getting to know local species and their habitats, and inspire local action and stewardship. The activities also provide the foundation for the main themes of the BC Environmental Learning and Experience framework (Ministry of Education: [www.bced.gov.bc.ca/environment\\_ed/](http://www.bced.gov.bc.ca/environment_ed/)) – those of Complexity, Aesthetics, Responsibility, and Ethics (C.A.R.E.). They are great “warm-up” activities for any field trip, and great “wakeup” activities for quick daily breaks from classroom routines. Adaptations for older students are provided, as well as Critical Questions and Debriefing suggestions for discussion.



### In this Section- Activities:

1. **Sensory Wakeup Circle**
2. **Rainbow Chips**
3. **Energy Burners**
4. **Touchstone**
5. **Sound Mapping**
6. **Forest Cologne**
7. **Adjectives Scavenger Hunt**
8. **Transition Activities: Moving a group from A to B**
9. **Walk Softly – A Footprint Activity**
10. **Instant Cameras**
11. **Make a Mini-Park!**





# Hands on Activities

## # 1 - SENSORY WAKEUP CIRCLE

**TIME REQUIRED:**  
5 – 10 MINUTES

**MATERIALS:**  
NONE

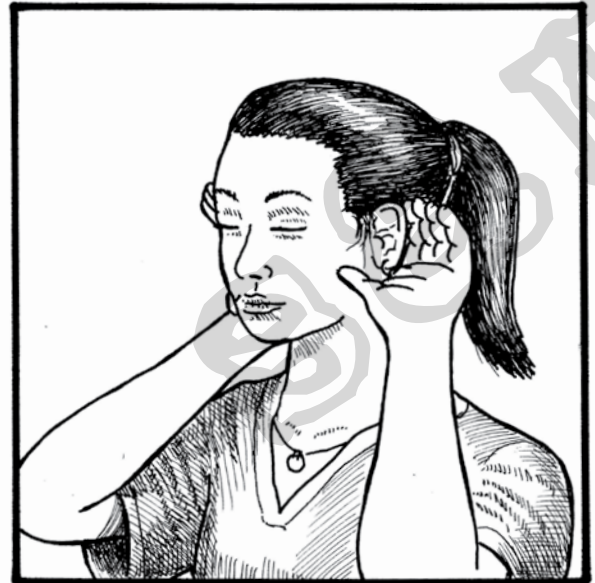
**AUDIENCE:**  
ALL AGES



This is a nice introductory and awakening activity to do each time you take a group outdoors. Gather the group in a circle and tell participants that you'll be waking up their senses to better explore and observe the environment. Ask them to list our main senses and remind them of ones they may not think of, such as our sense of temperature, hunger, and air currents. Wake the senses up individually:

**TOUCH:** Have everyone rub their hands together vigorously until they feel heat energy being generated between their palms when they pull them apart slightly. Do this until everyone has “woken up” their fingers.

**HEARING:** Have everyone put on “deer ears” – cup hands around their ears so the area for capturing sound is enlarged. To demonstrate how effective larger ears are, have everyone take their “deer ears” off as you keep speaking, and then put them on again, noting how much louder your voice or other sounds become. Try having the group put the “ears” on backwards to hear sounds behind them. Now have everyone close their eyes (to block out the dominant sense of sight) and count the number of different sounds they hear in a 20 – 30 second time frame.



Younger students might want to hold up their fingers for each sound. Ask people how many sounds they heard, and to describe some of them.

**TASTE:** If it is raining, have everyone taste a raindrop, or some seawater if you are on the beach, but otherwise save the tasting for lunchtime!

**SMELL:** Have everyone close their eyes and focus on their sense of smell by taking a breath through their mouths and then two big breaths through their nose. Have different people in the circle describe what they smell. Now have the group turn to face out of the circle and repeat the smelling exercise; ask for any different scents.

**SIGHT:** Send the group out from the circle to do the Rainbow Chips activity (see Activity #2).

**Adaptation for Older Students:**

**Small Group Sessions** - Middle and secondary school students may feel uncomfortable doing the sensory awareness activities in a large group, but thoroughly enjoy them in smaller gatherings. Put older students in groups of two or three, and give each group a piece of string about three metres long. Have them move to an area away from other groups and lay down the string so it forms a circle. Ask each group to do one or two of the sensory activities – e.g. Sound Mapping, Rainbow Chips, and/or recording the smells, colours and textures found inside their circle.

**Digital Photo Sensory Shoots** - Have students work in groups of two or three, ensuring that each group has a digital camera or cell phone camera to use. Give each group a sensory theme (colour, texture, smells, sounds, contrasts, etc.) and have them take photos in an outdoor area based on their theme, to show to the class later as a PowerPoint display or hard copy collage.



**Critical Questions:** Which sense could you give up? Which sense could you not live without?

**#2 - RAINBOW CHIPS**

**RAINBOW CHIPS:** This is a fun and easy activity that gets participants looking closely at things around them, and hones their observation skills. Collect a selection of paint chips from your local paint store, ensuring that you get a good range of colours and shades. Cut up the chips if they are in strips, and place them in a bag. Hand each participant a “rainbow chip”, telling them that every colour of the rainbow exists in nature all around us, and send them off to match their chip colour as closely as possible with something natural (human-made items like garbage or clothing don’t count!). Ask them not to pick their matched item if it is alive, but to show it to someone close by. Offer some hints: turn leaves and stems over to see colours beneath, look closely at rocks and pebbles, lichen, tree bark and sap. Once they have found a match, give them another colour chip to match, or a whole strip of paint chips of similar shades to match.



**Critical Questions:** What surprised you the most about this activity? What colours were hardest to find?

**Extension: Paint Chip Poetry** - Based on the name and colour of their paint chip, have students write a haiku, cinquain or other type of poem.

**TIME REQUIRED:**  
15 MINUTES

**MATERIALS:**  
BAG OF 30 - 40 PAINT  
COLOUR CHIPS FROM A  
PAINT STORE

**AUDIENCE:**  
ALL AGES



**#11 - MAKE A MINI-PARK!**

**DESCRIPTION:** Students will brainstorm reasons for creating parks, and work in pairs to create a “mini-park” that someone the size of their thumb would come to visit.

**WHY PARKS?** Before going outside, have students brainstorm the different reasons that parks have been created, and list them on the board. Some of these include:

- ✦ Protecting biodiversity - the variety of plants and animals found in an area
- ✦ Protecting ecosystems and ecological processes that support the existence of life
- ✦ Protecting unique or special features: for instance, Banff National Park was initially created to protect the hot springs found there
- ✦ Protecting representative areas of a region’s natural heritage, such as valleys, grasslands, lakes, deserts, beaches
- ✦ Protecting special recreational areas for kayaking, hiking, swimming, dog-walking
- ✦ Ensuring there is urban green space for people to walk, breathe fresh air and play games

**INSTRUCTIONS:** Outside, tell students to create a “mini-park” for someone the size of their thumb to visit. Each pair of students receives a piece of string or surveyor’s tape which will act as their park boundary, as well as five toothpicks to place at specific spots in their mini-park as “interpretive sign posts” to highlight special features. Students should be prepared to describe why they chose particular areas to protect.

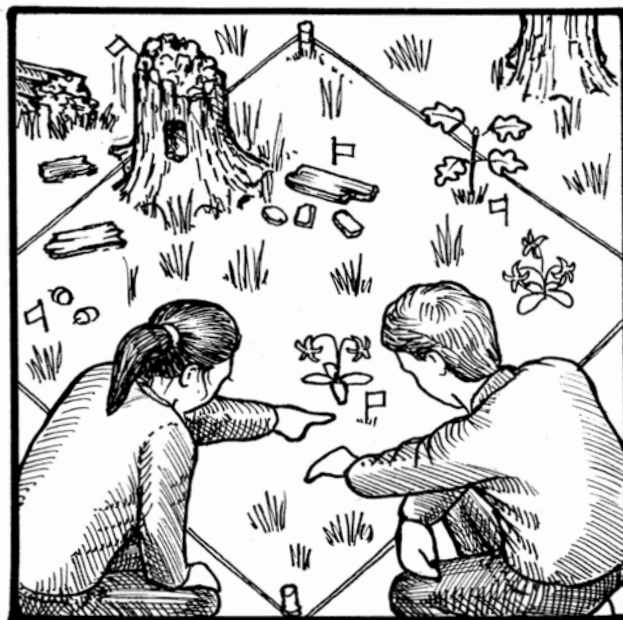
Once student pairs have completed their park, they should show another pair through it, pointing out the highlights and reasons for protecting certain areas, then reverse roles. Have students write a short descriptive paragraph about their park in the style of a travel brochure, commenting on the wonders and special features. Remember to dismantle all the “parks” when you leave!

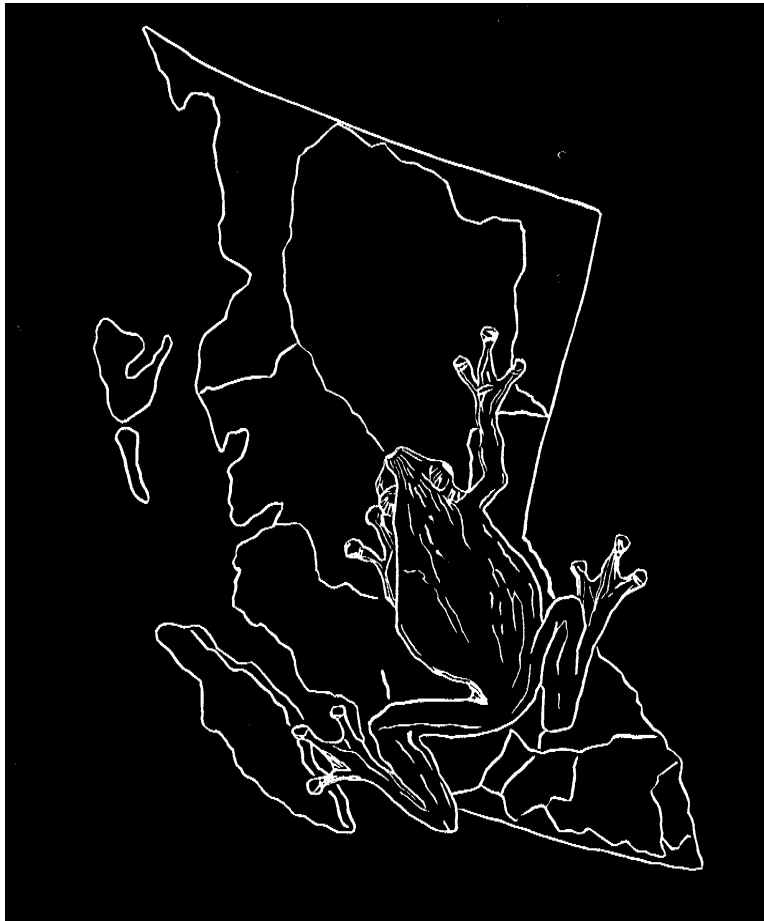
**Critical Questions:** Why do we create and protect parks? What would society be like if we didn’t need parks?

**TIME REQUIRED:**  
45 MINUTES

**MATERIALS:**  
A NATURAL AREA, A THREE METRE LENGTH OF SURVEYOR’S RIBBON OR STRING AND FIVE TOOTHPICKS FOR EACH PAIR OF STUDENTS

**AUDIENCE:**  
GRADES 2 – 6





*"We abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect."*

ALDO LEOPOLD

*“Study Nature, not books”*

LOUIS AGGASSIZ, SWISS BIOLOGIST

## Section IV: Exploring and Mapping Special Places

This section focuses on BC’s biodiversity, biogeoclimatic zones and students’ mapping skills. It targets Science and Social Studies learning outcomes for intermediate and secondary students. **Postcards from the Zone** has students researching and developing postcards from selected biogeoclimatic zones. An activity on biodiversity encourages students to explore a special local place to become aware of the rich variety of its species and to understand what comprises an organism’s habitat. The last activity centres on mapping: **Your Community Map** has students exploring their immediate community, developing map keys and adding elements to a base map. An extension activity teaches compass skills. Student worksheets and backgrounders support student-directed learning.

### In this Section- Activities:

16. **Postcards from the Zone! BC’s Biogeoclimatic Zones**
17. **Who Lives Here? Habitat Biodiversity**
18. **Your Community Map**





# Activity 17

## WHO LIVES HERE? HABITAT BIODIVERSITY

*Students participate in a hands-on exploration of a local natural area to gain an awareness of the number and variety of species present, and understand what makes up an organism's habitat.*

### BACKGROUND - HABITAT AND BIODIVERSITY:

Whether you live in a house, apartment building, trailer, condo or some other style of home, you need air to breathe, a source of water nearby, food, safe shelter, and enough space to live and grow. Other living things in our neighbourhoods share these same basic needs. A plant or animal's home is its habitat - this is where it finds sufficient food, water, shelter and enough space to live and move. If any one of these is inadequate – for instance, a place has food and shelter, but no water close by - it's not a suitable habitat for that species. Within any area there may be many habitats, all slightly different from one another. The size of a habitat varies widely, from an entire forest to a pond, a rock or a patch of grass. Habitats, like our homes, are not static places and are always changing. For example, a salmon stream is affected by what happens within its watershed. Loss of any of the elements of habitat will have serious impacts on the animals living there – for instance, a water source might dry up, a tree is cut down, or a field is sprayed with pesticide. Humans have choice in how we impact the planet's habitats.

Biological diversity - *or biodiversity* - is a term used to describe the variety of life on the planet: plants, animals, fungi and micro-organisms. Our lives connect in thousands of ways with the plants and animals we share the earth with. Everything we eat, our homes, our running water and our possessions were all once living things, or connected with the lives and habitats of other species by some natural process. Our health, cultural vitality and very survival depend on conserving the variety of life on earth. We need to care about the living things in our world in order to protect them. To care about them, we need to understand them.

Protecting plants and animals is one of the reasons for creating parks: knowing where different plants and animals live, and the special habitats they need, informs the decision-making process. In this activity, students explore a natural area to discover and document its biodiversity and range of habitats.

### MATERIALS:

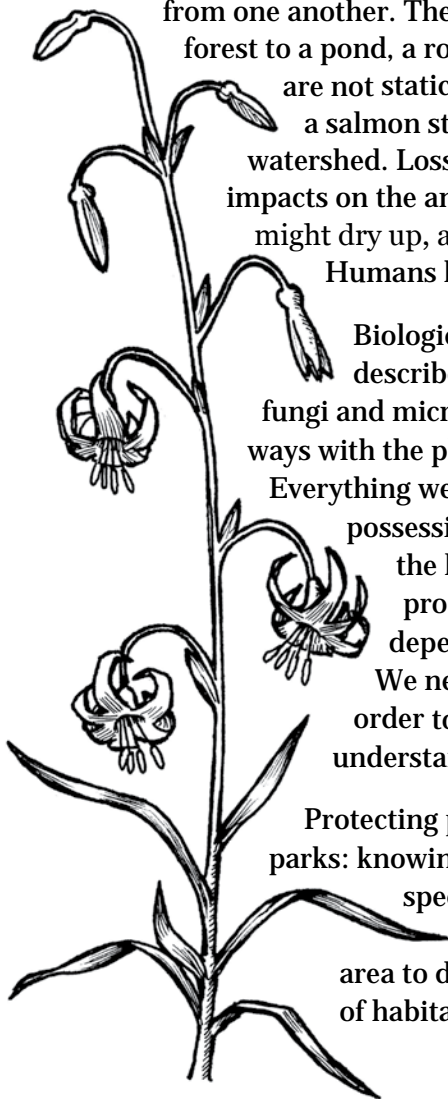
- CLIPBOARDS  
(SEE MATERIALS TIP SHEET)
- PENCILS
- HABITAT DATA SHEETS FOR STUDENT TEAMS
- TOOLS FOR EXPLORING: TROWELS, BUCKETS, PLASTIC CONTAINERS, HAND LENSES, SMALL COLLECTING NETS, BUG JARS, BINOCULARS, VARIOUS FIELD GUIDES (SEE RESOURCES SECTION), ART SUPPLIES

### TIME REQUIRED:

ONE OR TWO PERIODS  
OUTDOORS, IN-CLASS  
TIME TO CREATE POSTERS  
AND/OR A HABITAT MURAL

### AUDIENCE:

GRADES 3 – 10



continued on next page. . .



## PROCEDURE

### Part One: Biodiversity Explorers

1. Discuss the **Conservation Ethic** with students (p. 30), and invite them to develop their own rules for outdoor exploration. Pair students up, and give each team a clipboard, pencil and a **Habitat Data Sheet**. Define and discuss the terms 'biodiversity' and 'habitat' with the class. Explain that they will be honing their observation skills by looking for examples of biodiversity and habitat.
2. Head outside to a local green space that has a few trees and plants - your school grounds or a local park (you don't need a large natural area). Do one or two sensory awareness activities such as **Sensory Wakeup Circle** and **Rainbow Chips**, to tune everyone in to their surroundings.
3. Have teams work to find examples of all the biodiversity clues on the habitat data sheet (p. 78), taking turns locating and drawing their discoveries. Give them about 10 - 15 minutes.
4. Have some field guides available to look up any insects, birds or plants that students find.

### PART TWO: HABITAT HUNTING

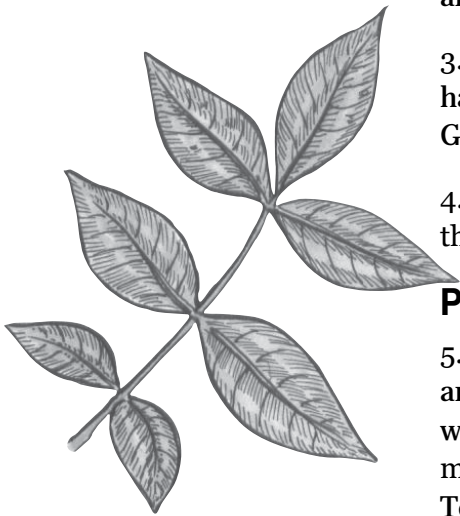
5. Next, have the teams choose a specific habitat: tell them to focus on one animal or plant and describe where it lives, some of its neighbours, and where gets its food and water. They should choose a name for their habitat, make a sketch of the components and record their findings on the data sheet. Tell students they'll be making a poster or mural with their information and drawings, so it's important to capture as many details about colours, shapes and sizes as they can.

### PART THREE: HABITAT DIVERSITY MURAL

6. Once back in class, give students art supplies and paper, and have teams create a colour representation of the species and habitat they studied, with its name and specific components illustrated. Have teams present their habitats to the class, and then create a *Habitat Biodiversity Mural* in a hallway with the completed posters.

### Discussion might include:

- How many different types and numbers of habitats were found?
- What are some of the significant differences?
- Why is the diversity of habitats important?
- What are some ways they can be damaged by people?
- Are any of these habitats in danger of disappearing? Why?
- How could they be protected or enhanced?
- If you had to choose one of these to protect, which one would you choose and why?



**ASSESSMENT**

Data sheets are complete with sketches and adequate descriptive detail. Habitat posters include references to an organism’s food source (photosynthesis for a plant!), water (e.g., rain, a puddle, a nearby creek), shelter or home (e.g., an ant hill, hole in a tree, patch of earth to grow in), and space to live and move (e.g., evidence of sufficient space for a tree to grow or enough area close by for caterpillars or pill bugs to collect food).

**Critical Questions:**

Most humans use resources far beyond the boundaries of our “habitats”. Where does your food and water come from? Research what you had for lunch today, and refer to an atlas to explore the habitats of some of the things you and your family buy.

Protecting habitat for wildlife is one reason why parks are created. What are some other reasons?



Teacher Notes

Horizontal lines for writing notes.



# Habitat Data Sheet

**Biodiversity:** or biological diversity is the term used to describe the variety of life on earth – plants, animals, fungi and micro-organisms.

**Habitat:** the place where an organism lives and can find accessible food, water, shelter and living space and varying in size from an ocean to a rotten log to a puddle.



DATE: \_\_\_\_\_

NAME(S): \_\_\_\_\_

## I. EVIDENCE OF BIODIVERSITY

**Find all these clues, then draw one of each.**

Find three different sized leaves from the same plant.

Find at least three different kinds of leaves.

Find at least three different kinds of plant “skins” or surfaces.

Find a plant which has three different colours.

Find at least three different kinds of seeds.

Find at least three leaves with different textures.

Find at least five different kinds of plants.

Find at least three different kinds of plants growing under a tree.

Find at least three different holes made by animals.

Find three different signs of an animal having eaten something.

Find three different consumers (animals) or evidence of them.

Find three different kinds of decomposers (e.g., slugs, snails, bacteria, fungi, earthworms, insects).

Find at least three plants with different odours.

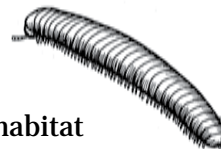
Find at least three different kinds of leaf stalks.

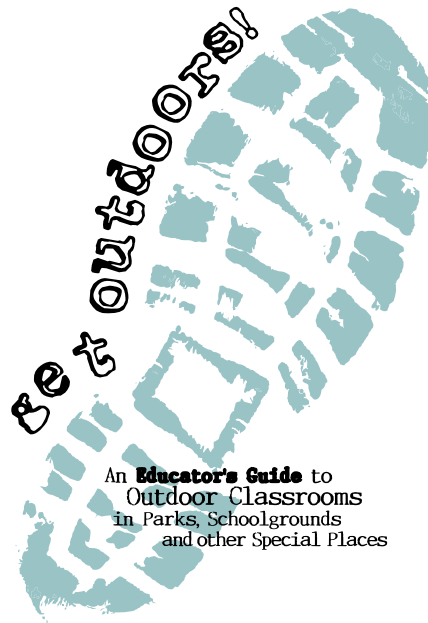
Find at least three different insects.

## II. HABITAT HUNTING!

Now that you've explored the area's biodiversity, choose one habitat and describe it on the back of this sheet, or in your journal, in words and drawings, using the following items for a guide.

1. Habitat name (make up your own!) and description.
2. Plants you find here.
3. Birds or mammals, or their signs, that you see here.
4. Insects you see.
5. What else might live in this habitat?
6. Why would an animal or plant live here?
7. What are the signs of human influence?
8. Why would you choose to protect this habitat?
9. Make a rough sketch of the habitat you are visiting: include the food sources, water, shelter and living space for a chosen animal or plant.





An **Educator's Guide** to  
Outdoor Classrooms  
in Parks, Schoolgrounds  
and other Special Places

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