

## 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

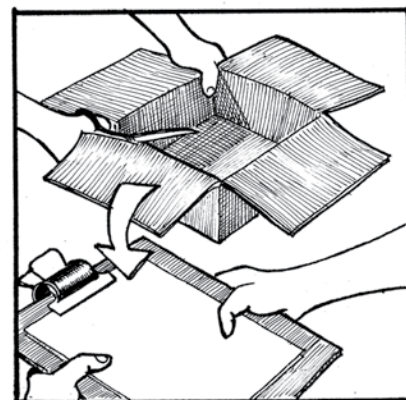
**Attention-Getters:** Use a whistle, bird or duck call, a musical instrument like a penny whistle or rattle, or other audible signals to get a group’s attention when outdoors. Let them know it’s time to look and listen, or gather together when they hear it. It’s much easier on your voice and more fun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

**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.



Butterfly-Clip-Boards

“ 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

**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.

## 2 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.

**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."*

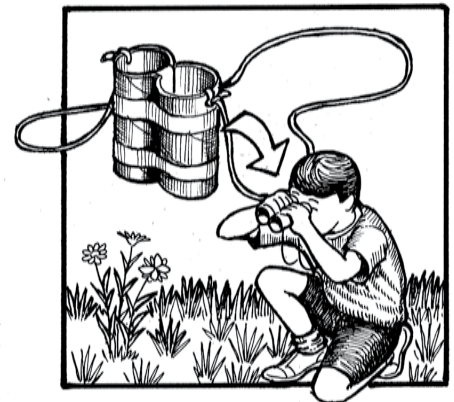
—Kim Fulton, Armstrong

**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!

*"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



**Toilet Roll Scopes**

*"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

#### 5 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

#### 6 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/eeepsa/outdoorkits/outdoorkits.htm](http://www.bctf.ca/eeepsa/outdoorkits/outdoorkits.htm)

—Steve Lott and Patrick Robertson, Vancouver

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

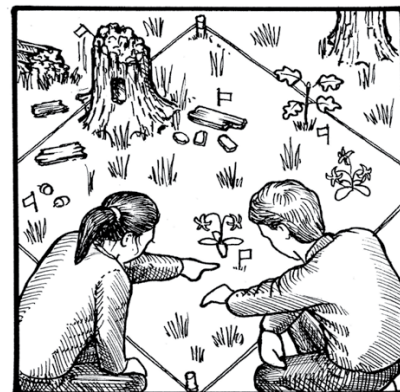
**Scarves and bandannas:** for use as blindfolds, “tail tags” in games

**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



**Defining the boundaries for study using string**

