



Young Naturalists' Club of British Columbia  
Bronze, Silver & Gold

# Action Awards



nature detective



environmental action



community participation



leading others





# Welcome to YNC Action Awards

## FUN & CHALLENGE!

Here's your invitation to take part in the **Action Awards** quest! Action Awards reward you for your outdoor and community activities. They encourage you to do all that you can to be a wiser naturalist and energetic environmentalist.

There are four types of activity:

### 1. Nature Detective

study, experiment, or research the natural world and report on it and report on your work.



### 2. Environmental Action

protect, conserve, preserve, or restore a part of the natural environment around you directly or indirectly.



### 3. Leading Others

sharing nature and environmental actions with your friends, family, school or community at large by giving a presentation, making a poster, starting your own local chapter of YNC.



### 4. Community Participation

take part in a nature related fieldtrip, program or community event. (This is where you use your **Participation Passport**. Remember to get it signed off by the leader of the event.)



There are three levels of awards, **Bronze**, **Silver**, and **Gold**. Each time you complete a level, you will receive a certificate, a pin and a well-deserved award. The activities you need for each level of Award are:

**BRONZE:** you must complete the following 7 activities

- 1 Nature Detective
- 1 Environmental Action
- 1 Leading Others
- 3 *Participation Passport* tickets
- 1 Your Choice

**SILVER:** you must include a minimum 5 Silver Level activities

- 2 Nature Detective
- 2 Environmental Action
- 2 Leading Others
- 4 *Participation Passport* tickets
- 2 Your Choice

**GOLD:** you must include a minimum 5 Gold Level activities & 5 Silver Level Activities

- 4 Nature Detective
- 4 Environmental Action
- 3 Leading Others
- 4 *Participation Passport* tickets
- 5 Your Choice

If you fill your *Passport* before you complete the other Actions for your Award, send it in for a special **BONUS** prize and get another *Passport* to complete more tickets toward your Award.

At the back of the booklet you will find lists of community information sources and reference books to help you with your projects

We're waiting to send you your Action Award just as soon as you qualify!



### **Bronze Level Award Includes:**

- Special YNC cap
- Bronze level certificate
- Write-up in Nature WILD!



### **Silver Level Award Includes:**

- YNC Button
- Silver level certificate
- Write-up in Nature WILD!



### **Gold Level Award Includes:**

- YNC Button
- Gold level certificate
- Write-up in Nature WILD!



Your actions will protect our environment and help BC's animals and plants.

## Earning an Action Award

Complete the number of different activities required for each level. As soon as you complete your project tell the YNC about it and we'll keep track of your progress and add up the points.

We will accept photocopies, photographs with project description, and/or letters from parents, teachers or other adults telling us about a project you have completed (do not send in the original project unless you do not want it back).

Send in your signed off **Passport** tickets all together.

If your activity seems to qualify under more than one category, please choose which you would like to have it count towards and we'll honour your request.

## Important Things To Remember

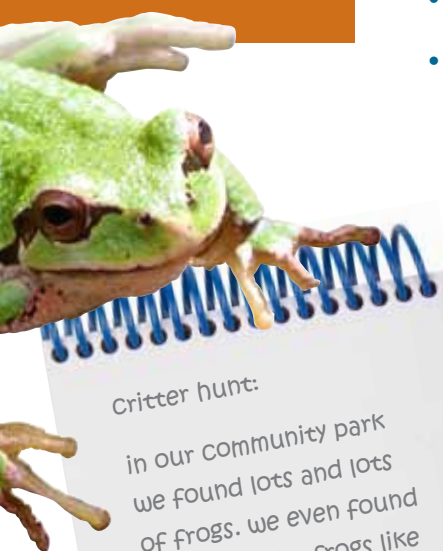
**Participation Passport** activities are not divided into Bronze, Silver & Gold levels. All community participation activities are of equal value.

As you have probably figured out already, you have to qualify for the Bronze Level Award before going to Silver, and then to Gold.

On the next pages you will find many projects you can get started on.

### **Your choice activities/Creating your own activities**

- Done all the activities from the Activity Guide that you find interesting?
- Ready to explore different ways of connecting with nature?
- At the back of this booklet you will find suggestions for more actions. OR - let your imagination run wild!
- Make up your own nature related activity & go for it!
- Wondering if your activity meets the level you are aiming at?
  - Write or email us with a description of your project and we'll evaluate the level for you.



Young Naturalists' Club





nature detective  
bronze level



Notes:








# Check Out A Dandelion

Studying the way a **dandelion** grows will tell you a lot about how other plants grow. Can you find the botanical name for **dandelion**?

## You'll need:

-  magnifying glass
-  sketch book
-  soft pencil with eraser

1. Where did the name 'dandelion' come from?
2. Pick a dandelion flower, cut it in half, look at it with your magnifying glass. Sketch what you see.
3. What shape are the leaves? How many?
4. Where on the plant do they grow?
5. Break the stem - what is it like inside?
6. Find a dandelion flower that is closed and is starting to die off.
7. Cut that in half. What do you see? Has it changed inside?
8. Find a dandelion puff - look at the seeds through your magnifying glass. Sketch a seed.
9. What good is it to the dandelion to have the kind of seeds it does?





# Ground Level 'Critter' Hunt

## You'll need:

-  magnifying glass
-  paper
-  pencil
-  shallow container



1. Choose a habitat - the garden, park, lakeside or seashore
2. Find 4 different creatures in that habitat.
3. Study them where you find them. It's OK to pick them up gently but put them back exactly where you found them.
4. Make a sketch of each 'critter' you find.
5. Describe how it moves.
6. Describe its habitat - wet/dry, dark/light, hidden/open and so on.
7. Try to figure out what it is feeding on.
8. Tell one extra interesting thing about each 'critter' that you observed or found out about it.
9. Did you discover anything else that was new to you on your 'critter hunt'?



What I found on my critter hunt in June.

I found this spider in a crack in an old log. There were lots of webs all around it. I think it is a \_\_\_\_\_ spider. The log was at the bottom of my garden

This crab is about 4 cm. Across. It was hiding under a rock with a lot of other crabs. It was on the beach at \_\_\_\_\_ after the tide went out.



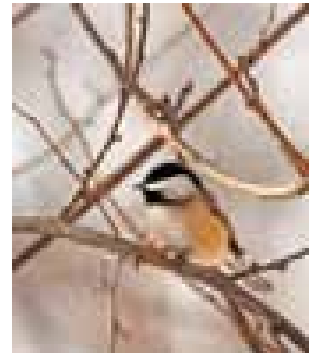
This slug is about 5 cm long. It was sitting on a lettuce leaf and had chewed a lot of holes in it. This is not a native slug. It is very destructive in vegetable gardens.



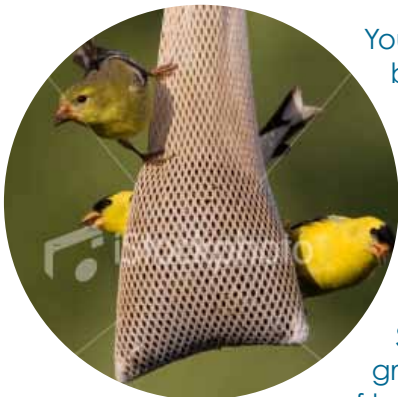
# Bird Feeding & Watching - They Go Together

Why feed birds? First of all, we do it for the birds. As land disappears under houses, food sources for birds disappear. Providing shelter, safe resting areas, water and dependable food supplies during migration and in winter helps to ensure a future for birds.

Secondly, attracting birds to your yard or balcony is an excellent way to watch birds and bird behaviour.



One of the best known studies in ornithology "Studies in the life history of the Song Sparrow" by Margaret Morse Nice (pronounced Nees) published in 1937 and 1943, was based entirely on watching sparrows in her garden.



You too can learn to identify the birds and observe their behaviour - how they act toward others of the same or different species, where they usually feed, the food they prefer.

Watch a chickadee - it will take one sunflower seed at a time, then fly away to eat it but a finch will sit at the feeder until it's had enough.

Some birds prefer to feed on seeds spilled on the ground. If you have a problem with cats, spread a good layer of brambles or brush below the feeder to give the birds some protection as they forage.

Don't forget the great  
backyard bird count in  
February. Your reports will add  
to knowledge of how many  
birds there are and how  
they move around.







# Observe Bird Feeder and Water Areas

Study these areas during 4 Weekends

1. Wait until the bird feeders are being used and then start your observations.
2. Count how many different kinds of birds have come to the feeders?
3. Count how many different kinds of birds have used the water?
4. Can you tell which is the preferred food for different species of bird?
5. Is much of the food wasted?

Write a report OR draw a chart with sketches, cut out pictures & anything else that illustrates your findings.



## Identify Four Birds

1. Sketch the birds. Note the size (approximately).
2. Use the ID card you received in your New Member pack to describe the birds.
3. Label the special marks that identify a particular species - for example:
  - 'lower mandible - yellow'
  - 'yellow stripe through crown'
  - 'white outer tail feathers'
  - 'striped belly' etc.
4. Use your field guide to identify the birds. Give their common and scientific names (ex: Steller's Jay - *Cyanocitta stelleri*)





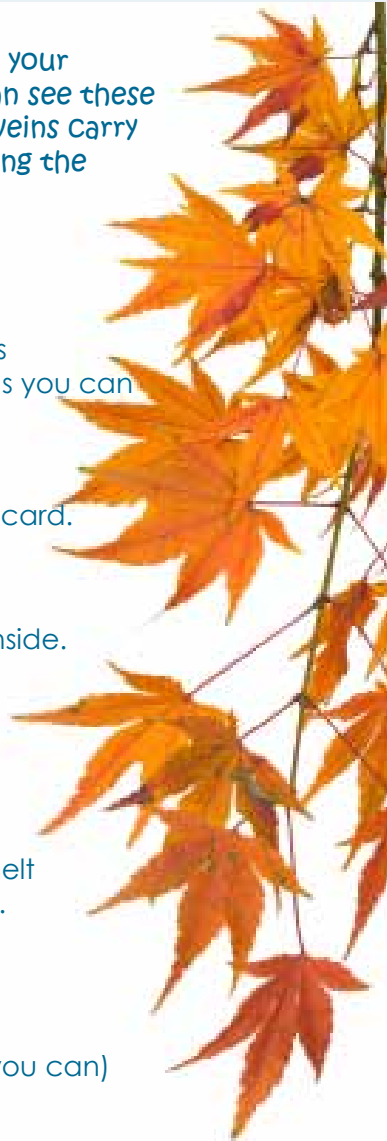
# 'Lovely Leaves' Scrapbook

If you compare your hand to a **leaf**, they look quite a bit alike. Like your hand, the **leaf** has veins that run from the stem to the **leaf**. You can see these veins on the underside of the **leaf**. Your veins carry blood, a **leaf's** veins carry a watery liquid called sap. The veins of a **leaf** also act as bones, giving the leaf strength and structure.

## You'll need:

- 🍃 a variety of undamaged leaves from at least 8 different plants (big and little) find as many varied shapes, colours and sizes as you can
- 🍃 waxed paper 🍃 a dish towel 🍃 an iron 🍃 glue
- 🍃 a binder 🍃 several sheets of 3-hole punched paper or thin card.

1. Fold a piece of wax paper in half so the waxy surface is on the inside. Be sure your paper is big enough to cover your largest leaf.
2. Place a leaf between the folded waxed paper and cover it with the dish towel.
3. With an adult's help, press on the towel with a hot iron. This will melt the wax from the paper onto the leaf and stop it from drying out.
4. Glue each leaf onto a sheet of paper.
5. Beside it write when and where you found it (sketch the plant if you can) and what kind of leaf it is. Store your pages in the binder.



## Make Leaf Rubbings

1. Collect a variety of undamaged leaves, all different shapes and sizes.
2. Put the leaves on a smooth surface and lay a piece of paper over them.
3. Shade lightly over the leaves with a soft pencil.

A print of the leaf should appear on the paper. Use different colour pencils to create a picture. You can cut out the leaf rubbings to glue on thin cardboard to make special occasion cards. Several cards like this, with envelopes, would make a lovely gift for friends and family.



# Watching Wildlife

## 1. Signs of Animals eating Plants

Search in:

- Shrubs and trees - look for galls with holes, woodpecker holes, sapsucker holes, leaking sap, chewed leaves. Also look for organisms that could be food - insects, spiders, insect eggs.
- Low plants - look for nectar producing flowers, aphids, chewed up leaves.
- Try to figure out what animal is eating which food.
- Write and sketch your findings.

OR

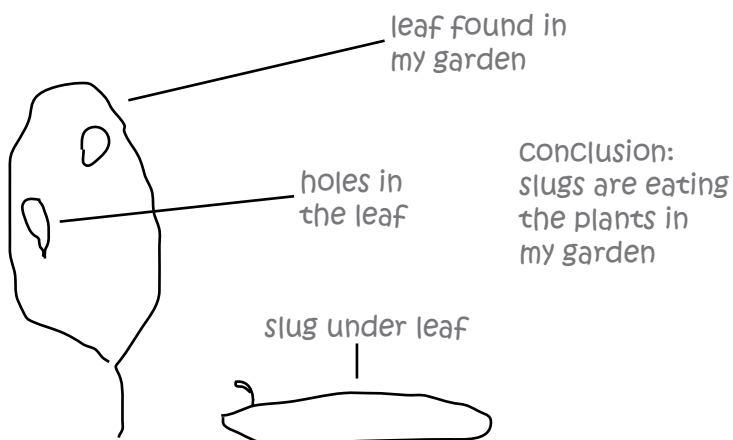
## 2. Choose a habitat that is special to where you live

- Locate five different plants and learn their names.
- Observe the wildlife (anything from bobcats to bumblebees) that live in this habitat and learn the names of five different species.
- Write a story about why the wildlife likes this habitat.

OR

## 3. Learning about nature through research

Tell us about a really cool nature book, magazine article, field guide or web site that you have studied, why you liked it and some interesting things you learned.



**Important note:**  
Sketches are often the best way to record your findings. All that is needed is a few lines with arrows to point out important features. They do not have to be works of art!





# Fun Night Project - Host A (Moth) Ball!

Get your whole family out with you! How do you invite your guests? Just like kids, **moths** and other insects love sugar. You can attract **moths** and other insects by setting out a sweet and sticky treat. **Moths** are more easily attracted at dusk but you can use the same bait and method in daylight to attract other insects.

## You'll need:

- 🍯 sugar or molasses
- 🍯 stale fruit juice
- 🍯 spoiled, mashed up fruit (bananas are good)
- 🍯 a bowl and spoon
- 🍯 trees
- 🍯 an old paintbrush
- 🍯 a flashlight
- 🍯 borrow an insect field guide from the library if you can



1. Mix up the sugar, juice and fruit in the bowl
2. Late in the day choose a tree, or trees, and use an old paintbrush to paint the mixture on the tree trunk.
3. Return about an hour later in the dark. Use your flashlight to see who's dropped in.
4. Go out again in half an hour and see who else came by.
5. Do it again during the day.
6. Describe how you did this project and how many insects and other creatures came to your "ball"
7. Identify 4 or more different insects that came OR sketch/describe them the best you can.

Who came to my moth ball



## Another Way

Lights also attract **night flying insects**, especially **moths**, so here's another way to observe **night fliers**.

### You'll need:

- 🔪 tacks
- 🔪 an old white sheet
- 💡 a light (porch light, large flashlight or lantern)
- 🔪 a large glass jar and lid with holes punched in
- 🌿 a plant stem or twig to put inside the jar



1. Tack the sheet on the side of a building or from the branch of a tree.
2. Shine a bright light on the sheet at night.
3. You can stand very close to the sheet without scaring off the insects.
4. When an insect lands on the sheet, try to catch it in your jar to for a closer look. Let it go when you are finished.
5. Describe how you did it and how many insects came to the sheet.
6. Identify 4 or more different insects that came OR sketch/describe them the best you can.





# Web Watching

Why not invite a **spider** to spin for you & see how it 's really done?

## You'll need:

- 🕸 a forked branch
- 🕸 a large glass container, like a 4-litre mustard jar
- 🕸 a piece of fine screening'
- 🕸 an elastic band
- 🕸 insects
- 🕸 a plant mister with water

1. Place the branch in the container
2. Collect an orb-weaver spider, such as a common garden spider, from the wild and gently place it on the branch.
3. Cover the container with the screen and secure it with the elastic.
4. Watch as the spider spins its web.
5. Once the web is built, add a couple of live flying insects such as fruit flies or mosquitoes, and watch the action.
6. Spray the web with a fine mist of water to provide your spider with some moisture.
7. Let your spider go after a day or so.

Send in a report about what you did and what happened.







# Worm Watch

Worms are everywhere - the easiest to find are earthworms. A large garden might have 50,000 earthworm living in the soil!

## You'll need:

- 🪵 trowel
- 🪵 cake pan
- 🪵 magnifying glass
- 🪵 4 sheets dampened tissue



1. With your trowel, dig around in the soil or compost and find a nice fat earthworm. Treat it VERY kindly.
2. Put the worm on the cake pan.
3. Study it through your magnifying glass. Which end is the head, which the tail? Which is the top side of the worm?
4. Flip it over gently and see what happens.
3. Stack the sheets of dampened tissue in one half of the pan, lay the worm so it is half on the paper, half on the pan. Which surface does it prefer?
4. Do this a few times to confirm your observations.
5. Watch carefully how the worm moves its body. Lie on the ground yourself and try to move like a worm.
6. Put the worm back where you found it and watch the way it disappears.
7. Report on your findings.





environmental action  
bronze level



Notes:





# Recycling And Re-using With Imagination

Make some **toys** for a younger sister, brother, cousin or neighbour.



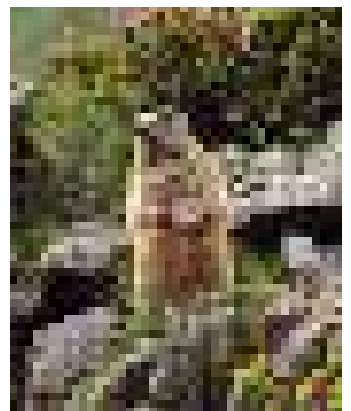
1. **soft toys:** find some lost and lonely socks (without holes!!) and make them into cuddly creatures. Stuff them with more lonely socks cut into strips.
2. **percussion set:** use large tin cans (drums), plastic jars with peas or beans inside (rattles), ridged pop bottle to scrape up and down on with a chopstick + lots of other instruments that you can invent.
3. **rainstick:** use the inside roll from wrapping paper or paper towel, poke some tooth picks through it; seal one end with masking tape; put some pebbles or dried peas inside; seal up the other end.
4. **mobile:** use old Christmas cards and/or objects like spools, film canisters, pipe cleaners, pieces of foil, and so on, hanging from wire coat hangers.
5. **'first words' picture book:** cut out pictures of everyday objects - furniture, crockery, food etc., paste onto 3-hole punched card or heavy paper and put them into an old school binder. Decorate the cover as well. Toddlers love these books!
6. **Whatever your imagination can conjure up - from re-used materials, of course!**



## Endangered Species

Make a Scrapbook or Mobile or Poster about **Endangered** Species

1. Find out about at least 4 endangered species of animals (including birds & fishes) or plants in BC.
2. Say if they are 'Red' or 'Blue' Listed.
3. Find out what 'Red' and 'Blue' Listed means.
4. Sketch or cut out pictures of the species you have chosen.
5. Make a map that shows where they are found.
6. If you can, find out why they are endangered.





# Make Two Types Of Bird Feeder

## 1. For SEEDS:

You have probably already seen ways to make feeders by using a pine cone or by cutting openings in the sides of a pop bottle or milk carton, but if you are plagued with grey squirrels you need something they can't chew up. Here's one idea -

### You'll need:

- 🌿 thin wire or fishing line
- 🌿 2 foil pie plates
- 🌿 large juice can
- 🌿 75 cm strong bendable wire
- 🌿 note: openings cut out with tin snips



## 2. For PEANUTS & SUET

- a. For peanuts (shelled) make a 'pocket' type container from 5 mm squared wire mesh (obtainable at lumber yard). Hang by wire from tree.
- b. Hang up a lump of beef fat (free from the butcher) in an onion bag OR make suet 'pudding'.

### Suet Pudding

Chop up and melt at low heat a chunk of beef fat (or use lard). Put in a blender or food processor and mix with unsalted peanuts, cornmeal, oats. Pack into small yogurt cartons and chill. Hang from tree in fine meshed onion bags.

### Helpful Hints:

Where to place your **feeders**:  
Place your **feeders** near shrubbery as birds like to dive for cover quickly. If you are hanging **feeders** on a balcony, place them quite near a window so the reflection of the **feeder** acts as a warning, or hang a mobile or other device either side of the window.

For ground **feeding** birds, you can also scatter seeds under the hedge or in balcony planters



## Fruit Bird Feeder

1. straighten out a coat hanger
2. push the end through an apple or pear
3. push a cork onto the wire to stop the fruit sliding off
4. curve the other end of the wire and hang from a tree.

Spring: brush your cat or dog then put the fur from the brush into an onion bag and hang it from a twig. Watch the birds take the fur to line their nests!



## Water Is Important

Fresh water is very important - if you can set up a simple drip by using a hose then the water will always be fresh plus the sound of dripping water will attract birds.

A large size plastic flowerpot will make a good bird bath. Line the bath with small rocks, gravel or pieces from a broken clay pot so the bottom won't be slippery; the water should be about 2" deep, but you can add more rocks to create an even shallower area for the smallest birds. The lid to a discarded garbage can also makes a good bird bath.



Change the water frequently as birds bathe in the water as well as drink it.



## Earthworm Research - Write An Essay

1. How many kinds of earthworms are there in the world?
2. Why are earthworms so important?
3. What harms earthworms?
4. What would happen if there was a shortage or disappearance of earthworms?
5. Try to get your essay published in the school newspaper.







## Make Three Gifts

1. For Mother's Day, Father's Day, Grandparents' Birthday - give a present that is hand-crafted from re-used materials (make a set of dusters from old towels, plant some kitchen herbs in an old but pretty teacup)

**OR** doesn't use any materials at all, such as:

2. Make a book of 6 tickets that says you will do something helpful like rake the leaves, sweep the porch, take the dog for a walk, wash the car (or the dog!)

Be sure you **honour** all the tickets!



## Make A green Shopper Display

1. Save the labels and cut out the names from the packaging of your family's shopping.
2. Sort the 'green' product labels/packaging from the 'not so green' products.
3. Make a display from them and put it up in your classroom at school.



## Write A Letter

Write to the manufacturer of any product that concerns you; for example if you feel there is too much packaging, write and say so. Make a copy of the letter you write and send it to YNC with a copy of the reply you receive.

### Green Shopper

Every week families go shopping for groceries and items for the household like cleaners and paper towels. Go along on the shopping trip and look for things such as recyclable containers, use of recycled materials, other ways of cutting down waste.



leading others  
bronze level



Notes:



## Recycling Challenge

Did you get your 'Recycling And Re-using With Imagination' Environmental Action Award?

Challenge Friends and/or Classmates to come up with more ideas & have a 'Recycling Fair'.

Give prizes for the best ideas.

Come to our  
school recycling fair  
this Saturday



## Endangered Species

Did you get your 'Endangered Species' Environmental Action Award?

If you take this project to school and do a talk about it to your class, this will count as a second Bronze Level Award Activity. Ask your teacher to sign a note or write a comment.

## Create More Bird Lovers

Teach someone else how to identify birds

OR

Help a friend or neighbour to put up feeders and a water bath.



## Walk And Share

1. Take your parents or grandparents for a walk and show them all the things you discovered about the habitat you studied.

OR

2. Share one of the projects you have done for Nature Detective or Environmental Action by bringing it to Show and Tell, or making a poster or other display for your class or another youth group you belong to (Brownies/Cubs, etc).

**Reminder:** Send us a copy or photo of your project or have an adult sign a letter to say what you have done.

Notes:



\_\_\_\_\_  
YNC Club:

\_\_\_\_\_  
Member Name:

community participation  
bronze level



Notes:

# Go Outdoors & then... Record Earn Return



Young Naturalists' Club of BC  
www.ync.ca

YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

Signature of Leader/Adult \_\_\_\_\_ Date of Event \_\_\_\_\_

YNC Member \_\_\_\_\_

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YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

Signature of Leader/Adult \_\_\_\_\_ Date of Event \_\_\_\_\_

Print and Fold

Print and Fold

for more information: www.ync.ca

Earn  
Prizes! Like a certificate, YNC  
Cap, or t-shirt.

1620 Mt. Seymour Rd.  
North Vancouver, BC V7G 2R9

Return  
your completed Passport to: your YNC  
Club Leader or mail to the office or  
scan and email to info@ync.ca.

Record  
your outdoor adventures such as  
YNC Explorer Days or other outdoor  
nature events.



How to  
use your



www.ync.ca

YNC Club: \_\_\_\_\_

Member Name: \_\_\_\_\_



nature detective  
silver level





Notes:

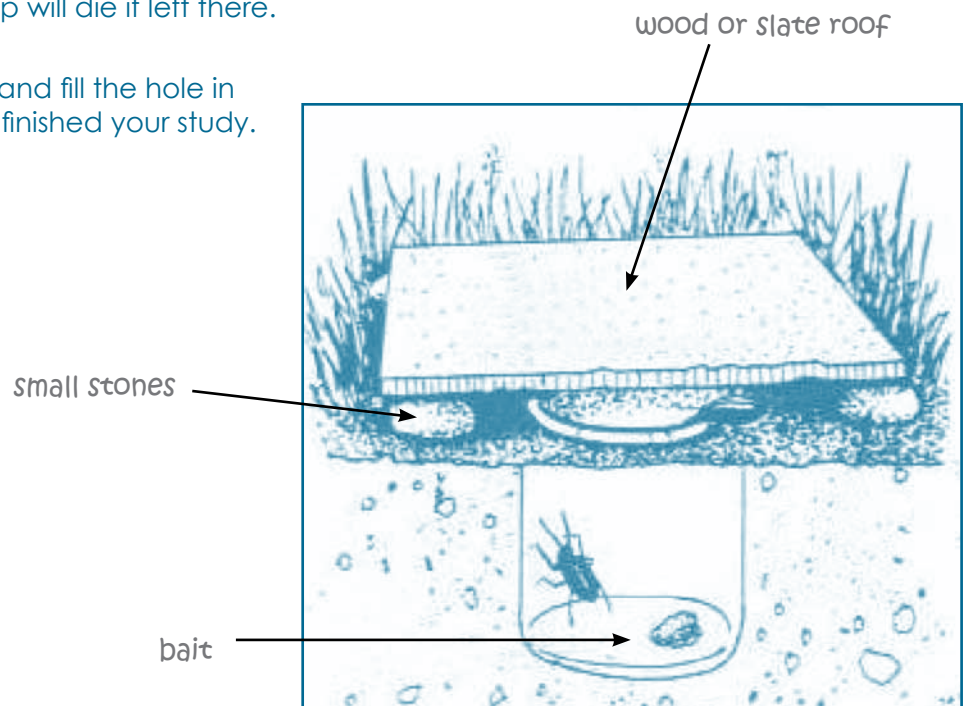


# The Amazing Pitfall Trap

## You'll need:

- 🐛 empty glass jar
- 🐛 stones about 15 mm wide
- 🐛 a piece of flat wood
- 🐛 a piece of flat wood

1. Dig a small hole in the ground just deeper than your jar.
2. Place the jar in the ground and make sure the edges don't stick up above the ground.
3. Put some soil and a few leaves into the jar to give the creatures you catch some shelter. You can also put in some scraps of apple, lettuce, cheese or tomato to attract the bugs.
4. Place four 20 mm thick stones around the edges of the of the jar. These stones will support the piece of wood, which will cover the jar.
5. Draw a picture of your pitfall trap and the insects you find and send us a copy.
6. Check your trap every day. The insects in the trap will die if left there.
7. Remove the jar and fill the hole in when you have finished your study.





## Pond Watch

Observe your **new pond** (see 'Make A Pond' in Environmental Action section) or **any pond** in your area during 4 weekends.

1. Record the animals and birds that use the pond and why - for example for drinking or for bathing or to catch insects.
2. Record any animals that you see in the pond.
3. You can record your results over a longer period of time if you wish.
4. Write a report with sketches and send us a copy.



## Bird Food Study

Do all **birds** eat the same thing? Obviously not. If they did, there would be far too much competition for too little food. The different types of bill give a very good clue to the kinds of food different **birds** eat. Even common garden **birds** have preferences.

1. Fix five or six shallow jar lids approximately 5 cm across to a plank of wood.
2. Position the plank somewhere where you can observe from inside your house.
3. Put different food on each lid (worms, fat, seeds, cheese, bread etc.).
4. Keep a note of who eats what.
5. The best time to carry out this study is the early morning as the birds are usually more active.
6. You may have to set up the feeding station and put the food out for several days before the experiment can start to let the birds become used to this new bird feeder.
7. Once a variety of birds start arriving on a regular basis you can start the experiment.

It is up to you to work out how you record the information and how long you run this experiment. But you should watch the feeder for a 30-minute period for at least 5 days. Write up your results and send us a copy.

Don't forget  
the great backyard  
bird count in  
February. Your  
reports will add  
to knowledge  
of how many  
birds there are  
and how they  
move around.





## Make A Worm Farm

1. First prepare a large clear glass jar by filling it with damp sand and soil in alternate layers each 1-2 cm thick. (make at least 6 layers)
2. Use a watering can to soak a patch of lawn with a dilute mixture of water and washing-up-liquid.
3. Collect the worms that come to the surface and rinse them immediately in tap water.
4. Alternatively, find worms hiding under rocks, logs or flowerpots.
5. Place the worms in the jar and add a layer of grass and dead leaves for them to feed on.
6. Cover the jar with thick paper to cut out as much light as possible.
7. Remove the paper each day and watch the worms gradually mix up all the soil layers.
8. Taking a photo of the wormery each day is a great way to record the worm's progress.
9. Alternatively you could draw a picture each day.
10. Send us a copy of your results



## Bug Shake

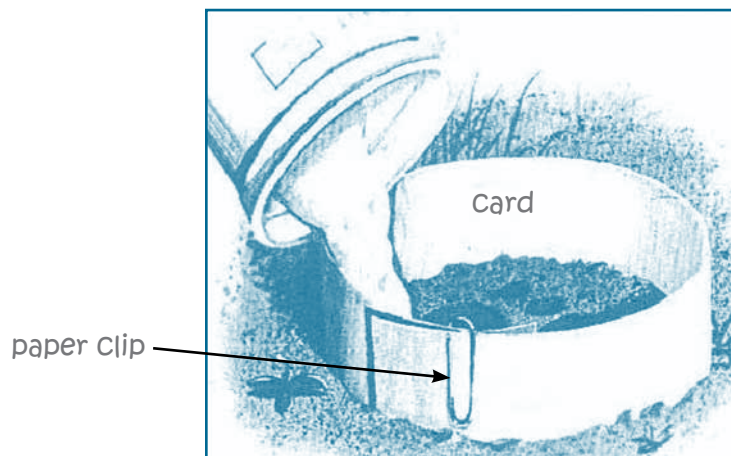
Find an old white sheet and cut out a square 50 cm X 50 cm. Place your white square on the ground underneath a bush, and then shake the branches. Try and identify the bugs that fall onto your sheet. Do this activity several times trying different types of bushes to see if you find anything different. Report your findings by recording which insects fell from each bush, also name the type of bush. Send us a copy of your results.



# Animal Tracks

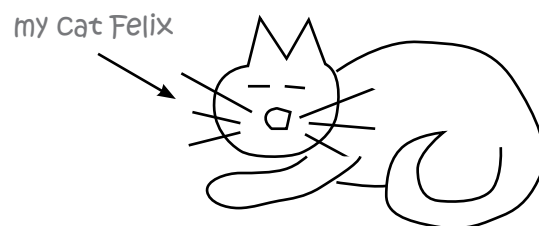
## You'll need:

- 🐾 quick drying plaster of Paris
- 🐾 a plastic container (a large yoghurt pot will do)
- 🐾 30 cm X 5 cm strip of card
- 🐾 vaseline
- 🐾 an old spoon
- 🐾 paper clips
- 🐾 large container of water
- 🐾 trowel



1. Find a clear well defined animal footprint such as coyote, or a large bird.
2. Vaseline the surface of the card strip and form it into a ring, securing it with a paper clip.
3. Press the ring into the soil to make a containing wall around the footprint.
4. Mix up the plaster of Paris in your pot. The plaster mix should have a smooth creamy consistency.
5. Pour the mix into the retaining ring, covering the animal track with at least 2cm of plaster.
6. Leave for about 30 minutes and then dig beneath the cast so that you can lift it up along with the underlying soil.
7. Let it set over night, then brush off the loose earth.

If you cannot find a clear footprint of a wild animal you could use a paw print from a pet such as a dog or a cat. Draw a picture of the footprint and the animal that made it and send us a copy.








# Make An Underwater Scope

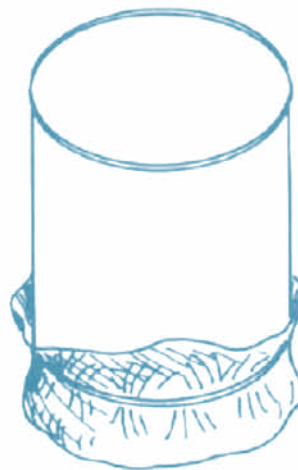
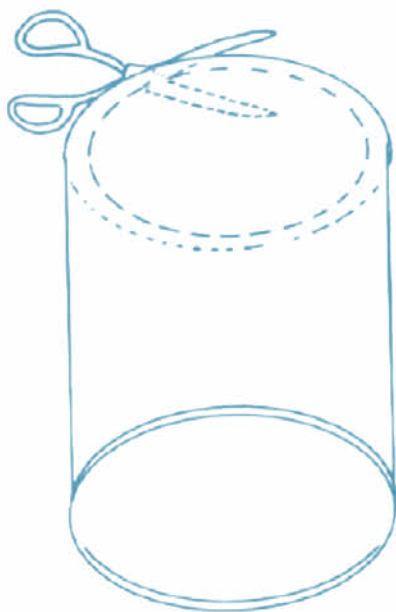
Using an **underwater viewer** enables you to discover much about life underwater without having to catch any animals. You can use the **viewer** in a stream, lake or in tide pools.

## You'll need:

-  a large can or pop bottle
-  clear plastic
-  strong elastic bands

1. Carefully take the top and bottom off a tin or a plastic bottle.
2. Ensure that there are no sharp edges.
3. Fix the clear plastic tightly to one end with an elastic band.
4. Push this end into the water, look through the clear end.

You can build an underwater scope to help you with the pond activities in this booklet





## Water Use Survey

For one whole day write down every time you use **water**. This includes; brushing your teeth, going to the washroom, washing your hands, having a bath or a shower, and drinking. It is probably best to do this project on a weekend.

Then think about how you could have saved **water**.

- Do you brush your teeth under a running tap? If you only turn the tap on to rinse your brush you use half the amount of water.
- Could you have taken a shower rather than a bath?  
A shower uses far less water.
- Do your parents have water-saving toilets? If not they can put a plastic bottle filled with water in the toilet tank. The toilet will use less water every time the tank fills up.
- Do any of the taps in your house drip when they are turned off?  
If they do ask you parents to get them fixed them as this wastes a lot more water than you think.
- Doing these simple things does not take much effort, but if everyone did them we would use a lot less water.
- Send us a copy of your water use diary.



## Why do Insects Visit Flowers?

Insects go to **flowers** looking for nectar. They are attracted to the **flower** by the bright colours and the smell. These experiments will help you find out which scents and colours attract which insects.

### Colour

Make 7 cardboard squares 30 cm X 30 cm and paint them different colours: white, yellow, red, blue, green, purple and black. Lay the card squares on the grass on a warm sunny day. Find out which is the most popular by keeping a record of the insects that visit the cards.

### Scent

Insects are also attracted by scent. Pick the least visited card and add on a smear of honey or other scents you think may attract insects. See if insects will now visit this colour, attracted by smell.

Write a report on your observations and send us a copy.





## Car Journey Survey

For one week, keep an '**on the move diary**'. Every time you make a car journey, note it down. Note down how far you went and how you travelled.

When you have completed your diary for the week, take a close look at it. Ask yourself the following questions and give yourself a really honest answer:

- Were all the journeys really necessary?
- Could you have walked?
- Could you have cycled?
- Could you have taken a bus?
- Could you have shared a ride with someone else?

Send us a copy of your diary.

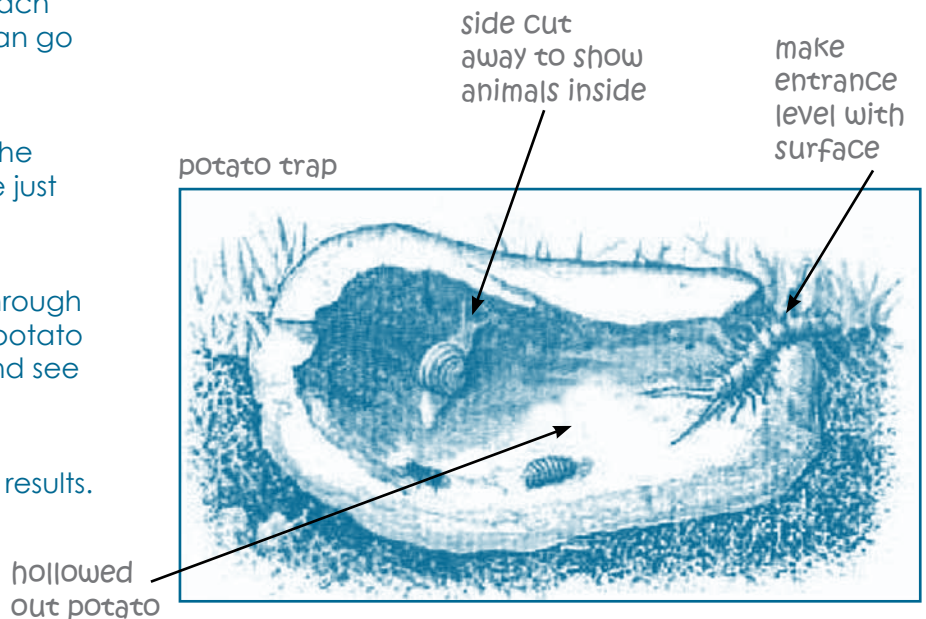


## Potato Trap

Make your own **potato trap** to catch small bugs.

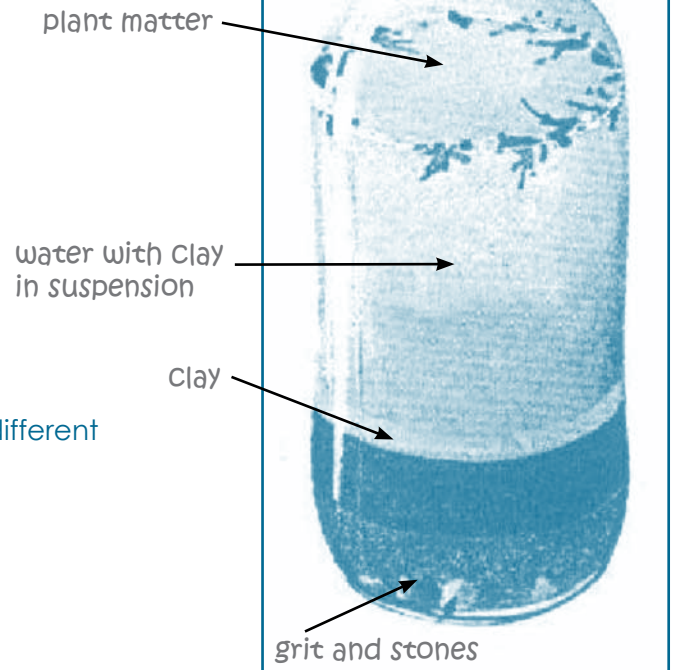
**You will need a large potato.**

1. Cut the potato in half, lengthwise and carve out the middle, just like a pumpkin.
2. Hold the potato together with toothpicks.
3. Make a small hole at each end so the creatures can go in and out.
4. Sink the potato half in the ground so the holes are just above the soil surface.
5. The bugs will crawl in through the holes. Check your potato every day for 4 days and see what you catch.
6. Send us a copy of your results.



## Soil Layers

1. Dig up a sample of soil and mix it with water (half soil and half water).
2. Then put it in a clear bottle.
3. Shake the bottle and let it settle. This is what happens in a lake or a sea: geologists call it sedimentation. It is part of the non-living environment that affects ecosystems.
4. Let your sample settle over- night.
5. Mark lines on your bottle and label the different layers you can see.
6. Send a sketch of your observations.



## Identify Four Pond Creatures

Identify the **creatures** you find in your **pond** or any **pond** in your area. .

1. Choose four different creatures that you find in your pond and sketch them.
2. Label your sketches - for example legs, body, head or any special markings you see.
3. Use a field guide to identify the four creatures. Give their common name and their scientific name.
4. Send us a copy of your labeled sketches.

### Important note:

Sketches are often the best way to record your findings. All that is needed is a few lines with arrows to point out important features. They do not have to be works of art !





environmental action  
silver level

Notes:





# Environmentally Friendly Cleaners

Many **cleaning products** available in the stores can affect aquatic life if they leak into rivers or lakes. Here are some simple recipes to create **cleaners** that will not harm life in the water. Report which ones you made and how you used them.

## Metal Polish

- 3 teaspoon of salt
- 1 tablespoon of flour
- white, distilled vinegar

Combine salt, flour and enough vinegar to create a paste. Scoop paste onto a sponge and polish bronze, brass or copper. Wipe with a soft cloth.

## Tile cleaner

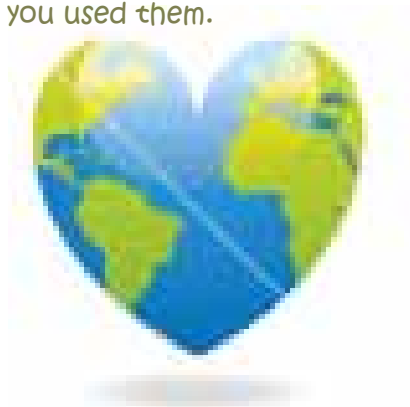
- $\frac{1}{2}$  cup baking soda
- vegetable oil based soap
- 15 drops of tea tree oil.

Mix together baking soda and enough soap to make a frosting-like consistency. Add tea tree oil. Scoop the creamy mixture onto a sponge, wash the surface, and rinse.

## Window Cleaner

- $\frac{1}{4}$  cup white distilled vinegar
- $\frac{1}{2}$  tablespoon of vegetable oil soap

Combine all the ingredients in a squirt bottle. Shake to blend, then spray on windows and wipe clean using a clean cotton cloth.





## Make A Pond

1. Dig a hole at least 60 cm deep and 1.5 metres across.
2. Shape it so it is narrower at the bottom.
3. Line it with 5 cm of sand or newspaper, then cover with a sheet of strong plastic large enough to overlap the edges of the pond.
4. Fill the pond with water, then pile rocks onto the edge of the plastic sheet to keep it firm and to protect the plastic from the sun.
5. You can buy pond plants from garden centres.
6. Stock the pond with creatures from a friend's pond, or wait to see what comes naturally.
7. You can find more information on pond building in your local library or on the internet. Send us a drawing, description or photo of your pond and a copy of your observations.



## Make A Birds Nest

Discover how birds make nests. Use twigs, leaves and anything else you think a bird may use to build your very own bird nest. Start your nest by finding flexible twigs and tying them together to make a frame. You could find a quite place high up in a tree or in a thick hedge to put it. You never know - the following spring it may get used, or birds make take bits of your nest to make their own. Tell us what you used to make your nest and where you put it.



# Make A Nest Box

You will need an adult to help you with this **activity**, in particular cutting the wood.

## You'll need:

- 🔪 a plank of wood 150 mm wide and 15 mm thick. (See picture below)
- 🔪 a strip of rubber for the roof hinge. (bicycle tyre inner tube is ideal)
- 🔪 2.5 cm galvanized nails
- 🔪 a catch for the lid
- 🔪 wood Treatment (make sure the odour has gone before putting up the box)

1. The nest box should be put up well before March.
2. Choose a location out of reach of cats and people.
3. Make sure your box is not facing south as it will get too hot.

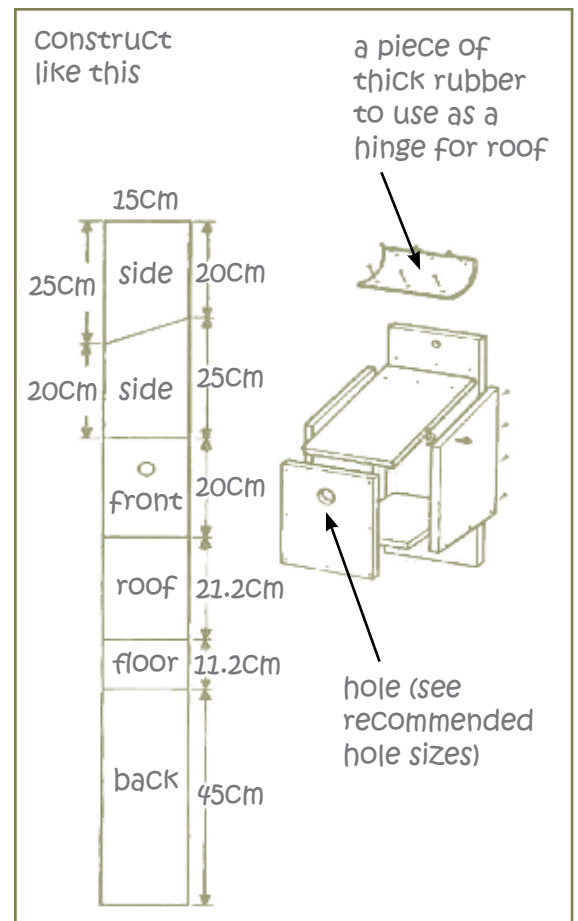
**IMPORTANT:** Nest hole size is very important. If too large, predators could get into the box. (for the same reason, do not put a perch in front of the hole).

## Recommended hole sizes:

Wrens - 25-28 mm

Chickadees - 28 mm

Nuthatches & Downy Woodpecker - 30 mm





# World Watch Scrapbook

This is a chance for you, your family and your friends to collect information about wildlife and the environment from around the globe.

Ask your friends to give you any relevant newspaper or magazine articles and pictures they find. Cut them out and stick them into your scrapbook. This is an on-going project that can last until your scrapbook is full.

Start this project by making a collage of wildlife and environmental pictures on the front cover of your scrapbook.

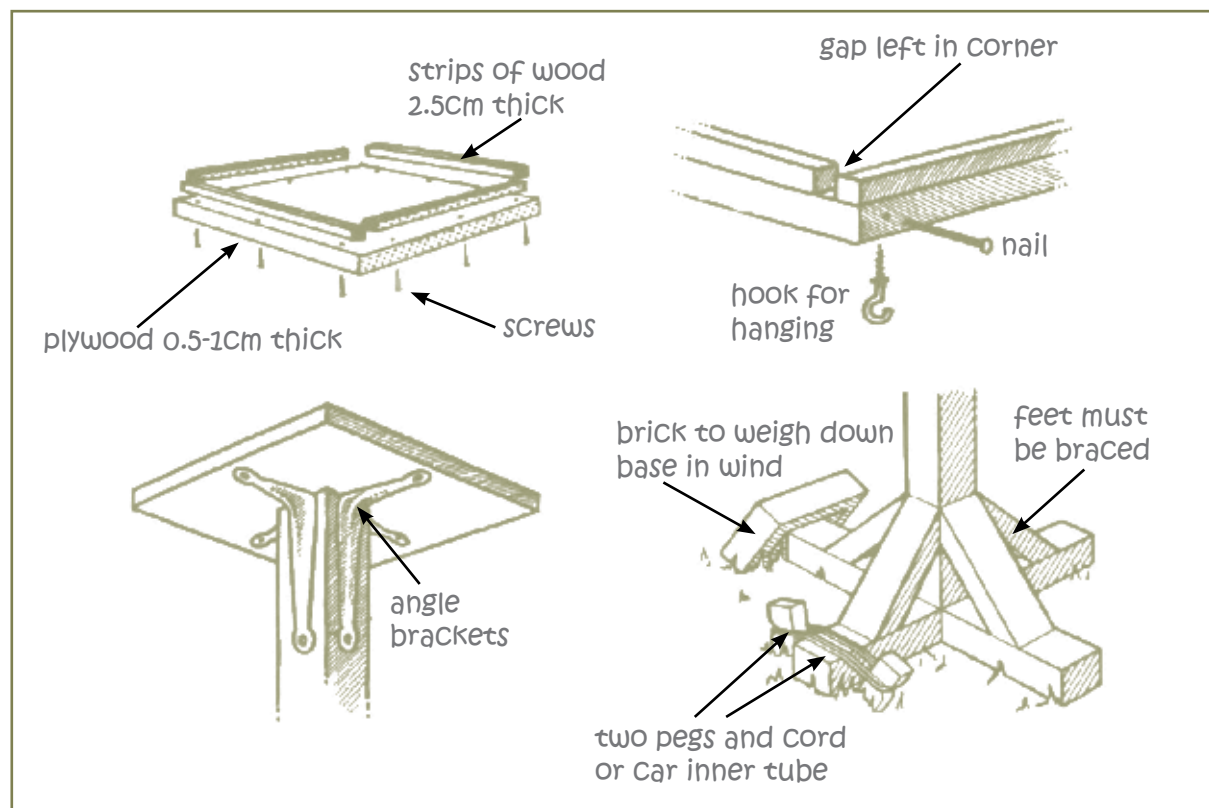
There are many ways you can organise your pictures and articles. For example by continent, country or by birds or animals etc.

Send us a copy of your front cover and a copy of your first few articles so we know you have started your world watch scrapbook.



## Make A Bird Table

To make a raised bird table, you need a flat piece of wood fixed on the top of a 1.5m high post. You can put legs on the post or drive it straight into the ground. A rim about 2.5 cm high around the edge will stop food from being blown away. Drill a few holes in the tray for rainwater to drain through and leave a gap at one corner to clean away uneaten food. A roof isn't necessary, but it will give birds some shelter.







# Build A Can Crusher

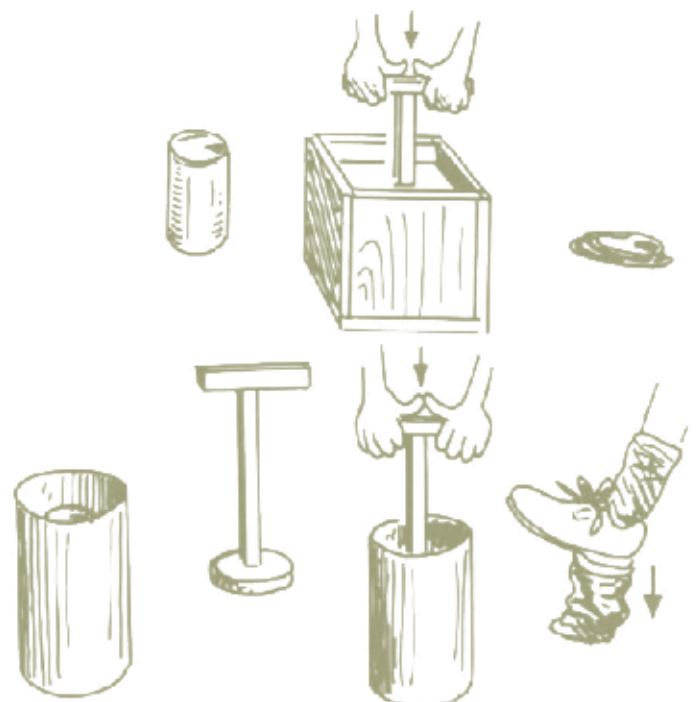
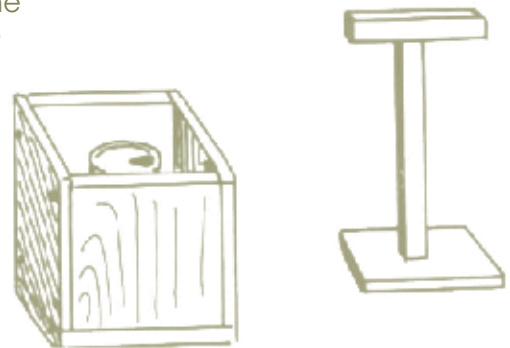
## You'll need:

- 🔪 wood scraps
- 🔪 nails
- 🔪 plastic tubing (drainpipe)
- 🔪 magnets (test for steel or aluminums)

This is an exercise in waste reduction in two ways - first by recycling the cans themselves and second by reducing the volume of the waste to minimise storage problems.

1. Make a square wooden box large enough to contain an upright pop can.
2. Cut a square of wood so that it just fits into the wooden box and attach the plunger handle to it as in the diagram.
3. Place a can in the box and use the plunger to squash it.

A variation on the square box method is to use a plastic drainpipe with a round plunger.



Notes:



leading others  
silver level

Notes:





## Make A Leaf Bookmark

Collect your favourite leaves. Look for special colours and shapes. Lay them flat between several sheets of newspaper and leave them under a heavy object. After about a week your leaves should be dried and pressed. You can then make your leaf bookmark by mounting the leaves on a piece of card and then covering it with adhesive-backed plastic. Make several bookmarks, send one in to YNC check off a Silver level activity and give the rest away as gifts.



## Leaf Slide Game

1. Find a piece of thick black card 30x15cm, fold the card in half to make a square 15x15cm.
2. Then cut out small square 3x3cm in the centre of the card. You must cut through both sides of the folded card.
3. Find a leaf and place it between the card. (dead leaves are best as you can see a wide variety of colours). The small square you cut in the middle of the card will enable you to get a good view of the leaf when you hold it up to the light. You will be able to see all the veins and colours in the leaf.

The next stage of this activity is to get a group of people, either friends, family members or classmates to make their own leaf slides. You must explain how to make them. Once everyone has made their leaf slide and found a leaf you can play a game.

Everyone must get into a circle. Then tell the group to look really carefully at their own leaf. Mix all the leaf slides up and pass them back to the group. Make sure the leaves do not move in the leaf slides (tape card or use paperclip). Each person in the group must find their own leaf as the mixed up leaf slides are passed around the circle.



## Teach A Friend How To Build A Nest Box

When you make your nest box in the Environmental Action section, you could take photos of your nest box during construction. This will help you teach someone else build a nest box. You can then show them a good place to put it up in their garden.



## Water Use Survey Challenge

Get at least 3 of your friends to carry out a water use survey (in the Environmental Action section). Send us a copy of their diaries. Ask them to think about the questions in the survey.



## World Watch Scrapbook Challenge

Once you have completed the World Watch Scrapbook in the Environmental Action section take the project to school and talk about it to your class. This will count as a second Silver Level Award Activity. Ask your teacher to write a comment about your scrapbook and presentation, and send us a copy of the comment.



## Make A Bird Table Challenge

Teach someone else how to make a bird table (instructions located in the Environmental Action section). Then give them some advice on the best place to put it in their garden.



## Micro Planets

### You'll need:

- a group of friends or members of your family
- 1 metre lengths of string
- toothpicks made into mini flags (red tape is ideal)

Tell your group that they must choose an area of ground. Find an area with interesting features, such as grass, soil, stones and leaves etc. Each person will circle their chosen area with the 1 metre of string; this represents their micro planet. Then mark 10 features within the circle with the toothpick flags.

Now your group must use their imagination, for example the stones could represent huge cliffs and a puddle of water could be a huge ocean. They must give their planet a name and describe all of the special features which they have marked. Share the information about your own micro planet with everyone in the group. Write a report on the activity or describe/sketch one of the micro planets, and send us a copy.

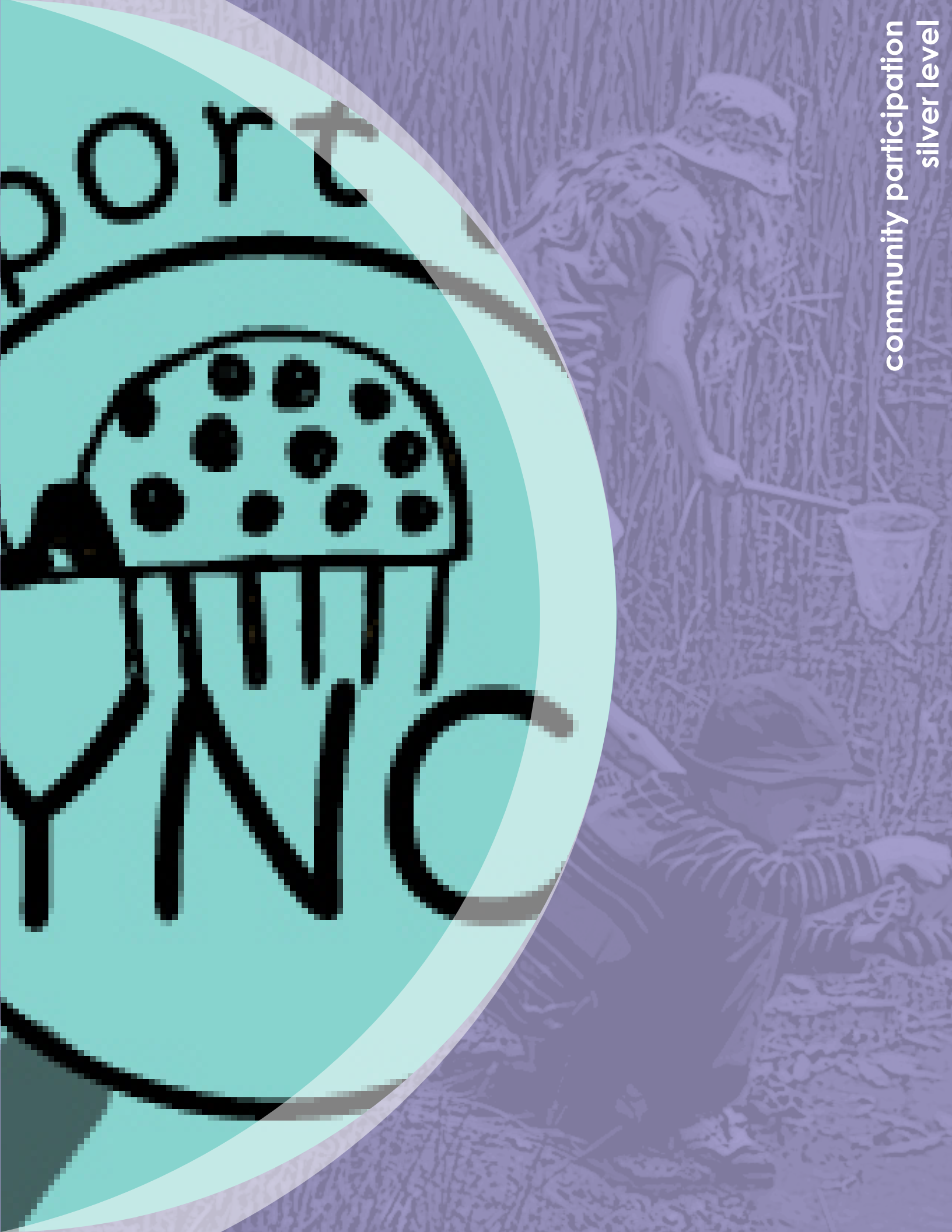


## Car Journey Survey Challenge

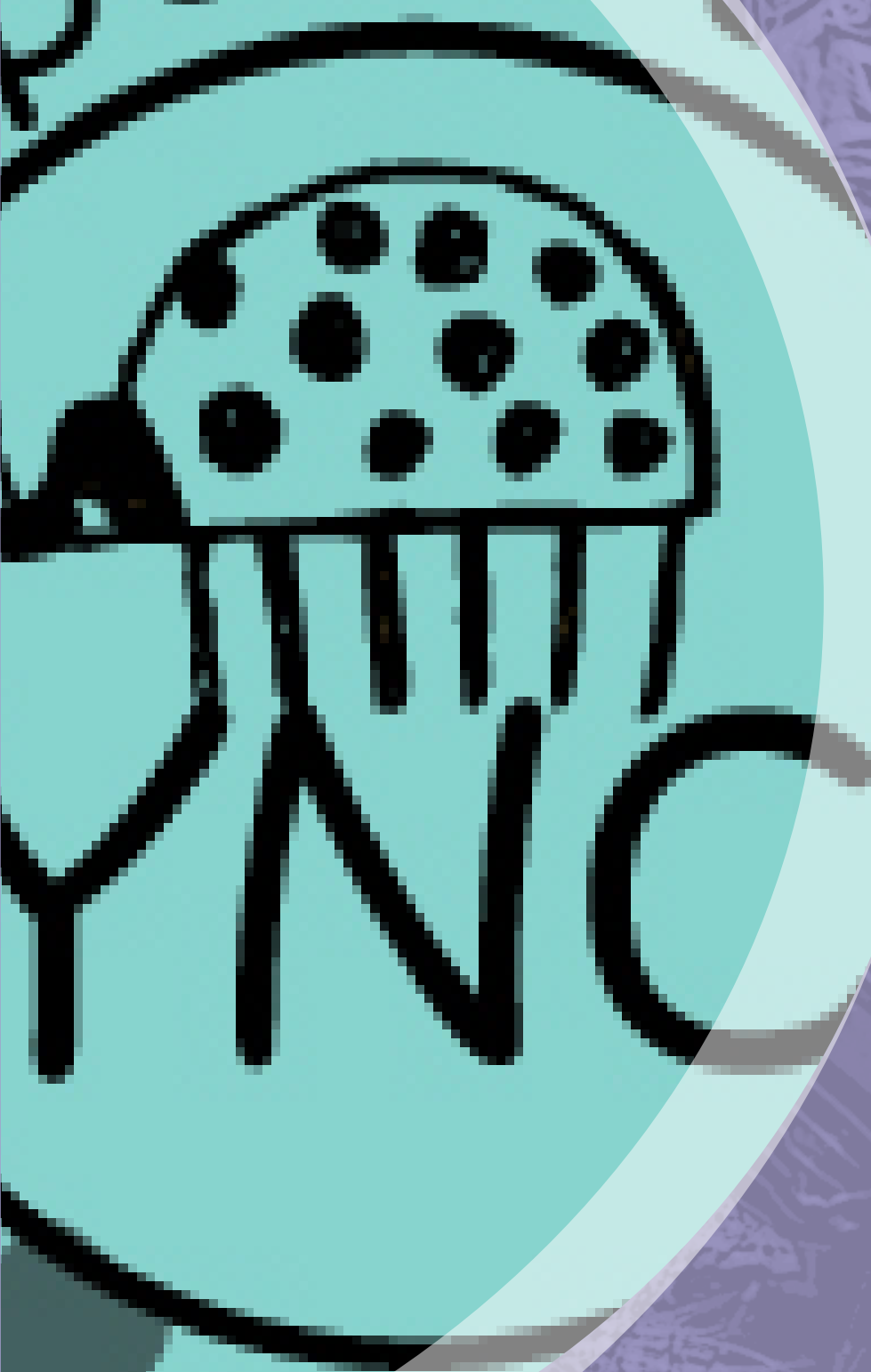
Get at least 3 of your friends to carry out a car journey survey (instructions located in the Environmental Action section). Send us a copy of their diary. Ask them to think about the questions in the survey.

Notes:





port



community participation  
silver level

Notes:

for more information: [www.ync.ca](http://www.ync.ca)

Prizes! Like a certificate, YNC  
Cap, or t-shirt.

**Earn**



1620 Mt. Seymour Rd.  
North Vancouver, BC V7G 2R9



Club Leader or mail to the office or  
scan and email to [info@ync.ca](mailto:info@ync.ca).  
your completed Passport to: your YNC



**Return**

your outdoor adventures such as  
YNC Explorer Days or other outdoor  
nature events.



**Record**



**How to use your**



YNC Club: \_\_\_\_\_

Member Name: \_\_\_\_\_

**Go Outdoors & then...**  
**Record Earn**  
**Return**



Young Naturalists' Club of BC  
[www.ync.ca](http://www.ync.ca)

YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

Signature of Leader/Adult \_\_\_\_\_

Date of Event \_\_\_\_\_

YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

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Signature of Leader/Adult \_\_\_\_\_

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Print and Fold

Print and Fold



nature detective  
gold level





Notes:

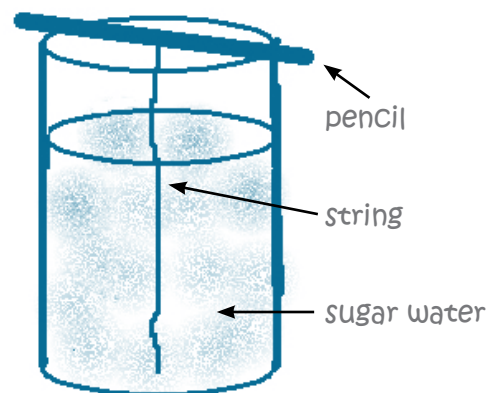


# Grow Your Own Crystals

**Crystals** are the small, regularly shaped particles that make up minerals and rocks. Water will dissolve small amounts of just about anything and when it evaporates, dissolved substances are left behind in the form of **crystals**. The slower the water evaporates, the larger the **crystals** grow.

## You'll need:

- 🍷 medium-sized cooking pot
- 🍷 two cups of water
- 🍷 long handled spoon
- 🍷 cup of sugar
- 🍷 piece of string (clean), about 15 cm long
- 🍷 drinking glass
- 🍷 pencil (or pen or popsicle stick)



1. Pour the water into the cooking pot.
2. Heat the water on the stove until it starts to boil.
3. Slowly add the sugar to the boiling water. Stir the water with the spoon. (There must not be any undissolved sugar in the bottom of the pot when you finish.)
4. When all the sugar is dissolved, carefully pour the sugar water into the drinking glass until the glass is about  $\frac{3}{4}$  filled.
5. Tie a piece of string to the centre of the pencil.
6. Set the pencil on top of the glass and let the string sink into the water. You might need to push it down with a string.
7. Let the mixture cool and then set the glass in a cool, dry place for several days. Let the water start to evaporate. The slower evaporation occurs, the better results will be. Be patient - don't give up.
8. Watch for crystals of sugar to form on the string. If it doesn't work the first time, reheat the mixture and add a bit more sugar.
9. When the crystals grow, look at them with your magnifier. Observe their shape, colour, size, hardness and anything else you can think of. Make notes in your notebook. Send us a copy of any notes and sketches that you have made about your crystals.



# Star Search

Try to learn to recognize certain **star groups** - don't worry if you can't see the picture they represent.

## You'll need:

- 🔦 flashlight (to read the star charts)
- 🧥 really warm clothes (consider a sleeping bag)
- 🪑 lawn chair (optional)
- 🔭 binoculars (optional)
- ☀️ clear night sky (late February or early March is often a good time)
- 📄 star charts (from books or the internet)

This can only be done at night when the sky is clear. You should be able to do this from most back yards in towns and cities. You need to be away from streetlights. In the country, go into a part of your yard where you are away from yard lights and lights shining through the windows. Dress warmly and find a comfortable position that allows you to look high up into the sky. Use the star charts to locate the constellations and the individual stars.

You do not need binoculars to find the constellations, but you will see more stars than you can see with your naked eye. Binoculars are really cool when you want to look at the moon. It takes practice to use binoculars to look at stars. If you support your arms on the chair, the stars won't dance around as much in the binoculars.



# Observing Butterflies

Butterflies and their caterpillars (larvae) are attracted to certain kinds of plants. Each butterfly lays its eggs on the specific plants that its caterpillars need to eat. Butterflies really need two kinds of plants: ones that supply nectar to butterflies and ones that can be a food source for caterpillars.

Find some plants that butterflies like and try to observe at least five different types of butterflies visiting them. What do their caterpillars look like and what do they like to eat? Keep track in your notebook of the plants and in-sects that you found. Who else visits the flowers?

## Some Favourite Butterfly Plants

Bee balm, wild columbine, alyssum, aster, aubretia, chrysanthemum, cosmos, day lily, globe thistle, lavender, lilac, marigold, shasta daisy, sunflower, zinnia, mint, rosemary, oregano, achillea, armeria, astilbe, buddleia, coreopsis, crambe, centranthus, cistus, dianthus, echinacea, allium, monarda, syringa, salvia, stokesia, sedum.

## Some Plants for Caterpillars

Stinging nettles, willows, thistles, borage, Douglas fir, pine, Western red cedar, pearly everlasting, spirea, dogwoods, poplar, cow parsley, fennel, dill, angelica, dock, mallow, clover, sweet clover, alder.



# Nature's Architects

Almost every animal makes some sort of structure. There are thousands of structures in nature, such as insect galls, beaver dams and bird nests. Look for and make notes about the kinds of structures you can find in nature. What are the structures like? How do animals make them? Send us a copy of your notes. Tell us what you found!

## You'll need:

 magnifier

 notebook

 pencil





# Tree Taxonomy

Learn to identify some of the **trees** that grow in BC.

## You'll need:

🔍 tree identification book

📓 notebook & pencil

Take a walk in a forested area or park. Parks are more likely to have trees that are not native to BC, but you can learn to recognize those as well. Native trees are the trees you would expect to find growing wild in BC. Try to identify as many trees (fourteen?) as you can. Looking at their leaves and cones can be very helpful. Tell us where you went and what trees you saw. Include any notes, sketches and other observations that occurred to you when you were looking at trees.



# Car Journey Survey

For one week, keep an '**on the move diary**'. Every time you make a car journey, note it down. Note down how far you went and how you travelled.

When you have completed your diary for the week, take a close look at it. Ask yourself the following questions and give yourself a really honest answer:

- Were all the journeys really necessary?
- Could you have walked?
- Could you have cycled?
- Could you have taken a bus?
- Could you have shared a ride with someone else?
- Send us a copy of your diary.

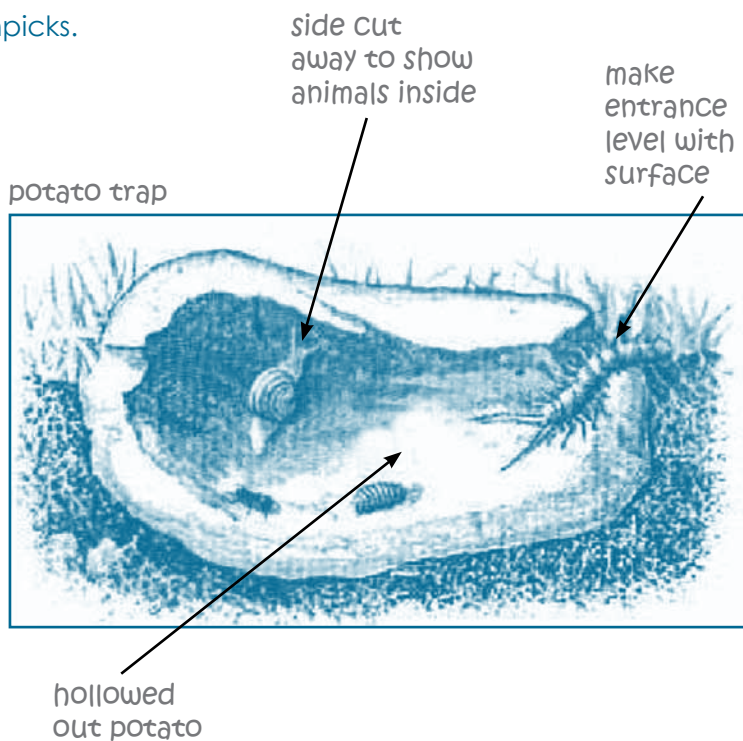


## Potato Trap

Make your own **potato trap** to catch small bugs.

**You will need a large potato.**

1. Cut the potato in half, lengthwise and carve out the middle, just like a pumpkin.
2. Hold the potato together with toothpicks.
3. Make a small hole at each end so the creatures can go in and out.
4. Sink the potato half in the ground so the holes are just above the soil surface.
5. The bugs will crawl in through the holes. Check your potato every day for 4 days and see what you catch.
6. Send us a copy of your results.



## Make A Food Web

Almost all living organisms eat and are eaten by other organisms. Draw and cut out pictures of plants and animals; arrange them into a **food web** and show how they are related to one another. Send us a copy of your **food web**.



## The Sounds Of Silence?

Listen for the **sounds of nature** by closing your eyes and counting the number of **sounds** that you hear. Give yourself time to adjust. What sorts of **sounds** do you hear? Try this in a variety of places and at different times. Compare unnatural vs. natural **sounds**. Is hard it to find quiet places? Where are they?

Notes:





environmental action  
gold level



A spiral-bound notebook with a white cover and a silver spiral binding. The notebook is open to a page with light blue horizontal ruling and a vertical red margin line on the left side. The word "Notes:" is written in a green, cursive font in the top left corner.

Notes:



## Community Clean-Up

Help keep your **community clean and tidy**! Sign up and participate in a **community cleanup** or invent your own. Involve your family (and people outside of it if you can). Do not restrict yourself to just your own yard - help clean a street, a park, the ditches bordering your property - the sky's the limit!.

### You'll need:

- 🧢 old clothes
- 🧤 gloves
- 🗑️ garbage bags
- 🔧 tools, depending on the picking up you do



## Plan A Butterfly Garden

Grow some **butterfly** and **caterpillar-friendly** plants (check out 'Observing Butterflies' in the Nature Detective section) and make a **butterfly habitat** in your yard or balcony. Make a plan showing what plants you would plant and where, and which insects they will attract. Send us a copy of your sketch.



## World Watch Scrapbook

This is a chance for you, your family and your friends to collect information about wildlife and the environment from around the globe.

Ask your friends to give you any relevant newspaper or magazine articles and pictures they find. Cut them out and stick them into your scrapbook. This is an on-going project that can last until your scrapbook is full.

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# Make A Nest Box

You will need an adult to help you with this **activity**, in particular cutting the wood.

## You'll need:

- 🔪 a plank of wood 150 mm wide and 15 mm thick. (See picture below)
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- 🔪 a catch for the lid
- 🔪 Wood Treatment (make sure the odour has gone before putting on the box)

1. The nest box should be put up well before March.
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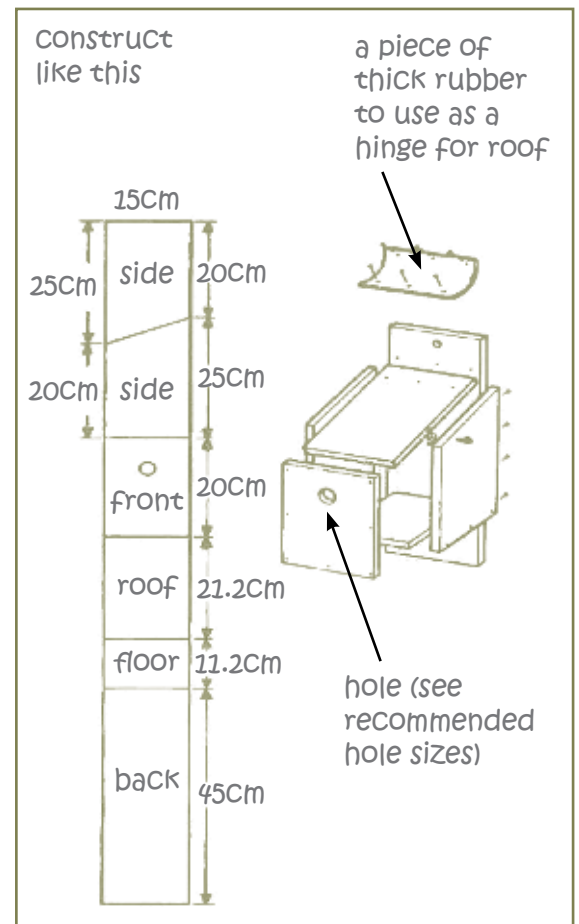
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## Recommended hole sizes:

Wrens - 25-28 mm

Chickadees - 28 mm

Nuthatches & Downy Woodpecker - 30 mm



# Start Composting

A lot of organic materials can be recycled back into the earth by composting. Get a composter (build, buy or borrow) started and have your family start using it. Find out what materials are good to compost and how to keep your composter doing its job. Your composter can be very simple. Worm composters exist that are good for small spaces. Write a report telling us what your composter looks like, what you put in it, how you look after it, etc.



# Our Water Use

Use the chart printed below to record the **water** you use. These numbers might not be exactly right for your house. Feel free to figure out your own way of measuring, like plugging the tub while you shower to see how much **water** is in the tub when you're done.

## How big is your water footprint in the bathroom?

1. How many times a day do you brush your teeth? \_\_\_\_\_ x \_\_\_\_\_ =

If you turn water OFF while brushing, write 1 litre.

If you leave water RUNNING while brushing, write 15 litres.

2. How many minutes do you spend in the shower? \_\_\_\_\_ x \_\_\_\_\_ =

If you have a low-flow showerhead, write 9 litres.

If you have a standard showerhead, write 18 litres.

3. How many times per day do you flush the toilet? \_\_\_\_\_ x \_\_\_\_\_ =

If you have a low flush toilet, write 13 litres.

If you have a standard toilet, write 18 litres.

4. How many times per day do you flush the toilet to get rid of garbage? \_\_\_\_\_ x \_\_\_\_\_ =

If you have a low flush toilet, write 13 litres.

If you have a standard toilet, write 18 litres.

Add up the water use of everyone in your family and calculate your total "family water footprint." Total litres \_\_\_\_\_ =





# Check Your Home For Water Leaks

1. Your water meter will help you decide if you have a water leak.
  - a. Be sure all taps, toilets, dishwashers, and washing machines will not be used for a period of two hours. Just before you are going shopping would be a good time to start this.
  - b. Read your water meter: \_\_\_\_\_ (b)
  - c. Read the meter again after two or more hours \_\_\_\_\_ (c)
  - d. Subtract (b - c) \_\_\_\_\_
  - e. If the answer in 'd' is not zero, there is a leak somewhere in the house.
2. Check your toilet for leaks:
  - a. Lift the lid on the toilet's water tank.
  - b. Add several drops of food colouring to the water in the tank.
  - c. Wait 30 minutes.
  - d. See if any of the colour shows up in the toilet bowl. If it does, there is a leak.
3. Check all the taps and faucets inside and outside of your home for leaks.
4. What are some other ways that you can save water in your home?

Using the internet, you can find information about water conservation at:  
<http://www.saskriverbasin.ca/watchdog.html>

A typical home's water use:

Kitchen and cleaning: 14%

Bath and shower: 34%

Toilet: 29%

Laundry: 19%



leading others  
gold level

Notes:



## Neighbourhood Mapping

1. Make a map of your neighbourhood and mark in all the important nature-related features (big trees, nest boxes, someone's butterfly garden, bramble patches, swamp, etc.). It does not have to be to scale. Use any style of map that suits you. You may need to draw a fairly large map, then 'shrink' the photocopies to send in.
2. Make a list of 5 features that you think would improve your neighbourhood from a wildlife point of view and explain how these features would help. Suggest some ways these ideas might be carried out.



## The Other 'R's

We focus a lot on recycling, but what about the other 'R's: 'reducing' and 'reusing'? Find three ways that your family can reduce its waste and consumption, and/or reuse materials that come into your home. Look at the bigger picture too: what could your school or community do to reduce and reuse? What are some of the reasons we don't do it as often as we could and what might make it easier? What would some of the benefits be?



## Show Someone The Stars

Once you have the 'Star Search' award in the Nature Detective section take a friend or family member out at night and teach them to recognize stars and constellations.





# Fresh Water Slosh

Take a friend to a place where there is open water and lots of cattails growing on the shore. Introduce your friend to the wildlife that lives in the water. Alternately, invent an ocean version of this activity.

## You'll need:

- 🍃 magnifier
- 🍃 a friend to go with you
- 🍃 for each person
  - ice cream bucket
  - toe of nylon stockings
  - coat hanger

1. Put a bit of swamp water into each person's ice cream bucket and see what's in the water (10 centimetres deep is enough).
2. Use the dip nets to catch some of the organisms you can see in the water. Put them into the ice cream bucket for study and identification. Try to identify as many as you can.
3. Look for life in various places and different depths.
4. Kick up a bit of mud from the bottom and catch some of it in your dip net or reach in and grab a handful. Examine it carefully as the mud runs back into the water. Don't forget to look at the plants both in and around the water.
5. Make sketches of some of your finds so you can identify them later.
6. Put everything you catch back into the water and don't leave water organisms exposed to air any longer than you have to - **they will die!**

## Make a dipper:

Take a coat hanger and cut a piece of wire from it that will make a circle about 10 cm across. Twist the ends of the wire to make a handle about 30 cm long. Fasten or sew the toe of a nylon stocking in the circle to make a dipping net.



## Car Journey Survey Challenge

Get at least 3 of your friends to carry out a car journey survey (instructions located in the Environmental Action section). Send us a copy of their diary. Ask them to think about the questions in the survey.



## Be A Tree Teacher

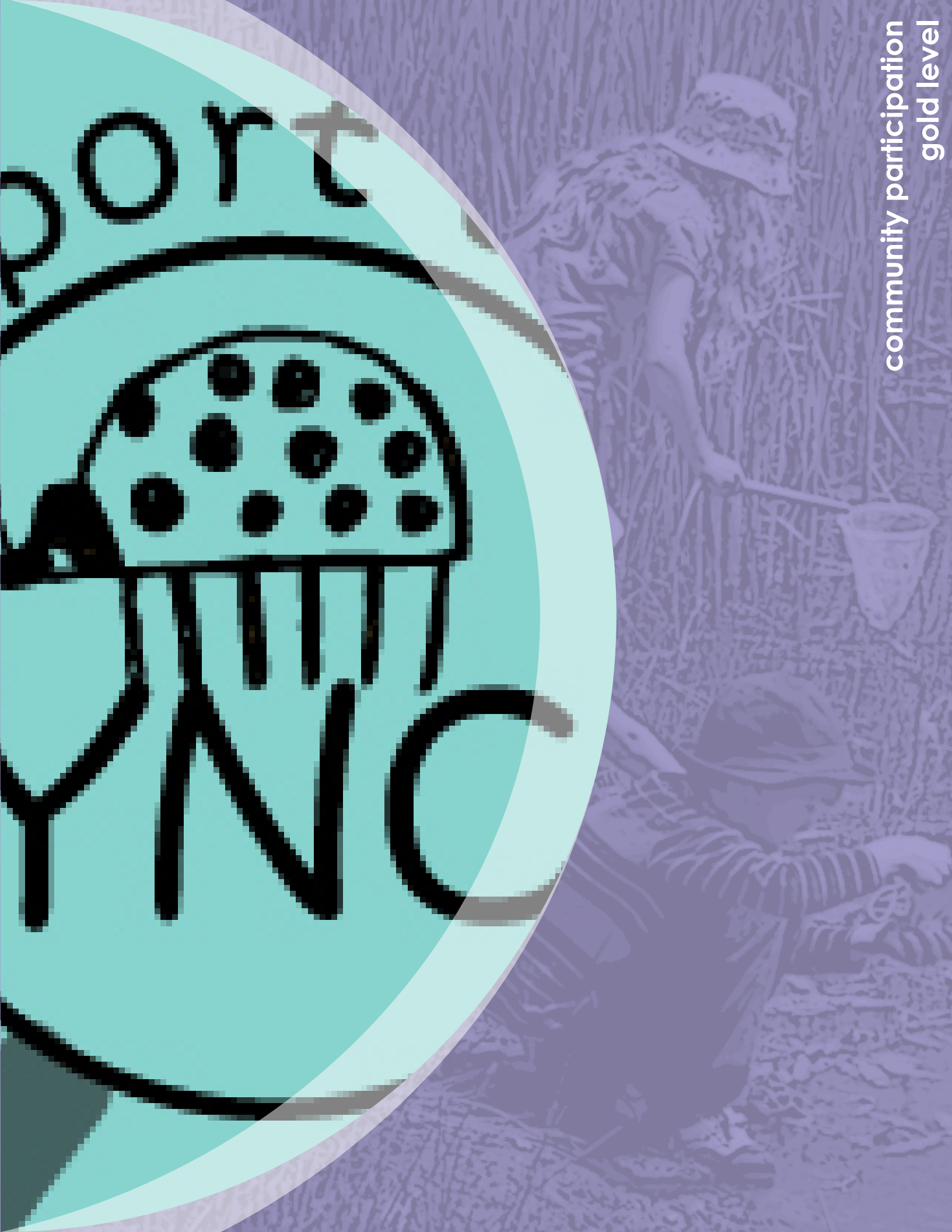
Take a friend or family member out to a forested area and teach them how to identify the trees that you discovered during your 'Tree Taxonomy' award in the Nature Detective section.



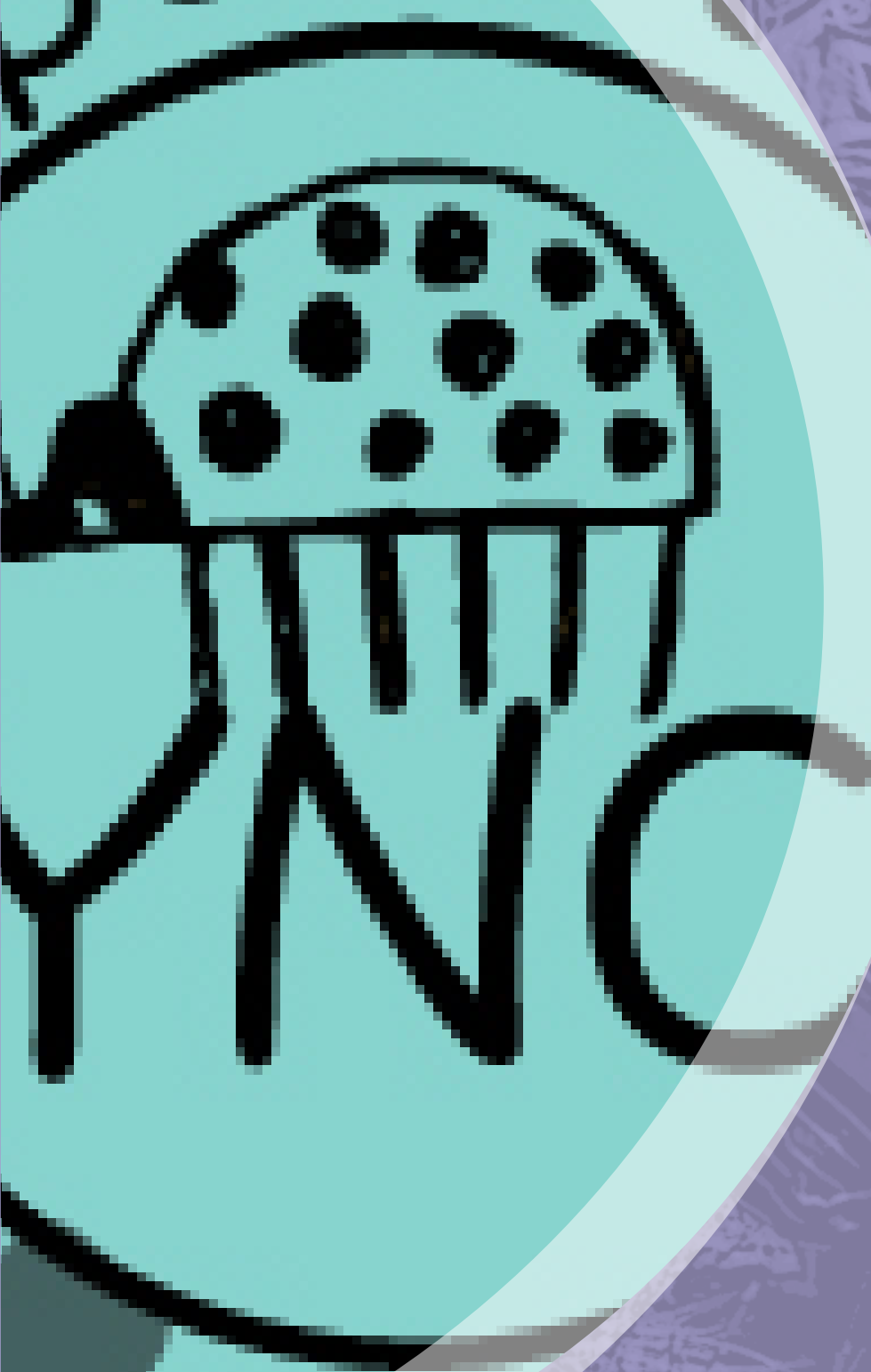
## World Watch Scrapbook Challenge

Once you have the 'World Watch Scrapbook' award in the Environmental Action section take the project to school and talk about it to your class. This will count as a second Gold Level Award Activity. Ask your teacher to write a comment about your scrapbook and presentation, and send us a copy of the comment.

Notes:



port



community participation  
gold level



Notes:

for more information: [www.ync.ca](http://www.ync.ca)

Prizes! Like a certificate, YNC  
cap, or t-shirt.

**Earn**



1620 Mt. Seymour Rd.  
North Vancouver, BC V7G 2R9



your completed Passport to: your YNC  
Club Leader or mail to the office or  
scan and email to [info@ync.ca](mailto:info@ync.ca).

**Return**



your outdoor adventures such as  
YNC Explorer Days or other outdoor  
nature events.

**Record**



**How to use your**



Print and Fold

**Go Outdoors & then...**  
**Record Earn**  
**Return**



Young Naturalists' Club of BC  
[www.ync.ca](http://www.ync.ca)

YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

Signature of Leader/Adult \_\_\_\_\_ Date of Event \_\_\_\_\_

YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

Signature of Leader/Adult \_\_\_\_\_ Date of Event \_\_\_\_\_

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YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

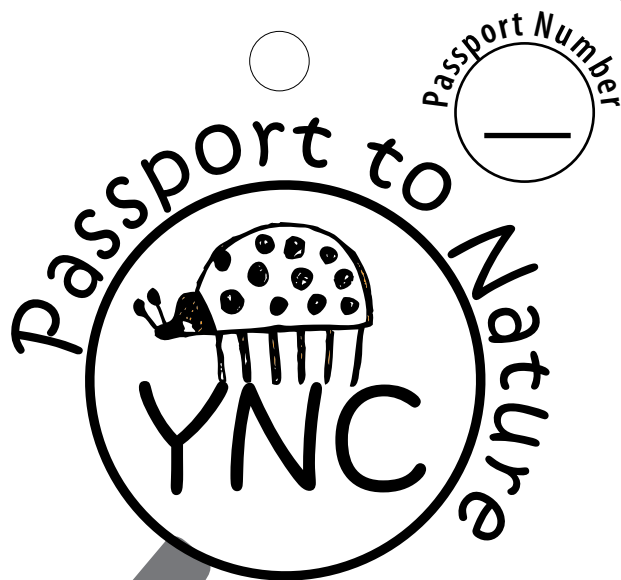
Signature of Leader/Adult \_\_\_\_\_ Date of Event \_\_\_\_\_

YNC Member \_\_\_\_\_

Describe your Adventure! \_\_\_\_\_

Signature of Leader/Adult \_\_\_\_\_ Date of Event \_\_\_\_\_

Print and Fold



Passport Number  
\_\_\_\_\_

[www.ync.ca](http://www.ync.ca)

YNC Club: \_\_\_\_\_

Member Name: \_\_\_\_\_



Young Naturalists' Club of British Columbia  
Reference Section

# Action Awards



nature detective



environmental action



community participation



leading others



# A Partial List Of Reference Books Junior Level

TITLE & AUTHOR(S)	PUBLISHER
Eye Witness Explorers - BIRDS by J. Bailey and David Burne pub and others in the series	Stoddard
Altitude Super Guides (folding pocket guides)	Altitude Publishing
Other folding pocket guides - Peterson Flash Guides and Mac's Field Guidesto Birds, Insects, Plants, etc	
British Columbia Seashore Life, British Columbia Birds and others in the series by J. Kavanaugh & R. Leung	
Salmon Story by Brenda Z. Guidberson	Henry Holt
Bugs of BC by John Acorn, Ian Sheldon	Lone Pine
Birds of Coastal British Columbia by J. Acorn, N. Baron	Lone Pine
Animal Tracks of British Columbia by I. Sheldon & T. Hartson	Lone Pine
Pond Life - Golden Nature Guide and many more topics	Golden Press
National Audubon Society First Field Guides to Insects, Birds, Wildflowers, Rocks & Minerals	Scholastic
National Audubon Society Pocket Guides to Familiar Mushrooms, Clouds & Storms, & many more topics	Alfred Knopf
Peterson's First Guide to Caterpillars, Backyard Birds, many other	Houghton Mifflin
The Jumbo Book of Nature Science by P. Hickman (for the Federation of Ontario Naturalists)	Kids Can Press
The Night Book by P. Hickman and many other titles	Whitecap Books
Coyotes in the Crosswalk (Canadian wildlife in the City)	Kids Can Press
Animals Eat the Weirdest Things, and A Toothy Tongue and One Long Foot and many other titles by D. Swanson	Whitecap Books
Green Giants (Rainforests of the Pacific Northwest) by T. Parkin	Douglas & McIntyre
Beginner's Guide to Bats by Williams, Mies, D & L. Stokes	Stokes
Plants of the West Coast Trail; Vancouver & the Lower Mainland, & other titles - pocket books by Collin Varner	Raincoast Books



# A Partial List Of Reference Books Intermediate Level

TITLE & AUTHOR(S)	PUBLISHER
British Columbia: A Natural History by R. & S. Cannings and several other titles in the series	Greystone Books
The B.C. Roadside Naturalist by R. & S. Cannings	Greystone Books
Parks of British Columbia by M. Paquette	Maia Publishing
Beach Explorations by G. Snively	Kingfisher Press, Sooke, BC
Life in the Pacific Ocean by R. & S. Cannings, M. deJong Westman	Greystone Books
Whales & other Marine Mammals of British Columbia & Alaska by Tamara Eder and Ian Sheldon	Lone Pine
Plants of Southern British Columbia by Parish, Coupe & Boyd	Lone Pine
Plants of Coastal British Columbia by Pojar & McKinnon	Lone Pine
Nature BC (an illustrated guide to common plants and animals) by J. Kavanaugh	Lone Pine
Mushrooms of Northwest N. America by H. Schalkwijk-Barendsen	Lone Pine
Field Guide to the Birds of North America	National Geographic
Birds of British Columbia Volumes 1 - 4	UBC Press
Birders' Handbook by Erlich, Dobkin & Wheye	Simon & Schuster
Birds of the Rockies by Holroyd & Coneybeare	Simon & Schuster
Amphibians of Oregon, Washington & BC by Corkran & Thoms	Simon & Schuster
Simon & Schuster's Guide to Butterflies & Moths	Simon & Schuster
Tree Book (Learning to Recognize Trees of British Columbia)	BC Ministry of Forests
A Year on the Wild Side by Briony Penn	Horsdal & Schubart
Seasonal Guide to the Natural Year by J. Davis	Fulcrum Publishing
British Columbia Recreational Atlas	BC Ministry of Environment
"Biodiversity Publications Catalogue "	BC Ministry of Environment, Lands & Parks is another good source of information.

NOTE: Whitecap Books, Lone Pine, Douglas & McIntyre, Horsdal & Schubart, Raincoast Books and Greystone Books are BC publishers.



# Opportunities For Community Involvement

## HABITAT ENHANCEMENT

### Backyard Habitat Enhancement

Bird/bat box workshops, other activities  
Institute of Urban Ecology  
Douglas College  
P.O. Box 2503  
New Westminster, BC, V3L 5B2  
Tel: (604) 527 5522 Fax: (604) 527 5095  
Email: iue@douglas.bc.ca  
[www.douglas.bc.ca/iue/ecoed.htm](http://www.douglas.bc.ca/iue/ecoed.htm)

### Evergreen Home Grounds

(Greening School grounds & Parks)  
#410 744 West Hastings St.  
Vancouver, BC, V6C 1A5  
Tel: (604) 689 0766 Fax: (604) 659 6222  
Email: [infobc@evergreen.ca](mailto:infobc@evergreen.ca) Website:  
[www.evergreen.ca](http://www.evergreen.ca)

### Greenstreets

(greening neighbourhood streets)  
c/o Engineering Services  
Vancouver City Hall, 5th floor  
453 West 12th Avenue  
Vancouver, BC, V5Y 1V4  
Tel: (604) 873 7155 Fax: (604) 871 6266  
Email: [greenstreets@city.vancouver.bc.ca](mailto:greenstreets@city.vancouver.bc.ca)  
Website: [www.city.vancouver.bc.ca/greenstreets](http://www.city.vancouver.bc.ca/greenstreets)

### NatureSCAPE BC

(Caring for wildlife habitat  
at home, schools & parks)  
PO Box 9354 Stn Prov Govt  
Victoria, BC V8W 9M1  
Tel: 800 387 9853 Fax: (250) 356 0985  
Resources for all BC ecosystems

### Canadian Wildlife Service

PO Box 340, Delta, BC,  
Tel: 604 940 4700

### Streamkeepers

(Community Stewardship Program)  
Pacific Streamkeepers Federation  
720 Orwell Street  
N. Vancouver, BC, V7J 2G3  
Tel: (604) 986 5059

### Living by Water project

Tel: 250 832 7405  
Email: [shorelines@jetstream.net](mailto:shorelines@jetstream.net)  
[www.livingbywater.ca](http://www.livingbywater.ca)

### Watershed Restoration Project

D. Suzuki Foundation  
#219 2211 West 4th Avenue  
Vancouver, BC, V6K 4S2  
Tel: (604) 732 0752 Fax: (604) 732 0752  
Email: [4228@vkool.com](mailto:4228@vkool.com)  
Website: [www.vkool.com/suzuki](http://www.vkool.com/suzuki)

### Centre for Marine Conservation

(International Coastal Clean up)  
604 659 3487 or  
202 429 5609  
and  
River Works (Fraser River Estuary)  
Tel: 604 659 3503  
Website: [www.riverworks.org](http://www.riverworks.org)

### Department of Fisheries & Oceans

Pacific Ocean  
email: [WilsonCh@pac.dfo-mpo.gc.ca](mailto:WilsonCh@pac.dfo-mpo.gc.ca)  
Website:  
<http://www.pac.dfo-mpo.gc.ca/oceans>

## SHARING THE CARING

### Classroom/community Action Projects

### Pitch-In Canada

Pitch-In Week, Re-cycling, etc.  
Resource and Activity Library  
Website: [www.pitch-in.ca](http://www.pitch-in.ca)

### GREEN TEACHER

[www.greenteacher.com](http://www.greenteacher.com)

### BC Endangered Species Coalition

1001 - 207 W. Hastings Street  
Vancouver, BC, V6B 1H7  
Tel: 250 847 2400 Fax: 250 877 7711  
email: [ksmallwood@wcel.org](mailto:ksmallwood@wcel.org)  
Website: [www.extinctionsucks.org](http://www.extinctionsucks.org)

## BIRDS

### Birdquest

(Basic Birding Program)  
Canadian Nature Federation  
# 606 1 Nicholas Street  
Ottawa, ON, K1N 7B7  
Tel: (800) 267 4088 Fax: (613) 562 3371

### Nest Records Scheme

(Egg Monitoring)  
Wild Bird Trust of BC  
PO Box 6218, Station C  
Victoria, BC, V8P 5L5  
Tel/fax: (250) 356 9145

### Project Feeder Watch

(Winter Survey of Feeder Birds)  
& Important Bird Areas  
Bird Studies Canada  
PO Box 160  
Port Rowan, ON, N0E 1M0  
Tel: (888) 448-BIRD  
Website: [www.bsc-eoc.org/pfw.html](http://www.bsc-eoc.org/pfw.html)

## FROGS and others

### Alien Alert

(Bullfrog Survey)  
Purnima Govindajulu University  
of Victoria  
Tel/Fax: (250) 472 4584  
Email: [purnimap@uvic.ca](mailto:purnimap@uvic.ca)  
Website:  
<http://web.uvic.ca/bullfrogs>

### Frogwatch

(National frog monitoring program)  
Laura Friis  
British Columbia Frogwatch  
Min. of Water, Land and Air Protection  
PO Box 9374, Stn. Prov. Gov  
Victoria, BC, V8W 9M4  
Tel: (250) 387 9755 Fax: (250) 356 9145  
Email: [bcfrogwatch@victoria1.gov.bc.ca](mailto:bcfrogwatch@victoria1.gov.bc.ca)

### Wormwatch

[www.wormwatch.ca](http://www.wormwatch.ca)

### Plantwatch

[www.cnf.ca/plantwatch](http://www.cnf.ca/plantwatch)

## Looking for a local naturalist?

There are more than 50 naturalist clubs around British Columbia who have the resource people to help you.

To locate the club nearest you, contact the

### BC Nature

1620 Mt. Seymour Rd  
North Vancouver, BC V7G 2R9  
Tel: 604 737 3057  
[www.bcnature.ca](http://www.bcnature.ca)

## Some Special Days Throughout The Year

### FEBRUARY

February 2 - International Wetlands Day  
February- 3rd weekend Great Backyard Bird Count  
February 22 Cycle in the Rain

### MARCH

Spring Break migration begins - a great time to go bird watching

March 15 Wildlife Week begins

March 22 Celebrate FRESH WATER (World wide)

### APRIL

Wildlife Week

April 22 EARTH DAY (world wide)

### MAY

Early in May Pitch-In Week (Canada wide)

Look out for Wildlife Festivals around the province

### JUNE

Bike Month

June 6 Canada Clean Air Day

June 8 OCEANS DAY (world wide)

### JULY & AUGUST

Summer Holidays time to explore nature in the park, in the forest, on the sea shore.

Last Sunday in August Spirit of the Salmon Swim - (kick off)

### SEPTEMBER

Shoreline Restoration Month

September 21 Car Free Day

4th Sunday in September RIVERS DAY

### OCTOBER

October 4 World 'Walk to School' Day

3rd week in October Arbor Week (celebrate Trees)

### NOVEMBER

2nd week in November Feeder Watch starts

### DECEMBER

Make fantastic gifts with recycled materials