



Volvo Adventure 2012

A community group leader's guide to biodiversity projects

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2 What's it all about?

This is a series of activities to help you prepare your entry to the Volvo Adventure. It collects together ideas and suggestions that could help devise and develop your biodiversity project. It could be used as a complete programme for people just starting out. For those of you with existing projects it provides suggestions for supporting your entry to the Volvo Adventure.

3 What is the Volvo Adventure?

Volvo and the United Nations Environment Programme (UNEP) challenge young people all over the world to participate in Volvo Adventure, an exciting award for a better environment. This educational programme gives young people from all around the world the opportunity to display their local environment-care projects.

Groups entering the Volvo Adventure are expected to show the need for their project or have a means to show it is being successful. If you have an existing project this could be based on your results, and showing an understanding of the impacts of your project locally. If you are starting out your research might focus on the potential solutions and why one was chosen.

4 Objectives

This set of activities is designed for use by community groups to research the issue they are working on. The objective is to:

- 1) Provide you with ideas for researching your biodiversity project.
- 2) Identify potential information sources for your biodiversity project.
- 3) Suggest methods to develop and start a biodiversity project.
- 4) Devise and collate results to show the effectiveness of your project.

5 What the Volvo Adventure needs

The activities are not provided as a programme to be followed, they are ideas and suggestions that can be adapted to a variety of situations. In fact you might want to look at other ideas in other downloads – you may want to use these also. To take part in the Volvo Adventure 2012, all you have to do is:

- 1) Think about how you can illustrate the need for your project.
- 2) Use the ideas in this pack to measure, monitor, and come up with ways to show how you can improve your local environment.
- 3) Submit your group's project before 31st January 2012.

6 Activity outcomes

The activities are based on successful projects used with different curriculums around the world to:

- 1) Measure and monitor biodiversity in your local community.
- 2) Create activity-based projects with young people to begin solving biodiversity issues in your area.
- 3) Introduce young people to researching a case that supports their actions.
- 4) Experiencing how a group can develop an understanding of how to research and present a 'brief' to local decision makers.

7 Using the activities

Writing for an international award means that we cannot produce a full description of how the activities will fit every curriculum they might be used with. The aim of the activities is to create a framework for your existing investigations. Rather than try to write for every curriculum we have suggested ways the activities have been used by other groups, including:

- As part of personal, social or environmental education to identify and plan a project to help the local community.
- As part of a business studies programme to help the group identify and research an environmentally based community issue.
- To support investigations of local places as part of a geography investigation to find out what people like or dislike about an area and map the main features.
- To investigate a problem and how it is reported or written about in the local press.
- As part of science investigations, as the activities provide a context for specific investigations such as water pollution, energy generation and use, or biological studies of an area.
- A series of activities that allow young people to monitor the health of their local community.



How to use this pack

The activities in the following sections can be focussed on biodiversity issues ranging from the establishment of gardens, protecting areas for nature conservation, or being involved in helping to protect a single species.

In the past, successful finalists have been involved in many of these types of project. The pack is structured to:

- 1) Introduce a method or process to create a biodiversity project.
- 2) Provide methods of qualitative research focussing on what people think about biodiversity issues.
- 3) Provide methods of quantitative analysis for measuring aspects of the plants and animals in your local area.

Section 1: Ask people

Skills and competencies

Competency	Skill	Activity
Recognise the rights of respondents.	<ul style="list-style-type: none"> • Identify the rights of respondents. • Explain how these rights have been recognised. • Show sensitivity to the needs of research respondents. 	Constructing a questionnaire.
Understand the importance of reflecting different views.	<ul style="list-style-type: none"> • Identify a range of community viewpoints and interests concerning an issue. • Explain the importance of community viewpoints and interests concerning an issue. 	Producing a report.
Identify a range of research methods and tools.	<ul style="list-style-type: none"> • Understand how to design a research questionnaire. • Distinguish between open and closed questions. • Identify when the above is appropriate. • Produce examples of different questionnaires. • Produce questions for self-completion. • Produce clear and unambiguous questions. • Identify leading questions. • Understand how to use a probing question. 	1: What do people think and do? 2: What's the real situation? 3: Why conserve green areas? 4: Perceptions of biodiversity

Activity 1: What do people think and do?

Time required: 20 minutes

Resources needed: Paper and pens

Objectives

- To identify how to prove the issue is real.
- To research the barriers to resolving the issue.
- To find out what actions have already been taken.

Instructions:

Ask the group to answer the following questions:

- 1) What evidence do you have that the biodiversity issue is a problem in the community?
- 2) What ideas do you have for proving that the problem is real?
- 3) How will you find out what people think about the issue?
- 4) How will you find out what individual people are doing about the issue?

Activity 2: What's the real situation?

Time required: 20 minutes

Resources needed: Paper and pens

Objectives

- To identify how to prove the issue is real.
- To find out what actions have already been taken.

Instructions

Ask the group to answer these questions:

- 1) How will you find out what is being done in our group to help the environment?
- 2) What are local companies doing to help?
- 3) What are local authorities doing to help?
- 4) Who do you need to speak to, or write to, for this information?
- 5) What's the best way to get in touch with them?

Tips

- A good questionnaire will have an objective – decide what information you want to find out. You may need to make more than one questionnaire.
- Start with an explanation about why the information is important.
- Think about the audience – what are they able to answer, and how much time do they have to answer it in?
- What sort of questionnaire are you going to write – one that is completed by the other person or one you complete when talking to them?
- Are you asking open questions to find out what people think?
- Are some questions multiple choice – with different tick boxes?
- Ask a wide selection of people to fill it in. Test your questionnaire first if you can.
- Start it with something easy for people to answer and finish by thanking them.
- Try not to ask a question that leads them to a particular answer.

Activity 3: Why conserve green areas?

Time required: 30 minutes

Resources needed: Paper and other information

Objective

- To identify what is being done to conserve biodiversity already.
- To research what actions are being taken by other groups.
- To identify international and national ideas for conservation.

Instructions

Ask the group to do a survey and ask these simple questions:

- 1) Should the area you are investigating be conserved for wildlife?
- 2) What do people feel are the advantages of the area being conserved?
- 3) What do people feel are the disadvantages of the area being conserved?
- 4) Ask people if they can think of a reason why the site should be conserved as a green space, and a reason why it should not be.

Activity 4: Perceptions of biodiversity

Time required: 40 minutes

Resources needed: Pen and paper

Objectives

- To find out what the young people think about biodiversity.
- To investigate reasons for protecting habitats and species.
- To create a basis for further questions and research.

Instructions

Work through these questions with the young people:

- 1) What sort of animals do you feel are benefiting from your work?
- 2) Write down the sorts of animals you think are dying out or becoming extinct locally, nationally and internationally.
- 3) What sorts of animal do you feel we should protect and keep from becoming extinct or dying out?
- 4) Why do you that feel it's important to conserve and protect rare animals from dying and becoming extinct?
- 5) What do you feel about keeping rare animals in zoos?
- 6) What do you feel about keeping rare animals in wildlife parks?

Section 2: Getting a biodiversity survey done

These activities are to help the young people to design a survey of the habitat or area they're working on. Not all of them are suitable for every biodiversity project, but you can select the ones that are useful for you. By investigating the eco-systems within your area the young people will have basic data for monitoring the site that can be useful to the people who manage it or devising a management plan for themselves.

Skills and competencies

Competency	Skill	Activity
Undertake basic biodiversity surveys.	<ul style="list-style-type: none"> • To introduce basic identification. • To introduce parts of an insect and other animals. • To allow basic data collection and recording. • To illustrate the diversity of life. • To understand food webs and chains. • To demonstrate how life relies on plants for food. • To illustrate how man's impact can alter wildlife and landscape. 	All

Activity 1: The biodiversity map

Time required: This is dependent on the area to be mapped.

Resources needed: Dependent upon the area to be mapped.

Objectives

- To map out the biodiversity in an area.

Instructions

- 1) Contact local organisations by letter or email to find out what types of biodiversity protection are available: is it for habitats or species?
- 2) Mark the areas or species that are protected on a base map.

Activity 2: Making a map

Time required: 60 minutes if the area had been defined already.

Resources needed: Compass, clothesline or rope or string, garden canes or long straight poles, tape measure, board with paper on it, pencils, ruler, protractor, pins.

Objective

- To map out a new habitat or area.

Instructions

Use these instructions with the young people:

- 1) Use the compass to find North and mark this as an arrow on your paper.
- 2) Put your board with the paper on it, keeping it orientated on a rock, chair or tripod.
- 3) Lay out the line from east to west.
- 4) Use the ruler to mark a line on your map, remembering to scale it. Younger children may need adult help to do this.
- 5) Put a pin in the end of your drawn line. Then make a sighting to a larger object – such as a tree. First from one side then other. Where the lines intersect is the tree on your map.
- 6) Alternatively measure out a line and then mark on the map after measuring the distance.
- 7) Try triangles as well – use the clothesline and garden canes to mark out a triangle measuring 3, 4, 5 units along each of its side. You can then use two sides to measure up and then across to make co-ordinates – for a small area.

Activity 3: Wildlife worth

Time required: 60 minutes, after the preparation activities have been completed.

Resources required: Maps, information on local nature reserves, explanations of different types of nature protection, pens, paper, markers and tracing paper.

Objectives

- To work out the worth of different habitats for wildlife.

Preparation

- 1) Look to see if the area is a nature reserve or protected in anyway. Contacting NGOs in your area can help.
- 2) Go on an expedition and count the number of different types of plant and animal you can find.

Instructions

- 1) Which habitats do you think are best for wildlife?
- 2) Why are these habitats important for wildlife?
- 3) What difference do seasons make?
- 4) Why is the habitat there, was it planted by people or did the plants grow there without human intervention?

Tip:

- Check out dangerous wildlife first, and the first aid or welfare requirements of your expedition.

Activity 4: Soil survey

Time required: 60 minutes

Resources needed: Survey sheet, base map.

Objectives

- To produce a soil map of an area.

Instructions

Ask the young people to:

- 1) Create a simple soil map, taking samples from exposed areas of soil.
- 2) Make a ball of soil about the size of your palm. You may need to wet the soil to do this - it should not be so wet that it shines.
- 3) Feel the texture of the soil by rubbing it between your fingers. There are three types of texture: **sand** - feels gritty; **silt** - feels smooth; **clay** - feels sticky. You can test your texture touch by using sand clay and mixing make up soil balls. Then see where your soil fits on this list (next page>>)

How your soil sample feels	Type of soil	Texture
Sandy and gritty to feel when you try to make it into a ball	Sandy	Will not make a ball.
	Loamy sand	Can just about make a ball. Leaves a stain, dark, black or brown.
	Sandy loam	Cannot be rolled into a sausage easily.
	Sandy silt	Just about makes a sausage when rolled out. Feels slightly sticky.
	Sandy clay	Very sandy, forms sausages easily.
	Clay loam	A little sandy and forms a strong ball in your hand.
Makes a ball that is easy to mould like clay	Silt loam	Feels smooth and a little sticky.
	Clay	Can be made into a sausage and bent into a circle. Looks shiny.
	Silty clay	Sausages of soil can make a circle, but does not look shiny when smeared.
	Silty clay loam	Sticky and sausages do not quite make a circle.

Tips:

- Bottled soil: take small samples of soil from around the site. Place them in clear bottles and mix with water to see what different ingredients there are in the soil.
- Look to see if the soils are wet or not by drying samples or burning off humus in an oven. Weigh the samples before and after.

Activity 5: What rarities are found in your area?

Time required: 60 minutes

Resources needed: Base map with existing features of the site marked.

Objectives

- To highlight habitat features of importance to maintain or encourage rare species.

Instructions

Ask the young people to:

- 1) Look at local museums or botanic gardens to uncover what used to grow naturally in your area. It could help you to plan wildlife gardens or conservation areas.
- 2) Ask when contacting museums and botanic gardens what conditions you need to create in your garden or wild area.
- 3) Use this information to highlight features you need to incorporate into your plan for the site, mark these on your base map.

Activity 6: Assess sites for yourself

Time required: 60 minutes

Resources needed: Use the information from previous activities.

Objectives

- To assess the site wildlife potential of the site.

Instructions

Ask the young people:

- 1) Are there landscape features that are important, or unique?
- 2) Does the area have any protection or buffer zones around it?
- 3) Can the site demonstrate ecology importance or human impact?
- 4) Are animals or plants of importance locally, nationally, internationally?
- 5) Does the area contain a wide variety of habitats and species?
- 6) How will the people in and around the area be affected?

Activity 7: Biodiversity in our town

Time required: 60 minutes after preparation activities.

Resources needed: Letters, maps, pens.

Objectives

- To assess the biodiversity conservation sites in your community or town.

Preparation

Ask the young people to find out from libraries and local nature groups:

- 1) Is there an inventory of wildlife in your town?
- 2) Do you have any endangered species?
- 3) Where do they live, what kind of habitat do they prefer?
- 4) What area of your town do you think is the most important to preserve biodiversity?

Instructions

Ask the young people to use maps to:

- 1) Mark areas around the community used for wildlife conservation.
- 2) Create overlays of key landscape features.
- 3) Create overlays of key geological features.
- 4) Identify areas that could be improved.

Activity 8: Finding out what plants are there

Time required: 60 minutes

Resources needed: Squares made of wood or string (quadrats).

Objectives

- To define plants in your area.
- To map their abundance and distribution.

Instructions

Ask the young people:

- 1) Create quadrats by either randomly throwing your quadrat and collecting samples, marking where you collected the sample, or take a line using a rope and measure to take quadrats at different intervals.
- 2) Work out the number of plants in each quadrat by counting the larger ones.
- 3) Estimate the number of other plants using one of these scales:
 - a) A scale of: Dominant, Common, Occasional, Frequent Occasional and Rare.
 - b) A scoring system such as:

Score	Cover in a quadrat
10	100%
9	over 75%
8	50-75%
7	33-50%
6	over 20%
5	over 5%
4	scattered
3	scarce
2	isolated
1	present

Activity 9: Finding out about animals

Time required: 60 minutes

Resources needed: See the tips for data collection ideas.

Objectives

- To survey some of the animals in your area.

Instructions

Ask the young people to find out:

- 1) What do the experts say? Find out what information already exists in your area try looking at reports and policies from different organisations.
- 2) What was there – can people in your school or community remember?
- 3) Have a look – could you do a sponsored bird watch or something similar?

Tips

The following techniques can help you find animals on your site:

- **Pitfall trap:** This could be a jar or tub in the ground, covered to stop rain going in, to collect ground-walking creatures. You might want to put bait in the traps.
- **Nooks and crannies:** Try setting out a small rock or bait such a honey to attract different animals. A honey or sugar solution in a shallow dish can attract a variety of animals, especially if the dish is painted yellow.
- **Sweep nets:** Use a net made from fine fabric such as muslin or net curtains or use plastic fine netting. Fix it around a metal frame such as a coat hanger, and attach this to a sawn-down broom handle. Then walk through the grass, sweeping the net from side to side. You can use this idea to make a basic pond net as well.
- **Pouters:** These can be made from tubes and netting. Make sure that one end is covered with a gauze or fine cloth and that the tube is big enough to suck up the insects.
- **Track traps:** You can use these to get the footprints of larger animals on walk ways using sand in a tray or mud. If you have plaster you can make casts from them.
- **Soil samples and leaf litter:** Put these under a light over a bowl with wire mesh covering it. Soil animals will move away from the light into the bowl.

Section 3: Action planning

Skills and competencies

Competency	Skill	Activity
Understand the importance of reflecting different views.	Identify a range of community viewpoints and interests concerning an issue and explain their importance.	1: Saving biodiversity
Develop the ability to produce basic plan.	Produce a plan. Produce a timetable.	2: Action Planning

Activity 1: Saving biodiversity

Time required: 60 minutes

Resources needed: The results of the research and investigative work.

Objectives

- To produce a plan to rescue the species and/or habitats.

Instructions

Ask the young people to:

- 1) Describe briefly the situation you investigated in your research. How many habitats and species did you find?
- 2) Research the costs of your ideas. This will help you to construct your action plan because you will know what is practical. Remember to cost out each of the elements.
- 3) Research a timetable, for example find out when trees should be planted, when is it safe to work in a pond, when should seeds be sown etc. This can be done simply using a 'ladder' drawn on a sheet of paper. Each rung of the ladder should correspond to a month in a year.
- 4) You now have to create a management timetable for your nature areas – what jobs need to be done to maintain the biodiversity in it?
- 5) Decide what will be your target when it comes to biodiversity. How many new habitats do you want to create or do you want to expand some of the existing ones? Is there any particular species you want to attract to your area? Be sure to set a reasonable target that you can achieve.
- 6) Are there alternatives?
- 7) How will the project affect other people's lives?
- 8) Describe the proposed target groups - all of them.
- 9) Decide upon the interests within the target groups; try ranking environmental degradation, natural world, human health and security, public opinion, public relations, economics.

Activity 2: Action planning

Time needed: 60 minutes

Resources required: Copies of this sheet or paper and the previous research results.

Objective

- To develop an action plan.

Instructions

Use the group's answers to Activity 1 and use this sheet to develop an action plan.

- 1) What's the issue?
- 2) What's your conclusion?
- 3) What's the objective of your action plan?
- 4) Who needs to be involved?
- 5) How will you involve them?
- 6) How will you prove support for your idea / get other peoples ideas?
- 7) Do you need funding?
- 8) What's the timescale?
- 9) How will you know if your project has succeeded?