SCOUTS
Creating a Better World

world scout environment programme
le programme environnement du scoutisme mondial

WORLD SCOUT ENVIRONMENT BADGE
PROGRAMME ACTIVITY RESOURCE

Water Exploring

Aim 1
Scouts are working towards a world where people and natural systems have clean water and clean air.

Educational objectives
Explore the sources of clean water and clean air in the local environment.
Identify threats to clean water and clean air in the local and global environment and be able to suggest solutions.

Age range
11 to 14

Summary
A practical activity to explore your local area and discover where water is found, what it is used for and why it is necessary.

Aim
To create awareness of water in our surroundings and the relationship between water and human life.

Equipment
Map, paper, pens, camera (optional)

Preparation
Find a suitable route around the local area

Duration
One to two hours

Setting
Local area

Background

Water is vital for life and in many parts of the world can be found all around us in a variety of different places. In some parts of the world clean, safe water is not freely available. This activity encourages us to explore our local environment and discover our water, where it is, what it is needed for and what it looks like. Once we understand our water and why it is important to us we can begin to learn about water in a global context.

Step by step guide to activity

1. Split the Scouts into small groups and give each group a map, paper, pen and a camera (optional). A route can be marked on the map, or you can give them co-ordinates to follow, or they can decide on their own route within a marked area.

2. Before the groups set off, have a quick discussion about where they think they might find water. For example, stream or river, public toilets, puddle, water fountain etc.

3. The groups walk around the route looking for water. When they find some they should think about the following questions. Where is the water? What is it used for? How much water is there? Is it there every day? What colour is it? Does it smell, is it discoloured? Can humans drink it? Can animals drink it? If they have a camera they can take a photograph of the water.

Evaluation

1. Once all the groups have returned ask each group to present what they found and discuss the findings. Use the questions below to help the discussion.

Were the Scouts surprised by the quantity of water they discovered?
How does the water they found fit into the water cycle?
How does the water help us?
How does the water help plants and animals?
Did anyone mention the water that is in the air as water vapour?
Did anyone mention the water in the soil and underground?

2. If you have taken photographs, create a display of the water in your neighbourhood.

3. Did the groups identify water hidden within buildings? Ask them to think about what we use water for in our homes and how that water gets there. What happens to that water before it enters our homes? Where does it go after it leaves our homes and what happens to it then?

Further activities

1. Visit a water facility in your local area and learn about where the water in your home comes from, how it is cleaned and where it goes to after you have used it.

2. Build a model or make a poster showing the water cycle.

3. If you found any water pollution problems in your local area, investigate these more thoroughly. Find out what is causing the pollution and take some action to resolve it.

4. Look into ways we can be more efficient with our use of water in our day-to-day lives.

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Nature Art

Aim 2
Scouts are working towards a world where sufficient natural habitat exists to support native species.

Educational objectives
Explore a local natural area.
Understand the ecosystem connections of native species of plants and animals and their habitat needs.
Be aware of global conservation issues affecting biodiversity.

Age range
11 to 14

Summary
An outdoor activity where the Scouts have the opportunity to be creative in nature and with nature.

Aim
To gain an appreciation of the variety, form and beauty of nature through creative activities.

Equipment
Paper and pens

Preparation
Find a suitable place to visit

Duration
Up to one hour

Setting
A local natural area, for example, forest, beach, mountain or park

Background

The natural world is full of variety and beauty. One way to become aware of this and begin to understand and appreciate it is through art. Being creative in nature and with nature is a fun way to connect with, observe and work with the natural world.

Step by step guide to activity

1. Find a suitable local natural area and take the group there.

2. Ask each Scout to find a comfortable space in the natural environment and spend a few minutes looking around them at the local nature.

3. Gather the group together and talk about what they noticed in their surroundings.

4. Ask each Scout to choose one thing in the environment and draw a picture of it. Hand out paper and pens. Once they have finished they present their picture to the rest of the group.

5. Ask the Scouts to form into small groups (of between three and five). They are going to use the natural objects around them to create some art - a picture or a sculpture. Make sure they respect the natural objects and do not harm any living creatures. They can use leaves, branches, stones, soil, trees, shrubs etc. If you want you can give them a theme for their art work.

6. Once they have finished gather the whole group together and go on a tour of the art work. Each group should explain their work.

Evaluation

1. Find out what the Scouts learnt about the natural environment they visited. What animals and plants did they see? Did they discover things in the natural environment that they hadn't seen before? How do the different natural elements work together to create the environment? Discuss how the ecosystem works.

2. Find out how much the Scouts enjoy being in the natural environment. Did the activity help them to connect with nature?

Further activities

1. Carry out a proper investigation of the local natural environment. Use survey techniques to record the plants and wildlife, make plaster casts of tracks, collect animal droppings and so on to build up a picture of the creatures that live there.

2. Encourage Scouts to keep their own nature journal where they can record their observations with different senses.

3. Learn about the native species and non native species in your local area. Do the non native species cause a problem for the native species? Find out how the non native species were introduced.

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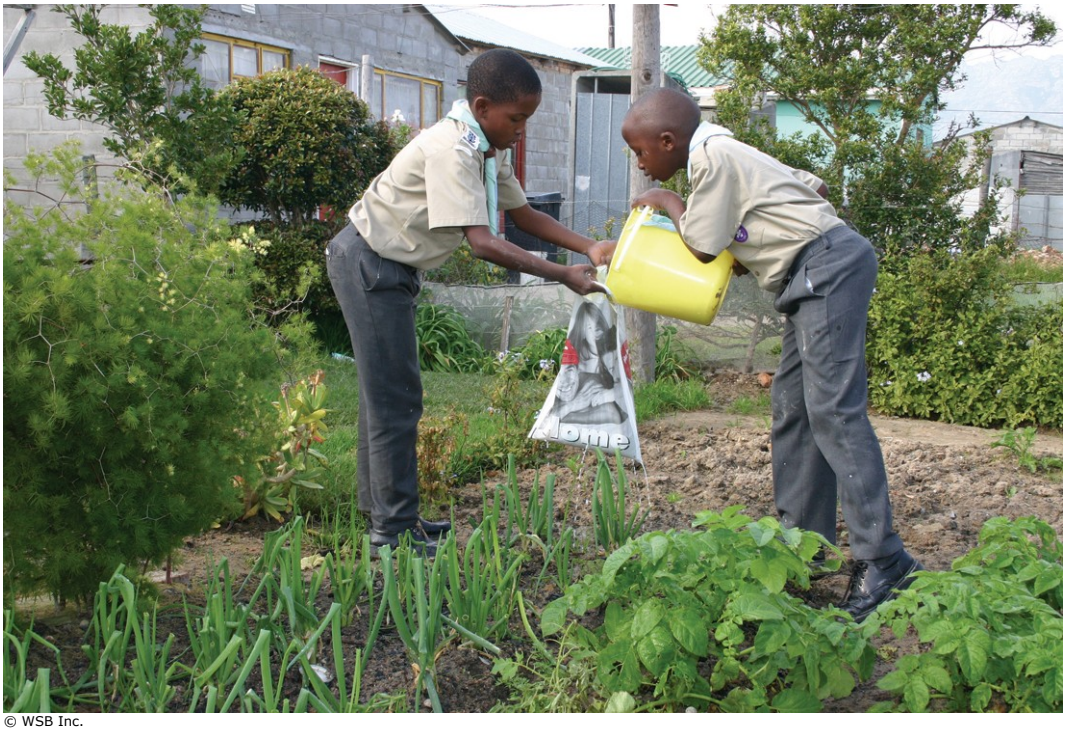

Food Chains and Chemicals

Aim
The risk of harmful substances to people and the environment are minimised.

Educational Objectives
Be aware of harmful substances in the local environment and identify their source.
Demonstrate what personal action can be taken to reduce the risk of harmful substances to people and the broader environment.

Age Range
11 to 14

Summary
A run around game to show how agricultural chemicals build up within the food chain.

Aim
To show how chemicals from agriculture are passed through ecological systems and why this is harmful to the environment.

Equipment
Cards showing different items in a common food chain (for example, grass, rabbit, fox etc.). There should be many more cards for the items lower in the food chain and only one or two for the higher levels. Some type of coloured tags (one per person at the bottom of the food chain).

Preparation
Make up the food chain cards. Choose a food chain that would be affected by agricultural pesticides and if possible that is relevant to your local area. Some ideas are supplied in the resources section. The cards should be able to be worn by the Scout, for example, they could be pinned or stuck onto jumpers or worn around the neck on string.

Duration
Thirty minutes

Setting
Scout meeting place

Background
Life on earth depends on the sun. The sun provides energy that plants use to grow and then also provide food for other organisms. One important way in which organisms depend on each other is for their food. Many animals feed only on plants (herbivores), lots of animals eat only other animals (carnivores) and some animals eat both plants and animals (omnivores). Despite these differences in diet, actually all animals depend on plants for their food through a relationship between plants and animals called a food chain.

Foxes eat rabbits, rabbits feed on grass. A hawk eats a lizard, the lizard eats a grasshopper and a grasshopper eats grass. In the ocean, fish eat small crustaceans (e.g., shrimps), who eat microscopic organisms called plankton. Plankton are very small organisms that live in the ocean and are classified as either 'phytoplankton' or 'zooplankton'. Phytoplankton use the energy from sunlight to create food via a process called 'photosynthesis'.

Example food chains:
Grass > Grasshopper > Lizard > Hawk

Phytoplankton > Zooplankton > Shrimp > Fish > Shark

Cactus > Insects > Lizard > Snake > Hawk

Trees > Insects > Monkey > Leopard

The organisms at the beginning of a food chain are usually very numerous while the animals at the end of the chain are often large and few in number. It is rare for high end predators to eat other high end predators. Food chains are normally more complicated than a simple chain as most animals eat more than one type of food. For example, a fox will eat rabbits, mice and beetles. In reality the food chain becomes a food web.

A food chain can be upset by human actions. This activity focuses on the impact of agricultural chemicals on food chains. Agricultural crops are commonly sprayed with chemicals called pesticides. These destroy insects, fungi and plants that might damage or compete with the crop.

Pesticides disrupt the food chain in two main ways. Firstly, by removing organisms from it. The majority of these pesticides kill the harmless or beneficial organisms as well as the harmful ones. If a plant or animal is removed from a food chain then the animals higher up the food chain will be affected.

Secondly, by introducing persistent, poisonous chemicals into the food chain. Some of these chemicals take a long time to break down. Once eaten, the chemical remains in the body of the animal and when that animal is eaten the chemical moves into the body of the next animal. The concentration of the chemical within each animal increases as it moves up the food chain. The chemical may be harmless to larger animals in low concentrations but as a result of being passed through the food chain its concentration might have increased sufficiently to cause disease or death.

Step by step guide to activity
1. Introduce the subject of food chains. Ask the Scouts some questions to find out what they know about food chains. What food chains exist in the local natural environment? What food chains do they know about from other natural environments? Choose a variety of examples, such as, the ocean, a tropical rain forest, the desert.

2. Give each Scout several long pieces of string and a food chain card. They must wear the card so it is visible to the other Scouts. Explain the activity. They are going to create a food chain. The cards show all the different organisms within a food chain. They must look at the different plants and animals on the cards and think about what their creature would eat and what would eat them. When they find something that they eat they must connect themselves to that creature with a piece of string. They should lie the string on the floor. They will end up with a food chain which shows a clear progression from several plants at the base of the food chain to one top predator at the top but with some animals that are connected to more than one other creature. Ask the Scouts to explain their chain. Is it a food chain or a food web? This activity will actually produce a food web which is a more realistic picture of what really happens in nature.

3. The next activity is food chain tag. The aim of the game is to catch your prey. Start by letting the plants run around the room and get warmed up. Set the herbivores (plant eaters) off to catch the plants. When they catch a plant the herbivore receives one point and the plant must sit on the ground. After a few minutes let the carnivores (animal eaters) start to play. When they catch a herbivore they automatically take their points. The winner at the end of the game is the carnivore with the most points. This might seem unfair on the plants and the herbivores but the situation will be changed in the next game when chemicals are introduced into the food chain.

4. Repeat the game but this time hand out a coloured tag to all the players who represent the lowest rung in the food chain (the green plants). They have been sprayed with a pesticide and the coloured tag represents the chemical. When they are caught they have to hand over their tag and lie down. At the end of the game, ask each carnivore to count up the number of coloured tags they have collected.

Evaluation

1. The coloured tags represent pesticides that have been sprayed onto the plants to ensure that the farmer's crops are successful. The farmer does not want diseases, insects or other plants to affect his crops. Discuss how the farmer's actions have affected the natural environment. Use the following questions to help your discussion.

Which animals have ended up with the most coloured tags?

If the tags are harmful chemicals then is having lots of them good or bad?

What might the chemicals do to the different animals?

How has the food chain system helped to increase the concentration of chemicals?

What properties of the chemicals have enabled this to happen?

2. Encourage the Scouts to think about why the pesticides were used and what alternatives to pesticides are available. Use the following questions to help your discussion.

Do you think the farmer would stop using pesticides if he knew about the damage they cause further up the food chain?

How could the farmer protect his crops from pests, disease and other plants without using harmful pesticides?

3. How aware are the Scouts of pesticides in their local environment? Use the following questions to help discuss this.

What crops are grown in your local environment, region, country?

Do you know if pesticides are used locally, regionally, nationally?

Has anyone heard of any local problems from pesticide use?

Do you think problems from pesticides are well publicised?

How could human beings be affected by pesticides?

What can individuals do to reduce the risk of pesticides to the environment?

Further activities

1. Explore how food is grown locally. Can you find examples of organically grown foods? Are there places growing food with chemicals? Which ones are used and why? Find out about alternatives to pesticides.

2. Find out which animals in your local area are top end predators. Do you think they may be affected by chemicals in the landscape?

3. Grow some of your own food using organic methods.

WORLD SCOUT ENVIRONMENT BADGE
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Garbage Bag Challenge

Aim 4
Scouts are working towards a world where the most suitable environmental practices are used.

Educational objectives
Recognise how we are connected with the environment and how we can make informed choices about our actions that can minimise the impact on the environment.
Identify potentially better environmental practices for your local area.
Demonstrate how local solutions can impact global issues.

Age range
11 to 14

Summary
A fun game to think about waste and how we can reduce it.

Aim
To encourage thinking about the waste we generate, what can be recycled and how we can reduce what we throw away.

Equipment
Plastic rubbish bags, selection of waste objects (clean and safe)

Preparation
Prepare the waste objects

Duration
Thirty minutes

Setting
Scout meeting place

Background

Human society creates a lot of waste. This waste might go into landfill, it might be incinerated or it might simply be dumped outdoors and left to decay. Whatever happens to this waste it is causing a problem for the environment. We need to reduce the amount of waste we produce. This can be done by following the five 'R' approach:

Refuse – for example, unnecessary packaging, leaflets, promotional material, platic bags

Repair – clothes, electrical equipment etc

Reduce – choose products that have less packaging, use only what you need

Reuse – buy second hand items, donate items to second hand shops

Recycle – buy products that can be recycled and recycle them

Step by step guide to activity

1. Split the group into teams and give each team a bag of rubbish.

2. Explain that the object of the game is to make your bag of rubbish as small as possible in a set amount of time. This is done by sorting through the rubbish and deciding how to dispose of things in a different way. Ask the group to think about what they can do to make the bag of rubbish smaller in the first place.

3. After five minutes ask each team to explain why they removed certain items from their bags and where they will put them if not in the rubbish. They should also explain what they would do differently – they should identify that some things could have been refused and that they could buy things with less packaging or packaging that is reusable or recyclable.

4. The team with the smallest bag of rubbish at the end is the winner.

Evaluation

1. Discuss the activity and introduce the five 'R' approach to waste. What do the Scouts think about these ideas? What do they do already? What would be easy to do?

Further activities

1. Ask the Scouts to think about packaging and bring in items from home that show packaging that is good for the environment and that is bad for the environment. They should think about whether the packaging is necessary, is recyclable, is already recycled, how much manufacturing has gone into it and how long it will take to decay in a landfill.

2. Set up a recycling station in your Scout meeting place. Ask the Scouts if they recycle at home.

3. If there are not recycling or good waste facilities available, consider contacting the government to encourage these to be set up.

4. Write a waste policy for Scout camp. Think about how you can reduce the amount of waste generated and how you will reuse and recycle during camp.

WORLD SCOUT ENVIRONMENT BADGE
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Prepare for Disaster!

Aim 5
Scouts are working towards a world where people are prepared to respond to environmental hazards and natural disasters.

Educational objectives
Be able to recognise different types of environmental hazards and natural disasters and explain why they occur.
Demonstrate how to help other people to be prepared to respond to environmental hazards and natural disasters in the local area.

Age range
11 to 14

Summary
An activity to create an emergency response plan and kit in preparation for natural disasters.

Aim
To understand why it is important to prepare for natural disasters.

Equipment
Paper, pens, emergency response kit items (optional), WOSM movie 'Natural Disasters: Will You Be Prepared?' (optional)

Preparation
Study the emergency equipment list provided

Duration
Thirty minutes

Setting
Scout meeting place

Background

Natural disasters occur all around the world and can have a devastating effect on the natural environment and on human beings. There are lots of different types of natural disaster, for example, hurricane, tropical cyclone, typhoon, tornado, drought, flood, volcano, landslide, tsunami, heat wave, wildfire, insect plague, famine, health epidemic, avalanche and earthquake.

It is very important that we have an understanding of natural disasters. The effect of a natural disaster can sometimes be minimised with careful preparation, awareness of warning signs (if appropriate) and knowledge of what to do once the disaster occurs. We need to be prepared to respond to them when they happen to us and to be able to provide support when they happen to others.

Step by step guide to activity:

1. Introduce the subject of natural disasters and find out how much the Scouts know about the subject. What natural disasters have affected their community or their country? What natural disasters have they heard about in other countries? What natural disasters could affect them in the future?

2. A short movie is available from the World Scouting website (www.scout.org) to introduce how various natural disasters affect Scouts around the world, or have information from recent natural disasters to share with the Scouts.

3. Choose a suitable natural disaster. This could be one that is relevant to the local area or one that is best understood by the Scouts. Gather the Scouts in a group and describe the natural disaster to them.

4. Split the Scouts into small groups and ask each group to think about how their lives would be affected by the natural disaster. Give them five minutes to discuss this and then ask for their thoughts.

5. Ask the Scouts how their survival would be affected if they were prepared for the disaster. Write down their ideas.

6. One way to increase your potential for survival during a natural disaster is to have an emergency response kit. This kit will be kept in a box or a bag that is transportable, in an accessible and known location and will contain items that have a clear survival purpose. Give each group a list of items that might go into an emergency response kit. Use the list provided and add extra items or adjust to suit available local resources as relevant to the type of natural disaster being discussed. An alternative option is to also put in some items that are not suitable. Ask each group to choose the most relevant items from the list. You can ask them to choose a certain number of items or you can ask them to list them in order of importance. When each group has finished ask the Scouts to present their lists to the whole group and explain their choices.

7. As a group, decide on the contents for your emergency response kit. If you have any of these items with you hand them out to the Scouts to look at.

8. Using all the ideas generated so far, create an Emergency Response Plan. This could incorporate ideas for assessing the severity of a natural disaster (if appropriate) before it happens, the emergency response kit, actions to take to respond in the immediate instance to the disaster and actions to take in the event of the situation lasting a certain length of time. An example plan is provided. This focuses on how to maintain communication throughout a natural disaster.

Evaluation

1. Ask the Scouts if they have ever thought about how they would cope in a natural disaster before. Do any of the Scouts have an emergency response kit or plan at home already? Will any of the Scouts go home and help their family to create a kit or plan?

2. Note to Leaders: Natural disasters can be devastating experiences and impact on the environment, infrastructure and people long after the initial event. It is important to provide ongoing support for young people to assist their recovery following a natural disaster.

Further activities

1. Having a knowledge of first aid is very important when placed in an emergency situation. Organise a first aid course for the Scouts.

2. Visit a local emergency services facility, for example, the Fire Brigade or the Police Station. Find out about their procedures for dealing with emergency situations and if they have had to deal with a natural disaster.

Example Family Emergency Response Kit

CONTENTS
Water – 9 Litres per person (3 Litres per person for 3 days) for drinking and cleaning.

Food – Non perishable, for a minimum of 3 days. Can opener if food is in a can.

Blankets and warm clothing. Tent or other shelter if required.

Communications – Radio (and batteries) to listen for updates on disaster, mobile telephone (Note: mobile phones may not always work after a disaster situation).

Notepad and pen or pencil to record important information.

Light – Torch with spare batteries. Candles and matches in a waterproof container can be helpful but should not be used if there is a risk of gas leaks.

1st Aid Kit and any medications that are required by family members.

Toilet – Bucket, garbage bags, disinfectant, trowel.

Entertainment (especially with children) – pack of cards, crosswords, special toy or games.

Water purification method – a cooker to boil water and/or water purification treatment tablets.

Protection - Gloves, face mask, long trousers and long sleeve shirt, hat, waterproof jacket.

Whistle.

Rope.

Map of town/city and compass.

Wrench or pliers in case gas or water mains need to be switched off.

Family Emergency Response Plan

ICE – In Case of Emergency number programmed into mobile phone and carried on a card in your wallet or school bag.

Family meeting point – somewhere clear of the home, that the entire family can re-unite at. A local park or other open area is a good location. At least two known routes to get there, in case one is cut off.

Out of Town Family Contact – a grandparent, aunt, uncle or family friend who lives in a different city to act as the central communication point. All family members check in with this person after the disaster, and this person (away from the disaster zone) can co-ordinate if all family members are accounted for, and be the liaison with Red Cross or other relief organisations. This person is also notified in the case of an imminent disaster, to be informed that all of the family is together, what equipment they have with them, where they are evacuating to and how long they expect to be out of contact for.

Local Evacuation Centre – find out where the evacuation centre in your town is situated. School? Sports Ground? Town Hall?