

Climate Change and Food Security Challenge Badge

Resource and Activity Materials







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Join us to make a difference!

The Food and Agriculture Organization of the United Nations (FAO), the World Association of Girl Guides and Girl Scouts (WAGGGS) and the Youth and United Nations Global Alliance (YUNGA) have joined forces to encourage children and youth around the world to become aware of the issues that affect all human beings everywhere.

Young people have the right and the responsibility to be informed and take action. They have the strengthand the ideals to make the world a better place for themselves and for future generations.

By providing practical tools we educate children and youth and motivate them to become actively involved
 in the fight against climate change and hunger. Young people are responsible citizens capable of taking up
 the challenge and acting as effective agents of change at a local and international level.

As their leaders and teachers, you can empower them through sharing knowledge and encouraging their
 participation. If you believe, as we do, that children and youth have an important role to play in addressing
 and overcoming these and other issues, join us to shape the future leaders of our world.

Our world is changing and it needs your help! It is time for you, the children and youth from all over the world, to use your amazing energy and imagination to assume different challenges to create a world where everyone can lead a happy life. Many young hands are already working hard to combat climate change and promote food security, but it is still not enough, they need you. Remember, we only have one world, if you start working today, you can make a difference tomorrow!

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Introduction

The following resources and activity ideas are designed to support you and your group and to help you educate children and youth about climate change and food security. The guide contains simple teaching tools to make learning appealing and fun, and provides a selection of activities and exercises to carry out individually or in your group. The guide can be used to achieve the Food Security and Climate Change Challenge Badge or can be used separately.

The materials we propose seek to ensure that young people consider the environmental, economic and social impacts of their actions and decisions in the local and global community. By using the guide you will
help them understand that all members of society have the right to live in a world free from hunger and the terrible effects of climate change. Although these activities teach specific skills and knowledge, their broader intent is to stimulate thought and discussion about the issues that affect our world today, and its consequences for the future.

Other materials

This guide complements the Food Security and Climate Change Challenge Badge activity booklet. Other support material includes the Climate Change Take Action Now! a guide to supporting the local actions of children and young people, with special emphasis on girls and young women. In addition, a comprehensive guide on all the issues related to climate change and food security will also shortly be available. For details on these documents and other resources please contact the YUNGA Secretariat or register to our newsletter to receive information on new developments automatically by sending an e-mail to:

children-youth@fao.org or yunga@fao.org



Help your group take up the challenge, use these materials to motivate them to learn and act, they have a lot to say about the issues that are affecting everyone on Earth. Children and youth have a loud voice, so encourage them to raise it and tell the world they are here to stay and make a change!

How the resources are organized

The resource and activities have been organized in the same order as the Climate Change and Food Security Challenge Badge. It is divided into three categories:

Our Climate: this category contains activities to help young people understand weather and climate, determine their impact on the environment and realize how individual actions can affect, positively or negatively, our world.

Our Food: this category contains activities to help young people learn more about the right of every human being to have access to food, be aware about the consequences of our food and life-style choices on our planet and our dependence on climate for our nutrition and health.

Our World: this category contains ideas to encourage young people to learn about sustainable lifestyles and the need to protect and respect the environment and its resources and fight against hunger in the world.

More resources

Links to other resources are provided at the end of each category to help you obtain useful information for you and your group.

Each activity in this guide contains:

Aim

A statement of the knowledge the activity wishes to transfer.

Materials

A list of the materials needed for the activity.

Time

The amount of time needed to carry out the activity.

Background

Some activities contain useful information that provides an overview to the focus of the activity.

6

How to do it

A clear explanation of the steps needed to develop the activity.

Discussion

Useful questions for you to use when discussing the issues that are being considered.

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Age ranges of activities

To help you and your group select the most appropriate activity, a coding system is provided to indicate the age group that the activity is most suitable for. Next to each activity you will see a code, for example "(Level 1 and 2)", which indicates the activity should be suitable for five to ten years old and eleven to fifteen years old.

Please note that this coding is only indicative. You may well find that some activities at other levels are more suitable for your group or particular individual.

- Level 1 FIVE TO TEN years old
- Level 2 ELEVEN TO FIFTEEN years old
- Level 3 SIXTEEN TO TWENTY years old

How to use this document

Step 1

Activities are provided for each category: "Our Climate", "Our Food" and "Our World". Use the activities you think will work best with your group, according to your needs and interests. The activities listed are just ideas, so we encourage you to be creative and modify them or come up with new ideas. Most of all, think of ways to make the activities lively and fun, for example through songs, games, plays, concerts, painting, photography, posters, collages, poems, quizzes, essays, fairs, conferences, workshops and many more. Some activities can be done individually, others in small groups.

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You can contact others to join the discussions. Invite families and the community to contribute to and
 participate in your activities. You can also invite media representatives to help you publicize your event and
 promote public awareness.

Step 2

Support and guide your group while they carry out each activity. Allow enough time for the children and youth to prepare adequately. Encourage them to think and act creatively when undertaking their activities.

Step 3

Encourage a discussion. Providing an opportunity for questioning is a good way to promote a deeper understanding about a topic and develop thinking skills (see the "How to make good questions" box on page 9). Moreover, this will lead them to reflect on ways in which they can take action in their lives and their communities. Let your group discuss different points of view and come up with possible solutions. You can finish by reaching some general conclusions.

Step 4

At the end of the activity allow enough time for feedback, see what individuals thought of the activity and what they have learned. Will this motivate them to make changes in their daily lives? See if they are interested in doing another activity, maybe they want to carry out an initiative in their school or local

community. You can introduce them to the Food Security and Climate Change Challenge Badge, see if they are interested in facing the challenge and getting the badge.

Step 5

Share with FAO and WAGGGS! Send us your stories, photos, drawings, ideas and suggestions to: childrenyouth@fao.org.

How to make good questions

Avoid questions that can be answered by "yes" or "no". Let the participants know that you want them to reflect on a specific topic. Remind them every idea is important. Encourage them to ask questions.

Remember you don't have all the answers. Let the participants discuss possible answers and come up with solutions. Answer a question with another question. This helps the participants to think further and draw conclusions.

Sample questions:

What would happen if...? What did you notice about...?

What are some possible explanations of ...?

What is the role of ...?

How do you think you/them would feel about...?

If you were ... what would you do?

What would you have done differently?

What are the advantages and disadvantages of ...?

What can this teach us about...?

Can you describe several things we can do to ...?

Would everyone agree with ...? Why or why not?

Can you name some good examples of ...?

What changes can you make to ...?

Our Climate

Introduction

Our planet's climate is changing. The average temperature of the Earth's surface has risen by 0.74 °C since the late 1800s and it is expected to increase by another 1.8 °C to 4 °C by the year 2100. The Earth's climate has been changing constantly during its five billion year history, many changes have happened during that time, but they usually occurred slowly over many thousands of years. But now things are different.

Many of the world's leading climate scientists agree that the increasing amount of greenhouse gases (GHGs) released into the air from human activities are contributing to these rapid changes. It might be hard to believe that people can change the Earth's climate, but human actions which release these heat trapping gases into the air are actually making our planet warmer. This situation requires a unified effort as the changes in climate that have already happened as a result of global warming and the even greater changes that are likely to occur in the future can cause serious challenges for humans and all living beings on our planet.

GHGs make the Earth warm enough to sustain life by trapping energy in the atmosphere, the air that surrounds our planet. This is known as the greenhouse effect. But current conditions are far from natural. The blanket of gases is getting thicker as we release GHGs by burning fossil fuels on an extraordinary scale, leading to an enhanced greenhouse effect.

There are many different greenhouse gases responsible for climate change. However, only three, CO_2 (Carbon Dioxide), CH₄ (Methane) and N₂O (Nitrous Oxide), account for almost 99 percent of all of the GHGs in our **atmosphere**, and CO₂ alone accounts for about 75 percent of all the greenhouse gas emissions in the world. Learning about these gases and knowing where they come from helps us discover ways to reduce them.

Climate change may be a big problem, but if we know that human activities are the leading cause of global warming, there are many little things we can do to reduce them. This is called mitigation. We cannot completely eliminate the problem, but we can manage our **carbon footprint** and reduce it while there is still time. We can also find ways to adapt to new **climates**, that means finding ways to live with them. There are many people around the world that are already implementing ways to adjust to **climate change** and reduce its impacts. It is time for everyone to make a difference!

There are still numerous uncertainties about **climate change** in the world. Encourage your group to learn more and reflect on global warming and how to tackle it. The activities below will help you have a good start; they were developed to allow children and youth to understand **climate** and see how they are affecting it. Individuals should then be able to reflect on themselves, their decisions and the consequences.

Note

For more information on Climate Change and all the issues related to it see the Guide to Climate Change, A complete guide for young people. You can register at: children-youth@fao.org to be informed when the guide will be available.

Let's combat climate change

- Take care of your environment!
- Level 1 2
- Aim

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To reflect on the way young people use **energy** and how to reduce the amount used.

- Materials
- Fact cards

Time

40 minutes

Background

Our planet has always given us the **energy** we need to carry out our day to day activities. But in the process, we have affected our planet's health by releasing too many **greenhouse gases** into the **atmosphere**. These include water vapour, carbon dioxide, methane, nitrous oxide and others.

The **atmosphere** is the air or gases that surround the Earth. This blanket of gases is getting thicker as we release **greenhouse gases** by burning **fossil fuels** (such as coal, oil or gas) for **energy**. When humans add more **greenhouse gases** to the **atmosphere** than the ones that occur naturally there is a general warming effect on the Earth's surface because these gases trap heat and prevent it from escaping to outer space, just like what happens in a greenhouse!

If the greenhouse effect increases or decreases, it greatly impacts climate. This may cause harmful effects for all living beings as many animals and plants need one kind of climate to survive. For this reason, we must find better ways of getting and using energy. The less energy we use, the less impact we have on our environment!

How to do it

- 1. Prepare the fact cards using the information that is provided below.
- Explain to your group that you will ask some questions related to energy use and that any participant can stand up and give an answer. Tell them to be quick because for each answer they will get one point. The participant that has the most points wins.
- 3. After the participant has given the answer, give him or her the card so he or she can read it to the rest of the group. Alternatively, you can read the fact card yourself.

Fact cards:

- Q: How can you save energy when charging your cell phone?
- F: After your cell phone has finished charging, unplug the charger from the wall. The charger wastes energy
- when nothing is plugged in to it.
- Q: How can you save energy with your vent?
- F: Keep your vents clear. It is easier to pump air into the room when the vents are not blocked.

We are many. We are YUNGA!

- Q: How can you save energy with your TV?
- F: Don't leave your TV on if you are not watching it and unplug it from the wall if you can because it uses energy even when it is on stand-by.
- Q: How can you save energy with your ceiling fan?
- F: When you leave the room, remember to turn it off. Use your fan wisely to make the best use of it. When you turn it on, close your doors and windows to prevent the air from escaping.
- Q: How can you save energy with your stereo?
- F: Turn off your stereo when you are not listening to it, you'll be helping your planet and your family.
- Q: How can you save energy with your windows and doors?
- F: If you feel a draft near your window or door tell your family about it. Ask them to insulate your room to
- make sure no air is coming in or going out. In this way you will get the best of heating and air conditioning.
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- Q: How can you save energy with your lights?
- F: Always turn off the lights when you leave a room, you will help your family save electricity and lower your
- electricity bill. You can use energy efficient lightbulbs that use up to 80 percent less electricity than an
 ordinary lightbulb, but produce the same amount of light.
- Q: How can you save energy with your computer?
- F: Don't leave your computer on if you are not using it, let it sleep and turn off the monitor to save energy.
- Q: How can you save energy with your electric appliances?
- F: Unplug the appliances you are not using to avoid unnecessary energy use. Buy and use energy saving products. These products use less energy than others.

Discussion

- Why is it important to use energy wisely?
- Can you think of other things to reduce your **energy** use? What would be easy to do and what would be hard to do?

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Reduce your climate change footprint!

Level 2 3

Aim

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To raise awareness of how young people contribute to climate change in their daily lives by understanding how their everyday actions are associated with releasing greenhouse gases into the atmosphere.

Materials

Green, orange and red answer cards; these should be in three different sizes. The red cards must be the biggest and the green cards the smallest.

Question cards

Time

30 minutes

Background

• Our planet is surrounded by a blanket of gases. This is our **atmosphere**. As the sun shines on the Earth it

sends us heat. Some of this is absorbed by the Earth's surface and some of it bounces back into the
 atmosphere. The reflected heat is trapped by the atmosphere and this keeps our planet warm. This is

known as the greenhouse effect.

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The blanket of gases is getting thicker as we release greenhouse gases by burning fossil fuels for energy and as we cut down forests for timber and agriculture. As a result, the temperature is rising and our climate is starting to change.

How to do it

- Prepare the question and answer cards. Use the questions provided below and, if appropriate, prepare
 additional questions that are relevant to your local environment.
- Set the question cards out in a circle and place the answer cards in the middle in three piles (a green pile, an orange pile and a red pile).
- 3. Each question has three answers: a green answer, an orange answer and a red answer. When making the answer cards, think about the number of participants and what their likely answers will be to the questions. This will determine how many answer cards of each colour are made. The answer cards can be made smaller if necessary. The important point is that the red cards are the largest and the green cards are the smallest.
- 4. Explain the activity. Each participant moves around the circle answering the questions and taking the correct coloured answer card at each question. Once they have answered all the questions, tell them to find a space and lay out their answer cards on the floor to make a patterned mat.
- 5. Once the participants have laid out their mat, explain what it means. The mat demonstrates their day to day energy use, which actually represents their day to day carbon footprint. It will vary between participants. The greater your energy use the bigger and redder the mat will be and the less your energy use the smaller and greener your mat will be.
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| Questions: | | | | | | |
|--------------------------------|--|--|--|--|--|--|
| How do you get to school/work? | | | | | | |
| By car | Red Card | | | | | |
| By bus or train | Orange Card | | | | | |
| By bike or on foot | Green Card | | | | | |
| Do you switch off the light | ts when you leave a room? | | | | | |
| Always | Green Card | | | | | |
| Sometimes | Orange Card | | | | | |
| Never | Red Card | | | | | |
| Do you leave your televisi | on on standby/in sleep mode? | | | | | |
| Always | Red Card | | | | | |
| Sometimes | Orange Card | | | | | |
| Never | Green Card | | | | | |
| Do you recycle ? | | | | | | |
| Never | Red Card | | | | | |
| Sometimes | Orange Card | | | | | |
| As much as possible | Green Card | | | | | |
| Do you buy locally produc | ed food? | | | | | |
| As often as possible | Green Card | | | | | |
| Sometimes | Orange Card | | | | | |
| No/Don't know | Red Card | | | | | |
| How often do you buy nev | w things? (such as clothes, CDs, computer games, etc.) | | | | | |
| More than once a week | Red Card | | | | | |
| Once a week | Orange Card | | | | | |
| Once a month or less | Green Card | | | | | |
| Do you use renewable en | ergy? | | | | | |
| Yes, a lot | Green Card | | | | | |
| Yes, but not often | Orange Card | | | | | |
| No/Don't know | Red Card | | | | | |
| Have you ever planted a t | ree? | | | | | |
| Yes, several trees | Green Card | | | | | |
| Yes, one tree | Orange Card | | | | | |

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Discussion

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- Who has the smallest, greenest mat and who has the biggest reddest mat? How do they feel about it?
- How green is the group in general? Are there big differences between the participants or does everyone
- have a similar energy use?
- How relevant were the questions to your daily life?
- What are you already doing to help the environment?
- Source: World Organization for the Scout Movement, Environment Programme,

Red Card

• www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities

• Climate change and food security cards

Level 1 2

Aim

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To learn about concepts related to climate change and food security.

Materials

- Cardboard
- Colour pencils
- Colour markers
- Scissors

Time

40 minutes

How to do it

1. Make the climate change and food security cards.

• The cards

In the box below you will find 16 words with their meanings. Use this information to make 16 word cards
and 16 meaning cards. Have your class help you make them. Tell them to be creative, they can make
different drawings and colour them as they like. In the end, you will have 32 cards, 16 containing a word and
16 containing its respective meaning.

- 16 containing its respective meaning.
 - 2. Divide the class into two groups. Give eight word cards and eight meaning cards to each group. The cards should be facing down, tell them to start at your call. The first group to match each word card to its respective meaning card is the winner!
- You can invent new games to play using the cards. Be creative!

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| Word | Meaning | | | | | |
|-------------------|--|--|--|--|--|--|
| Environment | The air, water, soil, minerals and living things that act upon a | | | | | |
| | creature or a community. The circumstances that surround each one of us | | | | | |
| <u>Olive sta</u> | The average weather conditions for a particular place and time | | | | | |
| Climate | Ine average weather conditions for a particular place and time | | | | | |
| | day to day, but this changes over hundreds or thousands of years. | | | | | |
| Climate change | A significant change from an established type of climate to another. | | | | | |
| Ŭ | This may present harmful effects for all living beings as many animals | | | | | |
| | and plants need one kind of climate to survive. | | | | | |
| Atmosphere | It describes the air or gases that surround the Earth. | | | | | |
| Fossil fuels | A general term used to refer to coal, natural gas and oil (petroleum), | | | | | |
| | which are substances that where formed during millions of years | | | | | |
| | from dead plants and animals. | | | | | |
| Greenhouse gases | The gases that occur naturally on the Earth's atmosphere that | | | | | |
| | absorb and trap heat to keep our world warm. Some examples are | | | | | |
| | Some human actions also produce these gases such as the human | | | | | |
| | of fossil fuels. | | | | | |
| Greenhouse effect | As the sun shines on the Earth it sends us heat. Some of this is | | | | | |
| | absorbed by the Earth's surface and some of it bounces back into the | | | | | |
| | atmosphere. The reflected heat is trapped by the greenhouse gases | | | | | |
| | in the atmosphere and this keeps the Earth warm enough for | | | | | |
| | humans, animals and plants to survive. | | | | | |
| Deforestation | When people remove trees from forests and use the land for other | | | | | |
| | purposes. This is one of the major causes of greenhouse gas | | | | | |
| | carbon dioxide: and trees that are cut no longer remove carbon | | | | | |
| | dioxide from the atmosphere. | | | | | |
| Healthy diet | Eating a good variety of foods and in the adequate amounts to | | | | | |
| | receive the nutrients you need for a healthy growth and | | | | | |
| | development. | | | | | |
| Malnutrition | Eating too little, too much or not having the right variety of food. The | | | | | |
| | body does not have the nutrients and energy it needs to ensure a | | | | | |
| | vigorous growth. | | | | | |
| Food access | A household's ability to always obtain enough food through a | | | | | |
| Food socurity | When all people can always have access to sufficient, safe and | | | | | |
| Food security | nutritious food to lead an active and healthy life. | | | | | |
| Right to food | The right of every man, woman and child to be free from hunger and | | | | | |
| | always get a sufficient amount and variety of good quality food. | | | | | |
| Nutrient | The part of a food that is stored and used by the body to build an | | | | | |
| | repair, give heat and energy and protection from diseases. | | | | | |
| Poverty | Not having enough money or resources for basic needs: clothing, | | | | | |
| | shelter and food. | | | | | |
| Hunger | A difficult situation that occurs when people do not have enough | | | | | |
| | food to meet their nutritional needs. | | | | | |

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Discussion

- How can our everyday activities contribute to climate change?
- How are people affected by climate change?
- Do you think everyone around the world leads a healthy diet? Is this fair?
- Who do you think can help promote the right to food?

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CO2 from fizzy water

Level 1 2 3

Aim

To learn and observe that CO₂ is colourless and odourless.

Materials

- A bottle of fizzy water
- Raisins

Time

20 minutes

Background

- Carbon Dioxide (CO₂) is a heavy colourless and odourless gas that is emitted in a number of ways. Concentrations of carbon dioxide in the **atmosphere** are naturally regulated by numerous processes collectively known as the "carbon cycle." The primary natural processes that release CO₂ into the **atmosphere** (sources) and that remove CO₂ from the **atmosphere** (sinks) are:
- Animal and plant respiration, by which oxygen and **nutrients** are converted into CO₂ and **energy**, and plant photosynthesis by which CO₂ is removed from the **atmosphere** and stored as carbon in plants;
- Ocean-atmosphere exchange, in which the oceans absorb and release CO₂ at the sea surface; and
- Volcanic eruptions, which release CO₂ from rocks deep in the Earth's crust (this source is very small).
- When in balance, the total carbon dioxide emissions and removals from the entire carbon cycle are roughly equal. But, since the Industrial Revolution, human activities have increased CO₂ concentrations in the **atmosphere**. The activities that lead to the emission (sources) and removal (sinks) of carbon dioxide include:
- The largest source of CO₂ emissions globally is the burning of fossil fuels such as coal, oil and gas in power plants, automobiles, industrial facilities and other sources.
- Specialized industrial production processes and product uses such as mineral production, metal production and the use of petroleum-based products can also lead to CO₂ emissions.
- Carbon sequestration is the process by which growing trees and plants absorb or remove CO₂ from the atmosphere and turn it into biomass (e.g., wood, leaves, etc.). Deforestation, on the contrary, can lead to significant levels of CO₂ emissions.
- CO₂ is very important in the context of climate because it acts as a greenhouse gas that contributes to global warming.
- Source: United States Environment Protection Agency,
- www.epa.gov/climatechange/emissions/co2.html
- 17

How to do it

- 1. Start by explaining what carbon dioxide is and how it is produced.
- 2. Ask the participants to make a circle so everybody can have a clear view. Shake and open a bottle of
- fizzy water to demonstrate the carbon dioxide gas that is dissolved in it. As the carbon dioxide escapes out of the water it produces bubbles and froth and makes a hissing sound. The group can observe that
- CO₂ is a colourless and odourless gas.
- 3. You can show that the bubbles contain a light gas by adding some raisins to the bottle of fizzy water. The bubbles attach to the surface of the raisins and push them up to the surface. When those bubbles
- burst, the gas is released and the raisins fall back to the bottom to collect more bubbles and rise again.

Discussion

- Where you able to see the CO₂ coming out of the bottle? Why or why not?
- Did it produce any smell?
- What happen to the raisins in the bottle?
- Where is CO₂ produced and where is CO₂ used?
- Source: Practical Action, Climate Choices and Children's Voices Web Site,
- www.climatechoices.org.uk, www.climatechoices.org.uk/docs/what_is_co2.pdf
- •

Catch the carbon dioxide

Level 1 2

Aim

- To learn the basic science behind climate change.
- Materials
- Blindfolds
- Time
- 30 minutes

How to do it

- Divide the group into two teams. One team are trees and the other are carbon dioxide molecules.
 There should be more carbon dioxide molecules than trees.
- Ask the trees to find a place to grow with plenty of space in between each tree. Once the tree has chosen its place to grow it cannot move, only its branches (arms). As they are growing the trees need to catch carbon dioxide. They do this with their branches and leaves. Ask the trees to practice catching
 carbon dioxide (they should wave their arms around).
- 3. The carbon dioxide molecules are found floating around in the air. They can move very quickly but they can't see where they are going (put blindfolds on the carbon dioxide molecules). The carbon dioxide molecules have to move from one side of the playing area to the other without getting caught. The trees have to try and catch them with their branches. A carbon dioxide molecule is caught if a tree touches it and the molecule then becomes a tree.
- 4. Continue the game until nearly all the carbon dioxide is gone, then stop and announce that humanshave discovered this forest and want to chop down the trees so they can grow crops on the soil. The

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We are many. We are YUNGA!

- trees get burnt and the carbon dioxide is released. Choose three quarters of the trees and turn them into carbon dioxide molecules. After a while the land becomes useless for growing crops so they decide
- to build a town there instead. In the town there are lots of cars and factories, these burn fuel which releases more carbon dioxide into the **atmosphere**. Choose half of the remaining trees and turn them into earbon dioxide melaculas
- into carbon dioxide molecules.
- 5. The scenario can then be changed so that the participants come along and plant more trees (turn some of the carbon dioxide molecules into trees).

Discussion

- In the game, what effect does the number of trees have on the number of carbon dioxide molecules? Does
- this also happen in real life?
- What effects did chopping the trees have (think about immediate and long term)?
- What effect did the planting of trees have on the carbon dioxide molecules?
- Why does it matter how much carbon dioxide there is in the atmosphere? How can we reduce the amount
- of carbon dioxide in the atmosphere?
- Source: World Organization for the Scout Movement, Environment Programme,
- www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities

•

GHGs mystery gift pass

Level 1

Aim

To understand that greenhouse gases (GHGs) are produced in everyday life.

Materials

- A mystery gift
- Music
- Newspaper

Time

- 30 minutes
- •

Background

• Climate change may be a big problem as it can harm our planet and its living creatures, but there are many

- little things we can do to start making a difference. Many things we do in our everyday life produce
- greenhouse gases that are making the Earth warmer. Driving a car or watching TV is not wrong, you just
- have to do it wisely. Everyone can help!

How to do it

- Wrap a small gift in layers and layers of newspaper. In between each layer include a small paper that
 describes an everyday action that emits GHGs.
- To play the game, have your group sit in a circle. You can sit out and play the music without watching
 where the gift is. The gift is passed around the room until the music stops. The participant holding the
 gift must unwrap a layer, read the small paper and answer the following questions:
- •

- Who is responsible? (Family, school, youth group, community, businesses, town, etc.)
- What can people do to help reduce these emissions?
- 3. Continue playing until all the layers have been unwrapped. The participant to unwrap the last layer of wrapping paper wins the gift. You can have at least ten wrappings.

Ideas:

- Driving a car.
- Producing drinks, like sodas.
- Making a special TV report.
- Playing video games.
- Making a new highway.

- Harvesting some crops.
- Making food for the school cafeteria.
- Going to the cinema.
- Flying an airplane.
- Building a new hospital.

Discussion

- Who do you think is most responsible for GHG emissions? Why?
- Was it hard to find ways to reduce your GHG emissions? Why or why not?
- What do you think will happen if people don't commit to reduce their GHG emissions?

What have I done today?

- Level 1 2 3
- •

- Aim
- To understand that our daily actions have an impact on the environment.

Materials

- Ball
- Colour markers
- Colour pencils
- Poster board

Time

•

20 minutes

Background

Every day we do things that impact on the **environment**. Some things we do are good for the **environment** and other things are bad for it. Very often we do things without even being aware of how it affects our world.

How to do it

- 1. Gather the group in a circle and hand the ball to one person.
- 2. The person with the ball starts by telling the group one thing they have done today that is good for the **environment**. Make sure they explain why their actions were good for it. If they find it difficult to think of something, ask them to think of one thing they have done today and decide if and how it was good for the **environment** (keep note of the answers given by the participants throughout the activity).
- 3. The participant then passes the ball onto another who does the same.

- 4. Once the ball has been round the whole group, repeat the game but this time ask them to think about one thing they have done today that is bad for the **environment**.
- 5. Have each participant choose one thing they do that is good for the **environment** and one thing they could improve upon. Make a group picture showing on one half the things they do which are good for the **environment** and the other half the things they can improve.

Discussion

Was it easier to think of things that were good or things that were bad for the environment?

- Can you name some differences within the group? Why is this?
- When you do everyday things do you think about how it affects the environment?
- Do you think it is important to consider the **environment**? Why or why not?

Source: World Organization for the Scout Movement, Environment Programme,

www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities

The greenhouse effect

Level 1 2

Aim

To understand how the greenhouse effect works.

Materials

- 20 ice cubes
- 4 cups of cold water
- A sunny day
- Kitchen plastic wrap
- Thermometer
- Two identical glass jars

Time

60 minutes

How to do it

- 1. Put two cups of cold water in each glass jar.
- 2. Add 10 ice cubes to each jar and cover one with the plastic wrap to represent the greenhouse effect and leave the other jar open.
- 3. Place both jars in the sun and check them after 20, 40 and 60 minutes.
- 4. Measure the temperature of the water in each jar. The air inside the greenhouse becomes warmer as it lets in the light and heat **energy** from the sun and this heat cannot escape so builds up inside the greenhouse.

Another example:

Another version of a greenhouse is what happens inside an automobile parked in the sun. The sun's light and heat gets into the vehicle and is trapped inside, like the plastic bag around the jar. The temperature

- inside a car can get over 120 °F (49 °C).
- •
- •
- •
- •

Discussion

- What happened to the ice cubes inside each jar? Which ones melted first?
- Was the temperature in each jar different? Which one was warmer?
- What could happen if the greenhouse effect changed the Earth's climate? Is this already happening?
- How can you help reduce the emission of greenhouse gases?
- Source: Energy Quest, Science Projects,

www.energyquest.ca.gov/, www.energyquest.ca.gov/projects/greenhouse.html

It's getting hot!

Level 1 2 3

Aim

To show how increased temperatures can affect our world.

Materials

- A sunny day
- Icebergs and glaciers (freeze water in paper cups or milk cartons and peel off the paper)
- Large glass tank and glass cover
- Paper

- Pencils
- Plastic wrap
- Ruler
- Small objects (houses, cars, people, animals, etc.) to create a village
- Thermometer
- Water

Time

60 minutes

How to do it

- 1. In a large tank create a small village with the objects.
- Place a small amount of cold water inside the tank (1 cm) to create the sea. You can use a ruler to control the water level.
- 3. Measure the temperature of the water.
- Place one or more icebergs and glaciers (make sure you explain the difference between them) in your
 tank. Note the rise in the water level with the introduction of the icebergs. Measure and record the
 new temperature and water height.
- 5. Put the glass cover and the plastic wrap over the tank.
- 6. Place the tank in the sun and record the temperature and water level changes after 15, 30, 45 and 60
 minutes.
- •

Discussion

- What happened to the icebergs and glaciers when the temperature increased?
- What did you notice about the coastal areas after the rise in the sea level?
- What happened to the homes and people of the shoreline? Is this happening in the real life?
- Why might climate change affect the coastline development?
- •
- •
- •
- •

- Modified from original source: Gulf of Maine Aquarium,
- www.gma.org/climate_change/index.html, www.gma.org/climate_change/HTML/blankets/
- •
- Climate change and food security flow chart
- Level 2 3
- Aim
- To explore the connections between human wellbeing, climate change and food security.
- •
- Materials
- Papers
- Pencils
- Time
- 30 minutes
- •

How to do it

- Divide your group into two teams. Ask them to use the titles below to create a flow chart about the connections of human wellbeing, climate change and food security. You may add any additional phrases you consider appropriate. Remind the participants to use arrows to show the direction of the cause-effect.
- 2. Ask each team to present their flow chart to the rest of the group.
- - Titles:
 - Active and healthy life
 - Greenhouse gas emissions
 - Effective learning
 - Sustainable development
 - Increases risks of future diseases
 - Reduces future income
 - Global warming
 - Access to sufficient and good quality food
 - Keeps children out of school
 - Loss of crops and livestock

- Perpetuates poverty
- Climate change related disasters
- Dietary deficiencies
- Human activities
- Lack of drinking water
- Available resources
- Productive arable land
- Respect for human rights
- Protection of the environment
- Encourage action to prevent climate change

Discussion

- How essential do you think it is to instil an environmental awareness starting from a young age?
- What areas of the world do you think will be most affected by climate change? Why?
- Which people do you think are most vulnerable to climate change? Why?
- Can you explain the role you have in the creation of a world fit for all?
- •

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- •
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Who is in control?

- Level 2 3
- Aim
- To reflect on who is responsible for pushing forward action on climate change.

Materials

- Whiteboard
- Whiteboard markers
- Statements

Time

40 minutes

How to do it

- 1. Draw a horizontal line on the whiteboard. On the left-hand side write "I disagree" and on the righthand side write "I agree".
- 2. Explain to the participants that you are going to read a statement and that each individual should make
- a drawing of him or herself along the line according to their belief. If they strongly agree with the statement they should make their drawing at the right-hand side of the line and if they do not agree they should place their drawing at the left-hand side.
- 3. Give them a short time to think if they agree or disagree with the statement. When everyone has made their drawing, ask different individuals to explain their reasons and then open up the discussion by asking others with different positions.



Statements:

- Individuals can't make a big difference to climate change; industries are the ones that must start making changes first.
- **Climate change** is one of the major issues affecting our world today, if we don't start acting now, tomorrow will be too late.
- Developed and industrializing countries produce more greenhouse gases; they must reduce their emissions more than developing countries.
- Human activities have already destroyed a great part of our **environment**; it is up to us to make a difference.
- Governments are responsible for making legislation; they should reach an agreement to sort out climate change.

Be creative and think of other statements that may interest your group!

Discussion

Which where the ideas that caused the most disagreement?

We are many. We are YUNGA!

- What are some possible common agreements?
- What is the role of individuals in their communities in relation to climate change?
- Who is responsible?
 - Level 2 3

Aim

- To understand that all segments of society have a role to play in addressing climate change, but in different
- ways.
- Materials
- A poster board
- Adhesive tape
- Colour cardboards
- Colour markers
- Ruler
- Time
- 40 minutes

How to do it

- Draw a circle on the poster board and divide it into six segments (like an orange), in each segment write one of the following: "Individuals", "Governments", "International Organizations", "NGOs", "Industries and Businesses" and "Scientists".
- 2. Divide the participants into four groups. Give each group three colour cardboard numbers (from one to three). Each group should receive a different colour.



- 3. Explain to the participants that they have to stick their number one on the segment that represents the group which they believe is most responsible for taking action on climate change. Their numbers two
- and three should go on the segments that represent the next most responsible groups in terms of acting against climate change.
- 4. Give the participants enough time to think about their choices. When everyone has finished distributing their numbers, you will have a grouping of numbers that represent your groups' ideas regarding who they feel are responsible for taking action against climate change.
- 5. Ask the participants to choose a representative from each group so they can explain their point of view.

Discussion

- Is everyone responsible for climate change? Why or why not?
- Do some segments have more capacity to make a change? Why or why not?
- What do you think would happen if one of these segments refuses to act against climate change?
- What do you think individuals need to do differently to prevent climate change?
- •
- •
- •
- •

| | We are many. We are YUNGA |
|--|----------------------------------|
| Source: Practical Action, Climate Change – Who is in Control?, | |
| http://practicalaction.org/docs/education/Climate_changewho_ | _s_in_control_teachers_notes.pdf |
| | |

• What animal am I?

Level 2

Aim

•

•

To understand some of the effects of climate change on the environment.

- Materials
- Paper
- Pencils

Time

- 30 minutes
- •

Background

• It has taken millions of years for life to get used to the conditions on Earth. A fast change in the world's

climate can have bad consequences for all living things. Climate change can alter the place where animals
 and plants live and grow (habitat). Many of these places depend on a specific balance of rainfall,

- temperature and soil type to remain healthy and suitable for their inhabitants.
- •

Most of the past climate changes occurred slowly, allowing plants and animals to adapt to the new living conditions or to look for a new home. However, if future climate changes occur as rapidly as some scientists

think, many animals and plants may not be able to cope with these changes and may not survive. This could

- cause the loss of some plant and animal species in certain areas of the world. For example, animals and
- plants that live in cold climates, such as polar bears and seals, will need to move polewards or uphill when
- the climate becomes even just that little bit warmer.

• How to do it

- 1. Make a copy of the following animal cards:
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- •
- •

- •

- •

- •
- •
- •

| ••• | •••• | ••• |
|-------------------------------|--|---|
| Polar bears | | African savannah elephants |
| Home: | | Home: |
| Hudson Bay, northeastern | | Nairobi, Kenva. |
| Canada. | | |
| | • | Habitat: |
| Habitat: | | Savanna |
| Arctic sea ice | | |
| | • | Food: |
| Food: | | Elephants often graze on grasses |
| Polar bears feed mainly on ri | inged | but they also consume a wid |
| and bearded seals. | | variety of plants and fruits. |
| | | |
| | • | |
| •• | | • |
| *••• | | ••••••••••••••••••••••••••••••••••••••• |
| ••• | | *••••••••••••••••••••••••••••••••••••• |
| •••••••• | | Corals |
| ••• | Home: | Corals |
| ••• | Home: Great Ba | <i>Corals</i> arrier Reef and Coral Sea, |
| ••• | Home: Great Ba Australia | <i>Corals</i> arrier Reef and Coral Sea, a. |
| • | Home: Great Ba Australia | <i>Corals</i> arrier Reef and Coral Sea, a. |
| ••• | Home: Great Ba Australia Habitat | Corals Arrier Reef and Coral Sea, A. |
| | Home: Great Ba Australia Habitat Coral ree | <i>Corals</i> arrier Reef and Coral Sea, a. |
| | Home: Great Ba Australia Habitat Coral ree | Corals arrier Reef and Coral Sea, a. efs |
| | Home: Great Ba Australia Habitat Coral ree Food: | <i>Corals</i> arrier Reef and Coral Sea, a. |
| | Home: Great Ba Australia Habitat: Coral ree Food: Some co | Corals arrier Reef and Coral Sea, a. efs |
| | Home: Great Ba Australia Habitat Coral ree Food: Some co drifting | Corals arrier Reef and Coral Sea, a. efs orals eat zooplankton (tiny animals) or small fishes. |

- Divide your group into three teams and ask each one to pick one of the cards. Give the group a few minutes to think about their creature.
- 3. Tell each team to act out the animal they received so the other groups can guess. "Yes or no" questions can be asked.
- After all the animals have been discovered ask the entire group to sit in a circle and discuss with them
 how climate change could affect each one of them by reading the following information:
- •

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•

• Polar bears

Unprecedented global warming linked to climate change is melting arctic ice sheets. As a result of the reduction in sea ice, polar bears have less time to hunt and are returning to land in poorer condition, raising fewer cubs and eating much less than they used to.

• African savannah elephants

In Africa, elephants face different threats such as shrinking living space, which brings them more frequently into conflict with people. With diminished living space, elephants will be unable to escape

- any changes to their natural habitat caused by global warming, including more frequent and longer dry periods. The drought is killing elephants in Kenya; they are succumbing to the lack of water and food as
- they cannot find enough vegetation to meet their needs.

Corals

One of the most dramatic effects of climate change on corals has been bleaching. When the ocean warms up, the oxygen content reduces and corals become 'bleached'. The heat affects the tiny algae which live symbiotically inside the corals and supply them with food. The heat stress damages the algae and, in consequence, leads to coral death.

Discussion

- How would you feel if you were one of the creatures that are being affected by climate change?
- What are some other living organisms that might be affected by changes in their ecosystems?
- Do you think it is necessary to start making a difference now? Why?

What disaster am I?

Level 1 2

Aim

To encourage young people to think about **natural disasters** and their different characteristics.

Materials

• Cards showing images of natural disasters and safety pins.

- Time
- 20 minutes

Background

Many natural disasters and their associated impacts are now changing. For example, droughts are
 becoming more severe in some places, the power and frequency of Atlantic hurricanes have increased and
 strong cold season storms are likely to become more frequent, with stronger winds and more extreme wave
 heights. While acknowledging that extremes can have positive or negative effects, scientists believe that
 because changes may occur more rapidly than the capacity of animals and plants to adapt to the new
 circumstances, the majority of the impacts of such events will be negative.

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 disasters, for example, hurricanes, tropical cyclones, typhoons, tornados, droughts, floods, volcano eruptions, landslides, tsunamis, heat waves, wildfires, avalanches, earthquakes, etc. It is very important that we have an understanding of natural disasters. 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.

How to do it

1. To start, ask your group to name some different types of **natural disasters**. Ensure that they have enough knowledge to begin the game and if necessary show the group some photographs and ask them to describe the images.

- 2. Pin a picture of a natural disaster onto the back of each participant. Explain to them that they have to find out what their natural disaster is by moving around the group and asking each other questions. The questions can only be answered with a "yes" or a "no". For example, "does my disaster involve wind?"
- 3. The participants can move around the room asking questions until they have worked out which natural disaster they are. The first participant to tell the teacher or leader the correct answer wins.
- 4. Allow the game to continue until everyone has worked out which natural disaster they are.

Discussion

- Which natural disasters are you familiar with?
- Have you ever suffered from a natural disaster? If yes, how did you feel?
- How can people be prepared for a natural disaster?
- What effects could climate change have in your community? What things can be done to prevent them?

Source: World Organization for the Scout Movement, Environment Programme, www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities

Sticky leaves

- Level 2 3

Aim

To learn about air pollution.

Materials

- Clear adhesive tape
- Leaves (to be collected)
- Scissors
- White paper

Time

40 minutes

Background

An air **pollutant** is any unwanted substance or chemical that contaminates the air that we breathe resulting in a decline in air quality. Air **pollutants** include smoke, carbon monoxide, nitrogen oxides, sulphur dioxide, particulates and ozone. Air **pollutants** have sources that are both natural and human. Natural sources include volcanoes, wildfires, airborne dust, cattle digesting grass and natural radioactive decay. Although some pollution comes from natural sources, most pollution is the result of human activity. The biggest causes are the operation of fossil fuel-burning power plants and automobiles that combust fuel.

Most of the main air **pollutants** can be harmful to human health. Air pollution is frequently associated with respiratory problems. It can make people sick or cause long-term illness, particularly in those most sensitive to pollution, such as children and the elderly. There are three ways in which animals can be affected by air pollution. They can breathe in gases or small particles, eat particles in food or water or absorb gases through the skin. Soft-bodied invertebrates, such as earthworms or animals with thin, moist skin such as frogs, are particularly affected by absorbing pollution.

How to do it

- Take your group to an outdoor setting with trees and shrubs. The activity can be done at more than one location. If this is the case, choose areas that differ in their proximity to roads, factories, or other sources of air pollution. The areas will need trees or bushes in leaf but the leaves should not be near the ground. One important point to note is that smooth surfaced leaves give better results than hairy leaves.
- 2. Give the participants five minutes to explore their surroundings. They can explore in small groups or individually. Ask them to discover all the different things that make up the environment around them.
- 3. Gather the group together and discuss their discoveries. They should have noticed living things such as trees, plants and animals as well as inanimate objects like soil, rocks and water. Ask your group how are these things all connected? Who eats who? Where do the animals live? What do the trees and plants need to survive? They should discover that the **environment** is all linked together. Ask them if there is anything else that is vital to this **environment** that we can't see. The answer is air.
- 4. Have the participants sit down and ask them to spend one or two minutes breathing in the air and thinking about it. They should take really deep breaths and try to fill their lungs. At the end of the allotted time ask them to describe the air around them. Does it taste of anything? Does it smell of anything? Can they see it? What is in air?
- 5. Introduce the sticky leaves activity. Our air contains 21 percent oxygen, 72 percent nitrogen,
 approximately 7 percent carbon dioxide and approximately 1 percent other gases, including pollutants.
- The majority of the gases and particles that make up our air, including the oxygen, nitrogen and carbon dioxide, are colourless, odourless and tasteless. However, some of the pollutants are in particles big enough to be visible to the naked eye. This activity enables these particles to be collected.
- 6. Ask the participants where they think air pollutants might come from (some sources are cars, fossil
 fuel-burning power plants, volcanoes, fires, dust). Ask them about their current location. What sources
 of air pollution are nearby?
- Split your group into small teams and give each one some white paper, scissors and some sticky tape.
 Depending on the size or other characteristics of your natural area and the size of your group, you can allocate each group their own area or vegetation type or you can allow them to decide themselves where to sample.
- 8. Tell the participants to cut a piece of sticky tape and press it firmly, sticky side down, onto a leaf. They then carefully remove the tape and stick it onto a piece of white paper. Each group should do this at least ten times in order to get a representative sample. Remind them to write down or draw the location where they took the sample.
- 9. Ask the participants to make a list of all the different things in your local area that contribute to air
 pollution.
- Gather the participants together and compare the results. If you have access to a magnifying glass or
 microscope, look closely at the samples. Rank the different samples in order of how dirty they are.

•

- Discussion
- Where were the dirtiest samples taken from? Where were the cleanest samples taken from? Is there a
 pattern, if so why?
- Where is the pollution coming from?
- Think about the damage the pollution in the air might be doing. How might it affect the plants? How might it
- affect human health? How might it affect animals? Bear in mind that this is only the pollution that is visible.
- A lot of pollution is not visible to the naked eye.
- Source: World Organization for the Scout Movement, Environment Programme,

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www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities

- How is climate going to change in the next century?
- Level 2 3
- Aim
- To understand that random climate variability makes detecting climate change more difficult.
- Time
- 30 minutes

Materials

- 3 plastic boxes, labelled with the 3 years
- 3 trays where the small balls will be placed, also labelled with the 3 years
- 90 small wooden or plastic balls of different colours. Proposal: blue, light blue, white, yellow, orange and
- red (see the table below for values related to each colour ball and the ratios for each year)
- A package of small round stickers or a felt tip pen
- A piece of paper
- Panel with different prediction years and with the values of increase/decrease temperature related to each
- colour ball

How to do it

- 1. Divide your group into three teams. Each one will be responsible to count the increase/decrease of temperature for each year.
- 2. Shake all of the plastic boxes with the balls inside to get them well mixed.
- 3. Each team takes from each box a total of 30 balls. This will represent an attempt to make a climate prediction for one year.
- 4. Calculate the mean increase/decrease of temperature depending on the colour of each ball; use the information from the table below.
- 5. Put the sticker in the corresponding place (year and increase/decrease of temperature value).
- 6. Discuss with your group about their experience. At the very beginning, it is difficult to draw any conclusions from an individual calculation. But it is nice, after some groups have already done it, to see the different stickers on the panel and to see that there is a mean increase of the predicted global temperature in time, but there is also an uncertainty in the prediction.
- Ratios of colour balls for each year to predict and the value of increase/decrease of temperature related to
 each colour (note the ratio of colour balls for each year is calculated in the way that uncertainty will be
 normal distribution):
- •
- •
- •
- •
- •
- •
- •
- •
- •
- •
- •
- •

| Value | Colours | 2005 | 2035 | 2065 | Total |
|-------|------------|------|------|------|-------|
| -4ºC | Blue | 9 | 4 | 0 | 13 |
| -2ºC | Light blue | 25 | 15 | 11 | 51 |
| 0ºC | White | 33 | 35 | 23 | 91 |
| 2ºC | Yellow | 25 | 31 | 31 | 87 |
| 4ºC | Orange | 8 | 10 | 20 | 38 |
| 6ºC | Red | 0 | 5 | 15 | 20 |
| | TOTAL | 100 | 100 | 100 | 300 |

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Discussion

Before taking the 30 balls out of each box and looking at the distribution of colours in each box, might you
 say anything about the mean temperature of that year?

- After calculating the mean increase/decrease of temperature, what do you think about the numbers that
 the three groups got?
- After looking at the panel, could you say something about the climate in the future?
- Source: CarboSchools,
- www.carboeurope.org/education/experiments.php
- Reduce your CO2 emissions!
 - Level 3

Aim

- To understand that single actions can help reduce the release of GHGs into the air.
- Materials
- iviateria
- Paper Pencils
- •
- Time
- 40 minutes
- •

How to do it

- Divide the participants into groups of four. Explain that the four of them work in the Ministry of the Environment, in the Department of Environmental Protection and that they have decided to carry out a GHGs Reduction Plan for the community. They are aware that many activities that people engage in every day result in emissions of greenhouse gases that contribute to climate change. The group is highly committed to reducing the amount of these emissions generated by their local community.
- Give the participants enough time to discuss and elaborate their GHGs Reduction Plan. Each group must come up with two programs that encourage their community (citizens, institutions and businesses) to change their behaviour and habits so they produce less GHGs.
- Ask each group to present their GHGs Reduction Plan to the rest of the participants to encourage discussion.

Discussion

- Do you think your community needs programs like these?
- What do you think your community would like about these programs?
- Do you think your community would have a hard time applying these programs? Why?
- Who do you think would have a harder time applying them: citizens, institutions or businesses?
- Modified from the following source: United States Environment Protection Agency,
- www.epa.gov/climatechange/emissions/downloads/wheel_studentact2.pdf

I can play my part!

Level 1 2

Aim

To identify individual actions that can contribute to protecting our planet.

Materials

- Cardboard
- Cardboard arrow
- Colour markers
- Construction paper
- Paper fastener
- Ruler
- Scissors

•

- , Time
- 40 minutes
- •

How to do it

Draw a circle on a cardboard and divide it into five. In each segment write one of following phrases so
 you produce a figure like the one below:



- 2. Cut the circle and place the arrow in its place. Use a sharp pencil to push a small hole through the centre and do the same with the arrow. Push the paper fastener through the holes and fold the ends back to hold both pieces together and to allow the arrow to spin easily. Tell your group to help you design the circle and the arrow to make them look attractive and fun!
- 3. Ask your group to sit in a circle. Each participant will have the chance to spin the arrow and, according to the segment the arrow is signalling, he or she will have to give an idea about how they can help the planet by acting in an eco-friendly way.
- 4. You can be the first to spin the arrow to show them how it works and then each participant will get his or her turn. Carry on with the activity until everyone has participated.
- 5. Then, make a poster with some of the ideas and hang it in a place where everyone can see. Tell them to be creative, there are lots of things they can do to help our planet!
- Ideas:
- Switch off unnecessary lights and electric appliances.
- Use heating and air conditioning only if necessary and don't leave it on while not at home.
- Always put waste in the trash cans.
- **Recycle** your waste.
- Close the water tap while you wash your teeth.
- Use public transport, your bicycle or walk whenever you can.
- Organize a "plant a tree" day.
- Buy your food from local farmers whenever is possible.
- Stick a "Think before you print" sign above the printer to encourage saving energy and paper.

Discussion

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- Is it easy to think about ways to help our planet? Why or why not?
- How do you feel when you are doing something good for your world?
- Who do you think should apply these ideas?
- What do you think your family could do differently to take care of the environment?

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• How can I be affected?

Level 2 3

Aim

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To reflect on how different issues related to climate change can affect people's lives.

Materials

- Pencils
- The grid

Time

60 minutes

How to do it

- Discuss how climate change will affect people as extreme weather conditions (for example, storms, heat waves, droughts, floods, etc.) will occur more often and will be more severe.
 - 2. Use the grid to discuss the most popular issues, their possible effects at different levels and try to think of a simple solution.

| • | lssue | Effect on me | Effect on my town | Effect on my country | Solution |
|---|-------|--------------|----------------------|-------------------------|----------|
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• Discussion

- How does it feel to know that our world is experiencing some negative changes?
- How responsible are we for climate change? Is there still time to make a difference?
- How are the effects of climate change different for individuals and for a country as a whole?
- Are the effects the same in different countries? Why or why not?
- Source: Active Citizenship, The Waste Interactive Teacher's Handbook,
- www.wtaeducationservices.com/index_files/TBG%20KS4%20Teachers%20Handbook.pdf, page 15.
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Tomorrow's world leaders

- Level 3
- Aim

• To experience the complexities of a climate change debate at a leadership level.

Materials

Paper and Pencils

• Time

Two sessions: a 40 minute session to explain the activity and to give to the participants time to research
 their assigned countries and a 60 minute session to carry out the activity.

How to do it

- Explain to your group that by using a role play they will be able to explore in a simplified way the type of debate that occurs at a United Nations Climate Change Conference, where different countries represent different points of view. The participants will take on roles as diplomats and involve themselves in a simulated session. You may want to investigate past UN climate change conferences.
- 2. Divide the participants into six groups. Each group will be assigned a different country.
- 3. The participants must carry out detailed research on their assigned country. It would be useful to divide the research into three categories:
 - a. General research on the assigned topic;
 - b. Research on the assigned country's policies and position with regard to the assigned topic; and,
 - c. General research on your assigned country's background and culture.
- 4. Each group must select a spokesperson to play the role. They must have enough time to prepare themselves, to establish their point of view and plan their questions to others.
- 5. You will have the role of the chair to make sure the meeting is fluent and that every representative exposes his or her point of view.
- 6. Each representative speaks for a maximum of five minutes to express his or her agreement or disagreement with the following scenario (countries can intervene in alphabetical order):

The scenario

The United Nations Climate Change Conference will agree that all countries should commit to lower their CO₂ emissions. Targets will be set for 2020, 2030 and 2040 and these will be different for each country. Each

- group should represent one of the following countries: Brazil, China, India, Japan, Kenya, South Africa,
- United Kingdom, United States of America: Venezuela. Remind the participants it is not their opinion they
- are expressing, but that of the country they are representing.
 - 7. Give the group 20 minutes for discussion and questions; any participant can intervene.
 - 8. The countries should produce a final document that will contain the conclusions that were agreed.

Discussion

- Was it difficult to express your country's opinion instead of your own?
- Do you think all countries are equally responsible for combating climate change? Why or why not?
- Be How do ideas of climate equity, which differ between and among developed and developing countries,

36

- influence potential approaches to international agreement?
- How do you think these agreements affect the lives of human beings?
- Source: Practical Action, Climate Change Who is in Control?,
- http://practicalaction.org/docs/education/Climate_change_-_who_s_in_control_teachers_notes.pdf
- •

- Our Climate Change Charter
- Level 1 2 3

Aim

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To understand that the fight against climate change requires a general commitment.

Materials

- Colour markers
- Paper
- Pencils
- The
- Time
- 30 minutes

• How to do it

- Discuss how consumer decision making can contribute to reducing greenhouse gas emissions and, thus,
 prevent further changes in climate.
- 2. Ask your group to sit in a circle and explain what a climate charter is.
- 3. Prepare your own climate change charter using the form provided below as a guide.
- 4. When you finish hang it in a place where everybody can see.
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Our Climate Change Charter

- We, (the class or youth group), recognise our shared responsibility to protect our environment.
- We acknowledge that:
 - there is growing evidence that human activities have contributed to climate change;
 - the increasing impact of climate change will profoundly influence our wellbeing; and,
- strong action needs to take place in order to prevent climate change.
- Therefore, we commit to reducing our greenhouse gas emissions by:
- focusing on the long term effects of our current actions; and,
- establishing an action plan to shed old habits.
- We will concentrate on:
- Saving energy
- Adopt...
- Provide...
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- Using water wisely
- Create...
- Assist...
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- Recycling, reducing and reusing
- Support...
- Work to...
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- Transporting sustainably
- Promote...
- Advocate...
- Sharing the burden
- Encourage others to...
- Join...

- Signatures:
 - Date:

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- Remember this is only a guide, so tell your group to be creative and come up with a document that
 encourages them to take action and make a difference!
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Discussion

- How do you feel about your Climate change Charter?
- Do you think it will be hard to implement and follow? Why or why not?
- What do you think will happen if people don't commit to change now?
- Does everyone agree with the need to encourage others to do the same? Can you think of some ideas to do

so?

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Save energy

How was it when there was no electricity?

Level 1 2

Aim

To learn that there are many different things we can do without using electricity.

Materials

- Paper
- Pencils
- Scissors

Time

Two sessions: a 40 minute session to carry out the activity and a 10 minute session to ask the participants about their experiences at home.

Background

Energy is what makes things happen. We need it to make cars run, to cook a pizza and to listen to music. We need energy for everything we do and every day we need lots of it. So, we have to get it from somewhere.

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There are two different sources of energy:

1. Non renewable

This is a type of **energy** that cannot be recreated in a short period of time. This is because it comes from things that will run out one day, for example, coal, gas and oil. These are called **fossil fuels** because they were formed over millions and millions of years by the action of heat from the Earth's core and pressure from rock and soil on the remains of dead plants and animals.

2. Renewable

This type of **energy** can be replenished in a short period of time. That means it comes from things that we can use over and over again, for example, sunlight, water, wind, plants or heat from inside the Earth. The methods used for producing this type of **energy** are often better for the **environment**.

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Renewable and non-renewable energy sources can be used to produce electricity. We get most of our electricity from non renewable sources and there is a bad consequence of doing so. The problem is that the use of fossil fuels contributes to greenhouse gas emissions into the Earth's atmosphere and this can lead to global warming and climate change. Using electricity is not wrong; you just have to be smart about it.

Greenhouse gases are gases that occur naturally in the air that surrounds the Earth. These gases absorb and trap heat to keep our planet warm. Some examples are water vapour, carbon dioxide, methane and nitrous oxide. A careful balance of greenhouse gases keeps the Earth warm enough for humans, animals and plants to survive. But, when people burn too many fossil fuels the amount of these gases becomes unbalanced.

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When humans add more greenhouse gases to the air there is a general warming effect on the Earth because
 these gases act like a blanket that traps heat and prevents it from escaping to outer space. The warming of
 the planet can have some bad consequences for all living beings because many animals and plants need one

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kind of climate to survive. Moreover, a change of the world's climate can lead to big problems like floods, fires, droughts, lack of food and many more. But remember, there are lots of ways to help our planet!

How to do it

1. Write each of the following groups of words in small pieces of paper:

| Wh | at do we use? | What did our ancestors use? |
|-----|-------------------|--------------------------------|
| 1. | Light bulbs | Candles/oil lamps |
| 2. | E-mails | Letters/postcards |
| 3. | Cars | Horses/carts |
| 4. | Stove | Wood and fire |
| 5. | TV | Books/comic books |
| 6. | Video games | Outdoor games |
| 7. | Computer | Pen and paper/typewriter |
| 8. | Internet research | Library |
| 9. | Telephone | Telegrams/letters |
| 10. | Radio | Live entertainment |
| 11. | Heater | Fire places |
| 12. | Movies | Theatre |

Ask the participants to think about some appliances that they use every day that need electricity to work. People all around the world are accustomed to electricity use and many can't imagine a life without it. But our ancestors did find ways to live without electricity.

- 3. Divide the participants in couples and give them one of papers you prepared.
- 4. Each couple must read out loud the "What do we use part?" and act out the "What did our ancestors use?" part, so the rest of the group can guess. For each correct answer the couple gets one point. The couple that has the most points is the winner. Continue until you have finished all the groups of words.
- Discuss with the participants how they can commit to using less electricity and ask them to spend an hour at home without using it. Tell them to plan some activities to do with their friends or family during that time.
- 6. In the next session, ask them about their experience.
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- How can you change your daily routine to use less electricity?
- Can you describe some advantages of using less electricity in your daily life?
- Why do you think it is important to encourage your family and friends to do the same?
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How much do you spend on electricity?

Level 1 2 3

Aim

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To reflect on the cost of electricity and determine if it can be reduced.

Materials

Electricity bills

Time

- 30 minutes
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Background

Energy is what makes things happen. We need it to turn the lights on, to cook a pizza and to listen to music.
 We need energy for almost everything we do and every day we need lots of it.

- •
- Renewable and non-renewable energy sources can be used to produce electricity. We get most of our electricity from non renewable sources and there is a bad consequence of doing so. The problem is that the
- use of fossil fuels contributes to greenhouse gas emissions into the Earth's air and this can lead to global
- warming and climate change. Using electricity is not wrong; you just have to be smart about it. Energy has a
- cost, so the less you use, the more you save and the less impact you have on the environment!

How to do it

- Divide the participants into small groups. Ask each group to review their families' electricity bills and to compare them. Tell them to write down any similarities or differences they find.
- 2. Discuss with the entire group about their electricity consumption and encourage discussion.
- •

Discussion

- Do you think you use too much electricity? Why or why not?
- Who do you think is the most responsible?
- What can you do to help your family reduce the electricity bill?
- What can you do to encourage your family to save energy?

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• Be wise about energy!

Level 1

Aim

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To learn that young people can encourage others to save energy.

Materials

- Adhesive tape
- Coloured cardboard
- Colour pencils
- Scissors

Time

40 minutes

How to do it

- Ask your group to sit in a circle and to think about ten things that require energy to work. Which of those items can you find in your school or youth meeting place? If you want to help the planet to maintain clean and healthy everyone must start using them wisely.
- Create your own energy-saving signs and put them up around your school or meeting place for
 everyone to see and follow.

- Do you think you use these items efficiently? Why or why not?
- What do you think are the advantages of saving energy?
- Who needs to save energy?
- Do you think people in your school or meeting place will follow your advice? Why or why not?
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• Electricity use survey

- Level 2 3
- Aim
- To find out how green your school or youth group is and determine if any improvement is needed.

Materials

- A plan of the school or meeting place (or of an area of it)
- Colour markers
- Pencils
- Poster board
- The grid

Time

60 minutes

How to do it

- 1. Explain to the participants that they will be conducting an electricity use survey. Ask them to register the negative as well as the positive aspects. Remind your group to consider all kinds of electricity use sources (heating, air conditioning, computers, lights, etc.).
- 2. Obtain or prepare a plan of the school or meeting place so you can cover the entire place or, if it is too big, you can choose an area to conduct your survey.
- 3. The group can carry out the survey during the class or meeting hour or you can choose a determined time of the day to conduct the survey. The participants can work in pairs or small groups, with a different pair or group carrying out the exercise in a different place. Additionally, you can repeat the activity a second day, so you can compare the results.
- 4. Analyze the results. By conducting this exercise, you can find out if your school or meeting place needs to improve its electricity use and decide what changes need to be done.
- 5. Have your group write some new electricity use rules and hang them in a place where the entire school or youth group can see.

Record the information as follows:

| Time of the day | ls it a + or a - aspect? | Where? | What? |
|-----------------|-----------------------------|--------|-------|
| | | | |
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- Do you believe your school or meeting place is energy efficient? Why or why not?
- Did you find areas where things could be improved?
- Which class or place of the school or meeting place consumes more energy?
- What can you do to encourage others to save energy?

• Change a Light Campaign

• Level 1 2 3

Aim

To encourage young people to make small changes that prevent climate change.

Materials

- Adhesive tape
- Colour markers
- Poster boards
- Time
- 40 minutes

Background

- Using energy saving lightbulbs has become one of the brightest ideas to help our planet. This type of
 lightbulbs use up to 80 percent less electricity than an ordinary lightbulb, but produces the same amount of
- e light.
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Moreover, energy saving lightbulbs last ten times longer than a standard one and use between a fifth and a

• quarter of the electricity of ordinary bulbs to generate the same amount of light. That means that they can

help you save money and energy. And by using less energy like electricity you will produce less carbon
 dioxide, one of the main causes of climate change.

• How to do it

- Divide your group into five teams and explain to them that they are going to participate in the "Change a Light" campaign.
- Ask each one to make an attractive and fun looking poster that will be hung in different places around
 the school or youth group. Remind them to use some facts.

- What are the advantages of doing a campaign like the one you did?
- Do you think you had a positive outcome? Why?
- What is the connection between energy and the environment?
- How would the world be different if everyone committed to saving energy?
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Bright lightbulbs

Level 1 2 3

Aim

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To reflect on the use of **energy** efficient items.

Materials

Conventional lightbulb and energy efficient lightbulb that produces an equivalent amount of light (for example, a 60 watt conventional bulb and an 11 watt energy efficient one)

- Lamp
- Thermometer

Time

30 minutes

How to do it

- 1. Discuss energy efficient products and how they contribute to saving energy and reducing greenhouse gas emissions, such as energy efficient lightbulbs.
- 2. Place the conventional bulb in the lamp and turn it on. Wait ten minutes and then observe the light that is produced.
- 3. Hold the thermometer 15 cm above the lightbulb for a minute and record the temperature. Turn off the lamp.
- 4. Place the **energy** efficient lightbulb in the lamp and turn it on. Wait ten minutes and observe the light that is produced.
- 5. Hold a thermometer 15 cm above the lightbulb for one minute and record the temperature.
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Be careful when you change the lightbulbs as they might be hot!

- Did both lightbulbs produce the same kind of light and the same amount of heat?
- Could you tell any difference between the lightbulbs?
- Which bulb is more **energy** efficient?
- Can you name other items that help save energy?
- Source: The Need Project, Putting Energy into Education,
- www.need.org/, www.need.org/needpdf/PriComparingLightBulbs.pdf
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Find your way to a cool kind of energy!

Level 1

Aim

To learn about renewable energy sources.

Materials

A copy of the maze

Time

- 15 minutes
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Background

Green electricity is power produced from renewable sources that do not harm the environment, like water,
 wind, sun, ground and biomass. This type of energy is called renewable because it can be replenished in a short period of time. That means it comes from things that we can use over and over again. The methods used for producing this type of energy are often better for the environment.

- Green power production technologies have fewer environmental impacts than the use of non renewable
- energy sources, like the burning of fossil fuels, which release a great amount of greenhouse gases into the
- Earth's atmosphere.
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Types of **renewable energy** sources:

- Solar energy refers to the sun's rays that reach the Earth. This energy can be converted into other forms of energy, such as heat and electricity. When converted to thermal (or heat) energy, solar energy can be used to heat water, for use in homes, buildings, or swimming pools and to heat spaces inside homes, greenhouses, and other buildings.
- Wind energy is energy harnessed from the wind. Today, wind energy is mainly used to generate electricity. Wind turbines use blades to collect the wind's energy. The wind flows over the blades, causing them to turn. The blades are connected to a drive shaft that turns an electric generator to produce electricity.
- Energy from moving water or hydropower is an important renewable energy source that can produce electricity. The amount of available energy in moving water is determined by its flow or fall. Swiftly flowing water in a big river or water descending rapidly from a very high point has a lot of energy in its
- flow.
- The word geothermal comes from the Greek words geo (earth) and therme (heat). So, geothermal energy is heat from inside the Earth. We can recover this heat as steam or hot water and use it to heat buildings or generate electricity.
- Biomass is organic material made from plants and animals. Biomass contains stored energy from the sun. Biomass is a renewable energy source because we can always grow more trees and crops, and
 - waste will always exist. Some examples of biomass fuels are wood, crops, manure and some garbage.

How to do it

1. Explain to the participants that, using the maze below, they have to trace the correct path that takes them through renewable energy sources.



Discussion

- What is the connection between energy and the environment?
- What is the difference between non-renewable and renewable energy sources?
- Why is it better to use renewable energy sources?
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• Green power!

Level 2 3

Aim

To learn about and discuss alternative energy sources.

Materials

Information cards

Time

- 40 minutes
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Background

- Green electricity is power produced from renewable sources like water, wind, sun, ground and biomass. This
- type of energy is called renewable because it can be replenished in a short period of time. That means it comes from things that we can use over and over again. The methods used for producing this type of energy
- are often better for the environment.
- Green power production technologies have fewer environmental impacts than the use of non renewable
- energy sources, like the burning of fossil fuels, which release a great amount of greenhouse gases into the Earth's atmosphere.

How to do it

- 1. Ask five participants to choose one of the following renewable energy sources:
 - Biomass
 - Ground or Geothermal
 - Solar
 - Water or Hydropower
 - Wind
- Explain to them that they are five famous scientists that have prepared a special TV report to talk about their renewable energy source. Each one must try to convince the rest of the class or youth group that their renewable energy source is the best. Tell them to be creative! They can present their topic in a serious or in a funny way.
- 3. Have the group vote to see which they think is the best renewable energy source.
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Information cards:

Solar energy

Solar energy refers to the sun's rays (solar radiation) that reach the Earth. This energy can be converted into other forms of energy, such as heat and electricity. When converted to thermal (or heat) energy, solar energy can be used to heat water for use in homes or buildings, or to heat swimming pools and spaces inside homes, greenhouses, and other buildings.

Solar energy can be converted to electricity in two ways:

- Photovoltaic (PV devices) or "solar cells" change sunlight directly into electricity. Individual PV cells are grouped into panels and arrays of panels can be used in a wide range of applications, for example, single small cells that charge calculators and watch batteries or systems that power single homes or large power plants covering many acres.
- Concentrating solar power plants generate electricity by using the heat from solar thermal collectors to heat a fluid which produces steam that is used to power the generator.

Two disadvantages of solar energy are:

- The amount of sunlight that arrives to the Earth is not constant. It depends on the location, the time of day, the time of year and the weather conditions.
- Because the sun doesn't deliver that much energy to any one place at any one time, a large surface area is required to collect the energy at a useful rate.

Solar energy and the environment

Using solar energy doesn't produce air or water pollution and greenhouse gases, but it does have some indirect impacts on the environment. For example, there are some toxic materials and substances that are used in the manufacturing process of photovoltaic cells. Moreover, large solar thermal power plants can harm desert ecosystems if not properly managed. Birds and insects can be killed if they fly into a concentrated beam of sunlight, such as that created by a solar power tower. Some solar thermal systems use potentially hazardous fluids (to transfer heat) that require proper handling and disposal.

Hydropower

Energy from moving water (or hydropower) is a **renewable energy** source. The amount of available energy in moving water is determined by its flow or fall. Swiftly flowing water in a big river or water descending rapidly from a very high point has a lot of energy in its flow.

In both cases the water flows through a pipe, then pushes against and turns blades in a turbine to spin a generator to produce electricity. In a run-of-the-river system the force of the current applies the needed pressure, while in a storage system water is accumulated in reservoirs created by dams, then released as needed to generate electricity.

Hydropower and the environment

Hydropower does not pollute the water or the air. However, hydropower facilities can have large environmental impacts by changing the environment and affecting land use, homes, and natural habitats in the dam area.

Most hydroelectric power plants have a dam and a reservoir. These structures may obstruct fish migration and affect their populations. Operating a hydroelectric power plant may also change the water temperature and the river's flow. These changes may harm native plants and animals in the river and on land. Methane, a strong greenhouse gas, may also form in some reservoirs and be emitted to the atmosphere.

Wind energy

Today, wind energy is mainly used to generate electricity. Wind turbines use blades to collect the wind's kinetic energy. The wind flows over the blades, causing them to turn. The blades are connected to a drive shaft that turns an electric generator to produce electricity.

Wind power plants, or wind farms, as they are sometimes called, are clusters of wind machines used to produce electricity. A wind farm usually has dozens of wind machines scattered over a large area. One disadvantage is that wind does not blow all the time.

Wind energy and the environment

Wind is a clean fuel; wind power plants produce no air or water pollution because no fuel is burned to generate electricity. The most serious environmental drawbacks to wind machines may be their negative effect on wild bird populations and the visual impact of wind farms on the landscape.

Geothermal energy

The word geothermal comes from the Greek words geo (earth) and therme (heat). So, geothermal energy is heat from inside the Earth. We can recover this heat as steam or hot water and use it to heat buildings or generate electricity. Geothermal energy is a **renewable energy** source because the heat is continuously produced inside the Earth.

Geothermal energy is generated in the Earth's core. Temperatures hotter than the sun's surface are continuously produced inside the Earth by the slow decay of radioactive particles, a process that happens in all rocks.

Some applications of geothermal energy use the Earth's temperatures near the surface, while others require drilling miles into the Earth. The three main uses of geothermal energy are:

- Direct use and district heating systems use hot water from springs or reservoirs near the surface.
- Electricity generation power plants require water or steam at very high temperature (300 to 700 °F). Geothermal power plants are generally built where geothermal reservoirs are located within a mile or two of the surface.
- Geothermal heat pumps use stable ground or water temperatures near the Earth's surface to control building temperatures above ground.

People around the world use geothermal energy to heat their homes and to produce electricity by digging deep wells and pumping the heated underground water or steam to the surface. We can also make use of the stable temperatures near the surface of the Earth to heat and cool buildings.

Geothermal energy and the environment

The environmental impact of geothermal energy depends on how it is being used. Direct use and heating applications have almost no negative impact on the environment. Geothermal power plants do not burn fuel to generate electricity, so their emission levels are very low. They release less than 1 percent of the carbon dioxide emissions of a fossil fuel plant. After the steam and water from a geothermal reservoir have been used, they are injected back into the Earth.

Biomass

Biomass is organic material made from plants and animals. Biomass contains stored energy from the sun. Plants absorb the sun's energy in a process called photosynthesis. The chemical energy in plants gets passed on to animals and people that eat them. Some examples of biomass fuels are wood, crops, manure, and some garbage. Biomass is a **renewable energy** source because we can always grow more trees and crops, and rubbish will always exist.

When burned, the chemical energy in biomass is released as heat. If you have a fireplace, the wood you burn in it is a biomass fuel. Wood waste or rubbish can be burned to produce steam for making electricity or to provide heat to industries and homes.

But, burning biomass is not the only way to release its energy. Biomass can be converted to other useable forms of energy, such as methane gas or transportation fuels like ethanol and biodiesel. Methane gas is the main ingredient of natural gas. Rotting garbage and agricultural and human waste release methane gas, also called "biogas." Crops like corn and sugar cane can be fermented to produce ethanol. Biodiesel, another transportation fuel, can be produced from left-over food products like vegetable oils and animal fats.

Biomass and the environment

Each of the different forms and uses of biomass impact the environment in a different way. Biomass pollutes the air when it is burned, but not as much as fossil fuels do. Burning biomass fuels does not produce **pollutants** such as sulfur that can cause acid rain. When burned, biomass releases carbon dioxide. But when biomass crops are grown, a nearly equivalent amount of carbon dioxide is captured through photosynthesis.

- Source: United States Energy Information Administration, Energy Kids,
- http://tonto.eia.doe.gov/kids/energy.cfm?page=renewable_home-basics

- What are the differences between renewable and non renewable energy sources?
- Why do you think energy sources that are strongly linked to climate change are used all over the world?
- What are the advantages and the disadvantages of renewable energy sources?
- Have you ever seen how a renewable energy source works? Can you explain it?
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• Quick energy debate

- Level 3
- Aim
- To think about energy issues from all points of view.
- Materials
- Stopwatch
- Whistle

Time

30 minutes

Background

Every day people around the world use different **energy** sources to make things work. **Energy** sources are classified into two groups: renewable and non-renewable. These can be converted into secondary **energy** sources like electricity and hydrogen.

• In the world, most of the energy people use comes from non-renewable energy sources. Coal, petroleum

and natural gas are non-renewable energy sources. These are called fossil fuels. They are non-renewable
 because their supplies are limited as they take millions of years to create.

The use of **renewable energy** sources is growing. These include biomass, geothermal **energy**, hydropower, solar **energy**, and wind **energy**. They are called **renewable energy** sources because they are replenished in a short time. Every day the sun shines, the wind blows and the rivers flow. We mainly use **renewable energy** sources to make electricity.

Electricity and hydrogen are different from the other energy sources because they are secondary sources of energy. These are called energy carriers because they are used to store, move and deliver energy in an easily useable form.

Energy sources have different impacts or effects on the environment. Some of these effects may include
 emissions, waste, and land or water use impacts, among others. Petroleum products, for example, are used
 to make many things, such as fuel, plastics and medicine. But even though these products are used in our
 daily life, finding, producing, moving, and using them provokes air (through the emission of greenhouse
 gases) and water pollution, causing negative impacts on the environment and human health.

Without proper care, coal mining can have a negative impact on ecosystems and water quality and alter
 landscapes and scenic views. Remains that choke mountain streams can result from surface mining like
 mountaintop removal and acidic water can drain from abandoned underground mines.

Natural gas burns more cleanly than other **fossil fuels**. It has fewer emissions of sulphur, carbon, and nitrogen than coal or oil, and when it is burned, it leaves almost no ash particles. This is one of the reasons why the use of natural gas, mainly for electricity generation, has grown so much.

For this reason, renewable energy use is expanding. When renewable energy sources are used, the demand
 for fossil fuels is reduced. Unlike fossil fuels, non-biomass renewable sources of energy do not directly emit
 greenhouse gases.

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We are many. We are YUNGA!

Nevertheless, it is important to remember that **renewable energy** has generally been more expensive to produce and use than **fossil fuels**. Renewable resources are often located in remote areas and it is expensive to build power lines to the cities where the electricity they produce is needed. The use of renewable sources is also limited by the fact that, for example, cloudy days reduce solar power and calm days reduce wind power.

- Source: Energy Kids, U.S. Energy Information Administration,
- http://tonto.eia.doe.gov/kids/

How to do it

- Select two participants to compete in a debate and one to be the timekeeper. The rest of the group are
 the judges.
- Give each participant one of the topics provided below. This should be done secretly so the participants
 don't know their opponents subject. Give them 30 seconds to think about what they are going to say.
- They then get 30 seconds each to state their argument. After both participants have talked, they then
- get a further 15 seconds each to respond to what the other participant has said. The judges then decide
- who was the most convincing and declare the winner. The winner of each debate is the participant who
- has shown the greatest skill in presenting their argument. The judges must forget their own opinions on
 the subject matter and judge purely on the debating skills of the participants.
- Repeat the game until everyone has participated. The winners can then compete against each other
 until there is an overall debating champion. If your group is big, you can split it into two.

Debating topics:

- Coal is great, versus, coal is bad.
- I love solar power, versus, I hate solar power.
- I think wind farms are ugly, versus, I think wind farms are beautiful.
- Global warming is very important, versus, global warming is not important.
- It will be good if temperatures rise, versus, It will be bad if temperatures rise.
- Solar power is the best form of energy, versus, wind power is the best form of energy.
- We should use nuclear power, versus, we shouldn't use nuclear power.
- We need to reduce our **energy** use, versus, we don't need to reduce our **energy** use.
- Everyone should know how to grow vegetables and basic foods, versus, food production should be left to the professionals: farmers.
- Urbanisation is good, versus, people should be encouraged to stay in the countryside.

- Which subjects were easy to debate and which were difficult?
- Was arguing against what you believe difficult?
- How does energy production harm the environment?
- How can energy be produced with less impact on the environment?
- What can individuals do to help energy production have less impact on the environment?
- Source: World Organization for the Scout Movement, Environment Programme,
- www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities
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- Use water wisely
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- Water Twist
- Level 1 2
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- Aim
- To explore the connections between being a responsible citizen and water use.
- Materials
- 8 paper sheets
- A bag
- Adhesive tape
- Colour markers
- Music
- Time
- 40 minutes

Background

You can find water all around you, in the sky and in the ground. We use water every day, for example, when we brush our teeth, when we cook a soup or when we water our plants. Water is a precious resource, so learning how to care for it is very important.

Less than 1 percent of all the water on the planet can be used by people, the rest is salt water (from the oceans) or is permanently frozen and we can't use it. As the population grows, more and more people need to use this limited resource. Therefore, it is important not to waste water.

Moreover, because of **climate change** our planet's **weather** patterns are changing, temperatures are getting warmer and sometimes the rain does not fall where and when it is needed. That's a big problem because we all need water to live. For example, sometimes summers get so dry that people have to be extremely careful not to **waste** water because the amount of water in their dams gets very low.

Water **conservation** starts with you! If you are more careful with your water now, we will all have enough to drink in the future.

How to do it

- 1. Choose eight colour markers and use each one to make a happy face in each paper.
- 2. Assign one of the questions provided below to each colour (you can repeat the colours if you have more than eight participants or you can create more questions).
- 3. Stick the papers on the floor in the shape of a circle with space in between each one.
- 4. Explain the game. Each participant stands on a paper and when the music starts playing each one steps to the next square, this continues until the music stops. When this happens, each participant stands on the square and you randomly draw a marker out of the bag to determine who has to answer a question.

- 5. Give the participant (or participants) a short time to answer and continue playing.
- 6. Before you start again, remove the paper (or papers) that correspond to the colour that you already took out of the bag.
- 7. Continue this pattern until you get down to a winner.

Questions:

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- Why is water considered a precious resource?
- Do all living beings need water? Why or why not?
- Do human beings have the right to waste water? Why or why not?
- What do you think are our responsibilities regarding water?
- Why do we need water to lead a healthy and happy life?
- Do water use habits affect the environment? Why or why not?
- Do water use habits affect human health?
- What steps could human beings take to use water more efficiently?

- Do you think you waste water with your everyday activities? Why or why not?
- What are you doing to save water?
- Is it important to encourage others to do the same? Why or why not?
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Clean your dirty water!

Level 1 2 3

Aim

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To learn about water filtration.

Materials

- A clear plastic bottle
- A funnel
- A paper towel
- Clean sand (from the sandbox or the beach)
- Dirt
- Scissors
- Water

Time

- 30 minutes
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Background

- Water in lakes, rivers and swamps often contain impurities that make it look dirty and smell bad. Water may
- also contain bacteria and other microbiological organisms that can cause different diseases if people drink
- it. For this reason, water from most surface sources must be cleaned and purified before it can be consumed
- by people. Water treatment plants typically clean water by taking it through different processes, one of
- these is filtration.

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How to do it

- Cut the paper towel to make a big circle. Fold it in half, then in half again and open it to make a paper
 cone.
- 2. Place the cone inside the funnel and put the funnel in the plastic bottle.
- 3. Fill the cone with the sand to create your filter.
- 4. Mix the water with four or five spoons of dirt and slowly pour it into your filter.
- 5. Look at the water that comes out of your filter.
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- What happened to the muddy water after it passed through the filter?
- Is the water from the plastic bottle clean? Or is it still a little bit dirty? If it is still a bit muddy, that is because
- the dirt particles were small enough to pass through the sand in the filter. That is the reason why water
- treatment plants use several water purification processes.
- Is it better to filter water or to prevent water contamination and use it wisely?

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Water trivia

- Level 1 2 3
- Aim
- To learn about water and water use facts.
- Material
- Water trivia
- Time
- 20 minutes
- How to do it
- Give each participant a copy of the following trivia and ask them to find the correct answers.
 Alternatively, the participants can work in pairs. You can also set it up as a competition. The participant or the pair that has the most correct answers is the winner.
- 2.

Water Trivia

We are many. We are YUNGA!

How much of the human body is water? a. Up to 3 800 litres a month b. How much of the Earth's surface is water? 15 litres every minute How much of the Earth's water is ocean? c. 97 percent d. How much of the world's water is frozen? 1 percent How much of the Earth's surface water is e. drinkable? 200 litres f. How long can a person live without water? 66 percent How much water can you save if you turn g. off your hose nozzle while you wash your car? About a week h. How much water can you save if you turn off the water while you brush your teeth? 2 percent i. How much water can you save if you keep your shower under five minutes? More than 400 litres How much water can you save if you turn j. off the shower while you shampoo? More than 200 litres a week How much water does an average person k. use in one day? 80 percent

Discussion

- What do you think your life would be like if you did not have enough water for your everyday needs?
- How is water availability and use connected to other global issues?
- What can be done to conserve water resources?
- Answers
- a. 66 percent b.80 percent c.97 percent d.2 percent e.1 percent f.About a week g.More than 400 litres

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- h.Up to 3 800 litres a month i.More than 200 litres a week j.15 litres every minute k.200 litres
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We are many. We are YUNGA!

- Find and fix!
- Level 1 2

Aim

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To learn that simple actions can help save water.

Materials

- Paper
 - Pencils

Time

Two sessions: a 15 minute session to explain the activity and a further 20 minute session to discuss your group's findings.

Background

- Water meters are used to measure the amount of water that comes into your home. You can find your water meter in your basement or outside. The water meters are read on a regular basis so your local Water
 Utilities Administration can bill you for the water you use. The bill covers the costs of treating and the the time to be a set of the set of th
- distributing the water.
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How to do it

- Explain to your group that they are going to find out if their house has a water leak. It is a good idea to send a note about the activity to the family, so they can help their children to develop it.
- 2. At home each participant must take a water meter reading at a moment when no one is using the
- water. Then, they must wait at least two hours, during which time no one can use water, and take a
 meter reading again. If the number changed, they have a water leak. It is a good idea to take the meter
- reading before and after school, but they must make sure no one uses the water during that time.
- 3. Discuss with your group about their findings. Encourage the participants to talk to their family about
 the importance of saving water, so they can make the decision to fix a leak if they have one.

- Did you discover your house had a water leak? Is your family fixing it?
- Why is it important to save water?
- Can everyone in the family contribute to saving water? How?
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• Water Footprint

• Level 1 2 3

Aim

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To reflect on your water use and consumption.

Materials

Access to internet

Time

- 20 minutes
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How to do it

Explain to your group that they are going to use the BBC water calculator to help them find out how
 much water their family uses each day at home:

http://news.bbc.co.uk/2/hi/in_depth/629/629/5086298.stm

- 2. Ask each participant to calculate his or her water use.
- 3. Tell the participants to discuss and compare results in pairs.

Discussion

- Do you think you and your family have a wasting water problem? Why or why not?
- What can you do at home to lower your water consumption?
- Can you name some advantages of saving water?

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We are many. We are YUNGA!

- Protect forests
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- Magical forest
- Level 1
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Aim

• To learn about and appreciate forests and their components.

- Materials
- An open space
- Time
 - 20 minutes
 - How to do it
 - 1. Write each of the following phrases on small pieces of paper and have each participant choose one.
 - 2. Have your group sit in a circle and close their eyes. Tell them to imagine they are in a forest and that each one will have to look for an object that fits the description they have.
 - 3. Have the participants open their eyes and say what they thought about. Ask them to look around to see if they can find something similar to what they thought of.

Descriptions:

- Something dry
- Something wet
- Something hard
- Something soft
- Something hairy
- Something pointy
- Something heavy

- Something light
- Something huge
- Something tiny
- Something flat
- Something round
- Something slippery
- Something rough

- Was it easy or hard to finding something that fitted your description?
- Can you name some benefits of protecting forests?
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Nature's treasure chest

Level 1

Aim

To understand the importance of protecting forests.

Materials

- 5 shoe boxes
- 5 wood products
- Colour markers
- Construction paper

Time

40 minutes

Background

- Forests cover about 30 percent of the land area on Earth. But a forest is more than just a group of trees.
- Forests play a vital role in the environment.
- The world's forests provide many different goods and services, for example:
 - Home for plants and animals, which help to maintain the diversity of life on Earth;
 - Food for people and animals;
 - Valuable materials for different industries, for example, to obtain medicines or wood for building or energy;
 - Filter pollution from the air as they soak up CO₂;
 - Protect the quality of water and prevent soil loss;
 - Produce wood fuels as an alternative to fossil fuels;
 - Create shade;
 - Give people nice places to live, relax and have fun;
- And much, much more!
- •
- Since the beginning of time, people have used raw materials from forests to help meet society's needs for
- housing, furniture, paper, and thousands of products used by people all around the world. Chemicals and
- other tree components are found in many everyday products such as tires, toothpaste, fuel, paint, chewing
- gum, hair spray or maple syrup. We could never name them all!
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- During the years, the increasing human population has created a bigger demand for forest products.Because of this, we risk destroying entire forests and all of the plant and animal life that exists in them.
- Moreover, the ability of our forests to store carbon and, thereby, to combat the changes in our climate is
 very important.
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- Our planet is getting hotter because of global warming! The release of fossil fuels, such as carbon dioxide, is
 increasing the amount of greenhouse gases in our atmosphere. Forests influence climate change mainly by
 affecting the amount of CO₂ in the atmosphere. When forests grow, carbon is removed from the
- atmosphere and absorbed in wood, leaves and soil. Because forests can absorb and store carbon over an
- extended period of time, they are considered "carbon sinks". This carbon remains stored in the forest
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ecosystem, but can be released into the atmosphere when forests are cleared, burned or degraded. Forests have the potential to absorb about one-tenth of global carbon emissions projected for the first half of this century.

Since cutting down trees for wood is one of the main reasons why forests around the world are being destroyed, it is important to find ways to protect forests through our everyday choices and to practice **conservation** to sustain the availability and use of the important resources we obtain from forests. There are many easy things you can do to help, so get to work!

How to do it

- Collect 5 shoe boxes and cut a hole in the top big enough to put your hand in. Place a different object made from wood in each box.
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- Ideas:
- Cardboard
- Newspaper
- Тоу
- Button
- Pencil

- Bracelet
- Lollypop stick
- Brush
- Toothpick
- Napkin
- 2. Get your group to put their hands in the box one by one and guess what they are feeling.
- 3. After they discover all the objects, ask them what these objects have in common, that they all come from wood.
- 4. Then, ask them to think about how important forests are for our daily life. Tell them to help you make a list of the things they can do to help preserve forests and make a nice poster, so you can put it in a place where everyone can see.

Ideas:

- Write on both sides of the paper.
- Collect your scrap paper and use it for different activities.
- Use cloth napkins and towels instead of paper ones whenever possible.
- Use a reusable bag instead of paper bags.
- Buy recycled paper.
- Print only if necessary.
- Dry your hands with a towel or a hand dryer instead of using paper towels.
- Plant a tree whenever you can.

- What products have you used today that are made from wood?
- What forest products are present in the classroom or meeting place?
- How important is it for everyone to use these products wisely?
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We are many. We are YUNGA!

- Forest fun!
- Level 1

Aim

To understand the importance of recycling.

Materials

- Cardboard (from boxes found at home)
- Colour pencils
- Colour markers
- Scissors
- Lollypop sticks
- Glue

Time

40 minutes

How to do it

- 1. Remind your group that recycling and reusing are great ways to help preserve resources like wood from trees. Therefore, ask them to bring from their houses some pieces of cardboard that can be reused (for example, a shoe box or a TV box).
- 2. Ask each participant to choose an animal from the forest to create a mask. Remind them that they can use all kinds of materials. When they are finished, glue the lollypop stick to the mask, so they can hold it.
- 3. Then ask them to read the following facts about paper recycling so they can learn more about the importance of doing so.

Facts:

- 75 percent of a tree harvested for paper does not end up as paper product.
- Paper made from recycled paper instead of virgin fibres requires 70 percent less energy.
- Making paper from recycled paper reduces contribution to air pollution by 95 percent.
- If all the newspaper in a big country like the United States was recycled, we could save about 250 000 000 trees each year.
- Recycling a stack of newspapers just 1 metre tall saves one tree.
- If you had a 15-year-old tree and made it into paper grocery bags, you'd get about 700 of them. A busy supermarket could use all of them under an hour. This means in one year, one supermarket can go through over 6 million paper bags. Imagine how many supermarkets there are around the world!
- Each ton of recycled paper can save 17 trees, 1 400 litres of oil, three cubic metres of landfill space, 4 000 kilowatts of energy, and 26 500 litres of water.
- The 17 trees saved from each ton of recycled paper can absorb a total of 110 kilograms of carbon dioxide from the air each year. Burning that same ton of paper would create 680 kilograms of carbon dioxide.

Discussion

How important are trees and forests in our lives?

- What do you think is your role in the protection of forests? How important is it to recycle and reuse wood products?
- Protect the Forests Contest
- Level 2 3
- Aim

To understand the important role of forests in our lives.

- Materials
- 4 poster boards
- Colour markers
- Colour pencils
- Non toxic paints or watercolours

Time

60 minutes

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Background

• Forests cover about 30 percent of the land area on Earth. But a forest is more than just a group of trees.

- Forests play a vital role in the **environment**.
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- The world's forests provide many different goods and services, for example:
- Home for plants and animals, which help to maintain the diversity of life on Earth;
- Food for people and animals;
- Valuable materials for different industries, for example, to obtain medicines or wood for building or energy;
- Filter pollution from the air as they soak up CO₂;
- Protect the quality of water and prevent soil loss;
- Produce wood fuels as an alternative to fossil fuels;
- Create shade;
- Give people nice places to live, relax and have fun;
- And much, much more!
- Since the beginning of time, people have used raw materials from forests to help meet society's needs for
- housing, furniture, paper, and thousands of products used by people all around the world. Chemicals and
- other tree components are found in many everyday products such as tires, toothpaste, fuel, paint, chewing
- gum, hair spray or maple syrup. We could never name them all!
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- During the years, the increasing human population has created a bigger demand for forest products. Because of this, we risk destroying entire forests and all of the plant and animal life that exists in them.
- Moreover, the ability of our forests to store carbon and thereby help to combat the changes in our climate
- is very important and the destruction of forests could lead to an acceleration of climate change.
- Our planet is getting hotter because of global warming! The release of fossil fuels, such a as carbon dioxide,
 is increasing the amount of greenhouse gases in our atmosphere. Forests influence climate change mainly
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by affecting the amount of CO₂ in the **atmosphere**. When forests grow, carbon is removed from the **atmosphere** and absorbed in wood, leaves and soil. Because forests can absorb and store carbon over an extended period of time, they are considered "carbon sinks". This carbon remains stored in the forest **ecosystem**, but can be released into the **atmosphere** when forests are cleared, burned or degraded. Forests have the potential to absorb about one-tenth of global carbon emissions projected for the first half of this century.

Since cutting down trees for wood is one of the main reasons why forests around the world are being destroyed, it is important to find ways to protect forests through our everyday choices and to practice **conservation** to sustain the availability and use of the important resources we obtain from forests. There are many easy things you can do to help, so get to work!

How to do it

- Divide your group into four teams. Explain to them that they are going to create a poster to show everyone why the forests are so important and should not be destroyed. Tell them to use their imagination to get their message across. Remind them they can use all kinds of materials!
- 2. When the teams are done, display the posters in your school or meeting place and have some other
- young people vote to see which poster they believe transmits a clear message and encourages people
 to make a change.

Discussion

- How do you think the world would be without the goods and services provided by forests?
- What would life be like without products made from wood, wood fibre or wood chemicals?
- How have attitudes towards forest protection changed over time?

Villagers and Loggers

Level 2 3

Aim

To discuss what can be done to protect forests.

Materials

- 2 different colour cards
- A log or any other solid object (a rock, a table, a chair)
- Adhesive tape
- An open space

Time

- 30 minutes
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- Background
- Forests provide many valuable foods and other products that are important to the livelihood of millions of
- people around the world. Moreover, forests regulate climate, produce oxygen and ensure water and soil
- conservation and biodiversity. With good practices and management, forest products can be harvested
- without exhausting the supply or damaging the environment and ecosystems.
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How to do it

- 1. Divide your group into two equal teams: "villagers" and "loggers". Assign a colour to each team and give each participant a card in the colour of their team.
- Each "logger" should write down one reason why they must continue cutting trees and each "villager" should write one reason why they need to save the forest.
- 3. Ask each team to choose one person to represent them. Blindfold these two players and ask them to stand in the centre of the game area. A big solid object should be placed in front of them.
- 4. Set a time limit for the game. At your signal, the participants should move up silently one by one and place their cards on the solid object. If the blindfolded "representatives" hear somebody approaching,
- they point in the direction of the sound and call "Orang-utan!" The caught player starts all over again.
- 5. When you stop the game, count the cards and give a point for each one.
- 6. Have the "representatives" take turns reading out loud each of the reasons for and against logging and try to come to an agreement on what should be done. They should seek to be fair to both the "loggers" and the "villagers".

- What can the loggers and the community leaders do to ensure that forests are respected?
- How can the villagers have a say in decisions that affect their environment, income and access to food?
- Source: The Right to Food: A Window on the World, Resource and Activity Guide,
- www.feedingminds.org/cartoon/rtf_en.htm, page 23.

 - Speak up for trees!
- Level 2 3
- •
- Aim
- To learn how individual actions can help preserve forests.
- Materials
- Paper
- Pens
- •
- Time
- 30 minutes
- •
- How to do it
- Explain to your group that one way to protect forests is to write letters to the companies responsible
 for deforestation. The people in these companies are not bad, but often don't understand how vital
 forests are. Therefore, it is really important to speak up for trees and forests.
- Divide your group in pairs. Ask each pair to write a letter to a company to explain why it is necessary to protect forests and to encourage them to maintain a philosophy that respects nature and its living beings.
- 3. Choose a company from your city or country that works with forest products and send all the letters to them in a big bundle so it makes a really big impression!
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We are many. We are YUNGA!

Discussion

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- What are the advantages and disadvantages of using forest products?
- How can people change their everyday habits to help promote forests' protection?
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- Reduce-reuse-recycle
- Dirty day!
- Level 1 2 3
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Aim

To experience how it feels to be in a dirty and untidy place.

- Materials
- Different types of rubbish
- Time
- 40 minutes
 - Background

We have a beautiful world that gives us all the things we need to lead a happy and healthy life, so it is time for everyone to take good care of it, it's the only one we have! By respecting the area we live in and helping to stop pollution we can create a clean and cafe environment for all living beings.

to stop pollution we can create a clean and safe environment for all living beings.

Something becomes waste when it cannot be recycled or used again. Waste is a serious issue. Disposing of
 waste can be difficult and costly and most of it ends up in holes in the ground (landfill sites) or is burnt in
 incinerators. Every day we produce tonnes and tonnes of waste and landfill sites are already becoming full.
 There are concerns about the impact on people's health and the pollution caused by landfill sites and
 incinerators. Litter is also a very big problem around the world, making our streets, our parks or our rivers
 untidy; it can have negative effects on plants, animals and humans.

Waste can take a long time to decompose. For example, a glass bottle can take up to one million years to
 breakdown, an average aluminium can needs between 80 and 100 years, a tin can needs about 50 years to
 decompose, a plastic bottle can take up to 450 years and a newspaper needs around 6 weeks to breakdown.
 But you can make a difference - approximately 84 percent of your bin waste can be recycled and around 32
 percent of all household waste is compostable!

Moreover, it is important to remember that a hazardous waste is a type of waste that is either toxic (poisonous), can catch fire, corrode other materials or react with other chemicals. This type of waste can pollute the land and the water that is underneath or next to it and threaten public health and the environment. These types of waste cannot be thrown in the regular rubbish bins.

Remember, everyone is responsible for keeping the **environment** clean! You can play your part at home, at school or youth group or at any place you visit. So, get to work!

How to do it

- 1. Before your group arrives, throw rubbish all around the class or meeting place. Make sure you use a large amount of rubbish so the participants can feel how disturbing it is to be in an untidy place.
- Start your lesson normally and continue for about 30 minutes. Then ask everyone to help clean up, make sure you recycle all the waste!

We are many. We are YUNGA!

Discussion

- How did you feel when you saw the class or meeting place all filled up with rubbish?
- Is it better to clean up as a group? How long do you think it would have taken a single person to clean up all
- that mess?
- How do you think people that live in untidy places feel? Do you think this is fair?
- Can you think of ideas to help keep your neighbourhood clean?

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Waste square puzzle

Level 1

Aim

To become familiar with, and learn about, waste related concepts.

Materials

- Pencils
- Square puzzle

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- Time
- 20 minutes

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- How to do it
- Give a copy of the following word square puzzle to each participant and ask them to find the following
 words (make sure your group knows the meaning of all the words):
 - Bin
 - Landfill site
 - Litter
 - Waste
 - Recycle
 - Repair
- •

- Reuse
- Glass
- Compost
- Paper
- Plastic
- Metal
- The words go forwards, backwards, up and down and diagonally!

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71
Waste Square Puzzle

| Q | W | Е | R | т | Υ | U | T | 0 | Ρ | А | S | D | F | G | Н |
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| W | S | Ζ | Х | С | V | 0 | В | Ν | Μ | Q | W | Е | R | т | Y |
| S | А | S | Κ | J | S | G | Μ | F | D | S | Α | Ρ | 0 | Т | U |
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| А | I. | L | Ν | Т | Т | L | K | Н | С | S | Α | G | R | Α | Ζ |
| S | G | V | D | Т | G | J | K | I. | R | Υ | Т | S | G | Ν | Х |
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| Х | Е | С | F | Ρ | Α | S | L | L | I. | т | Т | Е | R | F | J |
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| U | W | R | D | F | G | Н | S | Α | Μ | Е | L | S | Q | S | Q |
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| т | G | R | W | Е | R | T | С | K | Ν | R | Т | Ρ | L | Е | Е |
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| н | J | Α | Ζ | Х | D | F | Т | Υ | U | J | I. | L | J | U | В |
| G | F | T | Q | W | Е | R | Т | G | F | D | V | Ρ | 0 | I. | Н |
| А | В | R | F | С | Υ | R | Е | С | Υ | С | L | Е | G | Н | J |
| I | Р | 0 | Α | S | Е | R | Т | Y | Н | G | D | V | С | F | В |

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2. Ask the children to make a sentence with all the words; they can work in pairs or small groups.

Discussion

- Can you name some tidy and untidy places around your neighbourhood?
- Which places in your neighbourhood do you prefer to visit? Why?
- How would you feel if your school or meeting place was always messy and untidy?
- Can you name some things you can do to keep clean your school or meeting place?
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| Sol | uti | on | | | | | | | | | | | | | |
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| А | 1 | L | Ν | Т | Т | L | К | Н | С | S | А | G | R | А | Ζ |
| S | G | V | D | Т | G | J | К | Т | R | Υ | Т | S | G | Ν | Х |
| V | С | В | G | н | Υ | R | Т | А | Q | W | J | н | Т | D | V |
| Х | Е | С | F | Р | А | S | L | L | Т | Т | Т | Е | R | F | J |
| D | Т | Q | Е | 0 | А | М | н | J | К | Т | Υ | L | К | Т | G |
| Н | S | W | Ι | L | В | К | G | S | R | U | Ι | Р | М | L | S |
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| U | W | R | D | F | G | н | S | А | М | Е | L | S | Q | S | Q |
| Y | Q | W | Е | R | Х | С | С | Ν | D | А | Т | Р | н | Т | W |
| R | Т | G | F | D | В | н | 0 | А | Х | М | Т | Α | 0 | Т | W |
| т | G | R | W | Е | R | Т | С | К | N | R | т | Р | L | Е | Ε |
| D | F | Ε | L | 0 | Х | F | Ν | L | W | Е | G | Ε | Υ | R | D |
| В | Μ | Ρ | R | Т | S | С | V | А | D | F | Р | R | Μ | N | V |
| Н | J | Α | Z | Х | D | F | Т | Y | U | J | Ι | L | J | U | В |
| G | F | | Q | W | Ε | R | Т | G | F | D | V | Р | 0 | Ι | н |
| А | В | R | F | С | Y | R | Ε | С | Y | С | L | Ε | G | н | J |
| 1 | Р | 0 | Α | S | Е | R | Т | Y | н | G | D | V | С | F | В |

• Litter explorers

- Level 1 2
- • Aim

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To understand the importance of acting together to bring about improvements to the environment.

• Materials

- Adhesive tape
- Cardboard
- Colour markers
- Colour pencils
- Pencils
 - Survey

Time

Two sessions: a 40 minute session to make the survey and a 50 minute session to make the rules.

We are many. We are YUNGA!

How to do it

- 1. Explain to your group that they will become the "litter explorers" of their school or youth group.
- Divide your group into small teams and tell them to use the survey provided below to learn about waste and litter in your school or youth group.
- Organize the teams so each one can make the survey in a different place of the school or youth group.
 It is a good idea to examine the school or meeting place during recess, when individuals produce large amounts of waste and litter. See example of a litter survey form on the next page.
- 4. Have each group present their findings to the rest of the class or youth group.
- 5. Create your own waste reduction plan that can help reduce and manage waste in your school or youth group. The participants should create new waste rules.
- Help your group to create their waste reduction action plan by discussing the following questions:
 - Why do we need to reduce waste?
 - What do you think are the waste problems in our school or meeting place?
 - What do we want to achieve?
 - How are we going to achieve it?
 - Who needs to be involved?
 - How will we know if we had success?
- 6. Then, ask your group to design a poster with the rules on it. Tell them to be creative and make it look
 nice! Remind them they can use all sort of materials and colours.
- 7. Make sure the new rules are hung in a place where everyone can see them.
- Discussion
- Can you name the advantages of managing waste in a proper manner?
- What actions can you and your family take to reduce the amount of waste you produce?
- What do you think is your responsibility regarding the protection of the environment?
- How important do you think it is for people to start making a difference?
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| | Litter Survey | |
|-------------------------|--|-----------------------------|
| Do you believe y | your school or youth group has a litter problem? | Yes 🗌 No 🗌 |
| If yes, which is t | he worst area? | |
| Do you believe l | itter can cause any harm? | Yes 🗌 No 🗌 |
| If yes, who are t | he most affected and why? | |
| What things can | you see lying on the ground most often? | |
| Who do you thir Why? | nk is most responsible for the amount of litter in | your school or youth group? |
| Do you believe l | itter is causing other problems? | Yes No |
| If yes, which and | d where? | |
| Do you think pe | ople respect the spaces where rubbish should be | placed? |
| | | Yes 🗌 No 🗌 |
| If no, why not? | | |
| Do you think pe | ople respect the spaces where rubbish should be | yes No |

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We are many. We are YUNGA!

Clean and Green Pledge

- Level 1 2
- Aim
- To encourage young people to maintain a clean **environment**.
- Materials
- Coloured cardboard
- Colour markers
- Time
- 20 minutes

Background

Every day, millions of people around the world buy all kinds of things that come with a packaging. The packaging is the container or group of materials used to wrap a product. Packaging is good as it helps protect and prevent a product from decay, but this can become a problem because it produces a lot of rubbish. These containers, such as glass, metal, plastic and paper, are made from **natural resources** which are mined or cut down, transported and then transformed. This process releases **greenhouse gases** into the air and promotes **climate change**.

You might already know that the best solution for this is to remember the three R's: reduce, reuse and
recycle. This is a great way to prevent our trash from harming our planet. You can reuse many types of
things instead of buying new ones, for example, you can decorate a shoe box and use it as a toy container.
When you recycle your rubbish instead of throwing it into the garbage bin, new objects can be created from
the old ones. And remember, when you reuse and recycle you will reduce the amount of garbage you
produce.

Moreover, remembering the three R's in your daily life will help prevent the need for more big holes in the ground, called **landfills**, which are used to bury the trash. *Reducing*, *reusing* and *recycling* is very simple and every time you do it you help to conserve **natural resources**, save **energy** and reduce pollution as factories don't have to make as many new products.

How to do it

Discuss with your group the importance of following the three R's and then explain to them that they are going to make their own
Clean and Green Pledge. Tell them to be creative and to make it look fun so they can hang it at home.

Discussion

How do you think keeping a clean environment helps animals and plants to have good health? How can following the three R's help keep the ground and the air clean? What changes do you think people need to do in order to prevent their trash from harming the planet?



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- Recycle Rush
- Level 1
- Aim
- To analyse how easy it is to recycle.
- Time
- 20 minutes
- Materials
- 5 recycle bins or boxes
- Adhesive tape
- Marker
- Rubbish (clean and safe)

Background

- Humans create a lot of waste. This waste might go into a 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.
- Landfills are so tightly packed that it takes a great deal of time for material to decompose. So, we need to
- reduce the amount of waste we produce. The easiest way to do so is to be cautious about what you buy and
- to think about whether something you are going to put in the trash can really belongs there. You can do a
- lot of good if you recycle!

How to do it

- 1. Ask your group to bring in the rubbish from their bins. Remind them to bring glass, paper, plastic and metal (aluminium and steel) materials.
- Divide the class into three teams and ask each one to put all their rubbish at the start line (you can draw it using tape or a chalk).
- 3. In turns each team member runs to the start line and collects one bit of rubbish and places it in the correct **recycle** bin, which will be placed at the finish line. Make sure you clearly identify each bin. As soon as the first member is done, he or she must run back and touch his or her friend's hand so the second member can run. The team that gets the most points is the winner. You can have your group develop the activity for 3 to 5 minutes.

Points:

Metal: 12 points

Why?

Steel cans are very common in the food industry, while aluminum cans are dominant in the beverage market. The amount of energy saved in using recycled metals rather than producing them from raw materials is 95 percent for aluminum and 74 percent for steel.

Using recycled goods for metal products can make a big impact. Using recycled steel conserves 1 100 kg of iron ore, 640 kg of coal and 50 kg of limestone, while using recycled aluminum conserves up to 8 tons of bauxite ore and 14 megawatt hours of electricity.

Only around 5 percent of the CO_2 is produced during the recycling process compared with producing raw aluminum. Moreover, recycling a single aluminum can saves enough energy to power a TV for 3 hours.

Paper: 10 points

Why?

One ton of paper requires the use of 98 tons of various resources and 75 percent percent of a tree harvested for paper does not end up as paper product.

Paper made from recycled paper instead of virgin fibre requires 70 percent less energy and reduces the contribution to air pollution by 95 percent.

Recycling a stack of newspapers just 1 metre tall saves one tree and recycling one ton of paper saves 3 000 litres of water.

Plastic: 8 points

Why?

Recycling 1 ton of plastic saves 7.4 cubic metres of landfill space.

Making new plastic requires significant amounts of fossil fuels. Between 7 and 8 percent of the world's fossil fuels are used in producing new plastics.

All plastics can be recycled. But only 10 percent of plastic bottles created are recycled, leaving the extra 90 percent to take up space in landfills and killing ocean life.

The energy required to produce bottled water is up to 2 000 times more than the energy required to produce tap water.

Five plastic soda bottles yield enough fibre for one extra large t-shirt, one square foot of carpet or enough fibre to fill one ski jacket.

Glass: 6 points

Why?

Glass can be recycled an indefinite number of times and never wears out and over a ton of resources is saved for every ton of glass recycled.

Making glass from recycled materials cuts related water pollution by 50 percent.

An estimated 80 percent of recovered glass containers are made into new glass bottles.

Discussion

Why do you think it is important that everyone starts recycling?

- What can you do to encourage your family to recycle your waste?
- What are you already doing to help your planet?

• Garbage Bag Challenge

• Level 2 3

Aim

To encourage thinking about the waste young people generate, what can be recycled and how they can
 reduce what they throw away.

Materials

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

• Time

30 minutes

Background

Human society creates a lot of waste. This waste might go into a 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 six R's approach:
- Rethink: Reflect on whether your lifestyle is harming the planet and if you can make some changes to prevent climate change, for example, turn on the lights only if necessary.
- Refuse: Don't accept, use or buy a material if you don't think you need it, for example, unnecessary packaging, leaflets, promotional material, plastic bags, etc.
 - **Repair:** Try to fix broken stuff or things that don't function properly, for example, clothes, jewellery, electrical equipment, etc.
 - **Reduce:** Minimize the amount of material and **energy** you use, for example, choose products that have less packaging, use only what you need
- **Reuse:** Take an existing product and use it (or its parts) for another purpose, for example, use a jelly jar to store your mom's homemade sauce, buy second hand items or donate some things.
- **Recycle:** A product that has become waste can be reprocessed and transformed into a new product. Therefore, buy products that can be recycled and recycle them.

How to do it

- 1. Divide the group into four teams and give each team a bag of rubbish.
- 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 rubbish bag 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 reused 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.

Discussion

- What do you think of the six R's approach?
- What are you doing already to manage waste properly?
- What do you think it would be easy to do on top of what you already do?
- Source: World Organization for the Scout Movement, Environment Programme,
- www.scout.org/en/about_scouting/the_youth_programme/environment/environment_programme/activities
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Ouch!

Level 1

Aim

To explore the consequences of throwing litter.

Materials

The story

Time

15 minutes

How to do it

1. Read the following story to your group or give each child a copy so they can read it by themselves.

A sparkling morning with a dirty ending

It was a beautiful Sunday morning. Nick and his small sister Mary where looking outside the window. A lot of children were playing in the park and some families were enjoying a nice picnic. Suddenly Nick had an idea; he wanted to take their dog Spot for a walk. Nick and Mary prepared Spot for his walk and took off. They reached the park rapidly and started playing. They were having a lot of fun, but all of sudden Spot started to complain, he hurt his paw with a glass bottle that was left on the ground. Nick and Mary took Spot to the veterinarian. Spot had a bad injury; the veterinarian had to bandage his paw. Spot couldn't walk home, so Nick took him in his arms.

Discussion

How did you feel when Spot hurt his paw?

Can throwing litter bring bad consequences for any living being?

Would you like to play in an untidy place? Could it be bad for you?

What can you do to prevent this type of things from happening?

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- Where does waste go?
- Level 2 3

Aim

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To learn about how the different forms of waste are disposed of.

Materials

- Pencils
- The grid

Time

40 minutes

How to do it

- 1. Discuss different types of waste and explain that different materials need to be managed in different ways.
- 2. Work with your group to discover what happens to the waste your school or youth group produces.Maybe the janitor can help you find out. Complete the following grid:
- TreatmentType of wasteOrganicPaperPlasticGlassMetalHazardous
wasteLandfillImage: Second Secon

Discussion

- Do you think your school or youth group manages waste properly? Why or why not?
- Which changes would you suggest?
- What can you do to apply these ideas at home?
- Do you think this would help the **environment**? Why or why not?
- Source: Source: Active Citizenship, The Waste Interactive Teacher's Handbook,
- www.wtaeducationservices.com/index_files/TBG%20KS4%20Teachers%20Handbook.pdf, page 18.

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Useful resources

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Climate change

- Alliance for Climate Education
- www.acespace.org/
- e Eco Kids
- www.ecokids.ca/pub/index.cfm
- Friends of the Earth
- www.foe.co.uk/
- Global warmingkids.net
- http://globalwarmingkids.net/
- Practical Action, Climate Choices Children's Voices
- www.climatechoices.org.uk/index.htm
- Unites States Environment Protection Agency, Climate Change Kids Site
- www.epa.gov/climatechange/kids/index.html

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- Energy
- Energy Quest
- www.energyquest.ca.gov/
- Energy Star Kids
- www.energystar.gov/index.cfm
- United States Department of Energy, Energy Efficiency and Renewable Energy
- www.eere.energy.gov/kids/
- United States Energy Information Administration, Energy Kids
- http://tonto.eia.doe.gov/kids/?c=kids.kids_index
- •

Water

- Conserveh2o.org
- www.conserveh2o.org/kids.html
- The Big Blue Bus, Fisheries and Oceans Canada
- www.dfo-mpo.gc.ca/canwaters-eauxcan/bbb-lgb/index_e.asp
- The Groundwater Foundation Kids Corner
- www.groundwater.org/kc/kc.html
- United States Environmental Protection Agency, Water
- www.epa.gov/water/kids.html
- Water Footprint
- www.waterfootprint.org/?page=files/home
- Water Use it Wisely
- www.wateruseitwisely.com/kids/index.php
- •
- Forests
- Educational In Nature
- www.gp.com/EducationalinNature/index.html
- Protect Your Forest
- http://protectyourforest.com/
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Rainforest Action network, Rainforest Heroes

- www.ran.org/new/kidscorner/home/
- Treelink Kids Corner
- www.treelink.org/kids/games.html
- Woodland Trust
- www.woodlandtrust.org.uk/en/learning-kids/Pages/children.aspx

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• Waste

- Keep Britain Tidy
- www.keepbritaintidy.org/
- Unites States Environmental Protection Agency
- www.epa.gov/osw/index.htm
- Reduce-reuse-recycle
- Earth911.com, For Students
- http://earth911.com/for-students/
- GetRecycling.org, The Conversionator
- www.nrc-recycle.org/theconversionator/shell.html
- . Kids be Green.org
- www.kidsbegreen.org/
- The Greens
- http://meetthegreens.pbskids.org/

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84

Our Food

Introduction

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Food is essential for life as it gives us the **energy** and **nutrients** we need to keep our bodies functioning. Without adequate nutrition, children and young people cannot develop their potential to the fullest. Food keeps us healthy, promotes resistance to disease and helps us to grow, learn and play.

We need different kinds of nutrients for all of our body processes. The nutrients we find in food include carbohydrates, proteins, fats, vitamins and minerals. All foods contain one or more of these nutrients in varying amounts and each type of nutrient serves particular functions. This is why it is so important to have diversity in our diet.

But our world is experiencing one of the biggest problems of our time. Climate change could
 become a major threat to world food security, as it has a strong impact on food production, access
 and distribution. Already 852 million people do not get enough to eat every day. Hunger and
 malnutrition cause immeasurable suffering to millions of families around our planet.

Climate change is not just about an increase in the world's temperature. In fact, while the average temperature of the Earth's surface is rising, the effects of this change on the climate in different regions of the world are very different. Climate change impacts ecosystems and communities all over the world.

Millions of people are being affected by extreme weather events, such as droughts, floods, heat
 waves, hurricanes, fires and pests. In some parts of the world, people may not have enough to eat
 because they cannot grow the food they need. Every year there are many countries in crisis
 situations that need assistance to cope with critical problems of food insecurity.

How people and nature adapt to climate change will determine how seriously it impacts human well-being. Some people and places are likely to be affected more than others. Especially at risk are developing countries, which are highly dependent on agriculture and have fewer resources and options to combat the effects of climate change and the damage caused from extreme events.

Every person has the right to food. All people have the right to feed themselves and their families with dignity. Therefore, when people, for reasons beyond their control, are not able to feed themselves, they must be helped. All members of society - individuals, families, local communities, private businesses, civil society organizations and governments - have responsibilities in ensuring that all people have access to sufficient and good quality food. We all need to take action to prevent further changes and protect our environment and wellbeing.

Our food choices can have negative effects on climate. The protection of our planet begins with
 choices individual consumers can make every day. The following activities aim to encourage
 children and youth to make wise decisions about the food they eat, where they buy it and how

they dispose of it in order to prevent climate change. Even the simplest activities can make a real difference to the environment.

Note

The Right to Food: A Window on the World is a joint FAO and WAGGGS initiative to educate young people around the world about hunger and malnutrition and become actively involved. A set of two books, one for young people and one for teachers or youth leaders, aim to help children and youth to understand that all members of society have responsibility for respecting, protecting and promoting the right of every human being to be free from hunger: www.feedingminds.org/cartoon/rtf_en.htm





Our food choices can have positive or negative effects on climate

- Check the labels!
- Level 1 2 3

Aim

To understand there are environmental costs associated with food transport.

Materials

- Adhesive tape
- Colouring pencils
- Drawing pins
- Paper
- Scissors
- String
- World map

Time

30 minutes

Background

The transport of food over long distances emits a great deal of greenhouse gases into the atmosphere,

these is one of the main problems with the global food trade. Food miles refer to the distance food travels

from the field to the plate, it is a way of indicating the environmental impact of the food we eat.

Different means of transport are needed to take food from one place to another, for example, planes trains, ships or lorries. Some food is imported by plane from across the globe and then transported by road to packing and distribution centres, other travels by train from one city to another and even some ingredients used in the food processing industry travel around the country from factory to factory before reaching the shops and, finally, your plate. Although there are many ways of transporting food, air travel gives off more CO₂ than any other form of transport.

Growing concerns about climate change and its effects have encouraged people to consider the impact that everyday goods, including food, have on the environment. Working out the environmental impact of the food we buy can be confusing. Agriculture, processing, storage, transport and the way we shop all have to be factored into the bigger greenhouse gas emissions picture. Moreover, many other processes contribute to the carbon footprint of our food. Many people tend to forget that the food we eat mounts up extra miles on the drive to the supermarket and back or when our food needs refrigeration.

Remember, there are many individual actions you can take to help your planet through your food choices, so start shopping wisely!

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How to do it

- 1. As homework ask the participants to choose their favourite food and find out where it comes from. Tell them they can check the labels to obtain this information. Ask them to record the country of origin. Alternatively, you can bring some food labels.
- 2. In the next session, explain to your group that not all types of food can be grown in one place. Some food might have travelled thousands of miles before it reached the shops.
- 3. Ask the participants to make a drawing of the food they chose and, using a world map, tell everyone to stick it on the country where it is produced. Attach a string from the country of origin to your own, so your group can learn which of the foods they eat travel long distances to reach their plate. You can also find out the number of miles between your country and the country of origin of each product.
- 4. Explain how the transport of food generates CO_2 and how the greater the distance travelled, the more CO_2 is produced.
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Discussion

- How is food transported from different countries?
- Why can't all types of food be grown in one place?
- What are the advantages and the disadvantages of buying food that comes from other parts of the world?
- What can you and your family do different to avoid food miles?
- Source: Friends of the Earth, Lesson Plan Food,
- www.foe.co.uk/resource/guides/lesson_plan_mad_about_food.pdf
- Supermarket safari
- Level 1 2
- •
- , Aim
- To realize that food packaging can harm nature.

Materials

- 5 pieces of packaged food (for example: aluminium can, plastic bag, milk carton, glass container, etc.). Try to
- choose products with too much packaging.
- Colour markers
- Colour pencils
- Music
- Poster board
- Time
- 40 minutes
- •
- Background
- Every day millions of people around the world buy all kinds of food that come with packaging. The packaging
- is the container or group of materials used to wrap a product. Packaging is good as it helps protect and
- prevent a product from decay, but this can become a problem because it produces a lot of rubbish. These
 containers, such as glass, metal, plastic and paper are made from natural resources which are mined or cut
- down, transported and then transformed. This process releases greenhouse gases and, therefore, promotes

- -

climate change. So remember, by choosing products with less packaging you can reduce the amount of garbage you produce and cut back on the amount of greenhouse gases released into the atmosphere.

How to do it

- 1. Put the products you brought around the class or meeting group so it looks like a "supermarket jungle".
- 2. Explain to your group that everyone has to run, skip, hop and dance through the supermarket jungle while the music plays and when it stops everyone has to sit on the floor as quickly as possible. The last one to sit down is too tired and needs to get a snack before he or she returns to the safari. So, this participant has to choose a product and describe it, how is it packaged? why? would more or less
- packaging make a difference? Continue until you finish all the products.
- 3. Divide the group into five teams, give each group one of the products and ask them to design the ideal package for it.
- 4. Have each team present their work.
- Discussion
- Why did you and your group design the package that way?
- Where does all our rubbish go? How does it harm our planet?
- How can you and your family change your food choices to prevent packaging from harming the planet?
- Could you eat more fresh food?
- •

Friendly lifestyles

- Level 1 2
- Aim
- To reflect how some people lead a more environmentally friendly lifestyle than others.
- •
- Materials
- Colour pencils
- Markers
- Paper
- Pencils
- _--
- Time
- 40 minutes

How to do it

- Explain to your group that rural communities, mainly in developing countries get their food from the farmer's market and don't use as many electric appliances to cook their food as people in the city do. Help them understand how their food footprint is much lower.
- 2. Have your group sit in a circle and think about ways that they can make better food choices and lead a more environmentally friendly life, such as rural people do.
- 3. Write down the ideas they come up with and make a nice poster that you can hang on the wall. Use all kind of materials to make it look fun!

We are many. We are YUNGA!

Below you will find some suggestions:

- Buy local food with no packaging.
- In the supermarket choose food with less packaging.
- Choose food made closer to home.
- Grow your own food at home
- Purchase foods in-season to avoid food miles.
- Buy only the food we need to avoid wasting it.
- Cook more at home and eat less junk food.
- When cooking don't waste energy.
- Discussion
- Have you ever visited a rural community? If yes, how is your life different from theirs?
- How are your cooking habits different?
- Can you name some differences between the food you eat and theirs?

Pizza solar oven!

- Level 1 2 3
- •
- Aim
- To learn about solar cooking.
- Materials
- Aluminium foil
- Black construction paper
- Clear plastic wrap (heavy plastic laminate works best)
- Marker
- Non-toxic glue and adhesive tape,
- Recycled pizza box
- Ruler
- Scissors
- Straw
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- Time
- 40 minutes
- Background

Fuel wood accounts for almost a fifth of the world's primary **energy** consumption. Each year about 2 billion tonnes of wood are burnt, mainly for cooking purposes. Yet, today, we are facing a crisis with our fast diminishing forest cover and a fuel wood shortage for more than 2 billion people around the world.

For this reason, using solar **energy** to cook represents a great option. A one-year field test in South Africa revealed that by using a solar stove, an average family can save 30 litres of kerosene, 30 kg of liquefied petroleum gas -two commonly used fuels- and about 1 tonne of firewood per year, which comes to an estimated 1 tonne of carbon dioxide reduction annually. This statistic, when combined with the fact that we

receive 10 000 to 15 000 times more solar **energy** on the Earth than that which we use, opens up amazing possibilities for the use of the sun's **energy** to meet our needs.

Solar cooking can help families save time and money and it produces no smoke, and thus it does not release **greenhouse gases** like the burning of other types of fuel does. Moreover, it cooks healthy food with minimal oil and it eliminates risks like fire and burns. Best of all, it uses a **renewable energy** source that can be freely harnessed by almost anyone using basic equipment.

Source: WWF, Renewable Energy,

www.panda.org/about_our_earth/teacher_resources/project_ideas/renewable_energy/

How to do it

- Explain to your group that you are going to build a pizza solar oven. The pizza solar oven can reach temperatures of 275 °F, hot enough to cook food. Expect the cooking time to take about twice as long as conventional methods and allow about half an hour to preheat.
- 2. Draw a one inch border on all four sides of the top of the pizza box. Cut along three sides leaving the line along the back of the box uncut.



3. Form a flap by gently folding back along the uncut line to form a crease. Cut a piece of aluminium foil to fit on the inside of the flap. Smooth out any wrinkles and glue it into place. Measure a piece of plastic to fit over the opening you created by forming the flap in your pizza box. The plastic should be cut larger than the opening so that it can be taped to the underside of the box top. Be sure the plastic becomes a tightly sealed window so that the air cannot escape from the oven interior.



4. Cut another piece of aluminium foil to line the bottom of the pizza box and carefully glue it into place. Cover the aluminium foil with a piece of black construction paper and tape it into place.



5. Close the pizza box top (window) and prop open the flap of the box with the straw and face the box towards the sun. Adjust until the aluminium reflects the maximum sunlight through the window into the oven interior.

6. Your oven is ready! Try cooking a pizza for everyone to enjoy.



This activity involves very high temperatures and there is a risk of burns, make sure that there is an adult to help when handling the oven.

Discussion
Can you name some differences between the way you cook and solar cooking?
Which type of cooking is better for the environment? Why?
Where you able to cook a pizza? How was it?
Source: Solar Now, Inc.,
www.solarnow.org/pizzabx.htm

Green lunch!
Level 2 3

Aim

To discuss how everyone can make small changes to help our planet.

Materials

- Paper
- Pencils

Time

20 minutes

Background

Many small family farms may not harm the **environment** if they raise cattle. But many large industries cut down forests to clear space for cattle ranching. Forests produce oxygen, use carbon dioxide and ensure water and soil **conservation**. When forests are cut down, carbon dioxide is released.

Raising animals for meat releases greenhouse gases. Meat is the most energy-intensive of all foods to produce and it takes up larger amounts of water than any other food production. Livestock production alone contributes to 18 percent of the greenhouse gases released into the atmosphere, more than the emissions from every single car, train, and plane on the planet. Although livestock production only contributes 9 percent of carbon dioxide emissions, the sector is responsible for 37 percent of methane and 65 percent of nitrous oxide, both potent greenhouse gases.

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If everyone committed to eating less meat, our world could save a lot of energy and water, forests wouldn't have to be cut down and we could help combat climate change!

How to do it

- 1. Remind your group that there are a lot of delicious and healthy meat-free menus you can enjoy at school or youth group.
- Explain to the participants that you are going to write a letter to the Director of your school or youth group to ask for a meat free menu for a day to encourage others to make wise food choices. You can
- even suggest a menu you think everyone would enjoy!

Discussion

- How important do you think small actions can be in order to combat climate change?
- Can you substitute meat products with other types of food? If yes, how?
- Can you create a meat free menu for your house? Do you think your family would like it?

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• How do you get your food?

- Level 1 2 3
- •
- Aim
- To discuss the different ways that people obtain their food.

Materials

- Blackboard
- Markers
- The photographs
- •

• Time

- 20 minutes
- •

How to do it

- 1. Cut out the two photographs and stick them on the blackboard, one is of shopping at the supermarket and the other at a farmers' market.

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©Quadell

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- 2. Tell the participants to look carefully at the photographs and ask them to write their names under the one that shows how his or her family buys their food.
 - 3. Discuss the following questions regarding both places:
 - Is the food fresh?
 - Is the food packaged?
 - Are there many processed foods?
 - Is the food just local or from all over the world?
- Discussion

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- What are the main differences you found between these two places?
- Which food do you think is healthier for you and friendlier for the **environment**?
- Do you think it is important for your family and friends to change their eating habits? Why or why not?
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What do you have in your shopping bag?

- Level 1 2 3
- Aim
- To discover how green your shopping bag is.

Materials

- Paper
- Pencils
- The family's shopping bag
- The grid

Time

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Two sessions: a 10 minute session to explain the activity and a 30 minute session to ask the participants about their findings.

How to do it

- As homework, ask the participants to explore their family's shopping bags when they arrive from the supermarket, so they can check what their family bought.
 - 2. Tell them to record the information using the following grid:

| Type of product | Is it frozen? | Is it imported? | Type of packaging | Is it over packaged? | Can the packaging be reused or recycled? |
|---|------------------|--------------------|----------------------|-------------------------|---|
| Fruits and vegetables | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 | | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 |
| Chicken, meat and fish | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 | | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 |
| Processed food | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 | | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 |
| Drinks (water, juice, soda, etc.) | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 | | Yes 🗆 No 🗆 | Yes 🗆 No 🗆 |

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- 3. In the next session review with the participants the outcomes of the activity. These ideas can help you:
 - Imported products result in a larger footprint because of food miles.
 - Eating a lot of meat, especially beef, results in a larger footprint than eating non meat products.
 - Frozen food results in a larger footprint as it requires more **energy** for storage.
 - Roughly 1.5 million tonnes of plastic are used every year by the bottled water industry, this creates serious waste problems.

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Discussion

- How green do you think your shopping bag is?
- Can you rank all the packaging from most to least sustainable?
- What can your family do to avoid packaging?
- Can you think of ideas to reuse packaging?
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- What did you eat yesterday?
- Level 1 2
- Aim

- To reflect on everyday food choices.
- Materials
- Whiteboard
- Whiteboard markers
- Time
- 20 minutes
- How to do it
- 1. Explain to the participants that each one will have to draw on the whiteboard the food they ate yesterday, so the rest of the group can guess. Each participant can have 30 seconds to make his or her drawing. Alternatively, if your group is too big, you can divide the participants in couples or small groups and ask them to choose a meal.
- 2. After everyone has finished, analyse with the entire group which types of food were more sustainable than others. Was the food produced near home? Did it require a lot of packaging? Was it something
- natural? Was it in season?

Discussion

- How sustainable do you think your group is?
- What types of food do you usually eat?
- Why is it important to encourage others to make wise food choices?
- •
- What's in your lunchbox?
 - Level 1 2 3
 - Aim

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- To realize how sustainable young people's food choices are.
- Materials
- Participants' lunches
- •
- Time
- 20 minutes
- How to do it
- 1. Choose a day of the week to ask the participants to exchange their lunches between them. Ask a participant to put his or her hand inside the lunchbox and to guess what is inside without looking. Then, ask the participant that was guessing to analyze how **sustainable** his or her friend's lunch was. Continue with this activity for some minutes. Make sure you all wash your hands before starting the activity!
- 2. Then, ask your group to create a lunchbox that they think is better for their health and for the environment.
 - 97

Discussion

- Do you think you need to make different food choices? Why?
- What can you do to bring a greener lunch to school or youth group?
- Which changes do you think you and your family need to make in order to prevent climate change through your food choices?

• Buy what you eat!

• Level 1 2

Aim

To encourage young people to buy only the quantity of food they will consume.

Materials

- Paper
- Pencils

Time

Two sessions: a 10 minute session to explain the activity and a 15 minute session to ask the participants about their findings.

How to do it

- As homework ask each participant to explore his or her kitchen to look for products that have already expired (make sure they all know how to read the expiry date) and that no one ate. Tell them to write down their findings on a piece of paper. Remind them to ask their family for help.
- 2. On the next session ask the participants about their experience at home.
- 3. Explain to your group how food consumption produces waste and how they can help reduce it by buying wisely.

Discussion

- Do you believe your family wastes food? Why or why not?
- Why is it wrong to waste food?
- Can you think of any ideas to encourage your family to buy food wisely?

Snack smart!

- Level 1 2 3
- Aim
- To encourage everyone at home to make better food choices.
- •
- Materials
- Adhesive tape
- Cardboard box (it could be a shoe box)
- •

- •

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- Colour markers
- Colour pencils
- Kitchen plastic wrap
- Time
- 40 minutes

- 1. Explain to your group that they are going to create their own veggie and fruit box where they can keep some vegetables and fruits to have as a snack instead of other types of food that produce waste.
- 2. Ask them to bring a cardboard box, such as a shoe box (20 cm x 30 cm would be a good size).
- 3. Tell them to decorate it using all kinds of nice materials to make it look cool. Cover the inside of the box
- with some plastic wrap so it is ready to hold all kinds of delicious fruits and vegetables.
- •
- Discussion
- What do you and your family usually have as a snack?
- What are the benefits of eating fresh food, like vegetables and fruits, instead of processed foods like cookies
- or potato chips?
- How does having many different kinds of food help us grow and be healthy?
- •
- Cool chefs!
- Level 1 2 3
- Aim
- To encourage young people to use locally available foods.
- Materials
- Colour markers
- Colour pencils
- Paper
- Pencils
- Time

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- Two sessions: a 10 minute session to explain the activity and a 50 minute session to carry it out.
- How to do it
 - 1. Remind your group about food miles and how each individual can help to take care of the planet by choosing local foods.
 - 2. Explain to your group that they will create a Local Recipe Book that will contain recipes prepared only with locally available foods.
 - As homework ask each participant to think about a simple recipe that can be prepared with local foods.
 Remind them they can ask their families for help. Tell them to be creative!
 - 4. In the next session have each participant present his or her recipe; gather your favourite recipes and put them together in a book. Ask your group to help you make it look nice.
 - 5. Everyone in the group can have a copy so they can take it home and encourage their families to reduce food miles.

Discussion

- Can you name some of your favourite local products?
- Was it hard finding recipes that use only local products? Why or why not?
- Can you name some benefits of preferring fresh local products instead of food that has travelled long
- distances?
- How do you feel when you know you are helping your world with your food choices?
- •

• We eat different food!

- Level 1 2 3
- Aim
- To learn about different food habits around the world.
 - Materials
- Access to internet
- Time
- 40 minutes
- How to do it
- 1. Explain to your group how people from the same country and, even more, from all over the world have different food consumption habits.
- 2. Ask the participants to describe and compare the photographs from the book "Hungry Planet, What the World Eats" by Peter Menzel and Faith D'Aluisio provided in the Time webpage:
- www.time.com/time/photogallery/0,29307,1626519,00.html
- •

Discussion

- What did you think when you first saw the difference between food consumption habits?
- Which diet is more like yours?
- How do food choices indicate other lifestyle differences?
- What changes, if any, would you make on future visits to the supermarket to help prevent climate change?
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- Food message mix-up!
- Level 1 2
- •
- Aim
- To reflect on ways to help our planet through food choices.
- Materials
- The phrases
- •
- Time
- 30 minutes
- •
- •
- •
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How to do it

- Explain to your group that you are going to play the message mix-up game. Have the participants sit in a circle and ask one of them to whisper one of the following phrases to the person on his or her left and so on. When the phrase has travelled all the way around the circle, the last person says the phrase out loud.
- 2. Read the original phrase. Continue until you finish all the phrases:
 - Eating locally produced, fresh, seasonal food is better for the **environment** as this helps cut the number of miles the food has travelled.
 - Shopping at stores near your house is better for the **environment** as people can walk, use their bicycle or the bus to reach the shops instead of driving.
 - Buying directly from a farmers' market is better for the **environment** as you help cut down packaging **waste** and you can be more confident that what you buy is fresh and healthy.
 - Buying from local producers helps revitalize local rural food economies as you support local farmers.
- Expect the unexpected when you hear the original and the final mixed-up phrase!

• Discussion

- Have you ever visited a farmer's market? How is it different from a supermarket?
- Why is it important that all your family and friends understand that everyone is responsible for taking care
- of the environment?
- Can you think of other ways how you can help the environment through your food choices?

What is organic farming?

Level 2

Aim

To learn about organic farming.

Materials

- A copy of "What is organic farming?"
- Pencils

Time

20 minutes

How to do it

- 1. Explain to your group that they have to figure out which words go in each blank. Below you will find the words, but tell the participants to be careful because there are two wrong words.
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What is organic farming?

- Organic farming is an example of ______ farming that uses non-polluting methods
- as close as possible to those found in _____.
 - ______ food is produced without using artificial ______.
 - Soil fertility is improved using manure and ______.
 - Organic farming is better for the ______ as it reduces ______ and treats farm ______ better.

| Compost | Animals | Conservati | on | Rules | | |
|-------------|-------------|------------|--------|-----------|--|--|
| Sustainable | Organic | Nature | Health | Planet | | |
| Chemicals | Environment | Pollutic | on | Intensive | | |
| | | | | | | |

Discussion

- Why is organic farming better for the environment?
- How can you help promote organic farming?
- Have you seen organic food in your local supermarket? If no, can you ask why?

Solution

- 1. Sustainable; nature
- 2. Organic; chemicals
- 3. Compost
- 4. Planet; pollution; animals
- 5. Rules; environment; health
- Source: Friends of the Earth, Food and Farming,
- www.foe.co.uk/resource/factsheets/food_farming.pdf, page 8.
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- Intensive vs. Sustainable
- Level 3
- Aim

To discuss intensive and sustainable farming.

Materials

- Colour markers
- Colour pencils
- Poster board
- •
- , Time
- 50 minutes
- •

Background

- Intensive or industrial farming around the world is causing several damages to the environment. It is
- associated with the increasing use of modern practices and agricultural mechanization and, thus, uses a big
- amount of fossil fuels. It is also characterized by the significant use of inputs to maximize the production.
 Fertilizers and animal waste can pollute our land and water supplies and destroy wildlife habitats.
- Generally, this type of farming puts profit above wildlife and animal welfare. For this reason, some people
- have started to consider sustainable farming.
- •
- Sustainable farming uses non-polluting methods as close as possible to those found in nature. Soil fertility is
 improved using manure and compost, and artificial fertilizers are avoided. Reliance on fossil fuels is reduced
- by cutting out man-made chemicals and reducing food miles. Food production, processing and distribution
- are carried out as close together as they can be. Sustainable farming methods promote environmental
- stewardship, biodiversity can be much higher in sustainable farms than in intensive farms. Sustainable
- farming seeks to provide more profitable farm income and enhance quality of life for farm families and
 communities.
- •

Source: Friends of the Earth, Food and Farming,

- www.foe.co.uk/resource/factsheets/food_farming.pdf
- How to do it
- Divide the participants into two groups. Explain to them that one group is going to create a poster of an
 intensive farm and the other of a sustainable farm. Tell them to be creative!
- 2. Have each group present their artwork. Then, you can place the posters in a place where the entire school or youth group can see.
- Discussion
- What are the similarities and the differences between both types of farming?
- How is biodiversity conservation different in each farming type?
- Can you name the advantages of sustainable farming for the protection of the environment and human
- health?
- How can you help promote sustainable farming?

- Support local production
- Level 2 3

Aim

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To realize young people can encourage others to support local producers.

Materials

- Paper
- Pencils
- •
- Time
- 30 minutes
- •

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• How to do it

- Discuss with your group how buying and eating locally produced food is better for the environment and
 for human health and how it helps revitalize local food economies as you support local farmers.
- Explain to your group that they are going to write to a local supermarket encouraging them to adopt policies that support local producers and the environment. Don't forget to explain the advantages of acting in such a way.

Discussion

What could be the benefits for local producers of promoting the consumption of local products?

- What are the advantages of raising awareness among this type of business?
- What could these businesses do to promote the protection of the environment and its resources?
- Why is it important that everyone collaborates to protect our planet?
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We are many. We are YUNGA!

- We need water!
- Level 1 2

Aim

To reflect on how water is used in every activities related to food and health.

Materials

- Colour markers
- Glue
- Old magazines and newspapers
- Poster boards
- Scissors
- •

Time

40 minutes

Background

- 70 percent of the Earth is covered by water, but only 2.5 percent of it is fresh; the rest is saltwater. Water
 use is increasing everywhere. The world's six billion inhabitants are already using 54 percent of all the
 accessible freshwater contained in rivers, lakes and underground aquifers. Worldwide, agriculture accounts
- for 70 percent of all fresh water uses, industry accounts for 22 percent and domestic use for about 8
 percent.
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Nothing on Earth can live without water; all living beings need water to stay healthy. A person needs 2-4
 litres of drinking water a day. Nevertheless, more than 1 in 6 people in the world don't have access to safe
 drinking water. Everyone must protect water resources in order to make them available for all people in a
 fair and sustainable way. We can all help preserve water and make sure that water resources are not
 polluted!

- How to do it
- 1. Remind your group that every day we need water to survive and that we use water in many different ways.
- Divide your group into small teams and ask each one to make a collage showing all the things they use water for that are related to food and health. Tell them to use the old magazines and newspapers to find the images they need.

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3. Have each group present their collages and encourage discussion.

Discussion

- Which everyday activities require more water?
- How would daily life change if there was little clean water?
- How would you feel if you didn't have access to the water you need to lead a healthy life?
- How important do you think it is for everyone to commit to saving water?

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- Your very own calendar!
- Level 1 2 3

Aim

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To think about ideas of how to prevent climate change through individual food choices.

Materials

- Colour cardboards
- Colour markers
- Colour pencils
- White poster board
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- Time
- 60 minutes

• How to do it

- 1. Explain to your group that they are going to make their own calendar with their artwork.
- 2. Divide the participants so you can have 12 drawings, one for each month of the year.
 - 3. Ask them to make a drawing related to climate change and food security on a colour cardboard.
- 4. Stick the artwork on the upper part of a bigger piece of white poster board and underneath write an
 idea to prevent climate change through food choices.
 - 5. Finally, draw the calendar on the lower part of the white poster board.
 - 6. You can hold the different sheets of the calendar together using a hole puncher and a ribbon.

Discussion

What are the advantages of committing to follow the ideas you came up with?

- What can you do to encourage your family and friends to do the same?

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- Run for your planet!
- Level 1 2 3

Aim

To reflect on ways to help the planet through simple actions.

Materials

- An open space to run
- Baton
- Paper
- Pencils
- •

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- Time
- 30 minutes

• How to do it

- 1. Organize the participants into groups of three.
- Explain to them that they are going to participate in a running relay race. You can choose the distance
 the members are going to run according to your participants' age group.
- 3. The first runner starts the race, but before he or she exchanges the baton with the second runner, he or she has to write down an idea of how to help the planet through their food choices on a piece of paper that must be placed at the end of his or her segment. The second runner must do the same thing before he or she exchanges the baton with the third runner.
 - 4. The fastest team is the winner!
 - Below you will find some ideas:
 - Learn to cook instead of eating fast food.
 - Grow your own food.
 - **Compost** your organic waste.
 - Eat fewer meat and more fresh foods.
 - Buy in bulk to avoid packaging.
 - Avoid individually wrapped products.
 - Buy local to avoid **food miles**.
 - Use reusable bags when you go to the supermarket.
 - Choose packaging made from recycled materials.
 - Buy organic food when you can.

Discussion

- How can these sustainable practices improve the quality of life?
- Do you think it is difficult to apply these ideas in your everyday life? Why or why not?
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- Do your bit!
- Level 1 2 3

Aim

To help others learn they can contribute to protect our world.

Materials

- Adhesive tape
- Candies
- Markers
- Paper
- Pencils
- Scissors
- Time

- Two sessions: a 40 minute session to explain the activity and prepare the candies and a 10 minute session to
- give out the candies.

• How to do it

- Explain to your group that you are going to organize a "Do your bit!" day. Choose a day of the week when your group can give to every person that arrives to school or youth group one of the candies you are going to prepare. You can also invite other classes or youth groups to join your activity, the more the better!
 - 2. Ask the participants to think about some phrases that encourage people to make better food choices and write them down.
- Tell your group to select their favourite 10 phrases and to write them down in small pieces of paper.
 They will have to do this several times, so they can have enough phrases for all the candies.
 Alternatively, you can make some copies and cut the phrases.
 - 4. Buy some candies to give away (you can organize a fundraising activity to raise some money to buy them) and stick a phrase on every one of them.
 - 5. Don't forget to advertise your activity. You can even make some "Do your bit" posters and place them all around your school or youth group.
 - Below you will find some examples:
 - Your food choices can have a negative impact on the environment, think before you buy!
 - Avoid food miles, prefer local food!
 - Shop wisely, buy just what you will eat and don't waste food!
 - Help the environment, use a reusable bag instead of plastic bags!
 - Think green, prefer food with less packaging!

- How did you feel while you were participating in this activity?
- How did people react when you gave them the candies?
- Where the phrases helpful for them?
- •

Our food and health depend on climate

- Food treasure hunt!
- Level 1 2 3

Aim

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To learn that different foods grow under different conditions and provide different health benefits.

Materials

- An open space
- Notebooks
- Pencils
- Small pieces of paper containing the phrases

Time

30 minutes

Background

Food is essential for life as it provides a range of different nutrients. Without adequate nutrition, children and young people cannot develop their potential to the fullest. Food provides a range of different nutrients. Some nutrients provide energy, while others are essential for growth and maintenance of the body. We need different kinds of nutrients for all of our body processes.

Energy is provided by the carbohydrates, proteins and fats in the food and drinks we consume.
 Carbohydrates, proteins and fats are macronutrients that we need to eat in relatively large amounts as they provide our bodies with energy. We all need energy to grow, keep warm and be active. Vitamins and minerals are micronutrients which are only needed in small amounts, but are essential to keep us healthy.
 Water and fibre are non-nutrients, but are also very important for our body. Carbohydrates are the most important source of energy for the body. Different foods and drinks provide different amounts of nutrients, this is why it is so important to have diversity in our diet.

How to do it

- Divide your group into two teams. Explain to the participants that they must look for the phrases that
 you hid around (you can develop this activity in the yard or if it is better for you, inside the classroom).
 Make sure you have two copies of the phrases, so each team can find all the eight phrases:
- •
- a. It is a tropical fruit and grows best in a warm, humid climate.
- b. It is an herb that is an excellent source of vitamin K and a very good source of iron, calcium and vitamin A.
 - c. It is a cereal grain that requires plenty of water for cultivation.
 - d. It is a vegetable that is one of the most important staple crops in human diet around the world. It is a great source of potassium, vitamin C and B vitamins.
 - e. It is a grass that grows in temperate and tropical countries around the world, especially in China and other countries in Southeast Asia. It is used for food, construction and making tools.

- f. It is a legume with very high protein content and rich in essential micronutrients, such as iron and folic acid.
 - g. It is a fruit that grows in regions with a Mediterranean climate with sunny dry summers and variable winter rainfall. Some varieties of this fruit are used to make wine.
 - h. It is a grass that is grown in temperate or cold **climates** in Europe, North America, and Asia. It is second as a source of the world's sugar.
- 2. Give to each team the list of foods that they must match with its respective meaning. The first team to find all the phrases and match them correctly is the winner.

Discussion

- Why do we find different types of food in different places? What are the advantages of this?
- Which could be some disadvantages?
- How can you be wise about your food choices in order to promote your health and protect the environment
 at the same time?

Answers

Mango Rice Bamboo Grape a. C. e. g. b. Basil d. Potatoes f. Bean h. Sugar cane.

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- Different food from different places
- Level 2 3
- Aim
- To learn that different types of food are grown in different places around the world.
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- Materials
- Information cards
- World map
- Time
- 20 minu
- 30 minutes

How to do it

- 1. Split the participants into two groups. Give each one of the following information cards and ask them to read it and discuss it.
- - These two products are cultivated in different parts of the world and need specific climate conditions to grow:

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Bananas

Bananas are the most popular fruit in the world. The banana industry is a very important source of income, employment and export earnings for major banana exporting countries, mainly developing countries in Latin America and the Caribbean, as well as in Asia and Africa. A strong bond exists between banana-generated income and household food security.

The banana is not a tree but a tall herb that can grow up to 15 metres in height. Bananas require as much warmth as can be given to them. Therefore, they are grown in tropical regions where the average temperature is 80 °F (27 °C) and the yearly rainfall is 200 - 250 cm. They require moist soil with good drainage. In fact, most bananas exported are grown within 30 degrees either side of the equator (in the tropics).

Bananas are a great food for your heart, providing an excellent source of vitamin B6, vitamin C and a good source of potassium and fibre, nutrients that help promote heart health.

Olive Oil

The term olive oil refers exclusively to oil obtained from the fruit of the olive tree. Olive oil production has normally been concentrated in the Mediterranean Basin countries: Spain, Portugal, Italy, Greece, Turkey, Tunisia and Morocco, where 95 percent of olive resources are located.

The olive tree is an evergreen that may live for several years. Its habitat is determined by the Mediterranean climate, which is characterized by relatively mild winters and hot, dry summers. The areas belonging to this climate type lie between 30 and 45 degrees north and south latitudes. It needs little water and is generally grown in dry land. Outside the Mediterranean, olive growing has developed through the introduction of varieties from other countries. This is the case of the United States, Argentina, Australia, Chile, Israel, South Africa, among others.

Research has found that an extra-virgin olive oil may help fight inflammation and have anticancer and antimicrobial properties. This discovery may help explain the health benefits long attributed to the olive-oil rich Mediterranean diet.

 Ask each group to make a small presentation and explain where their product is cultivated and under which climate conditions it grows.

3. Tell the participants to think about other products that are not grown in your country and locate them on a world map, so you can create a "World Food Map".

- Can you name some advantages of having different climates around the world?
- Why do different types of food grow in different countries?
- Can you name the benefits of having a varied diet?

How could the production of these crops be affected if climate keeps changing?

- Fruit and veggie clock
 - Level 1 2

Aim

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To learn about the food that grows in each season in your country.

Materials

A circle of chairs with a clear space in the middle of the circle and enough room for children to move.

Time

60 minutes

How to do it

- 1. Draw a circle on a poster board and divide it into twelve. Each segment corresponds to a month of the year.
- 2. Ask your group to help you make a drawing of the fruits and vegetables you can find in your country during each month.
- 3. Make another circle of the same size, divide it into twelve and cut only one segment. Place it over the other circle and use a sharp pencil to push a small hole through the centre of both circles, hold them together using a paper fastener.
- 4. Turn the circle above to see, month by month, which fruits and vegetables are typical of that period of the year.
- 5. You can play a game by giving each participant the name of a fruit or vegetable.
- 6. Ask the children to sit in the circle of chairs and using the fruit and veggie clock start telling a story about fruits and vegetables. Every time the participants hear their names, they must stand up quickly, turn around and sit.
- To get everyone to move all at once, you must call out "fruit and vegetable garden". Everyone must stand up and change chairs. There should be one less chair in the circle than the number of participants, so you can eliminate some fruits or veggies.
- 8. Once the children understand the game, speed up the time between children standing up and turning and changing chairs.
- •

- Where does the out of season food you find in your country come from?
- Do you think you could substitute these foods with others that are in season so you can avoid food miles?
- Why don't we eat more food from local sources?
- How could our farmers be affected if we keep getting our food elsewhere?
- Source: Associazione Guide e Scout Cattolici Italiani (Agesci), Thinking Day 2010, Stop a Fame e Povertà,
- www.agesci.org/ospiti/100wagggs/index.php?dnd_path=&dnd=2286, page 18.
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- What about climate change and food?
- Level 1
- Aim
- To understand that climate change can affect food access.

Time

- 20 minutes
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Background

- Agriculture is necessary for most rural families to have a sustainable way of receiving food and earning
- income. Agriculture is very sensitive to climate change and extreme weather events. Millions of people are
- being affected by natural disasters such as droughts, floods, storms, hurricanes or fires. Climate change,
- including extreme events, is making it even more difficult to grow and harvest produce from the land.

Materials

- Fresh food for a small snack
- How to do it
 - 1. Explain to your group that you are going to have a small picnic together, so ask them to bring some fresh food to eat, such as fruits or vegetables.
 - 2. Have your group sit in a circle with the food they brought.
 - 3. Start by explaining to your group that climate change related disasters can have a negative effect on food and water access and that many people around the world suffer because of this.
 - 4. Tell your group to imagine that the food they brought represents their crops and that a flood destroyed them. As a result, they won't be able to eat their food anymore. So, ask them to put it away.
 - 5. Reflect with them on individual actions that everybody can take to help prevent climate change and its effects.
 - 6. Then, you can enjoy a small snack!

- Have you ever felt hungry and did not have anything to eat? How did you feel?
- Can you name other climate change related disasters that affect food access?
- How do you think the people that suffer from these disasters feel?
- Does everyone have the right to enjoy enough and nutritious food? Why?
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- Climate change and food production
- Level 2 3
- Aim

To understand that climate change related disasters can have a negative impact on food.

- Materials
- Paper
- Pencils
- •
- Time
- 50 minutes
- •
- Background

Men and women from all over the world are being affected by changing climate. Many of the world's
 poorest people live in developing countries and depend on farming to feed their families. Climate change
 can add to their food and water insecurity and increase their work levels.

• Women are particularly affected by the risks of environmental damage. Poor women tend to rely more than

men on natural resources, so when these are directly hit by climate change, women's livelihoods will
 greatly be affected.

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Moreover, more than 132 million girls and boys aged 5 to 14 years old work in crop and livestock
 production, helping supply some of the food and drink the family needs. When children are forced to work
 long hours in the fields, their ability to attend school or skills training is limited, preventing them from
 gaining education that could help lift them out of poverty in the future.

- How to do it
 - 1. Divide the participants into five groups and explain to them that they are going to simulate subsistence farming in small villages.
- Write on a piece of paper the following climate change related disasters: drought, earthquake, tropical cyclone, flood and fires.
 - 3. Tell each group to pick a paper and, according to their disaster, ask them to answer the following questions:
 - How does this disaster affect your people's situation as subsistence farmers and your ability to feed your families?
 - What do you think would happen if this cycle of low food production continued for several years?
 - What are the effects of living a life in which hunger and malnutrition are an everyday issue? How does this affect your family?
 - What solutions would you propose to improve your food supply?

4. Ask each group to make a small role play for the rest of the class or youth group. Tell them to be creative!

Discussion

- What natural disasters have affected your community?
- Has climate change affected food production in your country? If yes, how?
- How can a change in weather patterns lead to food and water insecurity?
- Do you remember any time when you did not know where your next meal would come from? If no, what do
- you think it would be like if this situation represented your own life?
- Source: Facing the Future, Farming for the Future,
- www.facingthefuture.org/Curriculum/DownloadFreeCurriculum/tabid/114/Default.aspx,page 2.
- •
- •
- It's fishing time!
- Level 2 3

Aim

To discuss the impacts of climate change on fish and fishing.

Materials

- Bowls
- Plates
- Small candies
- Straws
- Time
- 20 minutes

Background

Fisheries support around 200 million people worldwide. Fisheries are extremely vulnerable to pollution, habitat destruction and other forms of environmental loss. Fish are increasingly threatened by the effects of climate change as temperatures rise in rivers, lakes and oceans, impacting millions of people in developing nations who depend on fishing for their livelihoods and billions of people who rely on fish as an important source of protein.

Hotter temperatures are expected to stunt the growth of some fish, resulting in fewer offspring. Normally fish metabolisms speed up as temperatures rise, but insufficient food supplies could slow their growth and reproduction rates. Some temperate fish, like salmon, catfish and sturgeon will not be able to spawn at all if winter temperatures do not drop below a certain level. Meanwhile, hotter temperatures mean that fish populations could move to cooler waters in an effort to maintain the temperature for their habitat. However, this can greatly affect other species that are dependent on these fish as a food source.

Moreover, freshwater fish particularly may not have enough oxygen to breathe as waters grow warmer. Fish filter oxygen from water, but the amount of oxygen dissolved in water decreases as temperatures rise. It is time for everyone to work together to preserve the wonders of our nature and promote human wellbeing!

Source: WWF, Hot, hungry and gasping for air – climate change puts fish at risk, warns WWF,

www.wwfpacific.org.fj/media/?50460/Hot-hungry-and-gasping-for-air-climate-change-puts-fish-at-risk-warns-WWF

How to do it

- Explain to your group that they are going to go fishing. Each participant will be a "fisher" whose 1. livelihood depends on catching fish.
- Divide the participants into teams of four and have each team choose an ocean name, such as Atlantic, 2. Pacific, Arctic, Mediterranean, etc. Give each team a bowl and give each participant a straw.
- The bowls will represent the ocean, the candies the ocean fish such as tilapia, salmon, tuna, etc. and 3. the straw the fishing rod. Each fisher must catch at least two fish in each round to survive (i.e. get enough fish to either eat or sell).
- 4. When the fishing begins, the participants must hold their hands behind their backs and use the fishing rod to suck the fish from the ocean and deposit them into their "boat" (plates).
- Say "start fishing" and give the participants about 20 seconds for the first fishing season. Have each 5. fisher count how many fish they caught and record the data. Fishers who did not catch the two fish minimum must sit out during the following round.
- The fish remaining in the ocean after each fishing season represent the breeding population, thus, one 6. new fish will be added for every fish left in the ocean. Allow fishers to use their hands on the straws during the second session to represent new technology.
- 7. After the second fishing season, don't add a new fish. Explain that fish stocks have plummeted as the • world heats up. Fish are increasingly threatened by the effects of climate change as temperatures rise in rivers, lakes and oceans. Hotter water means less food, less offspring and even less oxygen for
- marine and freshwater fish populations.
- Continue with the activity until the oceans run out of fish. How are the fishers going to survive now? 8. One option is to go to another ocean. Allow the participants to invade other oceans.

- How did you feel when you realized that you had depleted your fish stock? •
- How did you feel when other fishers joined your ocean group? •
- How does this activity relate to real ocean and fishery issues?
- What is missing in this game (impacts on animals that rely on fish for their survival, population growth, •
- etc.)?
- What happens to a resource when you have infinite population growth, rapidly developing technology, and
- a finite resource?
- Source: Fishing for the Future,
- www.facingthefuture.org/Curriculum/DownloadFreeCurriculum/tabid/114/Default.aspx •

• Food, health and climate snakes and ladders

Level 1 2

Aim

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To reflect on different issues related to climate change.

Materials

- 40x40 piece of cardboard
- Colour markers
- Markers and dice

Time

40 minutes

How to do it

- 1. Take a 40 x 40 cm piece of cardboard and divide it into a 10 x 10 grid of squares. Number the squares from the bottom left square as 1 and going backwards and forwards up the board to the top left square.
- 2. Draw seven ladders and seven snakes which connect different squares to each other. On the other squares, write the following instructions:
 - You lost your crops because of a flooding, go back three spaces.
 - You were not able to catch enough fish to sustain your family, go back three spaces.
 - You have a successful harvest and sell all your produce at the market, go forward three spaces.
 - You get a grant to cultivate your land, go forward three spaces.
- Ask your group to help you make it look colourful and fun!
- 3. Explain the game. You will need one marker for each player and a dice. Roll the dice and move the marker that number of spaces. If you land on a ladder, you can climb up it if you give a reason how climate contributes to maintaining a good health. If you land on a snake, you must slide down it unless you can give a reason how you can contribute to combat climate change through your food choices.
- The first to reach the space 100 is the winner! Have fun!
- •

- Do all people have enough food to satisfy their nutritional needs? Why not?
- What consequences does having a poor diet have for people's health?
- If you know that everyone has the right to be free from hunger, how can you help these people?
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- Source: Associazione Guide e Scout Cattolici Italiani (Agesci), Thinking Day 2010, Stop a Fame e Povertà,
 www.agesci.org/ospiti/100wagggs/index.php?dnd_path=&dnd=2286, page 3.
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- Food, Health & Climate Web
 - Level 3
 - Aim

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To reflect on the interdependency between food, health and climate.

Materials

Ball of yarn

Time

- 30 minutes
- •

How to do it

- 1. Have your group form a circle and give each participant one of the titles below.
- 2. Ask your group to think about the connections between food, health and climate. Give the ball of yarn
- to one of the participants and, keeping hold of the beginning of the thread, have him or her pass it to
 another participant across the room that is related to his or her title. Remind your group that they
 should always hold their part of the thread, so they can form the food, health and climate web.
- Continue until everyone is holding a part of the web.
- 3. Ask the first participant to pull on his or her piece of yarn. Do the others feel the pull? Help them understand how everything is interconnected.

• Titles:

- Active and healthy life
- Greenhouse gas emissions from agriculture
- Vulnerable populations
- Effective learning
- Increases risks of future diseases
- Global warming
- Access to sufficient and good quality food
- Keeps children out of school
- Loss of crops and livestock
- Improve agricultural practices

- Climate change related disasters
- Dietary deficiencies
- Unsustainable human activities
- Water resources
- Productive arable land
- Protection of the environment
- Increased hunger
- Great variety of foods
- Different types of climate
- Land degradation

• Encourage your group to think further! Ask the participants to add more titles that they think are related to

• the topic.

- What is the connection between food and climate?
- What is the connection between health and climate?
- And how does food contribute to maintaining a good health?
- Why is it important that everyone is aware about the need to work together to combat climate change?
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- Which world would you prefer?
 - Level 1 2

Aim

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To reflect on the benefits of promoting the maintenance of a healthy planet where everyone can have access to the food they need.

Materials

- A poster board
- Colour markers
- Colour pencils
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- Time
- 50 minutes

• How to do it

- 1. Have the children sit in a circle and ask them the following question:
 - How would the world be if no one had enough food to eat?
 - 2. Divide the participants into two groups and tell them they are each going to make a drawing on a half of the poster board.
 - 3. Ask one group to make a drawing of a healthy planet where resources are available and all people enjoy safe and sufficient food, and ask the other group to make a drawing of a degraded planet where resources are becoming scarce and people have trouble meeting their food needs.
 - 4. Ask the groups to share and explain their drawings.

Discussion

- Which world would you prefer to live in? Why?
- Do you agree that the strength of a nation comes from its people? How would people be different living in one world and another?
- Do you think every person has the right to be healthy and function at their full potential? Why?

A "day in the life" story

- Level 1 2
- • •
- Aim

To encourage young people to think about some consequences of harming our environment.

- Materials
- Colour pencils
- Papers
- Pencils

Time

- •

40 minutes

How to do it

- 1. Divide your group into two teams. Explain to the participants that each one will write a story about the life of a boy or girl.
- Ask one team to write a story about a day in the life of a boy or girl that lives in a place where he or she can enjoy fresh air and obtain sufficient, good quality food and water, and ask the other team to write a
- story about a day in the life of a boy or girl that lives in a place where human activities have degraded
- the land and he or she cannot enjoy a nice **environment** and has trouble finding enough fresh food and
- water to have a happy and healthy life. Tell the teams to include a drawing of the boy or girl they are
 describing.
- Make sure each story answers the following questions so the children can have a clear idea about the
 situation of the boy or girl they are creating:
 - How many members does his or her family have?
 - Where and how does this family live?
 - Do children go to school?
 - Do the parents have a job? Where do they work?
 - Where do they get their food from?
 - Do they obtain and enjoy sufficient and nutritionally adequate food?
- 3. Have each team present their character and describe his or her life.
- Discussion
- How would each character be in the future?
- Which character would you prefer to be? Why?
- How is your life similar or different from each character?
- What can we do now to avoid hearing about people that have to live situations like the one described in the
- second story?
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• Food detectives

• Level 1 2 3

Aim

To investigate forgotten foods that were grown in your area in the past.

Materials

- Paper
- Pencils
- •

Time

- Two sessions: a 10 minute session to explain the activity and a 40 minute session to discuss the outcomes of
 the interviews.
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• How to do it

- Explain to your group how the food people used to eat in the past was different from the food we consume today.
- As homework ask each participant to conduct a small interview with an elder member of his or her family to find out what people used to eat in your country. They can write down their interview or, if it is possible, they can use a tape recorder.
 - 3. Help the participants to write the questions for their interview. Below you will find some suggestions:
 - Do you believe my diet is different from the one you had when you were my age? Why?
 - What food did you eat when you were growing up?
 - Where did your food come from?
 - How have food habits changed over the years?
 - Are there food plants that are not being eaten today? If so, why?
 - Do you remember eating any of these "forgotten foods"?
 - What was your favourite food? Is the taste the same today?
 - Has the taste of food changed over the years? If so, why?
 - Do you think climate change has affected food production? If so, Why?

- Which diet do you think is healthier, the one people had in the past or yours?
- Can you think of ways how you can use this knowledge around your home or community to improve your
- own nutrition?
- Do you believe it is important that farmers continue to grow "forgotten foods"? Why?
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- Make your voice heard!
- Level 2 3
- Aim

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To understand that you can help to raise awareness about climate change and food security.

Materials

- Paper
- Pencils
- •
- Time
- 40 minutes
- •

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• How to do it

- Discuss with your group how they can help others to understand in order to learn and act about the issues that affect our life, such as climate change and food security.
- Explain to the participants that the entire group is going to write an article to raise awareness in your community about how food choices can help prevent climate change and how climate change can affect food production and supply.
- affect food production and supply.
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- 3. Send your article to the editor of the local newspaper so they can publish it!

• Discussion

Do you believe people need to learn more about the impact of individual actions on the environment?
 Why?

- Can you name some things people in your community can do to lower their emissions related to their food choices?
- Have you already heard about projects or ideas that people from your community are developing to do so?
- What would be the advantages of committing to reduce your food footprint?
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Everybody has the right to food

- Where is my meal?
- Level 1 2 3

Aim

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To experience how it feels not have access to sufficient food.

Materials

2 different colours of yarn, for example, yellow and red

Time

30 minutes

Background

- Every person has the right to adequate food and to be free from hunger. The right to food means that all
- people have the right to feed themselves and their families with dignity. People must be able to grow, hunt
 or catch the food they need or earn enough money to buy it. Fulfilling the right to food means ensuring that
- people have the knowledge, skills, resources and opportunities to get food for themselves. It also means
- that when people, for reasons beyond their control, are not able to feed themselves, they still have the right
- to food and they must be helped until they are able to feed themselves again.
- •

- Nevertheless, many people in the world don't get enough of the food they require to meet their body's
 needs. It is a general responsibility to promote food security, which means the right of every human being
- to get a sufficient amount and variety of good quality and safe foods to have an active and healthy life.
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• How to do it

- Cut 30 segments from the red yarn (10 cm each) and 15 segments from the yellow yarn, these will be the worms. The participants will be birds looking for their lunch.
- Hide the yarn segments throughout the yard area.
- 3. Divide the participants into two teams. Explain to them that they are birds looking for their food and
- have one team search for the yellow worms and the other for the red worms. Give them about 5-8
- minutes to gather up as many worms as they can. Tell them that each group needs at least 20 worms to
 meet their nutritional needs.
- 4. Count how many worms each team found. What happened? Does everyone have enough food?

- How would you feel if this happened to you in real life?
- What options do the hungry birds have to get the food they need?
- Can you name some ways how the other team can help the hungry birds?
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- What is hunger?
- Level 1 2
- Aim

To understand and discuss hunger.

- Materials
- Balloons
- •
- Time
- 20 minutes
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Background

- Around 852 million people do not get enough to eat every day and over 200 million of them are children
 under the age of 5. Hunger and malnutrition cause immeasurable suffering to millions of families around
- the world. More than 60 million children go to school hungry every day; about 40 percent of them are in
- Africa. Children and youth that do not have an adequate diet have poor health, do not grow well, are
- vulnerable to disease and lose their learning potential. Acute malnutrition can even result in death.

• How to do it

- 1. Ask your group to sit in a circle. Explain to them that they are going to play a game.
- 2. Blow up a balloon and tell the participants that while you are clapping your hands they have to keep passing it, but when you say "stop" the child that has the balloon must keep it and answer a question.
- 3. Continue playing until you have discussed all of the following questions:
 - What does hunger mean?
 - Why does hunger exist?
 - Is hunger a problem all around the world?
 - Do some countries have a greater problem feeding their people? Why?
 - How does hunger affect children and families?
 - Can everyone work to help end hunger? How?

- How do you feel when you haven't eaten for a long time?
- Do you think everyone has the right to eat the right quantity of food at the right time of the day? Why?
- Have you heard about hungry people in your country? How do you think they feel?
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- Break the Circle of Hunger
- Level 1 2

Aim

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To experience how difficult it is to break out of **poverty** and **hunger**.

Materials

- Chalk or stick to draw on the ground
- Whistle

Time

20 minutes

How to do it

- 1. Divide your group into two teams. One team represents poor people and the other one represents **poverty** and **hunger**.
- With the chalk or the stick draw a circle on the ground. The "poor people" team stays within the circle.
 The "poverty and hunger" team stays outside the circle.
- 3. At your signal (whistle) the participants inside the circle try to break out of it and the participants outside the circle try to keep them in.
- 4. Once a participant breaks out of the circle, he or she becomes a "helper" and tries to help the people inside the circle to break out of it. If no one breaks out, select one or two participants to be "helpers".
- 5. Continue the game for a few minutes, then change sides and play a second round.

Discussion

- How easy is it for a person who is poor and hungry to get out of the circle of hunger and poverty?
- In which ways can people be supported to break out of hunger and poverty?
- Can the players identify similar situations in real life?
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Source: The Right to Food: A Window on the World, Resource and Activity Guide,

- www.feedingminds.org/cartoon/rtf_en.htm, page 18.
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- We are hungry!
- Level 1
- •
- Aim

To discuss hunger related issues.

Materials

- Cardboard
- Colour pencils

Time

40 minutes

How to do it

- 1. Have the participants sit in a circle.
- During the game you will pronounce the following phrases: "the world is hungry", "I am hungry", "you are hungry". Start telling a story, every time you say "the world is hungry" everyone must stand up quickly, turn around and sit; every time you say "I am hungry" the participants must rub their tummies;
- and, every time to say "you are hungry" each participant must hug the person on his or her right.
- 3. After a couple of rounds, you can speed up the time between phrases and make the wrong movements to confuse the participants.
- 4. You can end the activity by asking the participants to make a drawing of any of the situations they prefer. You can then put the drawings around your class or meeting place.

Discussion

- How do you feel when you are hungry? Are you able to do things with the same energy?
- What are the advantages of eating a healthy meal every day?
- Can you think of ways that you and your family can help hungry people?
- Source: Associazione Guide e Scout Cattolici Italiani (Agesci), Thinking Day 2010, Stop a Fame e Povertà,
 www.agesci.org/ospiti/100wagggs/index.php?dnd_path=&dnd=2286, page 7.
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Watch your water!

Level 1 2 3

Aim

To experience how difficult it can be to obtain water.

Materials

- An open area
- Balloons
- String

Time

- •
- •
- •
- •

25 minutes

How to do it

- 1. Explain to your group that they are going to play a game. Every participant plays individually. The object of the game is to pop the other participants' balloons.
- Tell the participants that they are part of a rural community that have to spend hours a day fetching water. The balloons will represent their buckets of water and the other participants trying to stomp their balloons will represent the difficulties they experience every day to have access to water.
- 3. Tie the balloons to the backs of the participants using some string. Tell the participants to begin on your call, they should run around and try to stomp other participants' balloons while keeping them from stomping on theirs. The last participant left with his or her balloon wins.
- stomping on theirs. The last participant left with his or her balloon wins.

Discussion

- Could you describe your life in a day with no water?
- Is it fair that poor communities do not have enough and safe water to meet their needs? Why?
- Can you name some health problems related to the lack of water or bad quality water?
- Is it fair that some people and industries pollute or use water in wasteful ways? What could you do to avoid
 this?
- un:

- Food security cross word
 - Level 1 2

Aim

- To learn about some words and facts related to **food security**.
- •

Materials

- A copy of the crossword puzzle
- Pencils

• Time

- 20 minutes
- •

How to do it

1. Explain to your group that they have to figure out the words that correspond to each of the following meanings. Ask them to write them into the corresponding boxes in the crossword puzzle.

Across

- 1. Being able to grow, buy or receive enough food.
- 2. Nourishment for the body that keeps you active.
- 3. Over 850 million people in the world suffer from this as they do not have the food they require to meet their nutritional needs.
- 4. Someone that grows food.
- 5. The provision of the necessary food to support life.

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Down

- 6. Feeling good physically.
- 7. When all people have always access to sufficient, safe and nutritious food.
- 8. You drink it and farmers use it to help their crops grow.
- 9. A lifestyle that cares for the maintenance and protection of the **environment** in order to promote future well-being.
- 10. A friendly type of farming that is better for the **environment**, animal welfare and our health.



Discussion

- Why does it matter to learn about food security?
- Do you believe it is fair that other children do not have enough food to eat? Why?
- What might your school or youth group do to promote food security?

Solution



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- What does food security mean?
- Level 2 3
- Aim

To understand the meaning of food security.

Materials

- Paper
- Pencils
- •
- Time
- 40 minutes
- •

• How to do it

- Write the following phrases in small pieces of paper: food availability, food accessibility and use of food, the three pillars of food security.
- 2. Divide the class into three groups and ask a representative from each one to pick a piece of paper.
- 3. Tell the groups to discuss their phrase relating it to food security, ask them to analyze what things
 might influence each one of them. Make sure each group thinks of some conclusions to present to the
 rest of the class or youth group.
- You can visit the Feeding Minds Fighting Hunger, A World Free from Hunger webpage to learn more about
- the three pillars of food security: www.feedingminds.org/level1/pri_level_en.htm
- Discussion
- How do climate change related disasters affect each one of the pillars of food security?
- Why is **poverty** and social inequality an obstacle to obtaining **food security**?
- How would you describe the condition of food security in your country?
- The food rainbow
- Level 1 2 3
- •
- Aim
- To reflect on good nutrition.
- •
- Materials
- Poster board
- Glue
- Colour markers
- Time
- 40 minutes
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Background

Food is essential for life as it provides a range of different **nutrients**. Without adequate nutrition, children and young people cannot develop their potential to the fullest. Food provides a range of different **nutrients**. Some **nutrients** provide **energy**, while others are essential for growth and maintenance of the body. We need different kinds of **nutrients** for all of our body processes.

- Energy is provided by the carbohydrate, protein and fat in the food and drinks we consume. Carbohydrates, proteins and fats are macronutrients that we need to eat in relatively large amounts in the diet as they provide our bodies with energy. We all need energy to grow, keep warm and be active. Vitamins and minerals are micronutrients which are only needed in small amounts, but are essential to keep us healthy. Water and fibre are non-nutrients, but are also very important for our body. Carbohydrate is the most important source of energy for the body. Different food and drinks provide different amounts of nutrients, this is why it is so important to have diversity in our diet.
- The rainbow below represents a healthy diet and that we should have the right mix of foods to grow and be
 healthy. Our plate should look like a rainbow!

How to do it

- Explain to your group that they are going to make the food rainbow. Tell them to start by cutting some food images from old magazines or newspapers or to draw some themselves.
- 2. Copy the rainbow on a big poster board and ask the participants to put them in the proper place in the rainbow.



www.feedingminds.org/cartoon/rtf_en.htm

- Can you name some benefits of having a healthy balanced diet?
- What are some of the problems related to hunger and malnutrition? How does it affect daily life?
- Does your plate at home look like a rainbow or do you and your family need to make better food choices?
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We are many. We are YUNGA!

- Rich or poor?
- Level 2 3
- •
- Aim

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- To experience how it feels not to have the same opportunities as others.
- Materials
- Beans (to use as money)
- Different food pictures to display
- Small pieces of paper to use as price tags
- Pencil
- •
- Time
- 30 minutes
- •

• How to do it

- Divide your group into three teams. Give 20 beans to one team, 10 beans to another team and 5 beans to the last one.
- Display the food pictures (flour, rice, bread, tuna, meat, fruit, water, soda, sweets, etc.) and put price tags on them. Ask each team what they would buy if this was all the money they had. Compare the results.
- Discussion
- How does poverty reduce access to food?
- How might the different groups help each other?
- How could governments help people living in poverty?
- Can you name some ideas about what your government is doing to promote access to food?
- Source: World Association of Girl Guides and Girl Scouts, Global Action Theme (GAT), GAT Badge Curriculum,
 www.wagggsworld.org/en/grab/3450/1/GATcurriculumENG.pdf, page 7.
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We are many. We are YUNGA!

- The obstacle race
- Level 1 2 3
- Aim
- To reflect on how access to food affects our health.
- Materials
- An open space for the race
- Cord, plastic cones (you can use empty plastic soda bottles instead), empty boxes, etc, to use as obstacles
- The food cards
- Time
- 30 minutes
- How to do it
- Organize an obstacle race. Explain to your group that 4 people are going to race at a time, three of them will have a "handicap" related to food and one will be in good health. The one that has anaemia must race with his feet tied up, the one that has a Vitamin A deficiency will race backwards, the one that has an iodine deficiency will race jumping in one foot and the one that is healthy will race normally.
- 2. Hide along the route the food cards which contain a list of the food each one needs to be healthy, if the participant finds his or her card he or she can race normally, but if it is not the right card, he or she should leave it there and continue racing as before. Tell them to start on the word "go".

Food cards:

Anaemia

If you have anaemia or lack of iron you should eat: fruits such as apples, tomatoes, plums and bananas; honey; meats such as kidney, heart and liver; poultry and fish; vegetables such as spinach, lettuce, beet, broccoli, celery and kale; and legumes and nuts such as pulses, almonds, whole grain cereals and peanuts.

Vitamin A

It is important to know that orange and yellow fruits and vegetables and dark green leafy vegetables provide more Vitamin A than the lighter colored fruits and vegetables. Therefore, you should eat: carrots, apricots, broccoli, peaches, melon, sweet potatoes, watermelon, parsley, pumpkin, tomatoes, spinach, collard, mustard, among others.

Iodine

lodine is an element that is vital for human health. If you have a iodine deficiency you should eat more seafood such as cod, shrimp, tuna, shellfish and seaweed; iodized salt; milk; boiled egg; navy beans, potatoes with peel; turkey breast, among others.

- How did you feel having a "handicap" related to food?
- Can you describe the life of a child that does not have sufficient food to be healthy, like many children in Africa?
- What small actions can you and your family take to help others that do not have enough to eat?

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|-------|-----------|----------|-----------|----------|-----|-------|---------|----|-------|-----|---------|----|
| Scout | Cattolici | Italiani | (Agesci), | Thinking | Day | 2010, | Stop | a | Fame | e | Poverta | à, |

www.agesci.org/ospiti/100wagggs/index.php?dnd_path=&dnd=2286, page 26.

- Take action
- Level 1 2
- Aim

To identify actions to help solve problems that girls and women face in access to food.

Materials

Chalk or a stick to draw on the ground

Source: Associazione Guide e

- Pens
- Paper
- Whistle

Time

20 minutes

Background

Women produce much of the world's food. For example, in Africa and Asia 80 percent and 60 percent, respectively, of farmers are women. Women sow, reap, harvest and cook food.

Women are particularly affected by the risks of environmental damage. Poor women tend to rely more than
 men on natural resources, so when these are directly hit by climate change, women's livelihoods will
 greatly be affected.

Seven out of ten of the world's hungry are women and girls. Two-thirds of the world's 880 million illiterate adults are women. Women's employment rate is two-thirds that for men. With women's key roles and responsibilities in feeding, providing care and producing food for the family, their rights are essential to ensuring the right to food.

How to do it

- Divide your group into three teams: "my family", "my school or youth group" and "local authorities".
 Give each team an equal number of pens and paper.
- 2. With a piece of chalk or a stick draw three big circles on the ground , a circle for each team, and draw a start line 20 steps away from the circles.
- 3. Ask each team to gather at the start line and discuss what actions they (families, schools or youth groups or authorities) can take to help solve problems that girls and women face in access to food.
- 4. At your signal (whistle) the teams should write down as many actions as they can think of appropriate for their roles, each idea on a separate piece of paper. Then one person should run to the circle and put the paper in it. The team that comes up with the most ideas wins.
- 5. At your signal stop the game, collect and count the ideas of each team.

Discussion

Is it fair that women have fewer chances than men to go to school, own land, inherit property and get a loan?

- Is it possible for your families, school and authorities to carry out these actions?
- •

- How could they work together to do this?
- Source: The Right to Food: A Window on the World, Resource and Activity Guide,
- www.feedingminds.org/cartoon/rtf_en.htm, page 38.

Who is vulnerable to hunger and malnutrition?

- Level 23
- Aim
- To discuss vulnerable groups in your country.
- **Materials**
- Paper
- Pencils
- Time
- 50 minutes

How to do it

- 1. Write each of the following phrases about the different vulnerable groups on a piece of paper:
 - Victims of conflict
 - Migrant workers and their families
 - Marginal populations in urban areas
 - People belonging to at-risk social groups
 - Some or all members of low-income households within vulnerable livelihood systems
 - Dependent people living alone or in low-income households with large family size

The list of vulnerable groups was written by the Feeding Minds Fighting Hunger, A World Without Hunger webpage. You can review their Who is Vulnerable? fact sheet to help you to develop this activity: www.feedingminds.org/level3/sec_level_en.htm

- 2. Divide the participants into six groups. Have each group pick one of the papers and ask them to discuss who they think belong to that group and why they are vulnerable to hunger and malnutrition.
- 3. Once each group has discussed about their vulnerable group, ask each one to make a small role play to have the other participants guess who they are representing.
- Review the conclusions of each group with the entire class or youth group. 4.
- **Discussion**
- Which vulnerable groups can you find in your country?
- Can you relate the hunger problems in your country to the vulnerable groups?
- What are some solutions your local government has proposed to improve the livelihoods of the vulnerable groups?
- Do you think you can do something to help? What?

• The big cake: food from the world population

Level 2 3

Aim

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To learn about food and food access around the world.

Materials

- A cake to share
- Chalk
- Old magazines and newspapers (to cut food images)
- Scissors

Time

40 minutes

How to do it

- Ask your group to draw or to cut some images of different types of food from around the world using some old magazines or newspapers. Put them apart.
- Use the chalk to make a circle on the floor. Divide your circle into six segments: three big segments that represent Australia, Europe and North America; two medium segments that represent Asia and Latin America; and, one small segment that represents Africa.
- Divide your group into 6 teams and assign a different continent to each one. Ask the participants to find the foods that correspond to their continent and to decorate their segment. Now you will have a big cake that represents the food from the world population.
- 4. Divide your group according to the world population: one person for Australia, one for Europe, one for
 North America, 3 for Latin America and 6 for Africa and Asia.
- 5. Distribute a real cake dividing it in pieces that represent the segments of your circle. What happened?

Discussion

- Was the cake distribution fair? Why not?
- Why would it be better to divide it more equitably?
- What actions can be taken to make this happen (individuals, community, government, etc.)?
- Source: Associazione Guide e Scout Cattolici Italiani (Agesci), Thinking Day 2010, Stop a Fame e Povertà,
 www.agesci.org/ospiti/100wagggs/index.php?dnd_path=&dnd=2286, page 7.
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Who is hungry?

- Level 1 2 3
- •
- Aim
- To know who is hungry and malnourished in the world.
- •
- Materials
- FAO World Hunger Map
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Time

- 20 minutes
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How to do it

- 1. Explain to your group that the following map shows the prevalence of undernourishment in the different countries of the world.
- 2. Ask your group to analyze the FAO hunger map and discuss with your group about it.

FAO Hunger Map 2004-2006



Source: Food and Agriculture Organization of the United Nations (FAO), www.fao.org/economic/ess/food-security-statistics/fao-hunger-map/en/

Discussion

Which people are more likely to be hungry around the world?

- Which areas present the worst numbers of hungry people?
- What can you say about the problem of hunger in your region and country?
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- Food security in your country
- Level 3
- Aim
- To analyze **food security** statistics of your country.
- Materials
- Access to internet
- Time
- 40 minutes
- •
- How to do it
- Using the internet look for your country's food security profile in the Food and Agriculture Organization of the United Nations webpage:
 - www.fao.org/economic/ess/food-security-statistics/food-security-statistics-by-country/en/
- 2. Review the **food security** indicators of your country and discuss with your group.
- 3. You can also review the indicators of other countries in order to compare different food security situations around the world.

Discussion

- Have food deprivation and consumption indicators had a significant improvement through the years? Does your country receive food aid?
- Has your country invested in agriculture? Do you think this has improved food production?
- What can you say about the nutritional status of your population?
- •

- Commercial/community debate
- Level 3
- Aim
- To reflect on actions that could affect people's access to food.
- Materials
- None
- •
- , Time
- 40 minutes
- How to do it
- Divide your group into "commercial" and "community". Explain to them that they are going to hold a debate on the actions taken by local governments, businesses and individuals which could affect people's access to food. Tell them to think about limited access to food through environmental damage versus the country's need to grow economically. How would this affect the local community?
- 2. You will be the chair of the debate, help the participants discuss in an ordered and respectful way.
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We are many. We are YUNGA!

Discussion

- How could you, as individuals, help promote access to food in your local communities?
- What could a community do to advocate for the right of all people to enjoy sufficient and good quality food?
- Can you name some efforts your local government has made to promote economic growth without harming
- the environment?
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Source: World Association of Girl Guides and Girl Scouts, World Thinking Day 2010 Activities Sheet, www.worldthinkingday.org/en/resources/document/view/3642, page 5.

• Poetry day!

Level 1 2

Aim

To encourage young people to reflect on climate change and food security in a creative way.

Materials

- Paper
- Pencils
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Time

40 minutes

• How to do it

- Explain to the participants that each one has to write a poem related to climate change and food
 security issues basing themselves on all the knowledge they have gained through their lessons. Tell
 them to be creative!
 - 2. First, have your group sit in a circle and brainstorm some words they think might be useful for this activity and write them on the board. This can help them have a guide to start creating their poems.
 - 3. Have the participants read their poems!
 - You can even hold a poetry reading evening for relatives and friends. Each participant can read its poem to encourage everyone there to make a difference.

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• Discussion

What was the message you wanted to transmit through your poem?

- Can you name some advantages of being aware that individual actions can contribute to fight climate
- change and promote food security?
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Useful resources

• Change4Life

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www.nhs.uk/change4life/Pages/Default.aspx

CoolFoodPlanet

www.coolfoodplanet.org/ita/home.htm

Dole

www.dole.com/#/home/

European Commission, The Tasty Bunch

http://ec.europa.eu/agriculture/tasty-bunch/index_en.htm

Food Climate Research Network

www.fcrn.org.uk/

• Friends of the Earth

• www.foe.co.uk/index.html

Peace Corps Challenge

www.peacecorps.gov/kids/

Practical Action

- http://practicalaction.org/?id=education
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Our World

Introduction

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Climate change is not just an environmental problem; climate change is actually changing our lives
 right now. Many people around the world are suffering because of extreme weather events that
 threaten their effective enjoyment of a range of human rights, including their access to sufficient
 and good quality food and water. At a global and national level, responses to climate change need
 to focus on a joint work where millions of hands participate together to ensure the well-being and
 needs of today's and future generations are met.

People have already borrowed too much from nature and now it is time for us to care for the planet that sustains us. The development of an enhanced awareness of the environment and the dangers faced due to irresponsible human activities will help us identify what needs to be done to promote the creation of a world that is healthier, more equitable and which offers a happy future, especially to children and youth.

Almost everyone is aware of the issue of climate change, but not many have stopped to think how individual actions can help tackle it and minimize the impact of the current level of greenhouse gas emissions. Providing children and youth with useful information on how to live an environmentally friendly lifestyle will enable you to nurture the growth of a new generation of responsible global citizens. This represents a great way to help them create the world today's adults have failed to, exactly the type of world we ourselves would like to live in.

Often young people feel powerless to make a difference. But climate change is a big problem that concerns us all and that is the reason why every effort is needed. Everyone can take responsibility for their everyday choices. We need to act now, before it is too late. The activities below will help children and youth to realize they have an important role to play in achieving a world free from hunger and the catastrophic effects of climate change. Developing awareness and encouraging change are the key.

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We are many. We are YUNGA!

- Discover!
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Young hands at work!

• Level 1 2 3

• Aim

To investigate what young people are doing to protect the planet.

• Materials

- Adhesive tape
- Colour markers
- Cardboard box
- Poster boards
- Scissors

Time

Two sessions: a 40 minutes session to prepare the activity and a 40 minutes session to review the outcomes.

How to do it

- 1. Remind your group that there are many different ways how we can help maintain our planet healthy and explain to them that you are going to find out what other young people from your school or youth group are doing to make a difference.
- 2. Seal the box using some adhesive tape and make a slit big enough to deposit papers inside.
- 3. Have the participants help you decorate the box, so it looks attractive and fun.
- Make some nice posters to advertise your activity. Make sure you encourage everyone to describe in a paper what they are doing to prevent climate change and help the planet.
- 5. Place the box outside your classroom or meeting place or in a spot where everyone can see.
- 6. After a week, check the papers inside the box! Maybe you can join their activities or select one to carry out with your group.

- How do we create the world we want for ourselves and for future generations?
- Do you think young people from your school or youth group are already making a difference?
- If you feel there is still a lot to do, can you name some ideas to raise awareness and promote action?
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How are we facing climate change?

Level 2 3

Aim

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To learn about the actions that are being taken at a local level to combat climate change.

Materials

- Notebooks
- Pencils

Time

Two sessions: a 10 minutes session to explain the activity and to prepare some questions for the government representative's visit and a 40 minute session to receive him or her.

How to do it

- Invite a local government representative to your school or youth group, so he or she can talk about the initiatives that are being implemented to tackle climate change in your community.
- 2. Before that day, make sure you encourage your group to think about the things they might want to know and help them prepare some questions.
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• Discussion

- How can we balance the needs of people, protect the environment and have a good economy?
- Do you think your life has been affected by climate change? Why or why not?
- How can an activity be made more sustainable?

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• What are you doing for your planet?

Level 1

Aim

•

To discover what actions your group is taking to protect the planet.

Materials

- An open space
- Colour markers
- Coloured construction paper
- Paper
- Pencil

Time

- 20 minutes
- ____

• How to do it

- 1. Explain to your group that you are playing a game. Pick one person to be the octopus and draw two
- lines that are at least 20 feet apart. The rest of participants will be the fish and have to line up on either
 line.
- 2. When the octopus shouts "hungry" everyone must try to cross to the other side while the octopus tries to tag them.
- When a fish is tagged, he or she must say how he or she is contributing to protect the planet through everyday choices. If he or she fails to do so, he or she becomes a tentacle and has to hold hands with the extense working with him to truck tog the other fish. The last fish laft wincl.
- the octopus, working with him to try to tag the other fish. The last fish left wins!
- 4. Make sure you write down all the things your group is doing for the planet and have them make a nice
 poster to encourage everyone to keep making a difference!

Discussion

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- Can you do something for your planet everyday and everywhere? Why?
- Why is it important that everyone contributes?
- What would happen if no one cared for our planet's health?

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• Environmental reporters

Level 3

Aim

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To investigate about environmental issues at a local level.

Materials

- Internet access
- Paper
- Pencils

Time

Two sessions: a 60 minute session to explain the activity and to give the groups some time to research and a previous 40 minute session allow your groups to write the article.

How to do it

- Divide the participants into four groups. Explain to them that each group will have to research about a
 local environmental issue. The research can be related to information about the impact of the local
- climate (city, province, country), projects that are helping to combat difficulties and/or personal stories
- from the community. Remind them they can look for information on the internet, in the library or even
- asking some people from the community. The participants will have to present their work as a
 newspaper article in order to inform others in the community about local issues and possible solutions
- that have been presented.
- 2. On a session give the groups enough time to write their articles. Ask each group to present their work
- to the rest of the participants. Then, you can publish the articles in your school, youth group or library.
- You can even send well researched articles to the local media!

- Has your community been affected by climate change? How?
- Which do you think are the worst problems your community is facing?
- In your community, who is acting to deal with environmental issues? Do you think others could contribute?
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We are many. We are YUNGA!

- Get inspired!
 - Level 2 3

Aim

•

To learn about sustainable design.

Materials

Access to internet

Time

Two sessions: a 40 minute session to explain the activity and to review the information sheets and a 30 minute session to admire your group's creations.

Background

- Everyone can take part in the creation of a more sustainable world and the design sector is already making
- a difference. Many designers have already incorporated sustainability concerns into their work, that means
- they are considering the social, economic and environmental aspects of their designs.
- Some designers have centred their work on the six R's: rethink, refuse, reduce, reuse, repair and recycle in
- order to develop innovative and practical products that help them and their customers make the world a
- better place. These people are aware of the link between climate change and their work in the design sector
- which, as any other industry, emits a great amount of greenhouse gases every day. Some designers are
- already acting as active citizens taking on their environmental responsibilities. You can do it too!

How to do it

- Explain to your group that they are going to transform themselves in sustainable designers. To help
 them, have them read the information sheets of different sustainable designers found at the Practical
- Action web site:
 - http://practicalaction.org/education/design_and_technology_profiles
- As homework ask them to choose some old products and materials they find at home and to create a sustainable product. Tell them to be creative as all the group is going to choose the best product!
- 3. Have each participant present their creation.

- How did you feel creating an object in a more sustainable way?
- Should every job consider its environmental responsibilities? How would the world be different if it actually was like that?
- Can you identify other professions that are already taking into consideration the respect for our planet?

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Energy from water

- Level 1 2 3
- Aim
- To understand how an alternative energy source works.

Materials

- Cardboard (make sure it is hard enough to use as a holder)
- Cardboard strips
- Cork
- Pins
- Time
- 40 minutes

Background

- **Energy** from moving water or hydropower is a **renewable energy** source. The amount of available **energy** in moving water is determined by its flow or fall. Swiftly flowing water in a big river or water descending
- rapidly from a very high point have a lot of **energy** in its flow. In either case, the water flows through a pipe,
- then pushes against and turns blades in a turbine to spin a generator to produce electricity. In a run-of-theriver system the force of the current applies the needed pressure, while in a storage system water is
- accumulated in reservoirs created by dams, then released as needed to generate electricity.

Source: United States Energy information Administration, Energy Kids,

http://tonto.eia.doe.gov/kids/energy.cfm?page=renewable_home-basics

How to do it

1. To make a small water turbine model, make some longitudinal slits on the cork and introduce the cardboard strips as shown on the drawing:



- Make a U-shaped holder for your cork. Remember you must leave some space between the holder and the cardboards attached to the cork.
- 3. Put pins in the ends for axles; make sure the cork is hold tightly.
- 4. Your turbine model will turn as fast as the water stream is moving. So, you can make it move by placing your model close to a water tap.

- Can the energy of water be transformed to generate electricity?
- Can you name some advantages of this type of energy?
- Does your country use this type of energy?
- Source: Energy Quest, Science Projects,
- www.energyquest.ca.gov/, www.energyquest.ca.gov/projects/waterenergy.html

Farming around you

- Level 1 2 3
- Aim
- To learn about farming in your area.
- Materials
- Notebooks
- Pencils
- Time
- Two sessions: a 10 minute session to explain the activity and to prepare some questions for the farmer's
- visit and a 40 minute session to receive him or her.
- How to do it
 - 1. Invite a farmer from your community to visit your school or youth group, so he or she can talk about the crops and animals that are raised in your area.
 - 2. Before that day, make sure you encourage your group to think about the things they might want to know and help them prepare some questions.

- Can you name some differences between farming in your area and in other parts of the world?
- Can you name some similarities?
- How can farming contribute to prevent climate change?
- Can you describe several things we can do to support local farming?
- •
- What do you eat?
- Level 1 2 3
- Aim
- To learn how people feed themselves in other countries.
- Materials
- Notebooks
- Pencils
- Time
- 40 minutes
- How to do it
- 1. If you have a foreign classmate or friend, ask him or her to make a presentation about the food and the eating habits of the people in his or her country.
- 2. Encourage your group to make some questions. It would also be a good idea to ask for an easy recipe, so your group can prepare at home.
- Discussion
- Can you identify some differences and some similarities between your eating habits and the ones from the
- people in the other country?
- What are some of the main crops that are produced and consumed in your country? How different are
- these from the foods that are consumed in the other country?

Let's deal with hunger!

Level 23

Aim

• •

To encourage young people to think about solutions to hunger related issues.

Materials

- 4 poster boards
- 4 different colour markers

Time

40 minutes

How to do it

- Write one of the following phrases on each poster board and place them around your classroom or 1. meeting place:
 - There are children in your community that suffer from malnutrition as they do not have access to safe and sufficient food.
 - Many people you know do not care about hunger.
 - There are poor families in developing countries that could have access to tap water if more donations were made.
 - Hunger prevents children from attending school as they have to work to earn the money they need to buy food.
- Divide your group into four teams and give each one a different colour marker. 2.
- Assign each team a starting phrase and explain to them that each one will have five minutes to come • 3. up with a viable solution for dealing with this issue. Make sure you tell the teams that they cannot repeat any solution already listed. •
- Continue until all the teams have written a solution for every phrase. 4.
 - 5. Have the teams present the solutions they wrote for each phrase. Have them consider what would happen if two or more of the solutions were combined.
- Talk to your group to see if one of the solutions could be carried out by them. • 6.

Discussion •

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- What can you do to increase awareness about hunger related problems in your community?
- What actions can you take as a global citizen to promote food security for all?

We are many. We are YUNGA!

- Be creative!
- •

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- Climate jingle
- Level 1 2 3

Aim

To create a jingle that encourages young people to make a change.

Materials

- Papers
- Pencils

Time

- 40 minutes
- •

How to do it

- Ask your group to sit in a circle and to brainstorm different words related to climate change and food security.
- Using the words, ask the participants to create a jingle that encourages people to lead environmentally friendly lives and to protect the world by contributing to combat climate change.
- 3. Sing your jingle for other classes or groups, you will have a blast! You can even accompany your jingle with different musical instruments.

• Discussion

- What was the reaction of the people that heard your jingle?
- Do you think they received the message you wanted to transmit?
- What does it mean when people say that small actions can make a big difference?

• Our very own mascot

- Level 1 2 3
- •
- , Aim
- To create your group's very own climate change and food security mascot.
- •
- Materials
- 3 Cardboards
- Colour markers
- Colour pencils
- •
- Time
- 60 minutes
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We are many. We are YUNGA!

How to do it

- Explain to your group that they are going to create their own climate change and food security mascot.
 Have them begin by brainstorming some ideas about what they want their mascot to transmit.
- 2. Divide the participants into three teams and have each one create their mascot.
- 3. Ask each team to present their work.
- 4. Put the artworks in a place where everybody can see and have them vote to choose which one is the best. May be your group's creation can become your school or youth group's climate change and food security mascot!

Discussion

- How can having a mascot help attract young people and encourage them to take action?
- What is the message you want to transmit through your creation?
- •

3-D Rubbish art

Level 1 2 3

Aim

- To encourage young people to think about the different types of materials they throw away.
- •

Materials

- 3 sheets of coloured poster board
- Adhesive tape
- Rubbish (clean and safe)
- Colour markers
- Glue
- Scissors
- •

Time

- 60 minutes
- •

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• How to do it

- Explain to your group that they are going to create an artwork using the different pieces of rubbish they
 find at home.
 - 2. Ask the participants to bring from home about 8-10 pieces of clean rubbish.
 - 3. Divide your group into three teams and tell each one to have fun with rubbish. They can make a 3-D rubbish monster or a cool mural showing an image. Tell them to be creative!
- Discussion
- How do you identify rubbish? How do you know when an item has become rubbish?
- What are some common objects people throw every day? Could these be recycled or reused?
- Can you name some other uses you can give to some rubbish items?
- •

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The six R's circle

- Level 1 2 3
- Aim
- To encourage young people to think about individual actions that can help the planet.

Materials

- Cardboard arrows
- Cardboards
- Colour markers
- Paper fasteners
- Ruler
- Scissors

Time

• Two sessions: a 40 minute session to explain the activity and to produce the circles and a 20 minute session

• to review the outcomes.

How to do it

6. Draw two circles on a cardboard and divide them into 6. In each segment write the following words so you can have two figures like the ones below:



- 7. Cut the circles and place the arrows (make sure you use a resistant cardboard so it can spin easily) in its places. Use a sharp pencil to push a small hole through the centre of the circles and do the same with the arrows. Push the paper fasteners through the holes and fold the ends back to hold both pieces together. Tell your group to help you design the circle and the arrows to make them look fun!
- 8. Ask your group to sit in a circle. Each participant should spin the six R's circle first and then the activities circle. According to the segments the arrows signalled, he or she will have to think about an idea to develop at home or at school or youth group. You can be the first to spin the arrow to show them how it works.
- Give the participants a couple of days to carry out their activities and on the next session have them present their outcomes. Be creative, change the activities every time to encourage your group to think green before acting!

Discussion

How and why is this activity an important step in creating the world we want?

Why is it important to encourage others to follow you example?

• How green are you?

Level 1 2

Aim

•

To reflect on different living beings and their impact on the **environment**.

Materials

3 chairs

An object to use as a microphone

Time

30 minutes

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How to do it

- 1. Explain to your group that you are going to create your own talk show: "How green are you?"
- One participant will be the host, 3 participants will be the guests and the rest of the group will be the public. Your guests for that day will be: a grizzly bear from Canada, an indigenous that lives in the Amazon jungle and a business person that lives in the city.
- 3. Tell the host to present each guest and to ask each one to describe their usual day.
- 4. Encourage the host and the public to make some questions: what do they eat? How do they wash themselves? How is their house? How do they transport from one place to another? What do they do on their free time?
- 5. After the guests have described their lifestyles, tell the host to ask the public to give some recommendations to any of the guests so they can lead a more environmentally friendly lifestyle.

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- How does your lifestyle affect other living beings?
- Why is it important that everyone respects the right of others to live in a clean and healthy environment?
- Can you name some ways how you can contribute to preserve the lives of animals and plants?
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- Your perfect world
 - Level 1 2

Aim

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To encourage young people to think about the world everyone can help create.

Materials

- Adhesive tape
- Big cardboard box
- Colour cardboards
- Colour markers
- Colour pencils
- Glue
- Green and blue construction paper
- Scissors

Time

- 60 minutes
- .

How to do it

- 1. Explain to your group that they are going to create their own nature scene.
- 2. Have the participants think about all the items they need, for example: grass, sand, flowers, trees, lakes, mountains, animals, clouds, etc. and tell them to chose the ones they want to make.
- 3. Cut the box to make it look like a stage. Cut a piece of green construction paper to fit the bottom of the box and some pieces of blue construction paper to fit the sides.
- 4. When everybody has finished creating their items, cut them and place them on your nature scene
 (make sure you leave a piece of cardboard at the bottom of the shapes so you can fold it to make them stand).
- 5. Put your group's nature scene in a place where everyone can see, so it reminds them that everyone has
 the responsibility to help create a better world.

Discussion

- Would your perfect world look similar to the one you created?
- What can you do to help maintain a clean world for future generations?
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A tree for life

Level 1 2 3

Aim

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To encourage others to make small actions to care for the planet.

Materials

- 2 or 3 sheets of brown construction paper
- Adhesive tape
- Green construction paper
- Papers
- Pencils
- Scissors

Time

Two sessions: a 30 minute session to explain the activity and to make the tree and a 20 minute session to review the outcomes.

How to do it

- With the help of your group, make the trunk and the branches of a big tree that will represent the world. But explain to your group that the tree will only get its leafs when everybody commits to doing something to protect the environment.
- 2. Tell your group that everyone must make a leaf, write a personal commitment and his or her name on it and stick it to the branches of the tree.
- 3. Explain to them that you are going to stick the tree in a place where your entire school or youth group can see.
- 4. Promote your activity with some posters and invite everyone to commit to creating a better world and to help your tree grow nice and green. Tell everyone that they can also bring some leafs from their family and friends. The more the better!
- 5. After about a week, check with your group how your tree has grown! Read some of the commitments,
 this will encourage the participants to keep making better choices.

- Discussion
- How did you feel when you saw your tree with no leafs? And how did you feel when you saw your tree had
- Iots of green leafs?
- How would the world be different if everyone in the world committed to making a difference?
- What are you and your family doing to protect the environment?
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Lunch at the forest

Level 1 2

Aim

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To encourage young people to protect forests and its wildlife.

Materials

- 3 or 4 poster boards
- Adhesive tape
- Colour cardboards
- Colour markers
- Colour pencils
- Scissors
- String

Time

Two sessions: a 40 minute session to explain the activity and prepare the materials and a 15 minute session to review the outcomes.

How to do it

- 1. Explain to your group that you are going to organize a "Lunch at the forest" day when you will invite everyone to wear a distinctive that makes them look like their favourite animal from the forest.
- Ask your group to make some cool posters to advertise your activity, invite everyone to participate.
 Make sure you say which the purpose of your activity is, encourage everyone to protect forests and its
- wildlife, and remember to state the day and the time when you will carry it out. You can carry out your
- activity during recess or break, so everyone can see the great variety of animals that visited your school
 or youth group during that day!
- Give your group some time to choose an animal and think of their distinctive characteristic: maybe
 some paws, some ears, a tail, some whiskers, a mane, some spots, some wings, etc.
- 4. On a second session review the outcomes of your activity. How did everyone feel?

- What comments did you hear about the activity?
- What would happen to all those animals if forests continue to be destroyed?
- Can you name some ways how we can contribute to protect forests?
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We are many. We are YUNGA!

Junky fashion

Level 2 3

Aim

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To encourage young people to make better choices.

Materials

- Adhesive tape
- Colour markers
- Poster boards

Time

Two sessions: a 20 minute session to explain the activity and prepare the materials and a 60 minute session to carry out the fashion show.

How to do it

- 1. Tell your group that they are organizing a contest to invite everyone at your school or youth group to create a garment from used clothes and become green fashion designers. Explain to them that the day of the contest a jury will choose the best creation.
- Have your group help you to make some nice posters to advertise the event, invite everyone to make a creative, cool and useful garment using only reused clothes from their homes. Make sure you clearly state the day and the time of the contest. Everyone can participate!
- 3. Hold a fashion show for all the youth and teachers or leaders. You can even invite parents to your show. Choose some people for the jury: students, teachers or leaders, parents or maybe you could invite a real designer.
- 4. Make sure you make everyone aware of the importance of reusing materials and reducing their waste!

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Discussion

- Can you name some negative impacts of the world of fashion?
- How do you think would be a great way to find new clothes? May be organizing an exchange day with your
- friends?
- Can you think or other ways to reuse materials?

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Water is life!

Level 2 3

Aim

To reflect how access to basic services affects our lives.

Materials

Information cards

Time

- 40 minutes
- •

Background

About 97.5 percent of the world's water is salt water. The rest is fresh water, but only about 0.25 percent of the world's water can be used to meet human needs.

- About 1.2 billion people of the world's population don't have clean water and 2.4 billion people don't have
 toilets. Nearly 80 percent of illnesses in developing countries are linked to poor water and sanitation
- conditions and 1 out of every 4 deaths under the age of 5 worldwide is due to a water-related disease.
- •

Everyone needs clean water, water is essential for life. This is why everyone must help save water and promote water access for all. Water changes lives!

How to do it

- 1. Remind your group that every day we need water to survive and lead a healthy and happy life.
- Divide your group into three teams. Give one of the information cards to each team and tell them to agree on how to depict their country's situation with a small role play.

Information cards:

Kenya

Most people obtain their drinking water from Lake Victoria, seasonal rivers and streams and hand-dug wells. All of these sources are contaminated. Women and children walk up to six kilometers each day to haul water, a task that takes up to three hours. Water is not only contaminated at its source but also from the way it is transported and stored. Few households boil their water.

India

Most water sources are contaminated by sewage and agricultural runoff. Although access to drinking water has improved, about 21 percent of communicable diseases in India are related to unsafe water. In India, diarrhea alone causes more than 1,600 deaths daily. Hygiene practices also continue to be a problem in India. Latrine usage is extremely poor in rural areas and hand washing is also very low, increasing the spread of diseases.

Honduras

In 1998 Hurricane Mitch left 75 percent of the country without safe drinking water. Families are forced to rely on contaminated water supplies and the prevalence of waterborne diseases like cholera is increasing. In addition, poor access to water also causes overall development to stagnate. Many women and children in the rural areas spend up to six hours each day fetching water and carrying it home on their heads. This prevents women from taking up income generating activities and prevents children from attending school.

Source: Water.org, http://water.org/projects/

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Discussion

- What similarities and differences can you find between how you use and obtain water at home and how
- people in these countries do it? Who do you think uses more water? Why might this be?
- Do you think this is fair? Why or why not?
- What do you think is your role in promoting water access for all?
- Have you heard about some activities or projects different entities have carried out to promote the right of
- all people to have safe water?
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Raise your voice!

Level 2 3

Aim

- To understand that young people have the right to grow in a healthy planet.
- •

Materials

- Paper
- Pencils
- Time
- 40 minutes

How to do it

- 1. Divide the participants into small groups. Tell them to pretend they are radio reporters and that they are going to broadcast a 5 minute radio talk on a local station.
- 2. Explain to them that this report must explain the correlation between climate change and child rights. Remind them that the authorities in your country must protect and help ensure the full development of children and youth. If they are forced to live in an environmentally compromised planet, most of them won't be able to enjoy their lives, since threats to their physical and mental well-being will increase. If you want to know more about the child rights you can visit the UNICEF Voices of Youth website:

www.unicef.org/voy/explore/rights/explore_rights.php

3. Ask each group to choose an announcer to read their report. It would also be a great idea to read it for the rest of school or youth group.

Discussion

- How does knowing your rights help you defend them?
- How can you promote your right to live in a clean and healthy environment?
- Can you name some of the negative consequences of climate change for your life?
- •

Environmental route

Level 1 2 3

Aim

- To understand our dependence on the environment.
- Materials
- An open space
- Coloured cardboards
- Coloured chalks
- Dice

Time

- 60 minutes
- •

How to do it

- Ask your group to help you draw a giant board game on the floor using the chalks. They should draw a route of 40 cells. Mark the first cell "Start" and the last one "Finish".
- At random, colour ten empty cells in one colour, ten in another colour and nine in a third colour. The colours should be mixed all over the board. Write the words plant, animal or food in the rest of the cells.
- 3. Have the participants prepare cardboard cards in the same colours as the cells. On one set write ten positive events related to the **environment**. For example:
 - Forest products are being harvested with good practices that respect the **environment**. Move 1 cell forward.
 - Families from a rural community have access to safe drinking water. Move 3 cells forward.
 - The Government has started a recycling programme in your community. Move 2 cells forward.

On another set write ten negative events. For example:

- An industry is polluting the river. Miss your turn.
- Human activities destroyed a forest. Move 2 cells back.
- A drought damaged the crops and the children are malnourished. Move 3 cells back.

And on the third set write nine funny tasks for the participants. For example:

- Jump around on one leg.
- Act like orangutans.
- Dance a funny song.

- 4. Then, have the participants prepare another set of 9 cards. Write the word plant on three cards, animal on other three and food on the last three cards. On the back of each card write the name of a plant, animal or food, respectively.
- 5. Divide your group into two teams and play the game. Each team throws the dice and moves 1-6 cells forward, the members of the team can take turns to throw the dice. Each time a participant stops on a funny task, the whole team has to do it. If a participant stops on a plant, animal or food, he or she must choose one of the corresponding cards, read it without showing it to his or her team and depict the plant, animal or food by mime so the rest of team can guess. If the team guesses, it can throw the dice again. If a team stops on a coloured cell, they have to pick up a card, read it out and act accordingly. The team who gets to the "Finish" first wins.

Discussion

- What climate change impacts have you seen in your community?
- Does describing what you want for your future help you realize it? How and why is this an important step in
- creating the world we want?
- What does it mean when we say Earth day is every day?

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We are many. We are YUNGA!

- Reach out!
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- Say it loud!
- Level 1 2 3

Aim

To encourage action to fight against climate change and promote food security.

Materials

- Adhesive tape
- Colour markers, watercolours or non toxic paints
- Poster boards

Time

60 minutes

How to do it

- Explain to your group that they are going to create a slogan for your school or youth group in order to promote action to fight against climate change and promote food security.
- 2. Have your group sit in a circle and brainstorm some ideas. Remind them how specific actions and lifestyle choices affect not only their lives, but the lives of others. Encourage them to create a slogan that invites young people to act and to remember that they can take action every day.
- 3. Ask your group to make a fun and attractive poster board with their slogan using all the materials they like and to stick it in a place where the entire school or youth group can see.

- Was it hard creating a slogan to encourage young people to act? Why or why not?
- What is the main idea you want everyone to remember through you slogan?
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Act responsibly!

Level 2 3

Aim

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To investigate about the most pressing issues your community is facing.

Materials

- Poster board
- Colour markers

Time

50 minutes

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How to do it

- Ask the participants to sit in a circle and to think about the most pressing issues your community is facing regarding climate change. For example: car use, energy use, rubbish, food choices, water use?
- Ask your group to choose two issues and to design some cool posters and signs to post around their
 community to encourage others to respect their environment and themselves.

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- Do you think there is a lack of commitment to address climate change issues in your community? Why or
 why not?
- How can acting more responsibly towards the environment contribute to creating a more healthy and
 happy life?
- Should the planet's future concern each and every one of us?
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Wise food wall

Level 1 2

Aim

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To encourage young people about the need to keep a healthy, balanced diet and to make wise food choices.

Materials

- Adhesive tape
- Colour markers
- Coloured construction paper
- Scissors

Time

40 minutes

How to do it

- 1. Remind your group that adequate food is essential for an active and healthy life and that, for this reason, you are going to create the "Wise food wall".
- 2. Ask your group to think about some advice they can give to other young people and adults related to food and food choices. You can find some ideas below.
- 3. Once you have your advice, have each participant make a big drawing of any food they like and tell them to write one of the phrases inside their food. Alternatively, if your group is too big, you can have them work in small teams.
- 4. Cut your foods and choose a wall were you can stick them, make sure everyone sees it!

Ideas:

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- Keep food safe to eat, always store, prepare and cook food in a clean way.
- Keep in shape, be physically active.
- Keep clean all food preparation areas.
- Put rubbish in its place.
- Wash your hands before preparing food.
- Wipe up all spills to avoid injuries.
- Snack smart, children who eat well grow well.
- Balance your food choices; eat more from some food groups than others.
- Eat every colour every day.
- Know your limits with fats and sugars.

- Why is it important to learn about healthy food choices?
- Can you describe what a good and healthy diet is?
- Do you think you need to change your mind about what foods you need to eat?
- Where can you get good information on food and nutrition?
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Our hands can make a difference!

Level 2 3

Aim

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To encourage young people to commit to making a difference.

Materials

- Coloured markers, watercolours or non toxic paints
- Paintbrushes
- Poster boards or a large banner or canvas

Time

Two sessions: a 40 minute session to explain the activity and prepare the materials and a 60 minute session to carry out the activity.

How to do it

- Explain to your group that you are going to create a hand mural where everyone from your school or youth group will be invited to put their hands. The hand mural will represent your school's commitment to work together to combat climate change and promote food security.
- 2. Find an indoor wall that is prominent at your school or youth group that everyone will pass every day, so you can use it for your hands mural. Be sure to get permission before you start. If you can't get permission to paint directly on the wall, you can hang a large banner or canvas or stick some poster boards.
- 3. Have our group help you prepare some cool posters to advertise your event and invite everyone to take part.
- 4. The day of the event, have everyone paint their hands and put them on the wall, ask them to write their names under their hands. Alternatively, if you can't find paint or watercolours, ask the participants to use the markers to trace their hands on the wall.
- 5. Don't forget to remind everyone that together we can make a difference!

- How did your school or youth group feel about this activity?
- How could you encourage your family and friends to make a similar commitment?
- How could you describe your role in raising awareness about the importance of combating climate change
- and promoting food security?
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Climate Change Communications Committee

Level 3

Aim

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To learn and inform young people about climate change issues.

Materials

- Paper
- Pencils

Time

- 60 minutes
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How to do it

- Explain to your group that you are going to create the Climate Change Communications Committee for
 your school or youth group and create a leaflet about the issue.
- Use the leaflet to report on likely climate change impacts (social: health, quality of life, etc.;
 environmental: flora and fauna, landscape, etc.; and economic: jobs, industry, etc.) or on the steps your
- local government, your community or your school or youth group is taking to become more
 environmentally-friendly, etc. Be creative and have fun!
- Once you have your leaflet ready, you can make copies and distribute them in your school, youth group
 or local library.

- How important is it to have a clear knowledge about something in order to decide which changes are
- needed?
- Can you name some benefits of informing others about climate change issues?
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Say no to car idling!

Level 1 2 3

Aim

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To encourage others to reduce car idling.

Materials

- Poster boards
- Colour markers

Time

40 minutes

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How to do it

- Start by reminding your group that cars add tons of CO₂ into the air each day and contribute to global warming and that a great way to cut down these carbon emissions is to stop car idling, that is to turn off the car when it doesn't need to be running. For example: when they are stuck in traffic or when they go to pick them up.
- Answer and their neighbourhood. They can include some facts so people know why it is so important to make a change. For example:
 - Idling is not good for your engine; it causes excess engine wear and wastes fuel.
 - Idling provokes pollution as it adds greenhouse gases into the air.
 - Turning on the engine uses only 10 seconds worth of gas, so if you leave it running for longer, you are only wasting fuel and money.
 - Car manufacturers suggest a warm-up time of less than five minutes.

- How do you think your family will react to this initiative?
- What impacts might car idling have for people's health?
- What other activities could you carry out to encourage others to stop car idling?
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• Hungry to help others to learn!

Level 1 2 3

Aim

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To encourage others to reduce food miles and to buy local.

Materials

- Paper
 - Pencils

Time

40 minutes

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How to do it

- Explain to your group that they are going to write a letter for a restaurant in your area to encourage it to buy from local production. Make sure you explain how food miles contribute to climate change and the benefits of buying local.
- A Make sure everyone sings and send the letter. You can send several letters to different restaurants to make a bigger difference!
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- Where does your family generally buy your food?
- Do you think you need to make wiser food choices? Why or why not?
- What could you do to promote these changes?
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We are many. We are YUNGA!

- Take action!
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- Do you recycle?
- Level 1 2

Aim

To analyse and compare how your group throws away rubbish.

Materials

- Cardboards
- Colour markers

Time

40 minutes

How to do it

- 1. Have your group sit in a circle and ask each one how their families throw away the rubbish they produce.
- Remind them of the importance of recycling and explain to them that the ones that don't recycle are going to implement a "recycling station" at home.
- 3. Have the participants make some signs that say where each type of rubbish should go, for example, glass, metal, paper, plastic, organic, others. If they don't have enough bins at home they can use empty
- boxes or rubbish bags. Tell them to explain to their families the importance of recycling. Remind them
- that even if your country doesn't have a recycling program, if you recycle you will be helping the people that collect rubbish and work in landfills.
- 4. If your government does not have recycling or good rubbish facilities available, you could consider sending a letter to encourage these to be set up.

Discussion

- How can rubbish affect the lives of human beings?
- Can you name some ways how rubbish might affect other living beings?
- Have you ever visited a recycling centre? How was it?

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Locker clean out day

Level 1 2 3

Aim

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To encourage young people to be aware of what they are throwing away.

Materials

- Colour markers
- Plastic bags
- Poster boards
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Time

Two sessions: a 20 minute session to explain the activity and prepare the posters and a 30 minute session to carry out the activity.

How to do it

- Remind your group how at the end of the year there are a lot of unused or partially used school supplies that are thrown away. Explain to them that, in order to help reduce the amount of rubbish your school or youth group produces, you are organizing a "Locker clean out day".
- 2. Make sure you advertise your activity making some nice posters, invite everyone to participate!
- 3. Arrange two or three drop-off points in your school or youth group where children and youth can leave
- their unused materials. Remember to announce where these places are going to be. It might also be a good idea to have some people of your group walk around collecting the unused materials.
- 4. You can contact an organization to donate the supplies you collected.
- 5. Make sure you calculate how many supplies were collected and share it with your school or youth
- group to encourage them to continue participating the next years.

Discussion

- How do you feel when you know you are contributing to protect the planet?
- How can small actions make a big difference?
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• Source: Alliance for Climate Education (ACE),

- www.acespace.org/act-now/toolkit/facilities/locker
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• Turn it off!

Level 1 2 3

Aim

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To remind young people about the importance of saving energy.

Materials

- Poster boards
- Colour markers
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Time

Two sessions: a 20 minute session to explain the activity and prepare the posters and a 10 minute session to discuss the outcomes.

How to do it

- Remind your group about the importance of being wise about energy and explain to them that you are organizing a "Turn it off day" to encourage everyone at school or youth group to turn off lights, computers, radios, fans, etc. for at least an hour to save energy and reduce the carbon emissions.
- You can talk to your school or youth group director to get support for your activity. Remind them we all
 have the obligation to care for our world!
- Advertise your event by putting up some cool posters. Make sure you clearly state the day and the hour
 your activity will take place.

- What did other people at your school or youth group think about your activity?
- How do you think your family would feel if you do the same at home?
- Do you usually turn off electric equipment when they are not in use in order to reduce vampire usage
- energy?
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• Transport Challenge Day

Level 1 2 3

Aim

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To encourage young people to be wise about transport.

Materials

- Adhesive tape
- Cardboard box
- Colour markers
- Poster boards
- Scissors

Time

Two sessions: a 40 minute session to explain the activity and prepare the materials and a 20 minute session to carry out the activity and review the papers from the box.

Background

- Transport is one of the most important sectors to consider in responding to the challenge of combating
- climate change as greenhouse gas emissions in this sector continue to increase. During the period 1990 2004, global emissions of CO₂ increased by 27 percent. Energy demand from the transport sector, an
- indicator of global transport emissions, increased by 37 percent over the same period.
- •

Transport is an especially challenging sector in which to reduce greenhouse gas emissions largely because it is so dependent on oil. But every day the number of vehicles is increasing. This is why making small

individual changes is so important!

How to do it

- Explain to your group that they are going to organize a "Transport Challenge Day" when you will
 encourage everyone from your school or youth group to arrive there in a sustainable way. For example:
 walking, biking, carpooling or using public transport.
- An example of the some nice posters to advertise your activity. Make sure you specify the day of the event.
- 3. Also, ask them to help you decorate the cardboard box that you will put in a place where everyone can
- see during the challenge day, so they can deposit a small paper saying how they arrived to school or
 youth group. Don't forget to specify this on your posters.
- 4. Review the papers from the box and analyse how creative and sustainable everyone was!

- How do you usually come to school or youth group?
- Have you seen how much pollution is produced because of transport?
- What impacts could this have for your health? And what impacts could it have for others living beings?
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Plant for your future •

• Level 1 2 3

Aim

To encourage young people to take small actions to improve their community.

Materials

- Shovels
- Trees
- Watering can
- Working gloves

Time •

- 60 minutes •
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How to do it

- Explain to your group that you are going to choose an area from your school or youth group or from 1. your community to plant some trees. You can to invite other groups to join in. Alternatively, you can • find out about a planting project and join their activities.
- It would be a good idea to collaborate with local landscaping companies and see if they will donate 2. some native trees. You can ask their advice on the correct types of trees and optimum location. You can also contact local companies to ask them to donate some trees and make their part!

- How important are trees for our planet's well-being?
- Can you name some goods and services we get from trees and forests?

Go green day!

Level 1 2

Aim

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To encourage young people to take small individual actions that have a positive effect on our world.

Materials

- Paper
 - Pencils

Time

Two sessions: a 30 minute session to explain the activity and help your group organize themselves and a 20 minute session to discuss their outcomes.

How to do it

- 1. Explain to your group that each one will plan a "Go Green Day" at home. Tell the participants to invite all their family and friends. The more, the better!
- Guide them to decide which activities they want to carry out during that day. They can carry out as many activities as they want, but help them make sure they have enough time to accomplish them. For example, they can develop two small activities or a big one. Make sure you send a note to their families
 - to get their support.
- 3. After carrying out the activities ask the participants to present a short paper explaining the following questions (alternatively you can discuss these questions in class):
 - Who participated in my "Go Green Day"?
 - What did we do?
 - How did we feel?
 - What did we learn?
- Remind them they can include drawings or photographs.

Ideas:

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- Clean up an area of your local park or neighbourhood.
- Plant some trees and flowers at home.
- Clean up your house to find things you can donate to charity.
- Make a plan to recycle your waste.
- Visit a recycling centre.
- Make a poster with some ideas to save energy and hang it in a public place.

- How do you feel when you do something to improve the environment?
- How did others react when they saw you were making a difference?
- Can you think of something you can you do different to keep your neighbourhood pleasant?
- What do you think would happen if everyone in your neighbourhood did some activities like the ones you did?

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There is a lot to do!

Level 1 2 3

Aim

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To learn there are different ways how young people can promote food security.

Materials

- Whiteboard
- Whiteboard markers
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Time

- 60 minutes
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• How to do it

- 1. Divide the whiteboard in three parts and write one the following phrases on each column:
 - Raising public awareness;
 - Contributing with organizations that support food security; and
 - Working to make a difference.
- 2. Explain to your group that these are all ways how they can contribute to prevent **climate change** and promote **food security** through their individual food and lifestyle choices. Ask the participants to brainstorm ideas about activities they can develop for each of the phrases. Make sure you write them down on the respective column.
 - 3. Then, divide the participants in three groups and ask each group to choose an activity they want to carry out and help them to organize it. It is a good idea to write down the rest of the activities that were not chosen on a paper, so you can have a great source of ideas to develop afterwards!

Discussion

Was it hard finding activities you can develop to help your **environment** and its people? Do you think it is important to involve others in the activities you have chosen? Why?

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Fun fundraising

- Level 1 2 3
- Aim

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To learn that everyone can help raise money to support different organizations that work to prevent climate
 change and promote food security.

Materials

- Paper
- Pencils
- Any materials the participants might need to carry out the fundraising activities

Time

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You might need different sessions according to the activity you choose.

How to do it

- 1. Explain to your group that many projects that are developed by different organizations are carried out thanks to different donations generated through fundraising activities.
- 2. Ask your group to sit in a circle and to think about fun fundraising activities they can carry out to help an organization of your preference. Make sure you write them all down!
- 3. Choose a fundraising activity you want to develop and have fun! You can invite others to join your initiative. Below you will find some suggestions:
- Design fun and attractive greeting cards according to the season of the year (such as Valentine's Day, Easter, Halloween, Thanks Giving Day, Christmas, birthdays, etc.) and sell them to your family, neighbours, friends, teachers, youth leaders, etc.
- Organize a walkathon and invite all your family, friends, teachers and youth leaders to sponsor your walk. Explain to them that for every meter you walk they will have to give you a determined sum of money, so the longer you walk, the more money you can raise. Invite all the children and young people from your school or youth group to join your activity.
- Fill a jar with candies and have people guess how many candies are inside. Charge for every guess, so the more people guess, the more money you will raise. The person who gets the nearest to the exact number of candies wins the jar!
- Organize a school yard sale. You can ask family, friends, teachers and youth leaders to donate some items to the cause. Set up an area for the yard sale and price every item. Invite everyone you know to your yard sale and don't forget to advertise it!
- Organize a Football Cup. Choose a sport you like (volleyball, basketball, football, etc.) and invite the rest
 of the school or youth groups to participate. Invite the parents and friends to watch and cheer. Sell
 tickets or charge admission at the door. Make sure you explain that all the money will go for a special
 cause.
- Remind your group that these are activities they can carry out alone, with their family or friends and that
 this is a fun way of helping!

- How important do you think are fundraising activities to obtain the resources needed to carry out an activity?
- How did you feel while you were working to help your planet and its people?
- What are the advantages of working together to achieve an objective?

• Useful resources • African Medical and Rese

- African Medical and Research Foundation (AMREF) www.amref.it/locator.cfm?SectionID=915 **Eco Friendly Kids** www.ecofriendlykids.co.uk/ **EcoHealth** www.ecohealth101.org/index.html **Eco- Schools** www.eco-schools.org.uk/ **Centre for Alternative Technology** www.cat.org.uk/index.tmpl?refer=index&init=1 One World.net's Kids Channel, Tiki the Penguin http://tiki.oneworld.net/front.html Sustainable Table www.sustainabletable.org/home.php The Renewable World www.renewableworld.org.uk/ **The Water Project** http://thewaterproject.org/ **United Nations Environment Programme, Tunza** www.unep.org/Tunza/ Unites States Environmental Protection Agency, For Students and Educators www.epa.gov/epahome/students.htm **World Food Programme Students and Teachers** www.wfp.org/students-and-teachers
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Glossary

- Atmosphere it describes the air or gases that surround the Earth.
- Biodiversity'bio' means life and 'diversity' means variety, so biodiversity refers to the incrediblevariety of living things in nature and how they interact with each other.
- Carbon footprintour day to day energy use; the total amount of greenhouse gases produced by our
daily activities.
- **Climate** the average **weather** conditions for a particular place and time period. This is not the same as **weather**; **weather** may change from day to day, but **climate changes** over hundreds or thousands of years.
- **Climate change** a significant change from an established climatic condition to another. This may present harmful effects for all living beings as many animals and plants need one kind of climate to survive.
- a mixture of decaying remains of plants and animals.
- Conservation the act of preserving or restoring from loss, damage or deterioration.
- **Deforestation** when people remove trees from forests and use the land for other purposes.
- Drought a long period of abnormal low water availability; water shortage which affects growing and living conditions.
- Ecosystem where communities of plants and animals live together, share their space, their land and their climate. There are many different ecosystems around the world, such as: deserts, forests, oceans, mountains or rivers.
- Energy is what makes things happen. Energy is necessary to fly an airplane or to cook a pizza; it is the power or capacity for work or activity.
- **Environment** the air, water, soil, minerals, living things, and all other things that act upon a creature or a community. The circumstances that surround each one of us.
- Flood an overflow of water that submerges land, which can cause negative impacts on the territory and its inhabitants.
- Food accessa household's ability to always obtain enough food through a combination of its own
home production, purchases or gifts.
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- **Food miles** it refers to the distance food travels from the field to the plate, it is a way of indicating the environmental impact of the food we eat. Agriculture, processing, storage, transport and the way we shop all have to be factored into the bigger greenhouse gas emissions picture.
- **Food security** when all people can always have access to sufficient, safe and nutritious food to lead an active and healthy life.
- **Fossil fuels** a general term used to refer to coal, natural gas and oil (petroleum), which are substances that where formed during millions of years from plant or animal remains.
- **Greenhouse effect** a careful balance of greenhouse gases keeps the Earth warm enough for humans, animals and plants to survive. But, when people burn too many fossil fuels such as coal, oil or gas this balance cannot be kept. When humans add more greenhouse gases to the atmosphere there is a general warming effect on the Earth's surface because these gases act like a blanket that trap heat and prevent it from escaping to outer space.
- **Greenhouse gases** the gases that occur naturally on the Earth's atmosphere that absorb and trap heat to keep our world warm. Some examples are water vapour, carbon dioxide, methane, nitrous oxide and others. Some human actions also produce these gases, such as the burning of fossil fuels.
- Habitat the place or area where animals and plants live and grow.
- **Healthy diet** eating a good variety of foods and in the adequate amounts to receive the nutrients you need for a healthy growth and development.
- **Human rights** the basic rights or advantages that every human being should automatically enjoy, such as: liberty, education, health, food, etc.
- Hunger an uneasy situation that occurs when people do not have enough food to meet their nutritional needs.
- Landfill big holes in the ground that are used to bury the trash.
- Litter a careless discard of waste outside the trash bins; making our streets, our parks or our rivers untidy can have negative effects on plants, animals and humans.
- Livelihood means of living or support; subsistence or maintenance.
- Malnutrition eating too little, too much or not having the right variety of food. The body does not have the **nutrients** and **energy** it needs to ensure a vigorous growth.
- Natural disasterscatastrophes that can happen all around the world and can have a devastating effect
on the natural environment and on human beings. There are different types of
natural disasters, for example: hurricanes, typhoons, droughts, floods, etc.
- Natural resources materials or objects found in nature that can be used by men to develop different activities, for example: wood, fresh water or minerals.
- Non-renewable a type of energy that cannot be recreated in a short period of time, that
 energy happens because it comes from things that will run out one day, for example, fossil fuels like: coal, gas and oil.
- Nutrient
 the part of a food that is stored and used by the body to build and repair, give heat
 and energy and protection from diseases.
- Organic farming a sustainable type of farming that uses non-polluting methods as close as possible to those found in nature. A friendly type of farming that is better for the environment, animal welfare and our health.
- Pollutant any unwanted substance or chemical that contaminates the air, the water or the land, resulting in a decline of their quality. Pollutants have sources that are both natural and human.
- **Poverty** not having enough money or resources for basic needs: clothing, shelter and food.
- Recycle
 the act of reprocessing a product that has become waste and transforming it into a new product.
- Renewable energy

 a type of energy can be replenished in a short period of time, that means it comes
 from things that can be used over and over again, for example, sunlight, water, wind, plants or heat from inside the Earth.
- Right to food the right of every man, woman and child to be free from hunger and always get a sufficient amount and variety of good quality food.
- Sustainable a lifestyle that cares for the maintenance and protection of the environment in order to promote future well-being. Acting in a manner that has minimal long-term effects on the environment.
- Waste a product or object that has been used, consumed or spent and is ready to be discarded.
- Weatherit describes what the day looks like outdoors in a specific place at a specific time.Weather can change a lot in a very short time, it refers to what happens from
minute to minute. For example, it may rain during the morning, but you may have a
sunny afternoon.

Resources and additional information

Join us!

Additional resources and information will be developed by FAO, WAGGGS, YUNGA and other partners for you to use when helping children and young people learn about the different issues that affect our world. If you would like to be automatically informed of the new materials that become available please write to us at: children-youth@fao.org and we will register you to the free YUNGA newsletter.

Share with us!

It would be great to receive your comments and information about your own experiences, activities and stories. You can write to us to:

children-youth@fao.org

Take the challenge!

Children and youth need to understand the environmental and social realities of our time and of their future. We need to support them to become empowered and responsible citizens of the world, able to adapt and to respond to future challenges.

The Food Security and Climate Change Challenge Badge will raise awareness of how our everyday activities contribute to climate change and how different communities are already, and will continue to be affected by climate change, especially in regards to access to water and food. Moreover, they will learn that many people in our world are not able to satisfy their nutritional needs, resulting in hunger and malnutrition, and they will explore how to make food choices which have less of an impact on our environment.

The badge will motivate young people to take actions to improve their lives and to encourage their local communities to become more environmentally friendly. It will help them realize they can make a difference and that they have a vital role in achieving a world free from hunger and climate change. Encourage your group to take the challenge!

www.fao.org/climatechange/media/18820/0/0/

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Other useful resources

Links to other useful resources and activity materials which can be used by you and your group to learn about and understand climate change and food security are listed below:

FAO Children and Youth Climate Change Portal contains a great variety of information, activities,
 publications, competitions, projects and videos for children and youth to learn and explore about climate
 change and hunger in the world. It also gives details about national and international news and events so

- young people can be informed about the various ways how they can be actively involved in the creation of a better world. It also includes links to FAO and other UN agencies youth sites:
- www.fao.org/climatechange/youth and www.fao.org/kids

Youth and United Nations Global Alliance (YUNGA) was created to empower children and youth to have a greater role in society, raise awareness and be the active agents of change. YUNGA is developing different initiatives, resources and opportunities for children and youth to translate their knowledge into advocacy and action. YUNGA also acts as a gateway to allow young people to be involved in UN related activities such as the Millennium Development Goals (MDGs) and initiatives related to food security, climate change and biodiversity.

www.yunga.org

WAGGGS Web Site contains great resources and news on climate change and other environmental issues
 like, for example, the "Together We Can Change Our World" badge curriculum about the Millennium
 Development Goals.

www.wagggsworld.org

Feeding Minds Fighting Hunger is an international classroom for exploring the problems of hunger,
 malnutrition and food insecurity. It is designed to help prepare and encourage teachers, students and young

people all over the world to actively participate in creating a world free from hunger.

www.feedingminds.org and www.feedingminds.org/yw/

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The Right to Food: A Window on the World is a joint FAO and WAGGGS initiative to educate young people around the world about hunger and malnutrition and become actively involved. A set of two books, one for young people and one for teachers or youth leaders, aim to help children and youth to understand

- that all members of society have the responsibility to respect, protect and promote the right of every
 - human being to be free from hunger.
 - www.feedingminds.org/cartoon/rtf_en.htm
- •

Climate Change: Take Action Now! contains information and resources on how to develop activities and actions related to climate change. This guide was designed to support the local actions developed by children and youth, with special emphasis on girls and young women.

• www.scout.org/en/node_70/library/environment/climate_change_take_action_now

Unite for Climate is your entry point into the world of youth action on climate change. The Portal is a
 home for children and young people to exchange ideas, gather information, join campaigns and work
 together on subjects related to climate change and other issues affecting our world today.

together on subjects related to climate change and other issues affecting our world today.

- http://uniteforclimate.org/
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CarboSchools is about creating partnerships between climate researchers from several leading carbon
 science laboratories in Europe and secondary school teachers. In these partnerships, young Europeans

- conduct experiments on the impact of greenhouse gases and learn about climate research and the
- reduction of emissions through true investigations and interactions with real scientists. Young people also
- have the opportunity to inform the wider community about climate change by producing a final output of
- articles, exhibitions, conferences etc. It provides a great number of resources for helping youth to get
 involved in finding solutions for the future.

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- www.carboeurope.org/education/index.php?lang=en
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Organizing events and activities

Interested in making a difference through your own initiatives but not sure where to begin? Here are some ideas to get you started!

• Find out!

You can find out more about the climate change and food security in your country by getting in touch with
 the people that work on these issues. Encourage them to share their knowledge and information on their
 projects with you. Find out what they are doing and try to join their activities. For example:

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- Representatives of UN agencies: FAO, UNDP, UNESCO, UNICEF, WFP, WHO, UNEP
- Ministry of Agriculture
- Ministry of the Environment
- Ministry of Education
- Ministry of Health
- Right to food groups
- Universities and other schools
- Non-governmental Organizations and International Non-governmental Organizations
- Community groups
- Faith-based groups

Be creative!

You can organize many lively activities: competitions, fairs, sports, conferences, debates, round-tables, workshops, concerts, drama, painting, photography, posters, collages, songs, poems, essays, slogans, letters, and many more!

Reach out!

Invite families and the community to contribute to and participate in your activities. Encourage the media to help you publicize your event and promote public awareness. Contact local news reporters to write stories about your activities and local and community radio stations to broadcast information and messages.

- Source: The Right to Food: A Window on the World, Resource and Activity Guide,
- www.feedingminds.org/cartoon/rtf_en.htm, page 51.
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Sponsor and partners

This resource and activity guide has been developed with the kind financial support of the **Swedish** International Development Agency (Sida).

www.sida.se

- The Climate Change and Food Security Resource and Activity Guide was developed by:
- **Food and Agriculture Organization of the United Nations (FAO)**
- FAO leads international efforts to defeat hunger. Serving both developed and developing countries, FAO acts
- as a neutral forum where all nations meet as equals to negotiate agreements and debate policy. FAO is also
- a source of knowledge and information, helping countries to modernize and improve agriculture, forestry
- and fisheries practices and ensure good nutrition for all.
- www.fao.org/climatechange/youth
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• World Association of Girl Guides and Girl Scouts (WAGGGS)

- WAGGGS is a worldwide movement providing non-formal education where girls and young women develop
- leadership and life skills through self-development, challenge and adventure. Girl Guides and Girl Scouts
- e learn by doing. The Association brings together Girl Guiding and Girl Scouting Associations from 145
- countries reaching 10 million members around the globe.
- www.wagggsworld.org

• Youth and United Nations Global Alliance (YUNGA)

- YUNGA was created to allow children and young people to be involved and make a difference. Numerous
- partners, including UN agencies and civil society organizations collaborate in developing initiatives, resources
- and opportunities for children and young people. YUNGA also acts as a gateway to allow children and youth
- to be involved in UN related activities such as the Millennium Development Goals (MDGs), food security,
- climate change and biodiversity.
- www.yunga.org
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Acknowledgements

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