



Teaching guide

ZOOM - Kids on the Move Campaign

Green Footprints for the global climate



**CLIMATE
ALLIANCE**

Teaching manual



CLIMATE ALLIANCE

Herausgeber und Vertrieb

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Foreword

Dear Teachers and Supporters of the ZOOM – Kids on the Move! campaign,

Since 2002, thousands of children all across Europe have been on the move collecting Green Footprints to help protect the global climate.

The ZOOM – Kids on the Move! campaign by Climate Alliance helps to make children aware from a very young age how they can make their daily journeys independently and in a climate-friendly manner. The subjects of regional food and saving energy are also covered. The outcome is a varied selection of measures that are necessary for climate protection, which can also be combined with one another.

The ZOOM – Kids on the Move! campaign is suitable for use in **kindergartens and primary schools (up to age 12)** in addition to day care centres and after-school clubs.

A great deal has happened in global climate protection since the ZOOM – Kids on the Move! campaign was first launched 15 years ago. New developments and important issues such as climate justice, consumption and sufficiency are covered in greater depth in this workbook. **New content** has been added to the background information, the implementation and game ideas as well as the break time games. All have in common that they provide greater insight into the global situation. We have moreover added new stopovers to our **Climate Voyage** in the support materials to provide children with further insights into the challenges and solutions on all continents on our planet. Look out for the globe symbol – it provides a handy indication of which materials can best be used when.



Take the children on a **symbolic journey to the next UN climate conference** where we will present the Green Footprints they have collected along with a compilation of their best work from the campaign week(s) to the conference participants. Allowing the campaign to also have an impact on the international level and to call upon climate politicians to actively implement more effective climate protection measures rather than simply make empty promises. **Children can act as role models for adults here!**

Regardless of when and how exactly you implement the campaign, what counts is that you consider this subject in a manner appropriate to your educational establishment. Give the children an opportunity to reflect on key sustainability issues and open up new perspectives to them in this way to help shape their future.

We are delighted with every single person who chooses to participate in the campaign (again) in the coming years and works with us to achieve a sustainable coexistence in Europe and our One World.

We wish you a great deal of fun and enjoyable activities during your campaign week(s)!

**Best wishes
from the Campaign Team at Climate Alliance**

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Orientation and planning

The ZOOM – Kids on the Move! campaign demonstrates the personal commitment to more sustainable mobility and offers suggestions for a lifestyle less driven by consumerism towards a more sparing use of our planet's resources. Climate-friendly behaviour is rewarded and the need for joint action communicated.

The children stick **green stickers** in their footprint albums for each journey completed on foot or by scooter, bike, bus or train. They earn red apple stickers and blue energy-saving light bulb stickers for the activities on climate-friendly food and saving energy respectively. Each sticker corresponds to one Green Footprint.



1 Green Footprint = 1 journey covered in a climate-friendly manner on foot or by scooter, bike, bus or train OR 1 activity on climate-friendly food or saving energy.

A **wide variety** of implementation and game ideas, break time games, worksheets and Climate Voyage materials along with countless other support materials are available for your planning. Further tips and ideas are also available online. Simply select the components that best fit with everyday activities at your kindergarten or primary school – as per your timetable and teaching content. You should also consider which components you wish to use **before and after** the campaign weeks to prepare for or follow up on your activities. If there is not sufficient time to cover all topics in detail or topics do not fit into your current planning: **we invite every kindergarten and school group to »only« collect Green Footprints – after all, every step counts!**

Some exercises are intended specifically for kindergarten children; others are for primary school infants (aged 6–8) or primary school juniors (aged 8–12). If no symbol is indicated, the exercise is suitable for all age groups.



Activities

Working together to create a **Green Footprints poster** (e.g. with the title »ZOOM – Kids on the Move!«) makes the communal nature of the campaign clear to the children. The children are able to draw green footprints or dots for each green footprint collected. Apples/red dots and energy-saving light bulbs/blue dots can be drawn for the climate-friendly food and energy-saving activities respectively. They can also leave space on the poster to document the Green Footprints collected (e.g. with the sentence »We've collected so many Green Footprints!«). The dots for regional food and energy savings can be included on the Green Footprints poster as »normal« Green Footprints – please see www.zoom-kids-forclimate.eu for a sample poster.

The children can write or draw their own ideas and wishes for climate politicians **on coloured paper footprints**. Allowing the activities and achievements to be presented to a wider audience during the according event in their kindergarten/school or town as well as at the UN climate conference in order to also call for implementation of the children's wishes on the political level.

The **Climate Voyage** leads to different stopovers on all of the world's continents. They meet with children from around the globe who report on their daily lives, learn about the causes and effects of climate change, and experience what this means for certain animals, for example. Keep an eye out for the references marked with a globe symbol.

You are able to support a **social solar lamp project** in the Amazonian rainforest financially. Parents, grandparents, neighbours and even companies are able to sponsor a child/ kindergarten/school and donate (e.g. € 0.10) for each Green Footprint collected. The children's commitment in turn will then allow children in the Peruvian Amazon region to finally have lights, which are better for them and the environment than the petroleum lights used there previously as standard.

Further activity ideas

- Print out the banner featuring the Green Footprints logo and slogan for your entrance area to make your commitment public – it is also very effective for events involving the media! Please contact Climate Alliance to request logo templates.

- Make a badge machine available at the closing event (can potentially be borrowed from the local authorities) and make Green Footprint badges – see the »Materials« tab on www.zoom-kidsforclimate.eu for templates.
- Use a footprint pastry cutter to bake »Cheesy Green Footprints«.
- Got any other ideas of activities? We look forward to receiving your suggestions, reports and photos!



Cooperating with the municipality

Children's establishments and municipalities should implement the campaign together, sending a clear signal for improved climate protection in their region, town or community.

To get the campaign started, teachers could ask their town (e.g. the environmental agency or climate protection managers) for support. Alternatively, municipal representatives could approach kindergartens and primary schools directly and encourage them to participate in the ZOOM – Kids on the Move! campaign. Please see www.zoom-kidsforclimate.eu for further information.

Local inhabitants and interested people could be informed of the activities and outcomes of the campaign week(s) during **kick-off and closing events**. The children should not only have the opportunity to present the Green Footprints they have collected to municipal politicians for themselves but also their ideas and wishes. The programme of events can be complemented with rallies, sponsored walks and/or competitions. If the municipality is not planning a closing event, the outcomes can also be presented during a kindergarten/school/district fête, parents' evening or media event at the kindergarten/school.

Follow-up

Submission deadline: Please use the feedback form on page 59 to submit details of the total Green Footprints collected along with photos and reports immediately after your campaign ends and at the latest by the date indicated by Climate Alliance. **Please see the cover letter for the deadline for submission of the Green Footprints collected or contact your local Climate Alliance directly or online.**

If your municipality is involved in the campaign, please take note of the deadline set by the municipality for submission of the campaign results.

The best and most creative results will be published online. For details of the current total Green Footprints collected across Europe, please see the »Results« tab on www.zoom-kidsforclimate.eu.

The campaign team at Climate Alliance wishes you a great deal of fun and every success with the campaign!

Background information

UN climate conferences

The UN climate conferences are often referred to as »(global) climate summits«. They are the annual Conference of the Parties (COP) of the United Nations Framework Convention on Climate Change (UNFCCC). Their organisation was agreed at the UN Conference on Environment and Development (UNCED) held in the Brazilian city of Rio de Janeiro back in 1992 that had the goal of a global reduction in greenhouse gases for the first time.

Paris Agreement

This agreement was reached at the UN climate conference held in Paris in 2015 (COP21). It entered into force in November 2016, 30 days after it was ratified by 55 states, which are responsible for at least 55% of the total global greenhouse gas emissions. The agreement is considered a historic step as all 195 member states were finally able to agree on a long-term climate goal and tools for its achievement after 20 years of climate negotiations. The long-term goal of this agreement is to hold the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels. Dangerous consequences for human health and the ecosystem should be avoided in this way.

Intergovernmental Panel on Climate Change (IPCC)

The Intergovernmental Panel on Climate Change (IPCC) is a scientific body that provides orientation for political decision-makers by compiling the latest data on global warming. The IPCC has published a number of status reports and special reports since it was established back in 1988.

Here are a few excerpts from the fifth status report published in 2013/14:

- *Warming of the climate system is unequivocal and, at 95–100%, it is extremely likely that human influence has been the dominant cause of the observed warming since the mid-twentieth century. The climate changes that have already occurred to date have a major impact on humans and nature.*
- *Over the past decades, climate changes have had far-reaching consequences for natural*

and human systems on all continents and in the oceans. A number of unique and sensitive ecosystems (e.g. in the Arctic and warm-water coral reefs) are already threatened by climate change today. The geographical spread of species and their interaction amongst one another have changed. The wheat and maize harvests are increasingly negatively impacted. In many regions, changes in rainfall or snow and ice melt have affected the water resources.

Countless opportunities exist to keep the actual warming lower than calculated in the scenarios through measures to counteract climate change. The most important technologies in the battle against climate change are the use of carbon-free energy sources and more efficient energy usage overall.

In September 2015, the United Nations agreed the »2030 Agenda for Sustainable Development« comprising 17 global Sustainable Development Goals (SDGs) – an important step in the right direction! These goals that apply universally lay the foundations for sustainable development worldwide.

Despite all the justified criticism of the resolution, positive emphasis must be placed on one important innovation compared to previous aims: the SDGs are a global approach that no longer apply exclusively for the countries of the Global South, but rather obligate all stakeholders. Particularly the industrialised nations have a lot of catching up to do – especially when it comes to sustainable production and consumer behaviour. Based on the principle of »common but differentiated responsibilities«, each country, municipality and inhabitant must contribute and commit to achieving a sustainable and just future.

Climate justice

The fact that climate change is not only an ecological problem but at the same time also a social and economic one becomes clear when it comes to the rights of indigenous peoples. Similar to many other population groups whose livelihood depends directly on the use of natural resources, indigenous peoples dwelling in sensitive ecosystems are most affected by climate change – and that although they barely contribute to it themselves.

If we really want to meet these challenges, then a holistic approach is required. Based on the principle of »common but differentiated responsibilities«, we must identify global relations and mutual dependencies, and commit to focusing

our efforts on distributive justice and innovation. Climate justice requires sustainable local solutions that enable a good life for all people of the world.

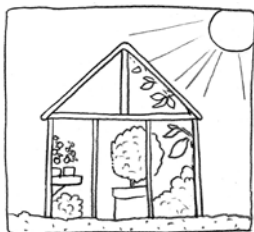
Education for Sustainable Development ESD

The Global Action Programme on Education for Sustainable Development is tasked with providing everyone with an insight into the complex local and global fields of action and thus contributing to the Agenda 2030. Changes are necessary in all social structures: politics, industry and not least the lifestyles of each and every one of us must be rethought in line with the Agenda 2030. Such far-reaching changes can only be effective if they are supported by a well-informed and committed general public. The ESD should help draw attention to previously indiscernible or neglected relationships between environmental action, economic needs, and social and global requirements. Sustainable everyday action as well as long-term (life) plans can be adjusted accordingly based on this.

Linking local action with global thinking is a small step in this direction – and that is ultimately also the aim of the ZOOM – Kids on the Move! campaign. It opens up new perspectives to the children and enables them to develop skills in the process and learn the values required for a respectful coexistence with other people on our planet. Children become more open-minded, act with greater foresight, and also act as role models to motivate others.

The climate and greenhouse effect

Many people consider the human-caused global increase in temperature to be the most dangerous burden on the environment caused by humans to date. Climate researchers predict warming of the earth by between 1.4°C and 5.8°C this century. They warn of a rise in the sea levels, with flooding, the loss of land, desertification



and an increase in extreme weather conditions. The so-called »anthropogenic« (i.e. man-made) greenhouse effect is responsible for this rise in temperature.

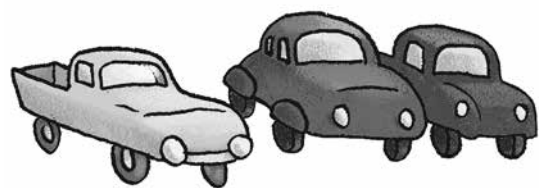
The greenhouse effect was originally only a natural phenomenon, whereby our planet works like a greenhouse: the sun's rays penetrate unhindered and are converted into heat. This heat cannot escape through the glass roof again as readily though, hence the greenhouse heats up.

The situation is similar in earth's atmosphere. The sun's rays that reach the earth's surface are converted into infrared rays (heat radiation) and are reflected back into the atmosphere. Climate-changing gases – so-called greenhouse gases such as carbon dioxide (CO₂), methane, nitrous oxide and ozone work like the greenhouse's roof and reflect part of the heat radiation back down to earth. This is our natural heater. Without it, the average temperature on earth would be -18°C and humans would not be able to live here. Thanks to human activities, such as burning fossil fuels, industrial processes, changes in land usage and large-scale forest clearance, humans are interfering with the natural process. Hence the concentration of CO₂ in the atmosphere has increased by more than one third, the methane concentration more than doubled and the nitrous oxide concentration risen by almost one fifth since the start of industrialisation.

Traffic and modal choices

Almost 30% of climate-damaging CO₂ emissions in the EU come from road traffic.

All combustion leads to release of the greenhouse gas carbon dioxide (CO₂) into the atmosphere. The emissions from cars relate directly to consumption: approx. 2.5 kg of CO₂ is released into the atmosphere per litre of petrol used. The consumption savings made by introducing new, more efficient cars are far outweighed by the additional consumption caused by the overall increase in traffic. The most environmentally-friendly modes of transport are undoubtedly walking and cycling.



The so-called kilometre balance reveals how environmentally-friendly cars, buses, trains and planes are. It is calculated from the energy consumption per person and kilometre. Thus, while the energy consumption of buses is higher than that of cars, they can transport far more people, which means that the kilometre balance is far better. Planes have the worst kilometre balance. The mobility of Europeans contrasts starkly with the environmental sustainability of the different modes of transport: while there were around 417 cars per 1,000 inhabitants in the EU in 2000, this total had already risen to 477 cars per 1,000 inhabitants in 2010. This corresponds to an increase of 14%. All across

the EU, cars are the first choice when it comes to the modes of transport: in 2010, almost 83% of person kilometres were covered by car.



Child-friendly traffic environment

Ideally, this means a traffic environment without any cars in which children are able to move around safely and have space to play. In reality, the streets are oriented to car usage meaning that there is barely any space left in urban spaces to cater to children's (mobility) needs. Children are restricted to limited spaces such as playground or pavements that are too narrow and often full of parked cars. They are barely able to get the movement required for their motoric development in their everyday lives. The consequences are motoric and health deficiencies, domestication and isolation in front of television and computer screens. This problem must above all be solved in existing residential areas with transport policy measures such as speed limits and traffic calming measures (i.e. the curbing of through traffic and slowing of the remaining motorised transport through the designation of play streets, for example). A safe and connected path network to child-specific facilities in residential districts is also important for a child-friendly traffic environment. If not yet available, a variety of crossing options should be created on streets for pedestrians both young and old, such as zebra crossings and traffic islands. In case of roads with several lanes, pedestrian crossings with traffic lights featuring sufficient green phases and as short as possible red phases are necessary. Parking on pavements constricts pedestrians' freedom of movement and should only be permitted on pavements that are more than five metres wide. To ensure that the areas forced to double as play areas are not constricted even further, parking on pavements in general should be reviewed. Large car parks (e.g. belonging to supermarkets) could be opened as a play and skating area outside of business hours. Frequent and intensive use of their living environment means that children are extremely familiar with their traffic environment. They are real experts! This should be taken advantage of by including children and young people in urban and traffic planning – through a children's district parlia-

ment, forums or similar forms of participation, for example.

From road safety to mobility education

These days, children's lives are greatly impacted by motorised private transport. They often experience it in their own environment from the »windscreen perspective« when being driven around by their parents. Despite the declining figures, traffic accidents involving children are still common in European road traffic. According to an EU report, more than 26,000 people died on the roads in 2015 – so an average of 51.5 road deaths per one million inhabitants.

In recent decades, a great deal of emphasis has been placed on road safety education in kindergartens and schools to help prevent accidents. Traffic safety is certainly very necessary, however from a developmental psychology perspective, its effects are somewhat limited: children only develop a hazard awareness at around the age of eight. They are very easily distracted by interesting things around them that seems to make them forget the traffic rules that they have learned, such



as looking to the right and left before crossing the road or stopping when they reach the curb. Physically, they can also barely cope with the roads, which are tailored to the needs of adults. When they stand between two parked cars,

they cannot see what is happening on the road. The green phase of traffic lights are often too short – both for children and elderly people. Within the scope of mobility education, attempts are also being made to offer children a safer road environment. Parents, teachers, politicians and municipal employees must be involved in the concept to make routes used by children safer. For only in this way can independent mobility be developed and children no longer be reliant on continuously being accompanied by an adult.

Traffic and health risks

The health consequences of traffic development, restriction during play, and the air and noise pollution caused by road traffic along with the increasing space usage are often still not borne in mind in »classic« road safety. Psychomotor disorders due to a lack of movement are today not uncommon among children. The hectic and noise of road traffic stress their senses and lead to reduced concentration. What's more, the »couch potatoes« caused by road traffic often

suffer from postural problems and excess weight. The air pollution in cities aggravates respiratory diseases. Motorised individual travel is a leading cause of asthma and allergies. In order to encourage sustainable development, children should be accorded a responsible and independent attitude to mobility for their future. The existing traffic conditions should be considered from a critical perspective. This involves teaching the children about sustainable mobility options, fostering a well-considered modal choice and imparting the according skills to use environmentally-friendly modes of transport (walking, cycling, bus and train).



Food consumption

Everyday food choices contribute significantly to the global burden on the climate. In Europe, around 20% of energy is used alone for its production, preservation, transport and preparation. The impact of different foods on the climate varies widely: far less energy is required to produce plant-based foods compared to animal products. Among others, this is due to the fact that cattle produce large quantities of methane during digestion, which is a greenhouse gas 25 times more potent than carbon dioxide. The seasonal cultivation of fruit and vegetables outdoors has far less of an impact on the climate than cultivation under glass or polytunnels. Organic farms release less greenhouse gas per hectare than conventional farms. Generally speaking, fresh, minimally-processed food has less of an impact on the climate than highly-processed products. Particularly frozen foods are associated with high energy consumption – not only during their processing but also during their storage and preparation.

Long transport routes by plane or lorry also harm our environment. The global increase in shipping should not be forgotten here either. The carbon dioxide released contributes to climate change, exhaust gases contaminate the air and lorries cause noise pollution and produce particulate matter.

Regional foods

Producing food in the local area leads to shorter transport routes and strengthens the regional economy accordingly. Because the food is harvested when fully ripe, it also tastes better and is healthier. Some foods such as classic »colonial wares« like pineapples, oranges, bananas, coffee and cocoa cannot be grown locally – but they can be purchased from organic, fair-trade sources. Others like strawberries and asparagus are best consumed during the local season rather than taking advantage of the offers from abroad or produced in greenhouses during the winter. Apples and many other types of vegetables can be bought fresh from local producers according to their seasonal availability. Seasonal calendars are available from consumer advice centres, for example.



Fair consumption

It is also worth widening one's perspective and paying attention to the conditions under which clothing, electronic devices, toys and even kindergarten and school materials are produced. This includes criteria such as working conditions, fair pay, working rights and the avoidance of child labour in addition to the environmental impact of the production and transport of goods. Through their behaviour, consumers assume responsibility for their own actions – after all, they are responsible for determining which products ultimately end up in their shopping basket. Generally speaking, cheap products from supermarkets, department stores or €1 shops can only be produced under poor working conditions. Alternatives are available in the form of fair-trade products as well as second-hand items from shops or online, at flea markets and exchange parties. It is also possible to borrow items from friends, repair existing items or even make them oneself.

Sufficiency

Sufficiency in this context means the attempt to keep the consumption of raw materials and energy to a minimum. This approach follows the principle that »less is more« and entails leading a good life through fewer possessions enabling

greater freedom. If we continue to exploit our planet as we have in the past, we will already need two planets by 2030 to cover our annual food, water and energy requirements.

Energy

Energy is »the strength and vitality required for sustained activity«. We cannot see, hear, taste or smell it. And yet we encounter it in the most varied of forms, such as heat, light or motion. Countless other forms of energy such as electrical power, tension and chemical energy can also be experienced in our everyday lives.

In physics, the law of conservation of energy states that energy cannot be created or destroyed. Rather it can merely be transformed from one form to another.

When »energy generation« is referred to (e.g. electricity generation), different energy transformation processes are actually meant here. Hence chemical energy is transformed into thermal energy (heat) in coal-fired power stations. This heat in turn generates steam, which is converted to mechanical energy via turbines and then into electrical energy (»electrical power«) using generators. Energy cannot exist alone. It always needs a medium such as crude oil or wind – these are two typical representatives from the two major groups of non-renewable and renewable energy sources.

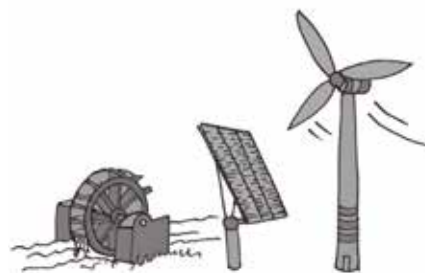
Non-renewable energy sources – fossil fuels and uranium

Fossil fuels (oil, gas, coal) are essentially concentrated solar energy, which was stored in organic material millions of years ago and converted into chemical energy in a lengthy process under high pressure and at high temperature. If this »concentrate« is burned, a huge amount of energy is released. If the energy in one barrel of oil (159 litres) were to be generated by muscle power, then it would correspond with 25,000 hours of the most strenuous manual labour. At the same time, the CO₂ absorbed and stored millions of years earlier is released back into the atmosphere within the shortest of times. Non-renewable energy sources can only be used once and are also only available in limited amounts. During their use, large quantities of CO₂ are released in just a short time, which cannot be absorbed again by plants and therefore increases the amount of CO₂ in the atmosphere. The greenhouse effect and climate change are exacerbated as a consequence. Crude oil is particularly valued, hence it is often referred to as »black gold«. It is the raw ingredient of countless products and today also still the fuel for almost all forms of

transport. However, in the foreseeable future, earth's crude oil reserves will no longer be sufficient to cater to the growing global demand. Exploitation is becoming significantly more difficult and expensive and can even cause global conflicts. Many researchers are of the opinion that the remaining reserves of fossil fuels should remain in the ground in order to prevent climate change from worsening.

Renewable energy

It is not only important to use energy sensibly to ensure that sufficient energy is also available in the future in order to protect the climate. A move should also be made toward using renewable energy from the sun, wind, water, biomass and geothermal heat. Renewable means that the energy can be used time and time again and will therefore also be available in the future. Alone the amount of solar energy that reaches the earth's surface corresponds with 10,000 times the amount of energy needed by all people in the world. It is safe, does not cause any pollution and is available in unlimited quantities (in human terms).



Energy transition

In 2014, the European Council in Brussels agreed a new framework for EU climate and energy policies until 2030. Particularly the agreement of a reduction target of at least 40% to reduce greenhouse gas emissions constitutes a breakthrough. What's more, by 2030, 27% of the EU's entire energy consumption should be covered by renewable sources such as wind, solar or biomass (currently approx. 15%). The energy transition also aims to improve energy efficiency, so the saving of energy – for the heating of homes or mobility, for example. The retrofitting of buildings and development of electric cars are important aspects here.

Campaign planning



This is the detailed plan for implementation of the campaign. Only want to get involved in the Green Footprints campaign? Then only the steps marked with a footprint are relevant.

Preparation tips

- Familiarise yourself with the **stickers and sticker album**; the latter contains information on how to use these.
- Create a **Green Footprints poster** (e.g. with the title »ZOOM – Kids on the Move!«) and display it where all the children can see it.
- Obtain a **world map** and mark on the (rough) location of your town/city/community.
- Review the implementation and game ideas, break time games, worksheets, Climate Voyage stopovers and support materials. Create an **individual class or group plan for the week** to suit your needs.
- Decide which activities you wish to complete to **prepare for and follow up on** the campaign week.
- Inform the children's **parents** of the campaign in good time so that they can best support their children (e.g. if children should travel to school or kindergarten by bus rather than be driven by their parents or if trips are planned for the week). Arrange an information week for parents or provide the children with written information before the campaign (see template and parent information in the sticker album).
- You are able to decide how long you wish to run the campaign and whether to implement it over **one or more project weeks**. We recommend collecting Green Footprints for at least seven days.
- The collection of Green Footprints can easily be spread over several weeks. A sticker album supplement is available for this.
- The implementation and game ideas have been conceived in such a way that the campaign period can be extended beyond everyday kindergarten/school life.

Materials

- Large sheet of paper for the Green Footprints poster
- World map
- A little flag or sticky label to mark your town on the map
- Paper, crayons and scissors to make wishprints (see sticker album)
- Pinboard for the world map and Green Footprints poster

Week plan

Introduction

Day 1

- ☞ To introduce the subject of mobility, we recommend discussing the children's journeys to kindergarten/school with them. They can then report how they come to kindergarten/school, whether someone brought them, what they experienced/saw/heard and whether there were any dangerous situations along the way.

Implementation idea: Activity 1 »Drawing the route to kindergarten/school« (can also be set as a homework task to prepare for the campaign week).

- ☞ The modes of transport used by the children can be recorded. At the end of the campaign week, they can discuss their mobility behaviour again and record any changes to this.
- ☞ The first day should also be used to discuss the advantages and disadvantages of the different modes of transport with the children in order to once again explain the options and which of these are environmentally-friendly.

Implementation idea: Activity 2 »What are the options? And what are their advantages and disadvantages?«; specifically for younger children: Activity 3 »What do you prefer?«

- ☞ Explain the campaign aims and background to the children (please also see the background information from page 5).

To **introduce the subject of climate-friendly food**, you could speak with the children about what they ate for breakfast and whether this included any foods from far away or from the local region.

Implementation idea: Activity 16 »What is on our plates?« (can also be set as a homework task to prepare for the campaign week).

The food eaten by the children can be recorded. At the end of the campaign week, they can then compare whether they were maybe able to add more regional foods to their diet by the end of the week. On the first day, you could explain the relationship between food and climate protection to the children and what opportunities exist for a climate-friendly diet (please also see the background information from page 5).

To **introduce the subject of saving energy**, we suggest discussing children's daily energy usage with them.

Implementation idea: Activity 27 »Find the energy source«

First, explain the relationship between energy consumption and climate change to the children and what they can do to save energy (please also see the background information from page 5 and the »Examples of energy-saving measures« on page 38).

- 🔗 Distribute the sticker albums and stickers to the children. Give each child a sticker album (they are able to keep this at the end of the campaign week) as well a sheet of stickers.
- 🔗 Explain the sticker album and how to stick the stickers (please also see the information in the sticker album itself). You can remain flexible regarding use of the stickers: children, who have to be driven to school, can perhaps collect Green Footprints during afternoon activities – when they go for a bike ride, for example. Explain the Green Footprints poster: for every green sticker that a child sticks in their sticker album, they can draw a footprint/green dot on the Green Footprints poster in the class/group room. For each climate-friendly food or energy-saving activity, they can draw an apple/red dot or energy-saving light bulb/blue dot respectively.
- 🔗 The children are able to stick the first sticker in their sticker album for today's journey to kindergarten/school and to draw a footprint/green dot on the Green Footprints poster as appropriate. For each climate-friendly food or energy-saving activity, they can

draw an apple/red dot or energy-saving light bulb/blue dot accordingly.

Homework on mobility: Activity 4 »The journey to kindergarten/school in former times«.

Homework on saving energy: Activities 28 and 29 from the »Exploring everyday energy usage« block.

Days 2–5

- 🔗 At the start of each day, the children should discuss briefly how they got home the day before and how they came to kindergarten/school today and whether they have already added the according stickers to their sticker album. You can also ask the children about their climate-friendly food and energy-saving activities. If they have completed any activities, they can add the according stickers for these, too.
- 🔗 For each sticker that a child adds to their sticker album, they are able to draw a footprint/green dot, apple/red dot or energy-saving light bulb/blue dot on the Green Footprints poster in the class/group room.
- 🔗 Select further activities from among Activities 5 to 38 for the next days.

For an overview of all activities, please see the table on the **next page**.



We recommend the following order, with 1–2 activities per day and topic:

	Mobility	Climate-friendly food	Saving energy
Days 2 and 3	<p>5 Great climate? The green-house effect – or why it is getting warmer and warmer</p> <p>6 Journeys of children from around the world</p> <p>7 The long journey of orange juice</p>	<p>17 Where is our food from?</p> <p>18 Cooking in kindergarten/school</p> <p>19 A closer look at potatoes</p> <p>20 A regional feast</p>	<p>30 Past, present, future</p> <p>31 A day beside the Rio Negro</p> <p>32 Investigating the green-house effect</p>
Day 4	<p>8 You live here, I live there</p> <p>9 Detectives on the road!</p> <p>10 My road traffic plan</p>	<p>21 Harvesting wild herbs and fruits</p> <p>22 The forest treasure trove</p> <p>23 In the Amazon rainforest</p>	<p>33 Renewable energy</p> <p>34 The energy check</p> <p>35 Making energy savings</p>
Day 5	<p>11 What can you hear? A listening walk</p> <p>12 Cars need space – so where can we play?</p> <p>13 Drawing my street</p>	<p>24 Other countries – other customs</p> <p>25 Cultural buffet</p> <p>26 The palm oil check</p>	<p>36 Making earth colours</p> <p>37 Swap shelf</p> <p>38 Plastic in satchels and bags</p>

Weekend

- The children can collect Green Footprints during their free time.

- 👉 Create colourful paper footprints with the children. Each child can then decorate a set of footprints, including their wishes and ideas for politicians.

Monday after the campaign week

- 👉 Follow up on the campaign week.
- 👉 Get the children to report back on their weekend activities.
- 👉 Compile a list of environmentally-friendly journeys in sentences or pictures. These can be hung around the classroom or used to create a documentary record.
- 👉 Use **Activity 39** »Climate-friendly kids think smart« (page 58) to reflect on the campaign week and record the key changes that the children want to make.
- 👉 Get the children to either draw or stick the footprints/green dots, apples/red dots or energy-saving light bulbs/blue dots collected at the weekend in the sticker album and on the Green Footprints poster.
- 👉 Help the children to count up the total Green Footprints they have collected.
- 👉 Add the Green Footprints collected by all of the groups/classes involved in the campaign together and record these clearly on the poster that can then be handed over to the municipality.

Immediately after the campaign

- 👉 Please send details of your project outcomes to Climate Alliance or your municipal coordinator – be sure to include:
 - details of the total number of children and groups who participated, along with the total number of footprints of different colours collected;
 - examples of the colourful paper footprints made by the children;
 - photos, reports, class posters, etc. Please use the feedback form on page 59 for this.
- 👉 We are also always delighted to receive press releases about your campaign, photos and any other documents or other descriptions of the campaign week you have created! We will assume that any materials you send us can be made public.
- 👉 The children are of course allowed to keep their sticker album – it is sufficient for you to simply provide us with the total number of climate-friendly footprints collected, divided into the green, red and blue footprints.

Mobility



Introduction

1 Drawing the route to kindergarten/school

Intention

To introduce the children to the subject of road traffic and use of the sticker album, get them to think about their daily journey to kindergarten/school. This can be done in a child-friendly manner by asking them to draw the route they take. These provide interesting insights into the development of children's spatial awareness: has the route been drawn from a »bird's eye perspective«, so almost like a street map? Or has a »street view« of the houses and roads been drawn? Have they only included a few elements or just the main »sections« in their drawing? Have the children included themselves in their drawing? Perhaps with friends? Or is only an »objective« view showing only the external features provided? Consideration of the choice of transport is also interesting: do the pictures by children, who are driven to school, differ from those by children, who normally walk? Countless possibilities to evaluate the drawings exist here. The drawings can then be displayed in a display or wall newspaper. The children can then add further pictures, stick photos or paint pictures of other places they like (football pitch, forest, stream) around the drawings.

Implementation

Get the children to draw their route to kindergarten/school on a large sheet of paper (as homework or a lesson task). The drawings can be used to start a discussion on transport and to explain the sticker album. Primary school juniors can also annotate their drawings or describe their route to school in writing on a separate sheet of paper.

The children can then explain their routes during a class discussion. Stories and experiences from the journey to school (written or verbal) together with items found along the way can be collected immediately after this or over the next few days. The children's homes can be marked on a map, and photos/pictures of key features

along the route added here together with stories, experiences and items found. The results can be displayed on a wall in the class/group room or outside in the corridor.



Ask at the town/city hall whether maps of the town/city or school routes are available for children to use for your campaign or whether they can maybe provide a map of your local area.

Materials

- Paper and pens
- Sufficient space to display the drawings; where desired, a street map

2 What are the options? And what are their advantages and disadvantages?

Intention

To introduce the subjects of the climate and mobility, the children should consider the advantages and disadvantages of the different modes of transport. Road traffic, which has increased continuously over the past few decades, has a major impact on children. Their freedom of movement is restricted by driving and parked vehicles, they are at risk of accidents, and they are exposed to exhaust gases and noise. At the same time, cars are a major source of fascination for children. Indeed, in some families, they are of high (emotional and material) value. Children's wishes for their own »dream car« are by all means real – as is the wish to obtain their driving licence as soon as possible.

Environmentally-aware mobility education does not seek to stigmatise cars in general. Rather, the aim should be well-considered transport choices. This includes critically weighing up the advantages and disadvantages of travelling by car. Children should not be given the idea that their parents must give up their job if their place of work can only be reached by car. Instead, alternatives should be pointed out and emphasis placed on



their advantages. It should be made clear that there are journeys that are actually best covered on foot or by bike – trips to the local post office or bakery, for example. What's more, it can by all means be pleasant to take the bus or train into town, as there is then no need to hunt for a parking space. The motto could be: as many cars as necessary, as few cars as possible!



Implementation

Working in groups, the children should make a list of all of the advantage and disadvantages of the different modes of transport on posters. They can either draw the modes of transport themselves or cut out pictures from magazines. The **Activity Worksheet 2** (page 44) can be used by way of introduction. The children can then present their arguments during a discussion. In kindergartens, the advantages and disadvantages can be discussed as a group.

Materials

- Worksheet
- Paper (poster size) and pens
- Where desired, magazines



Possible follow-up tasks

Suitable for children up to the age of 12

- **Pros and cons discussion:** the children can be divided into two groups to represent opposing views (e.g. for or against travelling by bus or train).
- The children could prepare a **»mobility diary«** for their families. During a set period (e.g. one week), they should keep a record of how each individual member of their family completes journeys, how many journeys they complete and which modes of transport they use for these. The diaries could then be evaluated (e.g. were there were any unnecessary car journeys? What are the advantages and disadvantages of having to change modes of transport?).

3 How do you like to travel?



Intention

Children are familiarised with different modes of transport, learn about public transport and practise road safety. They can practise riding their tricycle, scooter or bike in a safe environment; skills courses can be set up for more capable children. The worksheets can be used to teach the children about the different colours used in road traffic and the meaning of the traffic light colours. Use the collective term »vehicle« and encourage the children to express their opinions and to speak freely.

Preparation

- **Activity Worksheet 3** (page 45) depicts different vehicles for the children to colour in. They should colour, circle or tick the modes of transport they like to use in green. Those they do not like to use should be marked in red. Those they are not familiar with should be marked in yellow.
- To familiarise the children with modes of transport that they have never or rarely used before, prepare a little trip, such as a walk, cycle, bus ride or trip on a tram or underground train.



Implementation

Use the colouring sheet to explain how people can move around. The collective term »vehicle« can be introduced here. Ask the children which vehicles they are familiar with and use themselves. Are there any modes of transport that the children do not like or are not familiar with? Each child can explain briefly why they do not like to walk, travel by car, take the bus, etc. The trips can then begin – depend how many you plan to complete, these can be spread over a period of 1–2 weeks. The most important safety rules for each individual mode of transport can be discussed with the children before and during the trips. Depending how are the children are, the pollution caused by each mode of transport could also be discussed with them in simple terms. After the trips, ask the children to draw pictures to see whether

their opinions have been changed and if so, how. They can then explain what they particularly liked and what they didn't like. It is also interesting for parents to learn how their children prefer to travel. The results could therefore potentially be presented at a parents' evening.

Materials

- Colouring sheet
- Red, green and yellow pens

Tip

This activity can also be combined with **Activity 2** (page 13) and **Activity 14** (page 23).

Ideas

- Organise a bicycle/scooter wash and care day with the children. Perhaps get a competent parent to help tighten a few nuts and bolts or oil bike chains. The children will really enjoy this and bike safety can also be improved: having a clean and well-functioning bike/scooter will make the children want to come to kindergarten/school by bike/scooter even more!
- Cycling/scooter proficiency test: arrange this independently or together with the local (traffic) police.

4 The journey to kindergarten/school in former times

Intention

Considering the journey to kindergarten/school of grandparents or elderly neighbours (e.g. during interviews) will increase children's awareness for their own journey.

The journey to kindergarten/school used to be different. They were sometimes more dangerous and often took longer than they do today. Children mostly had to walk and were rarely driven anywhere. The huge increase in cars has significantly changed the journey to kindergarten/school as well as the experiences during these journeys.

Interviews with grandparents/elderly neighbours can allow the children to find out what has changed and what is still the same.

Implementation

Get the children to interview their grandparent(s) or an elderly person from their neighbourhood about their journey(s) to kindergarten/school.



Kindergarten children can ask their parents and grandparents about their journey and perhaps draw pictures of these.



Children aged 8–12 can use **Activity Worksheet 4** (page 46) for the interview.

It is of course also possible to conduct the interview without using the worksheet. Alternatively, the children are able to prepare their own questionnaire or to conduct the interview on the street using a recording device.



They can then compare their own journey with those of the adults they interviewed and either write a text explaining the differences or discuss these as a group. Alternatively, the key findings (e.g. mode of transport, journey length) can be summarised in a table on a large poster. Other information obtained during the questionnaire (e.g. experiences during journeys in former times) is best presented during a discussion round.

Materials

- Worksheet
- Clipboard/hard surface to lean on
- Poster for evaluation
- Where desired, a recording device incl. microphone



One world!

5 Great climate? The greenhouse effect – or why it is getting warmer and warmer



Intention

The subjects of the climate and greenhouse effect are complex and can only be understood by primary school children to a certain extent (see background information). The illustrated story on **Activity Worksheet 5** will help provide a basic understanding of the greenhouse effect.

The focus is less on the subject of the climate here and more on the fact that our actions have an impact on the entire world. Reference can be made to the UN climate conferences and campaign here. It should be made clear that local action (e.g. avoiding unnecessary car journeys) is by all means of global significance and the Green Footprints collected during the campaign can help to improve the global climate.

Implementation

Read the illustrated story on **Activity Worksheet 5** (page 47) with the children. As a class or in small groups, get them to think about who (or what) apart from cars also contributes to global warming and what they think can be done to prevent this. The results can be recorded on the board or posters.

Background information

Carbon dioxide is released when fossil fuels (coal, gas, oil) are burned. Solutions to reduce the CO₂ emissions can therefore include saving energy in all areas of life (cooking, heating, etc.). Those who save electricity help to protect the climate – the same goes for those who heat intelligently.

Idea

To further illustrate the greenhouse effect, a greenhouse could be visited. A small greenhouse is often big enough to illustrate the principle of the greenhouse effect and temperature differences. Such a trip is also suitable for kindergartens and primary school infant when combined with the appropriate information.

Tip

This activity can also be combined with **Activity Worksheet 33** »Renewable energy« (page 56) outlining alternatives to fossil fuels. The children can experience the greenhouse effect first-

hand by completing the experiment in **Activity Worksheet 32** (page 55) and investigating where energy is used in daily life and how this can also be saved by completing **Activity 35** (page 38).

Materials

- Worksheet
- Paper

Tip



The Climate Voyage stopover »North America: glittering lights at any cost?« is a good complement here.

6 Journeys of children from around the world

Intention

The campaign not only aims to raise awareness for one's own situation but also to take a look at the bigger picture and consider mobility and climate protection in a global context.

Activity Worksheet 6 (page 48) provides children with a preliminary insight into the differences and similarities between journeys to school in different countries of the world.

The children from Brazil, South Africa, China and the USA use modes of transport that the children are by all means familiar with to travel to school. Despite their different living conditions, all of the children have in common that they must complete the journey to kindergarten or school – if they are lucky enough to attend a kindergarten or school that is! The children can compare their journey with those of the other children.

Implementation

The children should read through the information in the speech bubbles on **Activity Worksheet 6** (page 48). They should make a note of any questions they might have and underline any words and/or names that they do not understand or cannot pronounce. After discussing their



questions, the children can work in silence to write about their own journey to school. Alternatively, this can be set as a homework task. If there is not sufficient space on the worksheet, they can continue writing on the back.



Kindergarten children and primary school infants can draw pictures to illustrate the different children and/or their own journey to kindergarten/school once the texts have been read out to them.

Idea

The modes of transport discussed in **Worksheet 6** can perhaps be acted out to kindergarten children (bus = eight chairs, boat = upside-down table, bike = broom handle, etc.)



Children aged 8+ can search for the home countries of the children described in the worksheet on a world map or globe, and the conditions at the schools and differences between the journeys to school compared. The children can work in small groups to search for further information about the countries and present their findings to the rest of the class.

Materials

- Worksheet
- Where appropriate, world map/globe and other information materials (books, travel guides, etc.)

Tip

- Additional materials on school journeys in other countries are available on www.zoom-kids-forclimate.eu.
 - The Climate Voyage, particularly the stopovers »Africa: healing rain – but when?« and »Australia: where the firebugs dance«, make suitable complements here.
- **Activity 23** »In the Amazon rainforest« (page 30) and **Activity 24** »Other countries – other customs« (page 30) offers further insights into regional foods. **Activity 31** »A day beside the Rio Negro« (page 35) informs on everyday energy usage in Amazonia.
- For more information on journeys to school and related projects, please see www.iwalkto-school.org.



7 The long journey of orange juice



Intention

To make the global impact of our lifestyle clear to children, a sample product could be considered that children all are familiar with from their everyday lives. As a drink enjoyed by most children, particularly things like orange juice are suitable here. Other foods and products (e.g. chocolate, bananas or a football) can also be considered during class.



Implementation

»Which of you like orange juice?« – this question can be used to lead into the subject. The children could also make a list of products they know that include oranges. A taste test with freshly-made and shop-bought orange juice could be organised, too. The children can then be asked whether they know that orange juice has already completed a very lengthy journey to reach them.

The illustration on **Activity Worksheet 7a** (page 49) and text on **Activity Worksheet 7b** (page 50) enable more in-depth consideration of the production and transportation of orange juice. The class can be divided into groups to answer the questions. They can be provided with additional materials on Brazil (atlas, encyclopaedia, travel guides, music, etc.) to allow them to gain an impression of the country for themselves. They can then present their findings to the class.

Avoid portraying a negative picture of Brazil to the children (destruction of the rainforest, social situation). Instead, focus on positive aspects such as football or the carnival in Rio. Possible solutions should also be considered (e.g. fair-trade orange juice along with the production and transport chain).

It can perhaps be discussed how a great many celebrities use fair-trade products and bear this in mind during their daily shopping. Please see www.fairtrade.net for details of which celebrities could serve as role models for the children.

As homework, the children could discuss with their parents or friends what other foods come to



us from far away and what problems are associated with these. The subject can also be discussed with the class in combination with **Activity 24** »Other countries – other customs« (page 30).



Background information on the illustration

- According to Fairtrade International, almost 80% of the world's orange juice exports originate from Brazil where the oranges are grown in vast plantations and harvested by hired workers. The oranges are picked by hand as the fruits do not ripen at the same rate. They are collected on high ladders in sacks weighing up to 30 kg, which are then carried to the collection point.
- Beside contamination from pesticides, the workers above all suffer from back problems. Many therefore cannot perform the work to their full capacity and are forced to make their children work.
- The orange juice is transported across the Atlantic as frozen concentrate aboard refrigerated freighters, then diluted again at juice manufacturers – often after being stored for a long time.
- Despite the high energy consumption for transport and storage, the juice can still be sold to us for rock-bottom prices. This is above all due to the low transport costs and low wages of the Brazilian plantation workers: they earn around just €25 per week as piece workers. And this although they work ten hours a day, six days a week and sometimes also on Sundays.

Game ideas and tips for the harvest story

- Making home-made orange juice: the children can experience first-hand how many oranges are needed to fill one glass with juice and learn in this way how their actions are linked with those of Sidnei's family.
- Picking oranges: the techniques used to pick oranges can be practised with the children (e.g.

reaching up for the fruits, bending down to pick fruits up off the ground, climbing a ladder, carrying full baskets of oranges, etc.). Allowing them to understand just how hard Sidnei and his family must work.

- Classroom shop: to show just how many oranges are needed to produce one litre of orange juice, 16 oranges, the picker's wage (€0.25) and a bottle/box of orange juice with the according retail price can be set up alongside one another in the class/group room.
- The euro as a pie chart: one euro can be used to indicate in a pie chart what the company (retailer) will earn compared to the orange picker.
1 litre of orange juice = €0.25 for the picker and about €1 in the supermarket.



Materials

- Worksheets
- Information materials about Brazil (see above)
- Where desired, orange juice and/or fresh oranges



Children experience road traffic – traffic detectives and urban planners

8 You live here, I live there



Intention

The homes of each individual child can be visited during a walk with the group. This activity reinforces the sense of belonging to the group and the understanding for one another. The children gain a sense of the different distances and their local neighbourhood. During the walk, the traffic situation at various places along the route can be explained and preliminary exercises in road safety conducted. Depending on the size of the catchment area, the children can also experience public transport.

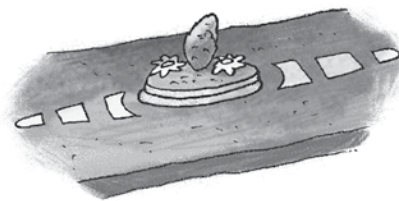
Preparation

- Begin by checking on a map where each individual child lives and determining the best route.
- Depending on the group size and locations, several tours could be planned. In case of longer distances, short play breaks could be planned (e.g. at a playground along the way or short stop-offs at the children's homes).
- The relevant section of the map can be enlarged and handed out to the children or – even better – a simplified version featuring the major roads drawn on a large sheet of paper or wall newspaper. Each of the children can then bring a photo of their home with them. Alternatively, they can draw a picture. For a sample wall newspaper, please see www.zoom-kids-forclimate.eu.
- If the group has not covered any longer distances before: set and discuss rules on how to behave in road traffic (e.g. »We will stay together and wait for each other at every street corner.«, »We will only cross roads as a group.«). Depending how old the children are, discuss crossing the road in different situations (e.g. when there are traffic lights, a zebra crossing or a traffic island; how to behave in the bus or tram).

Implementation

Before setting off on the trip, stick the photos/pictures of the children's homes to be visited on the wall newspaper. The children can then briefly explain how they get to kindergarten/school each morning. The most important rules for how to behave on the street should also be reviewed. All

children then have the task of finding out where the other children's homes are. Upon arriving at their home, each child can then explain or show where and how they live: which floor do they live on? Can they point out their bedroom window? Is there a garden or playground where they can play? Do they have nice neighbours? Before moving on, a photo can be taken of the child or group in front of the building. The teacher(s) and children should take note during the walk of whether there are any »sights« or other points of reference along the way that can be added to the map afterwards. Ideally, also take a photo of these. After the walk, the route can be reviewed and added to the map. It should be discussed who lives closest. Did the children find the route long or short? Which children can potentially walk to kindergarten/school together? This information is also interesting for parents and could potentially be presented at a parents' evening.



Materials

- Large map/paper to add the most important routes
- Photos/pictures of the buildings where the children live and of the children themselves
- Pens, camera for out and about

9 Detectives on the road!



Intention

Children use the questionnaire, tape measure and stopwatch to investigate their daily journeys. The activity helps to improve their local knowledge, as it tests their sense of direction and abstraction skills. Allowing them to identify more strongly with their surroundings. By observing the traffic, they gain an awareness for dangerous spots in their local area. They learn to judge these more realistically. Moreover, a local children mobility report allows preliminary experiences with municipal planning processes to be gathered. It can be used to improve traffic safety locally. Involvement of the local press in implementa-



tion of the campaign is recommended for this. Support can also be requested from local environmental and children's associations along with citizens' initiatives. To avoid any disappointments and other negative effects, it should be discussed with the children that it can take a very long time to implement changes and not all problems can be solved from one day to the next.

In-class preparation

- The campaign goals, questionnaire and all questions can be discussed with the children. Where necessary, they can practise using the stopwatch and tape measure.
- Depending on the type of implementation (see above), the route should be set and the children divided into groups as necessary.
- The children can use the »Detectives on the road!« template to create their own identification documents.



Implementation

There are three options for completing this activity in class:

1. The teachers and children explore a set »route« that the children are familiar with from their daily lives (can be determined using a list of the children's addresses). Each child completes their own questionnaire.
2. The class is divided into groups, which then investigate their everyday »routes«. Problem during school hours: all groups must be accompanied by an adult (teacher).
3. The children spend an afternoon exploring their »route« on their own. A letter can be written to the parents to ask for their help.

Materials

- Sufficient questionnaires
- Measuring tape or yardstick
- Stop watch or clock with a second hand
- Clipboard (affordable alternative: back of a notepad with a peg)
- Notepaper

Evaluation

The questionnaires can be used to (a) obtain statements on the children's wishes regarding the traffic environment, (b) identify concrete problems and dangerous points in the respective municipality, which can then be used as the basis for discussions with the responsible policymakers and municipal representatives, and (c) obtain statistical information on children's mobility and play behaviour (optional). A variety of evaluation options then exist:

For (a) and (b):

Create a local children's mobility report. This »review« summarises the outcomes of the »Detectives on the road« activity.

The report can be prepared as follows:

- Problems with pavements and cycle paths, wait times at traffic lights and dangers (speeding cars, etc.) can be indicated on a town/district map.
- The pictures and stories from the »My road traffic plan« activity and the children's concrete suggestions for solutions can be collected in a wall display.
- With their teacher's help, the children can write a letter to the mayor outlining their findings and wishes and also pass this on to the local press. The latter can also already be included in the questionnaire phase (see above). If the municipality is planning to organise a closing event for the campaign, this could form the »stage« for presentation of the results. Will your town/city get involved? Will there be a closing event? Be sure to check (e.g. with the environmental agency or youth welfare office – or contact Climate Alliance directly)! However, school fêtes or events in the local district are also ideal for presenting the results along with the activities of countless municipalities during the European Mobility Week (16–22 September) or World Children's Day (20 September).

For (c):

A table for statistical evaluation of the questionnaire is available for download under the »Materials« tab on www.zoom-kidsforclimate.eu.

10 My road traffic plan

Intention

Based on the question of »How do I want the local traffic to be?«, the children can draw or write about their visions for the local road traffic situation. This will foster their abstraction skills and stimulate their imagination. Children tend to be more aware of their living environment than adults. After all, they spend a great deal of time there and explore it while they play. They often have a very good idea of what they do not like and what they would change. Indeed, children are experts for urban and traffic planning. Hence their knowledge should also be used to provide the responsible politicians and administrators with ideas for child-friendly city and traffic planning. If municipalities recognise this and take the children seriously, children can experience that the planning ideas they draw or write about are also borne in mind.



Implementation

The children should draw or write down how they would like the traffic to be. A camera can be used to provide additional positive examples. The visions could be displayed in the class/group room or corridor. The findings can also be forwarded to the local press and municipal politicians – see **Activity 1** »Drawing the route to kindergarten/school« (page 13) and **Activity 9** »Detectives on the road!« (page 19).

It could motivate children to pretend to be traffic planners responsible for designing the road layout. The prospect of being able to present their planning ideas to the local press and responsible municipal planners and politicians will also motivate the children. Therefore, make contact with the responsible persons in your local area early on regarding a cooperation.

Materials

- Paper and pens
- Where desired, a camera

11 What can you hear? A listening walk

Intention

The sounds around us can be experienced more intensively with closed eyes. One of the many impacts of road traffic should be made clear to the children by getting them to concentrate on the traffic noise. What's more, it can be also be discussed that traffic noise not only disturbs but can also make people seriously ill. Beside the noise issue, the listening walk offers further learning opportunities: the children must trust a partner to guide them and experience how it is for visually impaired people, who must rely on their sense of hearing to orientate themselves. They can experience how difficult it is to differentiate between different noises or how it is not as easy to hear a cyclist as it is to hear a car.



Preparation

Teachers/educators should first select an appropriate route.

It should include a good balance of loud and quiet sounds, which can be covered at a slow walking pace in around 15 minutes (rule of thumb: when blindfolded, children will need four times longer than an adult).

Children should not be forced to wear a blindfold if they do not want to.

A poster entitled »What did you hear?« can be prepared on which the children can make a note of their impressions during the walk.

Implementation

The children should work in pairs. One of the children must put on a blindfold and allow themselves to be guided by their partner. It



should be discussed beforehand what the children doing the guiding and being guided should take a note of along the way. Under the teacher's guidance, the children should take a walk along a quiet road or through a park or forest to a busy road. The children should then exchange roles for the journey back again. Kindergarten groups can switch roles more often or only cover particularly loud or quiet sections of the route blindfolded. Upon arriving back in the class/group room, the children can discuss what they heard and make a note of their findings on the poster entitled »What did you hear?«. The experience of acting as guide and being guided should also be discussed.

Materials

- Blindfolds (black scarves, neckerchiefs or strips of cloth)
- Paper (poster size) and pens

Tip

The German Federal Centre for Health Education offers a variety of materials on the subject of noise on its website: www.bzga.de

12 Cars need space – so where can we play?

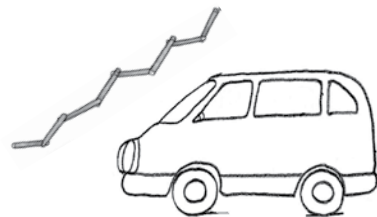
Intention

This activity provides an introduction to the subject of space usage in urban settings. Children should gain an understanding of the subject by measuring their teachers' and parents' cars. Cars take up a huge amount of space both when being driven and while parked, which can no longer be used for other purposes, e.g. to play. In most big cities, 40% of space is given over to parking. Environmentally-friendly modes of transport take up comparatively little space. During this activity, the children should learn how much space individual transport takes up and how much space is lost that could otherwise be used to play in. Kindergarten children and primary school infants can experience how much space a car needs during a simple experiment: they can fill a single parking space with their scooters, bikes, tricycles, etc. and count how many they can fit into one single parking space.

Implementation

To be able to complete this activity, the children must be familiar with length units (i.e. cm, m and km). They must also be able to add and subtract

numbers with a decimal place. Primary school juniors can measure the cars parked in the staff car park (length and width) and make a note of these. The measurements can then be recorded on the board and the lengths added together. The level of difficulty can be increased by including the distance between the cars (60 cm between two cars). The calculation should be made available.



The children could then be set the homework task of measuring the length and width of their parents' cars. On the following day, they can calculate as a class how long the traffic jam would be if the cars of all families were lined up one behind the other, again with 60 cm between each.

As a follow-up project (potentially on the following day), the children can record (some of) the cars measured in the school car park. The comparison with the amount of space that bicycles and/or buses able to transport the same number of passengers take up makes clear how much space cars waste. This can then lead into a discussion on the advantages and disadvantages of the different modes of transport (see **Activities 2 and 3** on pages 13–14).

Materials

- Measuring tapes and yardsticks
- Notepaper
- Something to lean on
- Chalk

13 Drawing my street

Intention

Parked and driving cars take up a large portion of public space, which is then no longer available to children for playing in. They must instead use the remaining space or »playground ghettos«. Two illustrations of a street from a bird's eye view – one with cars and one without – make clear to

the children how much space the cars take up. They are able to use the »empty« illustration to draw their visions and experience what space becomes available when the street is no longer full of parked cars.



Implementation

Provide each child with the two blank worksheets. The first features a street full of parked cars; the second is empty of cars: Ask them »How would you use the empty space?«.

Materials

- Two worksheets per child
- Pens
- The two templates are available under the »Materials« tab on www.zoom-kidsforclimate.eu.

Idea

Create a wall newspaper, large-scale street map or plan of the area. This will allow the children to develop their powers of imagination and to orientate themselves within their local neighbourhood/district: »Here's my house, that's where my friend lives, I go to gymnastics here, the supermarket, etc. and here's our kindergarten/school.«

Children take new routes

14 Planning an eco-friendly trip

Intention

Planning an environmentally-friendly trip will help to enhance children's awareness of environmentally-friendly (leisure) mobility. Cars are not only used for the journey to work or school. They are increasingly also the #1 mode of transport during leisure time. While there will always be trip destinations that are difficult or impossible

to reach using public transport, a great many improvements have been made in recent years. The option of transporting bicycles in public transport means that a great many more leisure options can now be reached without using a car.

Implementation

Discuss and record the advantages and disadvantages of a weekend without a car on posters. As an additional optional homework task, the children can plan and complete an eco-friendly trip with their parents (where possible).

Tips for the children's planning

By bus and train



- Which modes of transport can be used to reach the destination?
- Where are the departure and arrival stops?
- Do you have to change?
- Check the timetables (e.g. search online or call the travel hotline to check the connections).

By bicycle or on foot



- Obtain a (leisure) map indicating the pedestrian/bike routes.
- Which route do you want to take?
- How long should the tour last?
- Check the bikes beforehand (brakes, lights, tyres).

The children should report back on their trips the following Monday. A list of regional trip destinations with information on the public transport links can potentially be provided to support the family trips.

Materials

Where appropriate, trip suggestions and information on public transport

Tip

The trip can also be combined with the purchase of climate-friendly foods as part of **Activity 17** (page 25), **Activity 26** »Palm oil check« (page 31) and **Activity 22** »Forest treasure trove« (page 29).



15 Walking buses, cycling trains



Intention

Children arrange a time to meet to walk/cycle to school together. Walking buses and cycling trains are a good opportunity to complete the journey to kindergarten/school with friends or schoolmates. The journey is fun when completed together. By creating a certain obligation to meet each morning to travel to school together, children are encouraged to use environmentally-friendly modes of transport, whereby environmentally-friendly travel behaviour will then become a habit. Cycling trains are more appropriate for junior/senior schools as it is often the case at primary schools in cities that only the older children are only allowed to cycle to school alone. To ensure their safety, the children should be accompanied by adults.



Implementation

The children meet at pre-arranged places along the route to school to continue their journey together. They always cycle or walk the same route.

The meeting points and routes are agreed with the children beforehand. The parents should also be involved. The route selected should avoid as many dangerous points as possible and ideally pass/cross green spaces. The journey should be covered together and the correct behaviour practised with everyone. An adult should accompany the group – at least at the start. In the case of cycling trains, the children cycling at the front and back should wear a reflective vest to enhance visibility. Potential dangers and exceptional situations (e.g. accidents or punctures) should be discussed with the children extensively beforehand and the correct behaviour practised.

Materials

- List of the children's addresses

Supporters

- Committed, interested parents
- Chaperones for the initial phase

Tip

- A variety of information on the »Walking to school and kindergarten« campaign that takes place in September is available for example on www.walkbiketoschool.org.
- Information on walking buses can be found online e.g. at https://en.wikipedia.org/wiki/Walking_bus.



Climate-friendly food



Foods from near and far

16 What is on our plates?

Intention

To introduce the subject of climate-friendly food, the children can think about what they ate the day before and consciously reflect on food. This list can later be researched to determine where the different foods are from and how food can be climate-friendly yet also tasty.

Fundamentals of a climate-friendly diet:

More plant-based foods and fewer animal-based foods; organic foods; regional produce – no transport by air; seasonal fruit and vegetables grown outside; fresh, minimally-processed foods instead of frozen foods and convenience goods; energy-efficient household devices; going shopping on foot or by bike.



Implementation



Kindergarten children can draw pictures of breakfast, lunch and dinner and discuss their favourite foods.



Schoolchildren can make a note in class of what they ate the day before and list the individual ingredients.

In the ensuing class discussion, the children can discuss their meals and what they particularly like to eat. They can consider as a group which foods

must be transported a long way and which can be obtained regionally. The children can determine which foods are in season when – this is when they taste the best and have the least impact on the climate.

Materials

- Paper and coloured pens
- Where appropriate, a seasonal calendar (available from consumer advice centres)

Ideas

- Film: »Ratatouille« – encourage an interest in cooking and healthy food.
- Nutrition and food exploration course: a complete lesson concept for junior school on food and kitchen devices, complemented with an extensive work folder. See www.aid.de for details.
- Lesson units for primary schools: »What is in season where?« using the example of strawberries; »Sensory course«: games and exercises about food; »Organic farm trip«: see www.oekolandbau.de for details.
- Teaching materials for the »Too good for the bin« campaign for children aged 8–12. The focus is on attitudes to food, wastage, leftovers and storage. Please see www.zugutfuerdietonne.de for details.

17 Where is our food from?

Intention

While most children know which foods they like, they often do not know where the ingredients are from. During a visit to a shop, the children can learn where the ingredients actually come from. This can also be combined with **Activity 14** »Planning an eco-friendly trip« (page 23).



Implementation

Foods that are hardly or not at all processed or mixed are ideal for further investigations. The individual ingredients of products such as fruit yoghurts or cereals have often already covered vast distances that cannot be retraced. Suitable products include bread, rolls, oats; fruit, vegetables (depending on the season), potatoes; milk, natural yoghurt, cheese, sausages, butter; eggs; honey, marmalade (home-made?); apple juice.

A shop to visit should be selected beforehand (supermarket, weekly market, local bakery, organic store) and the foods whose origins should be traced agreed with the children. Older primary school children can work in groups to make a note of the origin of selected foods. This cannot always be discerned from the packaging of products such as milk, yoghurt and cheese – guidance may be required. It makes sense to write down where selected products are from and then to determine those with the shortest possible routes.

The findings can be recorded on a world map and discussed as a group: where are foods from and which are better for the climate? If an idea from the »Preparing a meal together« block (from page 26) should be implemented, the visit to the shop can also be used to purchase the ingredients required – the children can search for regional products to use.

Materials

- Shopping list (plan together beforehand)
- Clipboards for on the go (or card with pegs)
- Paper and pens
- Where desired, a world map

Tip

- To better understand the origin of foods: visit to a weekly market (NB: larger suppliers often purchase their products from a wholesaler; smaller agricultural businesses tend to offer more regional, »home-grown« products) or a local (organic) farm – potentially with a visit to the fields and animals; »teaching farm«: activities specifically for children such as grinding grain or baking bread. Further trip suggestions: dairy, (organic) bakery, apiary, fruit farm, allotments.
- Some supermarkets offer tours for children, particularly sellers of regional and organic products.
- Knowing that some products must be obtained from far away, foods such as bananas, coca, chocolate, coffee and orange juice can also be investigated/purchased – see »The bigger

picture« block with **Activities 24 and 25** (pages 30–31).

- For children aged 8+, this can also be complemented with **Activity 26**, »The palm oil check« (page 31).



Kindergarten children and primary school infants can instead pay a visit to a weekly market where they do not need to be able to read or write and can instead ask the individual retailers questions themselves directly.

Preparing a meal together**18** Cooking in kindergarten/school**Intention**

In the following activity, children will be shown how to prepare simple, affordable, easy-to-prepare meals to introduce them to basic foods – where possible, from the local region. Many children no longer learn how to prepare basic foods to make healthy, tasty meals at home. On the one hand, convenience foods and frozen goods, the lack of time and aggressive advertising by the food industry are on the increase and mean that kitchens are often only being used to reheat food. On the other, the growing popularity of cookery shows, »regional dishes« in restaurants and the concern for increasingly overweight children is leading to a return to self-catering.



Implementation

If no kitchen is available, it may be possible to arrange a breakfast featuring in-house products with a rural association or fair-trade group at a farm café, the kindergarten or school. Alternatively, a local supermarket may offer a shop tour that concludes with the opportunity to sample regional products.

Communal breakfast – tasty and climate-friendly:

because many children have breakfast at their day care centre or school, it should be fairly easy to organise a »regional breakfast«. The children could be involved in the trip to the shops to prepare for the breakfast – see **Activity 17** (page 25) – during which they can consider the origin of food products.

After the breakfast: add pins, little flags or stickers to a map to indicate the place/country of origin of the different foods. This will help make clear which routes the different foods take to reach the children's plates. The foods with the shortest routes could be indicated on the map in green; those with the longest routes could be indicated in red.

Allowing the children to determine which transport routes their climate-friendly shopping can »save«.

Materials

- Breakfast
- Country/world map, pins, thread

Regional lunch:

The children learn where their food comes from while preparing a lunch comprising potato soup and fruit salad: where can they buy which ingredients? Where are the ingredients grown? What did their grandparents used to eat?

Activity Worksheet 18 (page 26) features recipes and questions to help get the children thinking. If no kitchen facilities are available, the ingredients and questions on the worksheet can instead simply be discussed with the children.

Materials

- Worksheet (can also be used if no food is being prepared)
- Recipe ingredients
- Kitchen and cutlery/crockery

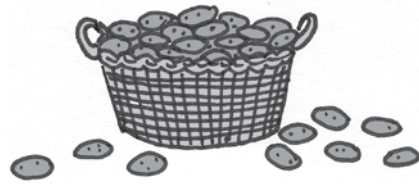
Idea

Create a memory game with the children using pictures of regional and tropical foods.

19 A closer look at potatoes

Intention

During this activity, children learn that preparing food using regional dishes does not need to be boring but can also include local products such as potatoes to create delectable dishes.

**Implementation**

While purchasing the ingredients at the market, the children can learn about the many different types of potatoes, which look and taste different and also have different uses. During a »potato week«, potatoes can be used to prepare different dishes each day – beside boiled potatoes and chips, other options include baked potato with curd cheese, potato gratin, mashed potato, potato soup, potato salad, potato waffles and potato bread. If only one day is available, a »potato buffet« comprising a selection of different dishes could be prepared with parents' help. If no kitchen facilities are available, baked potatoes could be prepared over a campfire and enjoyed with herb cheese. A parent could perhaps be found to provide a sweet potato cake for dessert.

Ideas

- Halloween pumpkins: the children can learn about the different types of pumpkins at the market and pumpkin recipes during the planning. A pumpkin can then be hollowed out for Halloween.
- To complement the subject of potatoes, the children can also create works of art using potato printing.



20 A regional feast

Intention

A celebration is always a very special highlight of any campaign – where possible, it could even last several days and cover a number of different food-related subjects. Recipes and suggestions can be compiled with the children beforehand. Allowing them to actively consider regional foods and their uses. At the same time, the children experience how they can actively contribute to a celebration and climate protection for themselves.



Implementation

Depending on the season, tasty local fruits can be sampled that children like to eat – strawberries and apples, for example. Depending on the region, the suggestions can also be used for different types of fruits.

The kick-off event could involve a trip to a strawberry field or apple orchard. Depending on their previous experiences, sampling foods »plucked directly from the plant« may be an entirely new experience for the children – collecting and eating strawberries on the fields, for example. The children can take their rich harvest with them and process it together. If the subject is apples, then these can not only be picked and sampled, apple pie baked and apple sauce prepared, but also the juice pressed (potentially at a local nature protection association or fruit orchard). Sampling different types of apples is an interesting experience. Many children are only familiar with the standard apples from the supermarket and may be surprised to learn that different types of apples can be sweet, sour, aromatic, bitter, fruity, juicy, hard or soft. If there is a local pomologist, they could be invited along as an apple expert and prepare »profiles« for the different types of apples with the children.

Ideas

- Harvest festival: in collaboration with a church group and/or farm, the tradition of a harvest festival in autumn can be upheld. Endless options for cooking and baking can be tried out here.
- Soup festival: shop for seasonal products and prepare a tasty soup – e.g. potato soup on the first day, a mixed vegetable soup on the second and a soup using individual ingredients on the third – depending on the time of year, perhaps pumpkin or cauliflower.
- Taste course: select typical fruits and vegetables and cut these into bite-sized pieces. Blindfold the children and get them to sample different pieces. They must then guess what they just tasted.

Fruits of the forest

21 Harvesting wild herbs and fruits

Intention

Use wild herbs and fruits to teach the children that food not only comes from cultivated plants, but that a great many tasty and useful things also grow »wild« in nature. Allowing them to experience the wonders of nature and how these are well worth protecting.



Implementation

Take a trip out into the local area during spring or summer, when food can potentially even be harvested »from the land«. The children will thoroughly enjoy searching for, identifying and collecting wild herbs and berries (depending on the season) as well as processing these to use in herb cheese, herbal tea, eggs with herbs, elderflower syrup and raspberry cheese. A »herb expert« from a nature protection society or rural association could moreover be invited along to explain the different herbs and their uses to the children and where they can be found. Ointments

and cosmetics can be also be made together. The possible healing and toxic effects should be emphasised and the children warned not to consume any unfamiliar plants as well as of the dangers of diseases transmitted by animals (e.g. tuberculosis, fox tapeworm).

22 The forest treasure trove

Intention

The forest is a real treasure trove – especially for children. All the senses are appealed to during a trip to a forest and a heightened awareness is called for. During this visit, the children can learn about their local forests and the foods and tools available there. They can use objects they find to create jewellery, containers or even their very own forest sofa.



Background information

Protecting the forests plays an important role in climate protection. They currently still cover almost 30% of the earth's surface and are home to a diversity of habitats and species as well as a wealth of biomass. What's more, they have a high carbon dioxide (CO₂) storage capacity and are the largest providers of oxygen as the »green lungs« of our planet.

More than half of the tropical rainforests remaining in the world are located in the Amazon region and these are of crucial importance to global climate protection. Just 4% of the world's forests can be found in the EU. They cover 38% of the entire surface area of the EU but are not equally distributed: two thirds of the total forested areas in Europe are located in just six of the member states (Finland, France, Germany, Poland, Spain and Sweden).

Implementation

»Who knows of a forest and where is it located?« – this question can be used to introduce the subject of forests. Experiences from visits

to forests can be discussed. Children can also prepare for the trip by thinking about an imaginary trip or using photos of a forest.

Plenty of time should be set aside to explore nature during the trip to a forest (or park). Ask the children to search for and collect certain items that can then be used to make something – either directly in the forest or back at the kindergarten/school.

Handicraft ideas

Seeds such as acorns, chestnuts and beechnuts along with grasses and leaves can be used to make containers or jewellery; flowers, leaves, little twigs, pine cones, stones, seeds can be used to make an outdoor mandala; wood, twigs, leaves and features can be used to create a forest spirit; leaves, wood and moss can be used to create a forest sofa.

Other ideas of items to collect: mushrooms, herbs and berries to eat; beechnuts to grind into flour for bread and biscuits; sage and mint to make herbal teas and cold medicines.

All functions of the forest, including for relaxation, as a carbon sink, source of fresh and clean air should be discussed. Reference should also be made to the subject of usage:

e.g. items from the forest perhaps might not keep as long as plastic products, but can be reintroduced back into the natural cycle.

Warm-up idea

For a change of perspective, get the children to hold a mirror under their noses so that they can only see up to the tops of the trees. Can they still find their way around?

Materials

- Bag for collecting items
- Where appropriate, a pocket mirror

Tip

- **Activity 11** (page 21) is suitable for children of all ages; **Activity 23** (page 30) is suitable for primary school children (up to age 11).
- The activity can be combined with the Climate Voyage stopovers »South America II: the warrior with the camera« and »Southeast Asia: palm oil and toilet paper from the rainforest«.



23 In the Amazon rainforest



Intention

The children learn about the lives of indigenous peoples dwelling in the Amazon region in the story by Apak from Ecuador. They find everything they need to live, feed themselves, protect themselves and remain healthy in the rainforest. Allowing the children to learn how humans live at one with nature and what the everyday lives of children living in other parts of the world are like. They can consider differences between the forests and lifestyles by telling their own forest stories and the concept of forest spirits.



Background information

Indigenous peoples live in harmony with their natural surrounds on all continents on our planet. Today, around 1,000 different indigenous peoples still dwell in the rainforests. In the Amazon rainforest, they use their forest sustainably and afford extensive knowledge of their environment. Anything that threatens the forest also threatens the people living there. They often have to fight for their land, as logging companies and oil firms, cattle breeders, gold prospectors and the owners of palm oil, soy and banana plantations compete with them for its ownership.

The forested areas on earth decrease by around 13 million hectares every year as a consequence – that's an area the size of 35 football pitches every minute.

Implementation

The location and size of the Amazon region can be determined with the children on a world map. They can then share if and what they already know about countries in South America or the rainforest.

The children can then read Apak's story in **Worksheet 23** (page 52) and discuss the food he plants and harvests in the rainforest with his family. What does Apak like to eat? Where do cassava and bananas grow? What do companies want from him and why is his friend Eriberto fighting for his living space? To compare the Amazon rainforest with their local forests, the children can write their own forest stories. They can gain greater insights into the forest by considering forest spirits and their role in the forest.

Tip

- A link to videos featuring Eriberto Gualinga from the Amazon region in Ecuador providing brief insights into the lives of the Kichwa indigenous people is available on www.zoom-kidsforclimate.eu.
- The Climate Voyage stopover »South America II: the warrior with the camera« also discusses the filmmaker and his people.

The bigger picture

24 Other countries – other customs

Intention

These days, most kindergartens/schools are attended by children of different nationalities/origins. The concept of »regional customs« has an entirely different meaning for these families. To draw the children's attention to this diversity, a collection of typical family recipes can be compiled.

Our diet always also has something to do with the living and working conditions of people in other parts of the world. Classic »colonial goods« such as coffee, tea, cocoa and pepper that consumers here expect to be able to buy for ever-lower prices are today still based on the poverty of the local farmers – see **Activity 7** (page 17).





The Western European/American diet is neither the best nor should it become the global standard. There are cultural, historic and climatic differences between the social circles, which must be observed and respected, shape children's tastes and at the same time provide an alternative to the standard fast food: eating with a knife and fork, chopsticks or one's fingers; eating pork, beef, dog; cheese as a delicacy or »mouldy milk« – it always depends on the perspective.

Implementation

The children should make note of a typical dish their family enjoys: kindergarten children can draw a picture of a typical family meal on a sheet of paper. Primary school children can write a short text on the meal and embellish this with drawings. The pictures and texts can be used to start a discussion: which meals are enjoyed on special occasions? Which foods are available »locally« in the families' countries of origin? Do people eat with a knife and fork, chopsticks or their fingers there? The countries of origin of the children's families could be marked on a world map. The individual sheets of paper can then be bound together in a recipe book for the group/class.

Materials

- Paper for the recipe book and pens
- Where desired, a world map

Tip

Parents can perhaps be asked to help prepare a national dish from their home country for the kindergarten/school (with the children) – please also see **Activity 25** »Cultural buffet« (page 31). Further insights into other countries are available in **Activity 6** (page 16), **Activity 23** (page 30) and **Activity 31** (page 35) about the diet and everyday energy usage in the Amazon rainforest.

25 Cultural buffet

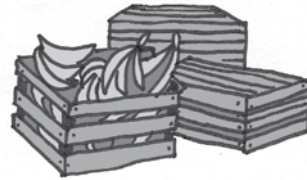
Intention

During this activity, the children learn how tasty the food from other countries can be, what is »normal« there and what is available locally.

Implementation

Be sure to involve the children's parents early on if you want to organise a »cultural buffet«: ask the parents if they can contribute any dishes

typical of their country/family for the buffet that are also child-friendly and perhaps also come along to explain these, too. What are typical festive dishes? Did they eat other foods when they were growing up? The »cultural buffet« could also be organised as an event for the entire kindergarten/school. Local cultural associations could potentially be involved in the preparations.



Materials

Dishes that the parents contribute to the buffet

Tip

- Chocolate, coffee, banana crates: discuss the production and processing of foods as well as the trade routes and economic profits and losses. Available for loan (for free or a nominal fee) from a local One World store, www.mission-einewelt.de, or www.weltinderschule.uni-bremen.de.
- Alternative: purchase »fair-trade« products (coffee, tea, cocoa, etc.) from a world shop and bring these to kindergarten/school to introduce a learning unit.

26 The palm oil check



Intention

Most children love chocolate. However, very few are aware that exactly this can be responsible for the large-scale clearance of rainforests. Get the children to compare the ingredients of different types of chocolate available in shops with other products bearing an organic/fair-trade label. This will allow them to learn about the relationship between global climate protection and our consumer behaviour. The palm oil check should provide children with a practical and constructive introduction to the subject of rainforest clearance. Ideas can be outlined and alternatives developed with the children to already help protect the climate when shopping.

Background information

Totalling 58 million tonnes, palm oil was the vegetable oil produced in the largest quantities in 2013. Rainforests in Southeast Asia, Latin America and America were cleared for its cultivation. Indonesia and Malaysia supply 50 million tonnes of palm oil – 85% of the palm oil on the global market. India consumes the most palm oil (9.1 million tonnes), followed by Indonesia and China. Palm oil is traditionally used in these countries for frying and cooking food. With 5.67 million tonnes, the EU is the fourth largest consumer of palm oil. Around 68% is used in the production of food, around 5% as bioenergy and the remaining 27% in cosmetics, detergents, candles and industrial lubricants.

Palm oil must be declared separately on food packaging. According to the EU's Food Information to Consumers Regulation, the specific plant origin (e.g. rapeseed oil, palm oil, soybean oil) has had to be indicated since 2014.

Consumers are able to influence the options available in the supermarket by favouring products not containing palm oil or only containing palm oil produced sustainably. Moreover, every one of us can make a difference by purchasing fewer convenience goods and instead preparing more meals for ourselves using fresh ingredients.

**Implementation**

Get the children to bring bars of chocolate with them, or the class/group can go to the supermarket together to purchase different products. The ingredients can be reviewed while purchasing the products as well as afterwards in class and considered in greater depth. Background information on palm oil should be discussed and the alternatives considered.

Ask the children to find another product containing palm oil at home as well as a comparable one not containing any palm oil. Make a note of the products that contain palm oil and those that do not. Which alternatives are available to replace products containing palm oil? Have a think together.

Ideas for alternatives: prepare fresh pizza instead of buying it frozen (freezing requires more energy); mix muesli instead of purchasing pre-mixed muesli; opt for nut spread instead of chocolate cream; buy ice cream not containing plant-based oils; use a washing ball rather than detergent; use natural soap rather than liquid soap containing palm oil.

Tip

- The »CodeCheck« app informs on what ingredients products actually contain.
- For further information on palm oil please see kids.mongabay.com/elementary/palm_oil.html.
- The Climate Voyage stopover »South-east Asia: palm oil and toilet paper from the rainforest« makes the ideal complement.
- It can also be combined with **Activity 22** »The forest treasure trove« (page 29).



Saving energy



Exploring everyday energy usage

27 Find the energy source

Intention

To introduce the subject of energy, the children should first be made aware which energy sources are actually available and what they are used for in our daily lives.

Many energy sources were used differently in former times. Fireplaces can traditionally be fuelled with logs or alternatively with wood pellets. The energy stored in the wood ultimately performs a specific task – in this case, to heat a room. Differentiating between the energy sources will enable the children to explore energy consumption in their everyday lives.

Implementation

Get the children to search for the appropriate energy sources for different uses (e.g. sailing ships and cars).



Kindergarten children and primary school infants can be introduced to the following consumers: sailing ships, cars, windmills and warm water for showering. They

can discuss as a group which energy sources are used for which activities, then draw pictures of the different energy sources and consumers.



Children aged 8+ can draw the following energy sources on the left-hand side of a sheet of paper: sun, wind, water, biomass (wood, grain), fossil fuels (crude oil, coal, gas). The following consumers

can then be written on the board and the children must write these beside the correct picture they have drawn: sailing ship, sawmill, horse-drawn carriage, wood oven, fireplace, gas heating, car, warm water for showering, windmill, gas heater, ox-drawn cart, extraction of sea salt. The children can work in pairs. The results and any questions can then be discussed as a group.

Solutions:

Wind (sailing ship, windmill), water (sawmill), biomass (horse-drawn carriage, ox-drawn cart – animals eat biomass and convert this to energy, wood oven fireplace), fossil fuels (gas heating, car, warm water for showering, gas oven, sawmill, fireplace), sun (warm water for showering, extraction of sea salt).

Tip



This exercise can be combined with the Climate Voyage stopovers »North America: glittering lights – at any cost?« and »South America I: living at the other end of the pipeline«.

28 Energy usage in former times



Intention

During interviews with their grandparents or elderly neighbours, the children learn how energy was used in former times. Allowing them to gain an impression of how much energy we use today and which alternatives are available.



Implementation

The children can prepare a short questionnaire together in class: did their grandparents/elderly neighbours use energy for any of the following activities – and if so, which? Alarm clock, breakfast, journey to school, lights, heating, cooking, playing, music, telephone, TV, holiday, celebrations, etc.? Ideally, they should use a separate sheet for each person they ask. The children can report back at school the next day about what they learned. Did people use more/less or perhaps different types of energy in the past (e.g. coal ovens)? Are there any ideas from the past that could be used today to save energy and would still work in our lives (e.g. hay boxes)?



Materials

- Paper and pens
- Please see the »Materials« tab on www.zoom-kidsforclimate.eu for a list of sample questions. To be able to compare: prepare an energy diary – see **Activity 29** (page 34) – or consider everyday energy usage with the children and write a list on the board or a poster: what do the children use energy for – from the moment they wake up to when they go to bed?

29 Energy diary

Intention

It is often the case that children (and even adults!) are not aware what »energy guzzlers« are hidden in their everyday lives. Keeping an energy diary will allow the children to compile information on their family's energy consumption.

Heating and car usage are the main sources of energy consumption in the average household, closely followed by the generation of warm water. In buildings, energy losses can mostly only be avoided through extensive measures such as heat insulation or a change in heating system to renewable energy sources. In the fields of mobility and warm water consumption, children can simply develop their own solutions.

50% of the journeys covered by car are less than 3.5 km in length and therefore ideal for completing by bike, for example.

**Implementation**

To sensitise children to the subject, ideas can be collected of activities during which energy is consumed (e.g. for lights, heating, playing, music). The children can then keep an »energy diary« on a sheet of paper in which they document what they use energy for during a day. Kindergarten children can draw pictures of the different situations. These notes can be used to start a discussion on energy consumption. The children can

then report back on their energy experiences the following day.

Materials

- Paper and pens

Tip

»Experience the sun – experience energy«: materials for primary schools on energy and saving energy are available from the Hessian Ministry of the Environment (www.energie-und-schule.hessen.de).

Energy for our One World

30 Past, present, future

**Intention**

The energy story »Past, present, future« traces the changes in everyday energy consumption over time. It also outlines the advantages and disadvantages of the different energy sources. People learned to use energy to make their everyday lives easier early on. With the growing industrialisation and mechanisation, the demand for energy also grew. At the same time, this was in turn linked to the development of new forms of energy generation. It is only due to the rise in environmental problems and increase in energy costs due to the growing scarcity of raw materials that energy efficiency and sustainability are also beginning to play a role.

**Implementation**

For primary school infants, two or three children can be assigned each sentence from the story. They can read the sentence through, draw pictures about the energy source described and then explain these to the rest of the class. All of the children can then work together to arrange the energy sources in the correct chronological order. The complete energy history can then

be read out, or the children can read out their sections one after the other in the correct order.

Primary school juniors can work on the worksheet in pairs. The text can be read out as a class, questions answered and any unfamiliar words discussed. The children can then attempt to arrange the sentences in the correct order in pairs and discuss their suggestions with the class. The text can be used to introduce a discussion on: which energy sources are available? How have they developed over time? What are the advantages and disadvantages of the different energy sources?

Materials

- Worksheet, scissors
- Pens/felt-tips

31 A day beside the Rio Negro

Intention

Beside considering one's own living conditions, the aim of the ZOOM – Kids on the Move! campaign is to raise awareness of the lives of children from other countries in the world in order to set the subjects of energy consumption and climate change in a global context. Based on the daily routine of indigenous people dwelling in the Amazon region, the children are able to learn that not all people have as much energy available to them as us in Europe.

Energy is decisive for development: electricity is essential to operate modern hospitals, for example. The processing of agricultural products and their marketing along with countless services are also energy intensive. And yet millions of people in developing countries do not have access to sustainable and reliable energy or to modern energy services. Effective climate protection while also furthering development therefore means also enabling access to clean and efficient energy for the countries in the southern hemisphere while saving energy in industrialised countries and switching to clean energy generation.

Implementation



The text on **Activity Worksheet 31** (page 54) can be read out to kindergarten children and primary school infants and the (energy) life in Amazonia discussed. What does José's mother

used to cook? Where does their light come from? How does José get to school? What is different for the kindergarten/school children?



Primary school juniors can read through the worksheet together as a class. They can then prepare an energy diary for the children living in Amazonia. The diary can be used to start a class discussion: where is energy needed beside the Rio Negro? What types of energy are available? What is the everyday (energy) life of the people living in Amazonia like? What are the differences compared to the everyday energy lives of children living in Europe?



Tip

- This activity can be combined with **Activity 6** »Journeys of children from around the world« (page 16) or **Activity 24** »Other countries – other customs« (page 30).
- Further lesson ideas and games are available in the »Renewable energy« brochure published by the German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (www.bmub.de).
- The lives of indigenous peoples living in Ecuador are outlined in the brochure »Indians today – expeditions through Ecuador«, which also contains lesson ideas along with a DVD featuring film clips – please see www.araonline.de.

Materials

- Worksheet
- An individual energy diary – see **Activity 29** (page 34) or consider as a class: what do we use energy for in our daily lives (waking up in the morning, alarm clock, lights, breakfast, journey to school, etc.)?

Tip



The Climate Voyage stopovers »South America I: living at the other end of the pipeline«, »South America II: the warrior with the camera« and »South America III: light for the rainforest« can be used here.



32 Investigating the greenhouse effect

Intention

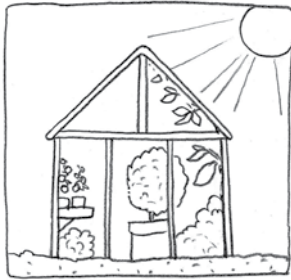
It is very difficult to explain the subjects of the climate and the greenhouse effect to kindergarten children and primary school infants. The experiment reduces the subject to a comparison with a greenhouse and provides the opportunity to consider the subject using a playful approach.

Activity 5 (page 16) can additionally be used for primary school juniors. It teaches the children about the relationship between energy consumption and the greenhouse effect.

Implementation

The children are able to use **Activity Worksheet 32** (page 55) to complete the experiment in small groups. If only one set of materials is available, the experiment can also be conducted as a class/group. The findings can then be presented and discussed with the class/group. If the children made guesses beforehand about how they expected the experiment to go, these can be compared with the actual results achieved.

The experiment could be combined with a visit to a greenhouse.



Materials

- Worksheet
- Thermometer
- Glass cheese cover, bowl or jar
- Sunny weather or a powerful light source

Tip



The Climate Voyage stopovers »Antarctica: splish splash penguin«, »The Arctic: polar bear becomes a swimming bear...« and »Africa: healing rain – but when?« make suitable complements here.

Saving energy made easy

33 Renewable energy

Intention

During this activity, the children learn about climate-friendly ways to generate energy.

Using energy makes our lives easier. At the same time, the production and consumption of energy can damage the climate: using fossil fuels for just one day uses up the amount of energy that it took the earth 1,000 years to generate. Large quantities of CO₂ are moreover released, which in turn exacerbate the greenhouse effect. Energy from renewable sources such as the sun, wind, water, biomass and geothermal heat are climate-friendly and can help to achieve (energy) justice worldwide.

Implementation

The relationship between the consumption of fossil fuels and climate change can be discussed with the children and alternative energy sources such as the sun, wind, water, biomass and geothermal heat presented. The children might have their own ideas of how to generate energy from the sun, wind, water, biomass or geothermal heat (solar panels, wind turbines, power plants with turbines, combustion, pumps).



The text on **Activity Worksheet 33** (page 56) featuring a fill-the-gap exercise can be used to discuss the subject of renewable energy with kindergarten children and primary school infants.



Primary school juniors can read through **Activity Worksheet 33** (page 56) as a class to familiarise themselves with the subject. Any unfamiliar words can be clarified. The children can then be set the task of working in pairs to fill the gaps in the text on the worksheet. The words to use are listed at the bottom of the worksheet.

They can then consider the advantages of renewable energies such as solar power compared to energy from coal or oil (impact on the environment and climate? How often can energy be obtained from a piece of coal? What about the sun?). For primary school juniors, the activity can be combined with **Activity Worksheet 5** (page 16).

Materials

- Worksheet
- Pens

Tip



The Climate Voyage stopovers »South America III: light for the rainforest« and »Oceania: land submerged – even without a storm« can be used here.

34 The energy check

Intention

Considering energy-saving measures for their everyday lives individually will help the children to understand the relationship between energy consumption and climate protection. Their awareness for climate-friendly daily (energy) behaviour will be enhanced. Simple alternatives can often be identified for typical behaviour. If the children think of these for themselves, they will develop a certain sense of commitment using a fun approach to also implement opportunities to save energy together. What's more, they will experience first-hand what they can do personally to help protect the climate.



Implementation

The energy diary created during **Activity 29** (page 34) can be used to consider which activities involve using energy: breakfast, the journey to school, lights, heating, playing or music. The examples of activities during which the children use energy can be listed on the board or a poster (in pictures or words). The children can then have a think together where they can save energy (e.g. watch less TV, switch off lights when they leave a room, use LEDs, cover short distances by bike/on foot, reduce waste). The suggestions can be recorded in a second list alongside the energy consumption in which it can also be marked which ideas the children can implement straight away at home. On the following day, the children can then report back on how they got on – which

measures were a success or less of a success, which they perhaps discussed with their parents.

Materials

- Energy diary – see **Activity 29** (page 34) or brainstorming in class on »During which daily activities do we use energy?«
- Paper (poster size)/board, possibly also pictures of energy consumers such as radios, toasters or hairdryers.

Tip

- For primary school juniors, the activity can also be combined with **Activity 5** (page 16).

Ideas

- Experiment – using solar power to heat water

Materials

- Thermometer
- Two small bottles
- One white sock and one black sock
- Kitchen timer
- Sunny weather

Implementation

- Instructions and questions for the children: begin by measuring the temperature of the water. Now fill both bottles with (the same amount of) water and screw the lids on tight. Pull the white sock over one bottle and the black sock over the other, then place them in the sun. Measure the temperature of the water in the bottles again after about an hour. Compare the results! If desired, the bottles can be left in the sun for another hour and the temperature measured again.
- **Questions:** How can you tell that the sun has heated the water up? Have you experienced this before?
- **Suggestion:** On a hot summer's day, a black garden hose can be filled with water and left in the sun until lunchtime. In the afternoon, the warm water can then be used to shower. Careful though: the warm water will soon be used up and will be followed by much colder water! The experiment can also be combined with **Activity 32** (page 36).



35 Making energy savings

Intention

Using **Activity Worksheet 34** (page 57), the children can experience where energy is used in their kindergarten/school as well as how they can save energy. They learn that they can also actively contribute to climate protection. If energy is not used, it does not need to be generated. Although renewable energy sources are increasingly being used in Europe, it will not be able to cover the growing energy demands for long. Hence it is important to also use energy sparingly and at the same time also switch to using renewable energy sources.



Implementation



Kindergarten groups can go through their kindergarten and have a think where energy could be saved (lights, heating, warm water, electricity). The children can then draw pictures on saving energy and display these in their group room.



To draw the attention of primary school children to possible »energy guzzlers«, the class can prepare a list together during a brainstorming session. **Activity Worksheet 34** (page 57) can be used to obtain further ideas. The children can then work in pairs to work as energy detectives and answer all of the question on the worksheet. They can identify solutions for themselves (e.g. record the room temperature, check for any dripping taps, etc.). They can perhaps even interview the school caretaker to obtain answers to the questions that they cannot answer for themselves. The children can then compile two lists of energy-saving tips: one with tips to remind themselves and others, and the other with ideas

of how teachers and the caretaker can improve things at their school.

Examples of energy-saving measures

Assign »energy detectives« for the class/group; correct airing (open windows briefly); energy-saving lights/LEDs; heating thermostat valves; limit the room temperature and avoid overheating the class/group room (a 1°C decrease in temperature can save 6% of energy); switch off any unnecessary lights, highlight the light switches, water-saving buttons; project work on climate protection; article for the school/local paper.

Recommended room temperatures and light intensities



Recommended temperatures

Classrooms 20°C, corridors 12–15°C, toilets 15°C, sports halls 17°C, changing rooms 22°C, teaching/administrative rooms 20°C, workrooms 18°C.

Light intensity

General teaching rooms 300 lux; teaching rooms mainly for use in the evenings 500 lux, workrooms and drawing rooms 500 lux, corridors 100 lux, reading rooms 500 lux, sports hall (training sessions) 200–300 lux, sports hall (competitions) 400–600 lux – depending on the sport.

Lux meters to measure the light intensity can often be borrowed from local utilities companies or environmental agencies. Any unnecessary fluorescent lights/energy-saving lights can then be removed.

Materials

- Worksheet
- Thermometer
- Paper and pens

Ideas

- Energy-saving calendar: the children can make a list of energy-saving tips together and compile these in a monthly/weekly calendar (depending on the amount of ideas) to create an »energy-saving calendar«. The according materials are often available from local energy providers or the local environmental/waste management agency.
- Activity days/weeks: one day or week could be devoted to the subjects of energy and climate protection. No limits are set to your creativity here! A »Renewable Energy Day« is held every year in April – the perfect time for a school energy day on the subjects of energy and climate protection.

Tip

The Climate Voyage stopovers »Europe: skiing and sledding – but where?!«, »Australia: where the firebugs dance« and »Southeast Asia: palm oil and toilet paper from the rainforest« are be used here.

Less is more

36 Making earth colours

Intention

Countless different colours can be created quickly and easily using soil and plants of different colours. Demonstrating to the children how creative and fun making handicraft tools can be.

Background information

Up until just a few decades ago, colours made from natural products still filled our shelves. Today, almost all colours are made using mineral oils, many of which are used to print advertising materials and newspapers. Paper recycling can lead these to get into food packaging and consequently also into the food chain – there is a great deal still to be done here in terms of consumer protection. Printing ink that is free from mineral oils is available, but rarely used due to a lack of demand.

Implementation

Collect small quantities of different soils, clay and loam as well as brick dust from bricks and other building materials in the most varied of colours. It is mostly sufficient to collect soil in different places to have a enough variety in colour. The soil under conifers is significantly darker than the soil under deciduous trees, for example.



Once the samples have been dried and any plant remains and larger stones removed (tip: use increasingly fine sieves), they can be crushed into fine powders using a mortar or potato masher. They can then be mixed with vegetable oil to create smooth colours or combined with starch to create finger paints (see support materials). To create more intense colours, simply add plant juices.

Materials

- Different soils, clay and loam or dust from bricks and other building materials
- Sieve, mortar, potato masher
- Vegetable oil
- Where desired, starch (for finger paints)
- Where desired, plant juices

Ideas

- It is also very easy to make chalk. Countless guides are available online.
- Combine the preparation of earth colours with a visit to the forest – see **Activity 22** »The forest treasure trove« (page 29).
- Making earth colours can be used to prepare for the concluding »wishprints« activity.
- Please see www.zoom-kidsforclimate.eu for even more ideas on how to make glue, plant and finger paints, paintbrushes, play dough, etc.

37 Swap shelf

Intention

Setting up a swap shelf including books, stuffed animals, toys, clothes and other items too good to throw away will encourage the children to think about our consumption behaviour and its consequences. This is a fun communal way to consider the aspects of sharing, avoiding waste and saving energy.

Background information

Every year, each EU citizen produces 481 kilograms of waste. That is almost the same weight as a fully-grown cow! There is a great deal of scope for improvement in terms of avoiding waste. It is about establishing a new concept for a closed-loop economy and resource consumption by recycling (raw) materials more and ensuring careful use of everyday items and food. This includes shopping intelligently, not immediately throwing away everything that is not flawless and instead repairing things or not allowing oneself to be unsettled by the best before date.



Implementation

Either set up a shelf or make one using (shoe) boxes brought along by the children. Fill the shelf together, then hold a little opening ceremony.

Where possible, position it in the entrance area where it can easily be accessed by all.

Those who bring something are also able to take something away.

It is also possible to donate something or to remove an item though. To prevent the shelf from becoming a »dumping ground«, rules for its use should be agreed with the children and also displayed next to the shelf. All items must be in working order, clean and usable.

Materials

- Shelf or boxes

Ideas

- Visit a flea market with the children or hold your own.
- Insights into the world of possibilities: meet experts at (bicycle) workshops, repair cafés or the building caretaker and find out how they repair things.
- Hold a repair and fix session with (grand) parents.



38 Plastic in satchels and bags

Intention

Get the children to search their satchels and bags for anything made of plastic. This will enable an investigation of our everyday habits and the consideration of alternatives.

Background information

A great many items consumed on a daily basis are made from coloured plastic. This makes our daily lives both practical and versatile. However, plastic is also harmful to the environment. A great deal of energy is required to produce it – mostly using crude oil, which is a non-renewable fossil fuel. Given that it is not chemically stable, tiny plastic particles can get into the air, soil and water as a consequence. These plastic particles have a very long lifespan: the tiny little pieces of plastic that have not been incinerated will still exist somewhere on earth hundreds of years from now. Plastic is piling up at the waste depots, floats in our seas and rivers, and can be fatal to animals. We also absorb it: the tiniest of particles get into our bodies through the food chain.

Implementation

Ask the children to empty out the contents of their satchels and bags onto their desks. Sort the contents into piles (e.g. glass, paper, material, plastic, etc.). Take a look which materials there are the most of. Then, separate the items into those containing plastic and those that do not. Explain to the children what plastic is made of and that it can have a damaging effect on their environment over its very long lifespan. Have a think together how and where plastic can be avoided.

Ideas

Use a rucksack or cloth bag to transport shopping; buy fruit and vegetables from a local market; visit packaging-free supermarkets; use reusable drinks bottles made from unbreakable glass, stainless steel or BPA-free Tritan™; opt for wooden pens without any coloured paint; paper binders; use wooden pencil sharpeners and rulers.

Tip

For tips on how to make glue, paints, paintbrushes, play dough and paper-mâché, please see www.zoom-kidsforclimate.eu.

39 Climate-friendly kids think smart

Intention

At the end of the project week, the children can compile the different things they have made and experiences. A personal reflection will allow them to review what they have learned about the different subjects and remind of the week's messages.

Activity Worksheet 39 (page 58) provides a useful template to conclude the activities and ask the children what the politicians must now do.

The focus here is on what the children can and want to change specifically for themselves – according to the motto of »Be the change you wish to see in the world« (Mahatma Gandhi). The children should also think about what support they need from their private sphere and/or politicians.

Implementation

After briefly reviewing the content covered during the project week, Activity Worksheet 39 (page 58) can be completed with the children. They should make a note of what specifically they will take home with them from the project week for their everyday lives. What in particular can they do for the climate and what support do they need for this?

Create »wishprints« to explain these wishes to politicians. The children can request targeted support from their local politicians. Example: if the children want to use climate-friendly energy, they could ask the politicians for more wind turbines.

The »wishprints« can be complemented with letters or posters calling on the participants in the UN climate conference to take action and implement national and international measures.

Climate Alliance can hand over the posters and letters prepared by the children at the annual UN climate conference together with the Green Footprints collected.

Materials

Worksheet 39 (page 58)

Ideas

Help the children to also continue their climate-friendly behaviour after the campaign week. Arrange with the children to discuss

whether and how they have implemented the measures they planned at regular intervals in the coming weeks. The difficulties involved in implementing the measures should be discussed and solutions found together. This reflection is important for the campaign's impact beyond the campaign week(s).



Break time games

Crossing the river

Mark out a stretch of 5–10 m in length in the playground (or classroom). Between the lines is the water that the children must cross using three small pieces of card (approx. 10 cm x 10 cm) without getting their feet wet. They can only put their feet on the card, lifting one at a time to use for the next step forward. The first person to cross the water without touching the ground has won.

Variation: instead of card, use boxes/posters instead. These can be folded in half at each step. With this game, a link can be made to the melting icebergs, as represented by the boxes/posters.

Materials

- Chalk
- Small pieces of card (approx. 10 cm x 10 cm) or boxes/posters – 3 per child

Imitating modes of transport

Different modes of transport can be simulated in the playground or classroom, for example bicycles, inline skaters, skateboarders, buses, trains and cars. All have their particularities that the children can imitate either alone or as a group. A train needs carriages and rails, meaning that teamwork is called for here. The difference between the different functions and simplicity/complexity of the modes of transport can be determined with the children. The game can be played on the floor or roads marked out with chalk as orientation. Each child should imitate several different modes of transport, at least three different ones. During the lesson, the children can be asked what other modes of transport there are (coaches, boats, planes).

Climate-friendly roads from building blocks

Travel using the different modes of transport generate different amounts of CO₂ emissions. The children can use building blocks to build roads together. Divide the children into two groups and decide on a starting point. The children in each group can then decide one after the other which mode of transport they wish to use to cover the next kilometre. For one kilometre by plane, get the children to lay out 20 building blocks; for one kilometre by car, 8 blocks; for one kilometre by train

or electric car, 2 blocks each; for one kilometre by bus, 1 building block and for journeys covered on foot, no blocks.

At the end, a rethink will take place, as it is not the group with the longest street that wins, but the group with the SHORTEST street using the fewest CO₂ blocks. This group has completed the most climate-friendly journey.

Weekday hopscotch

The first player stands on the »earth« and throws a stone on the square for »Monday«. They must then hop over this square on one foot and continue on through the week from Tuesday until Sunday, then back to Tuesday. They must then pick up the stone in the »Monday« square and hop back to earth with the stone balanced on their head, foot, finger, etc. The stone can then be thrown on Tuesday and so on. Anyone who throws the stone on the wrong field is out.

Bridge to Amazonia

The teacher builds a »bridge to Amazonia« with a bench over several crash mats or »wobbly rope bridge«, also over crash mats. The children must then balance across the bridge to reach the other side safe and sound, without getting wet. – A wonderful complement to the subject of one world and movement!

Materials

- Bench or rope
- Crash mats

Material transport

Place a small piece of card (approx. 10 cm x 10 cm) on each child's head and get them to move around the classroom (slowly!). They must take care to ensure that the card does not fall. If it does fall to the ground, they are not allowed to move until another child comes to their aid and places the piece of card back on their head.

Materials

- Pieces of card

What are the options?

I need a ticket for the bus.



I can talk with my friends on the bus.

I can read on the bus.



Cycling keeps me fit.

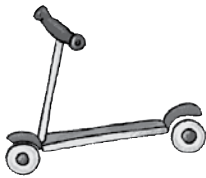
Bikes don't take up much space.

I can see and experience a lot more on foot.



I can always walk.

Riding my scooter is really fun.



I can get to see my friends quickly by scooter.

Cars are noisy and dangerous.



I can leave whenever I want.

The car is just outside my front door.

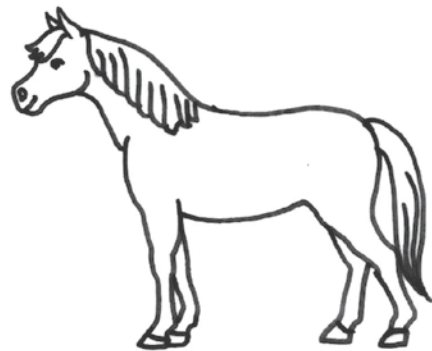
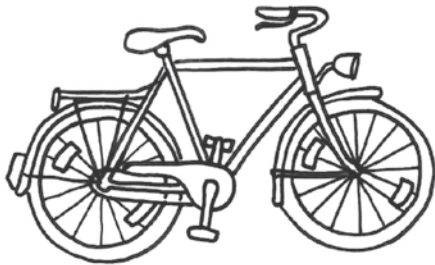
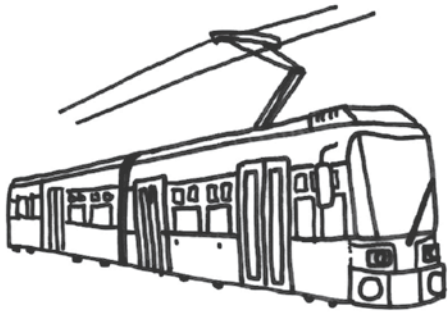
I can transport everything I need by car.

Cars emit harmful fumes.

Task:

What other reasons for using the different modes of transport can you think of?

What do you prefer?



Task:

Colour in the different modes of transport:

- Use GREEN for all those you like
- Use RED for all those you don't like
- Use YELLOW for all those you are not familiar with

Interview on School Journeys

Were journeys to school different in the past? To find out, you have to become an investigative reporter and ask your parents, grandparents or older people from your neighbourhood about their journeys to school. Write down the answers and compare them with your experiences. What has changed, and what is still the same?



Name of the reporters: _____

Date: _____

Interview-Partner: _____
(Mom, Dad, Grandpa, Grandma, neighbours, ...)

Where was your primary school?

(Place, name of the school) _____

What year did you start school? _____

How did you get to school?

(walk, by bike, bus, train, car...)



How long did you need for your way to school? _____

Was your way to school dangerous/difficult? If yes, why? _____

Did you get there with friends or on your own? _____

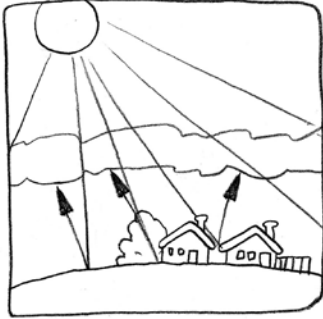
Do you remember any special experience or adventure on your way to school? _____

What are the differences between nowadays journeys and the one in earlier times?

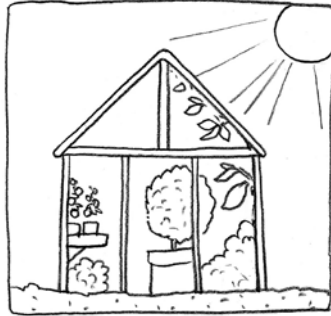


Think about further questions and write them down.

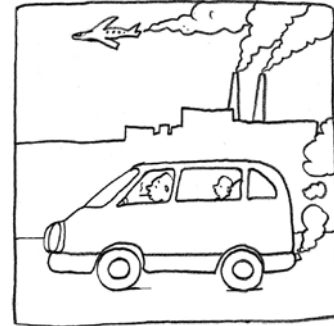
Why the Earth is Warming Up



1. When the sun shines on the Earth, it becomes warm. A gas-skin (the atmosphere) around the Earth prevents the warmth from returning into outer space. This is the natural greenhouse effect. Without it Earth would be very cold (-18°C).



2. This effect is similar to the way a greenhouse works. The sun shines through the windows. The greenhouse becomes warm. The glass of the windows does the same thing as the gas-skin around the Earth. It keeps the warmth in the house. So plants can grow faster, even if it is cold outside.



3. To keep a car running the engine has to burn petrol or diesel. This produces fumes that can be dangerous for people and the environment. For example carbon dioxide - a gas you can't see or smell.



4. What's the problem? If too many harmful substances get into the air, the atmosphere around the world becomes thicker. Therefore the warmth takes longer to escape from the Earth. So the Earth can get too hot. Our behaviour has consequences on the whole world. The more exhaust fumes we produce the more the Earth warms up. If we drive the car less, it helps the whole world.



5. If the Earth warms up too many people are in danger. Some countries will get even more hot. There will be more dangerous storms. The sea-level will increase, and so many places will be permanently flooded.

- Read this text carefully.
- Mark any sentences you don't understand.
- Now ask your teacher!

Journeys of children from around the world

Hi, I am Maria. I live in the outskirts of Johannesburg. This is a town in South Africa. My family and I are living in a hut. It takes me one hour to get to school and I have to walk. In December it is very hot and my trip to school is very dusty.

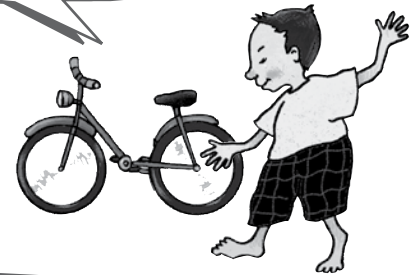


My name is Wong ChokYew. I live in the city of Wan-xian next to the river Jangtsekiang. This is the biggest river in China. Many people here go by bike. In front of our house there are traffic lights. Sometimes more than a hundred cyclists are waiting there for the light to turn green. I am allowed to go by bike on my own since last year. I have to be very careful because of all the bikes on the street.

Hey, I am Susan. I live in the USA close to Portsmouth, New Hampshire. There is no school in the countryside. So we have to drive to the next city.



Luckily the yellow school bus stops in front of our house every morning. All my friends take this bus too, so we have a lot of fun there..

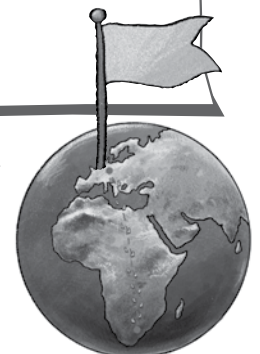


I am José. None of you gets to school like I do! I live next to the river Amazon, close to the city of Gurupà. There are hardly any roads through the rainforest, and it's much faster to travel by boat. In the morning all the children from our village meet at the quay. It takes us one hour to get to school. The trip back is much faster: then we drive with the current.

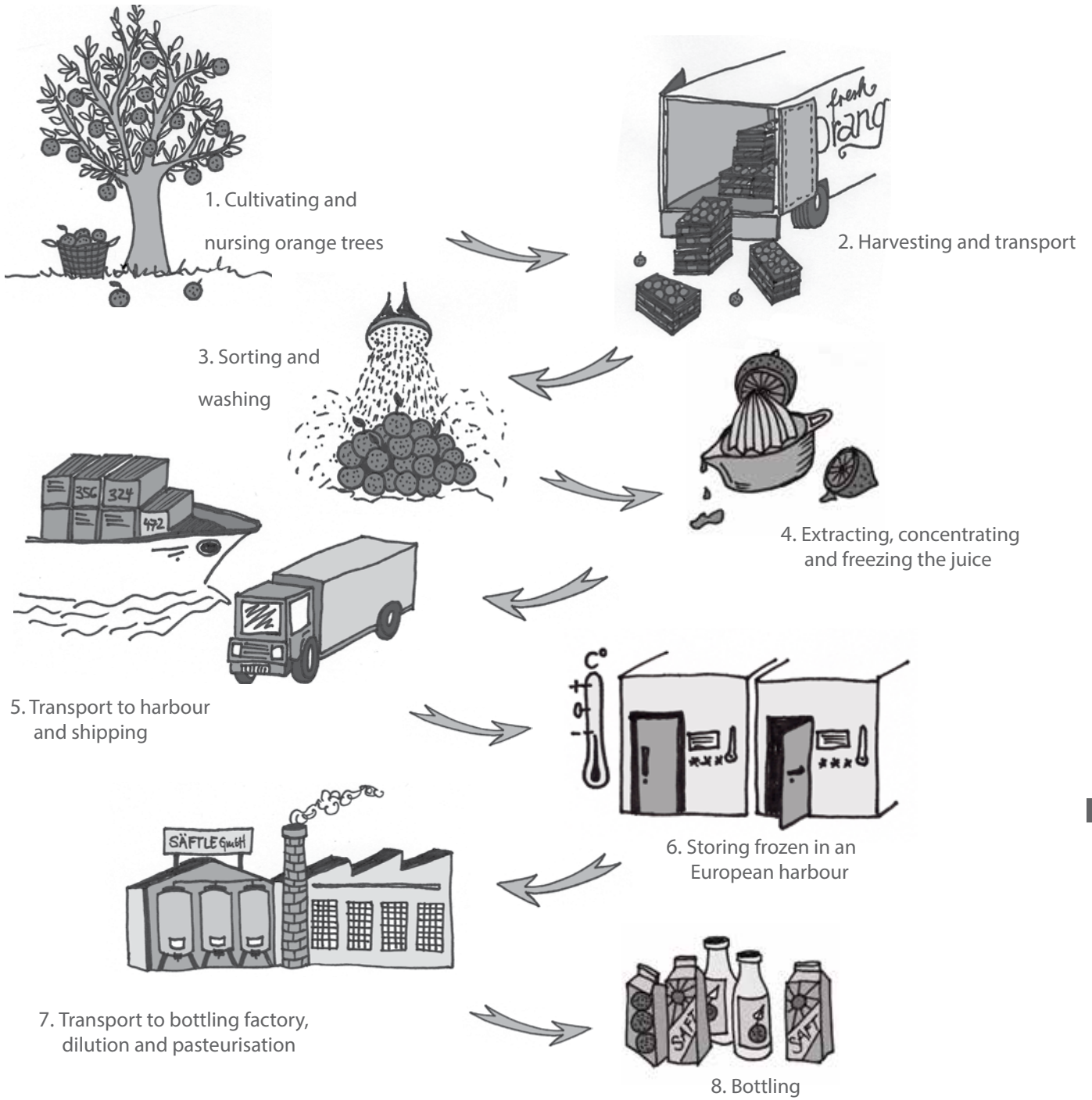


Tasks:

- Read how other children get to school
- Use the empty box to write or paint something about your own journey to school. Use the back or another piece of paper if you need more space.
- Take a world map or a globe and try to find the countries that the children come from.
- Can you find out about other journeys to school that are not mentioned on this page?



The Long Journey of Orange Juice



Sidnei and the Orange Juice

The Orange juice you buy in the supermarket might come from Brazil, a country in South America.

Oranges are cultivated in large plantations. Harvest takes place from May until January. Everyone has to help, even the children. So they have no time for school. Besides, school is very expensive because the children need books and pencils, but the families need the money for their food.

A plantation worker picks up to 2 000 kg of oranges per day. The worker has to fill his sack 80 times a day. This sack hangs on his shoulder and weighs between 25-30kg (containing about 150 oranges).

The worker earns about 25 Euros a week. That's just enough for the important things they need. The work is very hard and badly paid, so the children have to work too.

One of these children is Sidnei. He is 12 years old.

His parents and his brother work on an orange plantation too. Sometimes they have to work from 6 o'clock in the morning until 8 o'clock in the evening. For 16 oranges they earn less than one cent (about 1/4 Cent) - this is the number of oranges you need for one litre of orange juice.

We pay one Euro for one litre of juice in the store, that makes 100 cents!

Sidnei's father has back problems from carrying oranges and so he's not able to work as much as he did in the past. Sidnei knows this could happen to him too.

Sidnei wants to become a banker, but that means he needs some time to go to school. In the evenings he is too tired to play with his friends. So he looks forward to Sundays, because then he doesn't work and he has some time to play football with his friends.



Tasks:

With one of your class mates, try to carry another child across the room.

How much does the child weigh? _____ kg

How far are you able to carry the child? _____ m

Sometimes the plantation workers have to carry their sacks 50m to the collecting point!

- How much longer is this than the classroom? _____
- Work out how many metres the worker have to carry the sack each day! _____ m
- Walk this distance (on your way home or in the school yard).
- Together with your group, think about why orange juice is sometimes cheaper than e.g. apple juice which is produced in our country.
- Think about Sidnei's situation. How could his family earn more money.
- What other juice do you like to drink? Does that juice have such a long distance to travel too?
- Think about the nearest apple orchard - how far away is it?

Cooking together

Potato soup

Ingredients

- 400 g potatoes
- 1/2 celeriac
- 2 carrots
- 1 onion
- 1 bay leaf
- 1 1/2 l vegetable stock
- Salt, pepper, nutmeg
- 3 tbsp flat leaf parsley
- 3 tbsp crème fraiche
- 40 g butter

Wash and peel the potatoes, celeriac and carrots, then chop them into small cubes. Peel and dice the onions. Heat the butter in a pan and sauté the potatoes and other vegetables with the onions. Pour in the vegetable stock. Season with salt, pepper and nutmeg. Add the bay leaf and leave to simmer for approx. 20 minutes. Remove the bay leaf and blend. Stir in the crème fraiche and season to taste with salt and pepper. Sprinkle with parsley.

Tasks:

Which ingredients can you get where?

Market: _____

Supermarket: _____

Farm: _____

Farm shop: _____

Own garden/balcony: _____

- Where are the ingredients grown?
- Ask your grandparents or elderly neighbours:
What kinds of soup did you eat as a child? Do you have any recipes for these?



Fruit salad

Ingredients

- 4 apples
- 4 bananas
- 4 oranges
- 1 melon
- 4 pears
- 1 lemon
- 100 g almonds
- 50 g sugar

Wash and peel the fruit and chop up small. Place in a large bowl. Squeeze the lemon into a smaller second bowl and add a little sugar to taste. Pour the sugar and juice mixture over the fruit. Allow to stand for a while, then sprinkle with almonds.

Tasks:

Take a look at the ingredients.

- Which had the longest journey to reach you?
- What could you use instead?

In the Amazon rainforest

Apak lives in the Amazon rainforest in Ecuador. He knows his forest very well. He has learned all there is to know about the plants and animals here from his people. He tells you all about the forest in which he lives.

Apak from Ecuador says:

Our forest is green all year round because it is always really hot and humid here. We know every stream, every valley and every pathway. My father knows where to find the very best honey. We weave baskets from palm leaves and use loops made from vines to climb the trees. There are a great many different trees here. Every other tree looks different. We used the trees' wood to build our houses. Our food and medicine also come from the forest. Our gardens in which we grow cassava, bananas, papayas and lemongrass are known as »chacras«. We eat everything that is in season.

The ghosts and spirits of our forefathers also inhabit the forest. My father passes through a secret doorway into their world with other men. The next community is one day's walk away. They are currently fighting a big company that wants to take our forest away from us. My friend Eriberto made a film about this. I hope no one will hurt our forest! It is our home. I am always here. I can't imagine living anywhere else.



Tasks:

- Read the text and underline any parts you do not understand.
- Discuss these with your classmates.
- Use the following words to write a story about a forest that you know: outing – rain – shoes – food – protection – squirrel – forest spirit
- What makes our forests special compared to the Amazonian rainforests? What are the differences?
- What do you think a forest spirit would be like? What could be their job? Paint or draw a picture of them.

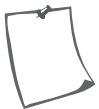
Past, present, future



Food is the primary »energy source« for us humans. We obtain energy from it to be able to use our muscles. There are not any technical tools yet.



Around 1,000 years ago, crusaders and merchants brought windmills to Europe.



Fire was discovered during the Stone Age between 300,000 to 750,000 years ago. Humans then have an energy source that provided light and warmth as well as protection.



Nuclear energy was discovered around 80 years ago, providing yet another energy source. It generates far more energy than other energy sources but also brings major problems with it (radiation, nuclear waste requiring storage, by-products that are used for lethal weapons).



Oil and coal were also discovered at around this time, between 4,000 and 5,000 years ago. They are used as a source of light or heat or to seal or waterproof ships. Human and animal muscle power play an important role.



The first water and windmills were built in Mesopotamia around 4,000 to 5,000 years ago to draw water. Wind was also used to power sailing boats and windmills in Egypt.



After humans discovered fire, they settled and began breeding livestock and farming the land. That was almost 12,000 years ago.

They also used animal muscle power. The animals in turn also had to be provided with food (energy).



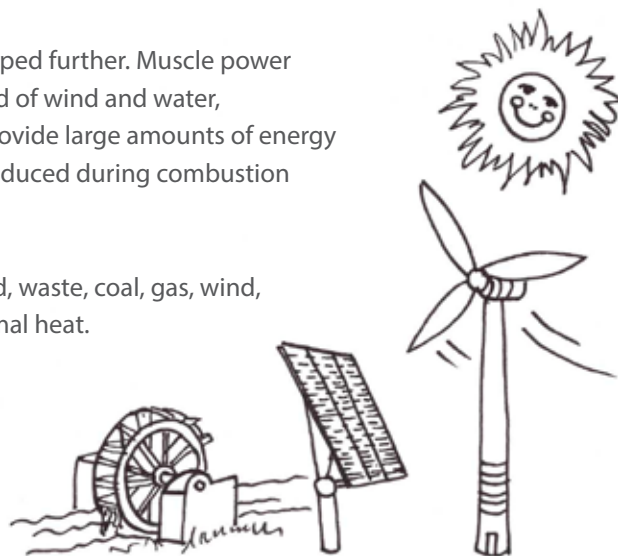
Around 300 years ago, technology developed further. Muscle power was replaced with machine power. Instead of wind and water, coal and oil are increasingly used. They provide large amounts of energy quickly and easily. However, gases are produced during combustion that cause the planet to get warmer.



Today, energy can be obtained from wood, waste, coal, gas, wind, water, nuclear power, the sun or geothermal heat.



Renewable energies such as wind, water and sun are the best for the climate.



Tasks:

Read through the short sections and decide on the correct chronological order by adding numbers to the boxes on the left-hand side.

A day beside the Rio Negro



José says:

We wake at dawn and climb out of our hammocks. Together with our parents, we go to the river to bathe. The water gives us strength and prevents us from becoming lazy or old. When it grows light, we help in the house and prepare our school things. Because we live on the equator, the sun always rises at 6 a.m. and sets at 6 p.m. Before leaving the house, we eat our first meal of the day: fish or game with sauce, accompanied by cassava bread. My mother makes the food over a wood fire.

Our parents then go work in the fields and take the younger children with them while the older children walk or travel by boat to the village school. We recently got electricity at school, which is obtained directly from the sun. Solar panels have been installed on the school's roof for this. This allows us to use a video recorder to watch interviews that the course before us recorded: in it, our parents and grandparents tell us about their everyday lives.



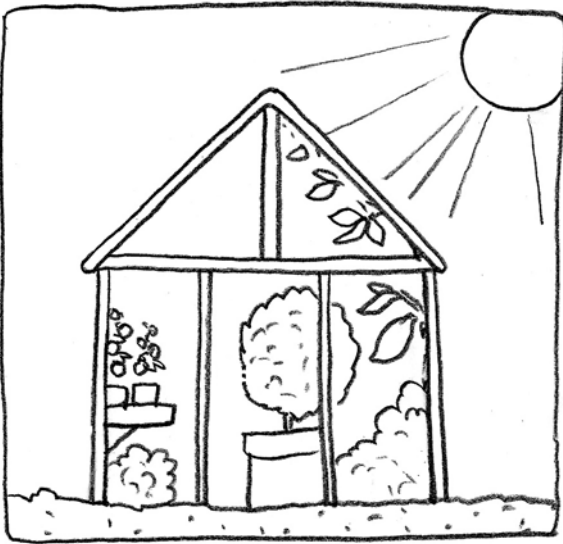
After finishing our lessons, we return home for a meal of fish or game with vegetables. We then mostly help our parents in the fields and learn how to take care of the plants for ourselves to ensure a good harvest. At about 3 p.m., we return home, bathe in the stream and have something to eat – mostly a fish soup. We then help mother with the housework, do our homework and play on the village square until it gets dark. Father then goes fishing, taking the older boys with him. After cleaning our teeth, we climb into our hammocks to sleep. The day of school, play and work in the fields is very tiring. Our parents mostly stay up a little longer. They sit with their friends beneath »lamparinas« (petroleum lamps with a wick) and tell stories.

Tasks:

- Have a think what a day beside the Rio Negro could be like and write an energy diary.
- Compare your energy diary with José's:
 - Where do you use energy?
 - What energy is actually available?



Investigating the greenhouse effect



Materials

- thermometer, glass bowl or a big bottling jar
- Sonniges Wetter

Method:

- Measure the temperature outside in the sun. Note it down below.
- Put the glass bowl over the thermometer. Make sure that there are no spaces in between!
- Check the thermometer after 30 minutes and note the new measurement.

- Now compare the two results.
- Temperature outside: _____ °C
- Temperature under glass bowl: _____ °C

Explanation:

The air under a glass bowl warms up more, like in a green house. The ray of sunshine comes through the glass, and so it warms up inside. The glass holds the warmth inside.

Maybe you've experienced that already in a car left parked in the sun - it quickly becomes very hot inside.

You can increase the temperature under the glass bowl by placing a sheet of black paper underneath.

Tip:

If you want to have a closer look at the Greenhouse effect, measure the temperature inside a greenhouse. Compare your result with the temperature outside.!

Glossary:

What is a Greenhouse?

A greenhouse is a glass building, where plants sprout and grow faster, because the air is warmer inside due to the Greenhouse effect. Greenhouses are used for plants that need a warmer climate, for example palms or cacti. Many flowers and vegetables are grown in greenhouses, so we can harvest them even in cold weather.

In springtime, a greenhouse is also used to sow plants for which it is still too cold to grow outside. If it becomes warmer outside, these plants are already large, and can be harvested earlier.

Renewable energy

Renewable energy can be used time and time again. It can be obtained from the sun, wind and water as well as plants (biomass) and the earth's heat.

Let the sun bright

Energy can be obtained from my r_____. There are a number of different ways to generate energy from s_____.

The energy can be converted into electricity, for example. This technique is known as photovoltaics. The sun's rays can be collected using s_____ and then used to heat water. You may have already seen something like this on the roofs of houses. By the way – did you know that my power is also contained in the wind, wood, water and earth?

I am the wind, the heavenly child

Layers of air are warmed by my friend, the sun, and this brings movement into the air. The air currents (w_____) can be converted into e_____ in wind farms. Humans have used my power for centuries now. To drive modes of transport such as s_____ and hot air balloons, for example.

Water ahoy!

W_____ can be used to generate power from my movement. My power is converted into energy as it flows. Energy can also be obtained from the e_____ and f_____ of the sea in tidal power stations.

Exercise:

- Read the text and underline any words you do not know.
- Discuss the words listed below.
- Use the word to fill in the gaps in the text:
ebb and flow – solar panels – rays – underground – wind – wood – living creatures – solar energy – sailing boats – earth – water wheels – warmth – electricity

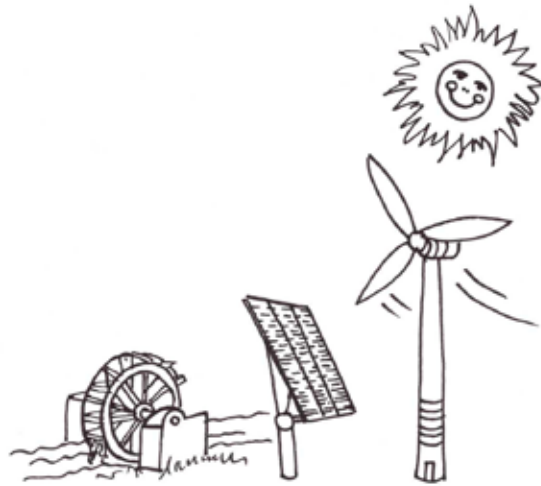
Biomass

I include all living and dead plant matter, animals and other l_____.

Plants generate me from solar energy and air. My energy can be converted into w_____ when it is burned. I am the oldest form of energy generation known to humankind. W_____ has been used to make fire – and therefore also heat – for a very long time now.

Heat from within – geothermal heat

My energy is stored as heat within the e_____ and can be used to generate heat. Because I am at home u_____, my energy is always available – regardless of the time of day or year.



Energy checklist

Lights:

Yes / No

- Will the light be switched off when class is over?
- How many and which lights are there in the classroom?
- Are the light covers dirty?
- Are the lights in the corridors and toilets needed during lesson times?
- Are the lights in the sports hall switched off when it is light enough?



Heating and ventilation:

What is the temperature in the different rooms (average)?

- Classroom _____ °C
- Workshops _____ °C
- Corridors _____ °C
- Secretariat _____ °C
- Staffroom _____ °C
- Toilets _____ °C
- Sports hall _____ °C
- Equipment room _____ °C
- Stairway _____ °C
- Cloakroom _____ °C
- Other _____ °C



Exercise:

- Complete the energy checklist.
- The caretaker should be able to answer a lot of these questions!
- You will need: thermometer, pens and paper.

Electricity:

Yes / No

Are machines switched off over the weekend?

- Computer
- Photocopier
- Television
- Drinks machine
- Projector
- Video recorder
- Video projector
- Other

(Warm) water:

- When and where is warm water used?

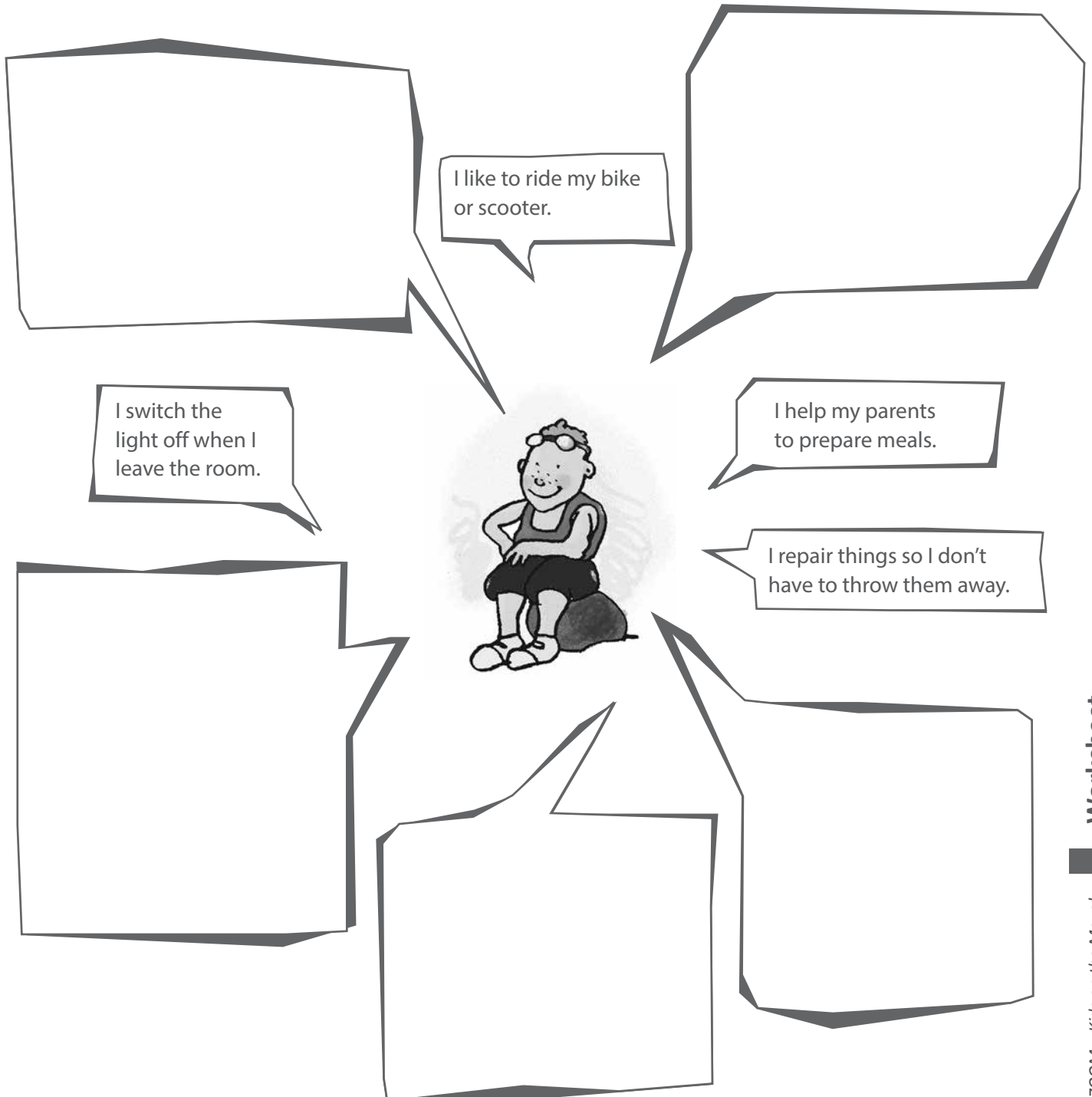
- What happens during the holidays, on public holidays and at the weekends? Is as much warm water available during these times?

- Where is warm water actually needed?

- Do any taps drip continuously? (Yes/No) If yes, then which ones?

- Does the toilet flush run continuously? (Yes/No) If yes, then which ones?

Climate-friendly kids think smart



Exercise:

- What else can you think of?
Use the speech bubbles to write down what you would like to do for the environment and climate.
- Also have a think what your parents could do.
Collect suggestions on a poster (or prepare a letter to all the parents).
- What should politicians do?
Create footprints or a poster to record your wishes.



Feedback form

CLIMATE ALLIANCE

European Secretariat | Head Office

Galvanistraße 28
60486 Frankfurt am Main
Germany

Name of kindergarten/school: _____

Group/class: _____

Address: _____

Contact: _____

Email: _____

Telephone number: _____

Number of children who participated: _____

Number of groups/classes who participated: _____

Number of footprints collected: Green: _____ Red: _____ Blue: _____

We are enclosing:






Wishprints for politicians Photos of our activities A report on our activities

Other: _____

We implemented the following:

Would you use these ideas again?

Number of activities – block on mobility: _____     

Number of activities – block on climate-friendly food: _____     

Number of activities – block on saving energy: _____     

Number of break time games: _____     

Number of Climate Voyage stopovers: _____     

Own ideas: _____

Please do not hesitate to contact us in case of questions:

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zoom@climatealliance.org

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Please see

**www.zoom-kidsforclimate.eu
for even more ideas and
links (incl. videos)!**

*SOLUTIONS for the break time puzzles on page 43:
Renewable energy | Use muscle power*

Green Footprints for the global climate

Actively explore everyday journeys in a fun way; complete journeys quietly on foot or zoom along by scooter, embark on a journey around our One World, learn about the journeys to school of children from around the world – the ZOOM – Kids on the Move! campaign offers all this and much more since 2002. Every journey covered in a climate-friendly manner – on foot, by scooter or bike, bus or train – counts as one Green Footprint during the campaign week whose dates you are free to decide.

The campaign modules and materials provide concrete ideas for planning and implementing mobility weeks. These can be complemented with activities from the blocks on “climate-friendly food”, “saving energy” and the “fair and climate-smart procurement of art and school supplies” to collect additional red and blue footprints.

Get involved and collect Green Footprints together with other children’s facilities in your town, city or municipality! Request support from national and international partners (the materials are available in several languages).

For results, Climate Voyage and further materials visit www.zoom-kidsforclimate.eu

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Climate Alliance

For over 30 years, Climate Alliance member municipalities have been acting in partnership with indigenous rainforest peoples for the benefit of the global climate. With nearly 2,000 members spread across more than 25 European countries, Climate Alliance is Europe’s largest city network dedicated to comprehensive and equitable climate action. Each member city, town and district has committed itself to continually cut greenhouse gas emissions, aiming for a 95% reduction by 2050 (compared to 1990 levels) in line with IPCC re-

commendations. Recognising the impact our lifestyles can have on the world’s most vulnerable people and places, Climate Alliance pairs local action with global responsibility. The network fosters cooperation with indigenous peoples, runs awareness raising campaigns and develops tools for climate action planning. It provides ample opportunity for participation and exchange while representing member interests at the national, European and international levels.



**CLIMATE
ALLIANCE**