



THE GREEN BELT – INCORPORATING ENVIRONMENTAL LEARNING INTO TAEKWONDO TEACHING

THE ENVIRONMENTAL REQUIREMENTS

DELIVERABLE

DELIVERABLE NAME	D2.1 The environmental requirements
LEAD BENEFICIARY	SBA
DISSEMINATION LEVEL	PUBLIC
WORK PACKAGE	WP2
DUE DATE	M7



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Introduction

The Green Belt project aims to instill environmental responsibility in Taekwondo athletes and trainees through sustainability education. It introduces the concept of "green athletes" and seeks to infuse the martial art belt system with a new sense of purpose. This initiative integrates green education and requirements into the theoretical and practical training of Taekwondo practitioners. The goal is to educate them on sustainable and eco-friendly practices, fostering green thinking and lifestyle.

Within this project, Taekwondo trainees will learn about the importance of conservation, waste reduction, recycling, and other practices that promote environmental sustainability. This education will be seamlessly integrated into their training sessions, creating a holistic approach that goes beyond physical skills. To advance to the next belt rank, trainees must demonstrate their understanding and implementation of these environmentally friendly practices.

By meeting these requirements, trainees not only progress in their Taekwondo journey but also become exemplary "green" athletes. Wearing the belt will symbolize more than just martial arts skill—it will represent their dedication to the well-being of our planet. It becomes a visible reminder of their commitment to preserving the environment and being responsible global citizens.

The Green Belt project aims to cultivate a generation of Taekwondo athletes who excel in their sport and actively contribute to a sustainable future. By blending Taekwondo principles with environmental consciousness, the project fosters a sense of responsibility and stewardship among athletes. It encourages them to lead by example and inspire others to follow suit, making a meaningful impact in their communities and driving positive change for the planet.

This project demonstrates that sports and environmental sustainability can go hand in hand, empowering young athletes to become champions not only in their sport but also for the planet. To achieve this, the partnership has developed specific requirements for obtaining respective belt ranks and provided accompanying educational materials on various topics of environmental sustainability.

The following document contain the elaborated requirements and education materials. These requirements are the result of collaborative efforts from all partners, who contributed ideas for improvement and adaptation to respective age groups of athletes. Furthermore, the project concept and requirements underwent a survey among athletes, coaches, trainers, and parents to gauge their attitudes and perceptions, leading to further refinements based on their valuable feedback.

The project is coordinated by Taekwondo Fitness NSA Bulgaria and unites five organizations: Taekwondo Fitness NSA (Bulgaria), Sustainable Balkan Association (Bulgaria), Elite Taekwondo Sport Club (Hungary), Syllogos Olympiakon Athlimaton Trikalon (Greece), and Reactive Taekwondo Team (Romania). Together, they work towards creating a greener and more sustainable future through the power of Taekwondo and environmental consciousness.

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Table of requirements

4-7 + – suitable tasks

8- 12 +- suitable tasks

12 + suitable tasks

18+ - suitable tasks

Belt rank	Educational topic	Tasks and Expected results	Means of verification	New skills and knowledge
9 Yellow-white belt	Climate change – what is it, what it's impact?:	<i>Food waste – eat what you buy or order</i> Guidance: Explain to the trainee that by eating all their meal, they prevent pollution (waste generation, which emits CO2)	Parents' verification Explanation letter	Climate change's impact on the planet and living beings.
		<i>Saving water - when brushing teeth's and washing hands</i> Guidance: Explain that climate change impacts water availability and distribution. Saving clean water prepares us to cope with future challenges.	Parents' verification Explanation letter	The role of greenhouse gases in warming the Earth.
		<i>Turning off lights</i> Guidance: Explain that when turning off lights, we save electricity, which is energy, and the energy sector is the biggest CO2 emitter.	Parents verification Explanation letter	Consequences like extreme weather, rising sea levels, and changes in ecosystems.
		<i>Collecting and handing over plastic garbage – 400 gr. (approx. 10 bottles of 2 letters)</i> Guidance:	You can choose from: - requesting pictures of collected garbage - The club collects the garbage and	Challenges for people, nature, and industries.
				The importance of taking care of the Earth for a better future.

		Explain that plastic should be cleaned (a cup of yogurt, should be washed off and smashed to reduce storage space.	organizes its disposal. - Handing over the garbage to traders and requesting some proof for delivering the waste	
		Collecting and handing over paper garbage – 300 gr. Guidance: Paper should be clean and smashed to reduce storage space.		
<p>Guidance for application: Choose at least two of the sections to be completed by the time of the exam. Choose at least one quantitative requirement. If the club decides to act as a collecting point, get in contact with disposal companies to arrange the transportation of the garbage. If there is a trader which buys garbage, the earned money can go in a “sustainability fund” of the organization, which can be used for various investments as improving energy efficiency of the premises, covering higher expenses for the purchase of equipment or materials produced by organizations, who have implemented sustainability management and use sustainable materials in their production chain. A good idea will be to purchase awards for the best environmentalists. “Parents verification” – as some of the trainees may be too young to read and write, parents verification is the option to check the execution of the requirement. To ensure parents’ cooperation, explain the main purpose – to motivate a positive change. The outcome we seek is their confirmation that their children do better than before.</p>				
8 Yellow belt	Greenhouse gases – share of industries.	Food waste – bringing meal boxes – at least five times. Guidance: Depends on the age category and the time of the trainings. Check with the parents if there are any restrictions at the schools on bringing meals. More applicable to older trainees – motivate them to pack the dinner leftovers for the next day.	Parents’ verification Explanation letter	Climate Change and Greenhouse Gas Emissions - Major Greenhouse Gases: CO2, CH4, N2O - Human Impact on Emissions: Fossil fuels, transportation, industrial processes
		Saving water – shorter showers Guidance:	Parents’ verification Explanation letter	

		Explain that shorter showers save both clean water and electricity/energy.		- Importance of Mitigation: Reducing all greenhouse gases
		Collecting and handing over plastic garbage – 600 gr.	You can choose from: <ul style="list-style-type: none"> - requesting pictures of collected garbage - The club collects the garbage and organizes its disposal. - Handing over the garbage to traders and requesting some proof for delivering the waste 	
		Saving electricity - using cooler water for showers, washing hands or dishes. Guidance: Explain that heating water is one of the major consumptions of energy (mainly electricity) at home.	Parents' verification Explanation letter	
		Saving electricity - better management of cooling and heating appliances – reduce the room temperature during winter with one degree / set your cooling appliance with one degree higher during summer / Guidance: Explain that by adjusting those appliances with only one degree is a huge progress, as they will save both money and GHG.	Explanation letter	

Guidance for application

Choose at least two of the sections to be completed by the time of the exam. **Choose at least one quantitative requirement.** Look on the top of the table to see the legend of the colors usage in the third column.

7 Yellow-green	Pollution. Types of pollution	Textile waste – laundry textile with liquid detergents Guidance: Emphasize that liquid detergents lead to less microplastic presence in the waste water.	Write a report	New knowledge on: Understanding and addressing pollution for a cleaner planet.
		<i>Turning off lights</i> Guidance: Explain that turning off lights save electricity, but also light noise as well.	Writing a report or parent verification	Exploring major types of pollution: water, air, soil, noise, and light pollution.
		Join cleaning initiative or clean some area. Guidance: Cleaning initiatives can be organized by the club. In case no public cleaning initiative is ongoing by the time of the exam, athletes can clean some area of their choice. Ask them to take photos “before and after”	Photos of participation during the initiative. Photos “Before” and “after”	The causes, consequences, and actions to combat pollution for a healthier future.
		Collecting and handing over plastic garbage – 800 gr.	You can choose from: - requesting pictures of collected garbage - The club collects the garbage and organizes its disposal. Handing over the garbage to traders and requesting some proof for delivering the waste	Impact of microplastics on water pollution and human health. Air pollution's link to global warming and health issues.
		Collecting and handing over paper garbage – 400 gr	Same as above	Detrimental effects of noise pollution on humans and wildlife.
Making an audit of the waste and suggesting how to reduce it Guidance: Tell your trainees to monitor for some period what type of waste they mostly	Writing a letter	Light pollution's disruption of ecosystems and wildlife behavior. Soil pollution's consequences for		

		produce. Then ask them to think of ways how to reduce it.		fertility and ecosystem health.
		Identify excessive packaging or non-sustainable packaging Guidance: Tell your students to pay attention to different products they buy and decide if the packaging could have been less. For instance, some food is packed both in plastic and then in paper packaging. It can refer to electronics, food, clothes, toys, etc.	Write a letter Report to your trainer directly	Individual responsibility in reducing pollution through sustainable practices.
Guidance for application: A good reputation for the club, will be the organization or supporting of a cleaning initiative. This way your trainees will easily fulfill the requirement of joining a cleaning initiative.				
6 green belt	Waste generation. E-waste	Write about 10 products that you have switched to which are more climate friendly – i.e.	Writing a report	New knowledge on s waste generation's impact, recycling rates, and the importance of reducing landfill waste; e-waste's growth, the need for recycling, and the value of critical raw materials. Increased knowledge on the textile industry's pollution, recycling potential, and new knowledge on sustainable tips for helping the environment.
		Saving electricity - do your laundry on lower temperature/ use dishwashing programme on lower temperature	Writing a report	
		Join a green initiative. Guidance: Any type of green initiative is applicable, not only cleaning – it might relate to planting trees or raising awareness	Photos of participation during green initiative	
		Collecting and handing over plastic garbage – 800 gr	Same options as described in previous belt rank requirements	
		Collecting and handing over paper garbage – 600 gr	Same options as described in previous belt rank requirements	
Guidance for application:				

Choose at least three of the sections to be completed by the time of the exam. **Choose at least 2 quantitative requirements.**

5 green-blue belt	Waste management Recycling– reuse and repair Waste management. – responsible consumer behavior	Write 10 times that you have repurposed or reused something	Writing a report	Waste management and environmental sustainability. Understanding the impact of consumer behavior on waste generation and greenhouse gas emissions. Adopting sustainable practices: recycling, reusing, and repairing to conserve resources. Making informed choices for a cleaner and healthier environment.
		Identification of plastic numeration of packaging – collect 500gr of PET plastic packaging items.	Same options as described in previous belt rank requirements	
		Implement at least 5 sustainable practices listed in the educational material	Writing a report	
		Textile waste – recycle old textile	Pictures of textile waste, parents' verification	
		Creating a recycling station	Pictures of the recycling station	
		Reporting on recycling – glass, paper, plastic	Writing a report	
		Collecting and handing over paper garbage – 800 gr	Same options as described in previous belt rank requirements	

Guidance for application:

Choose at least three of the sections to be completed by the time of the exam. **Choose at least 2 quantitative requirements.**

If you decide to apply the first requirement, you might create an online survey with the following sample of reuse and repair practices to simplify the reporting process – trainees will fill in online the achievement of the respective target.

The reuse options:

- Reuse plastic bags
- Reuse plastic boxes
- Reuse old clothes as cleaning clothes.
- Reuse clothes of a sibling
- Reuse glass jars

The repair options:

- Repair your shoes;
- Repair your clothes
- Repair home appliances

- Repair toys				
4 blue belt	Waste management. – responsible consumer behavior	Join a green initiative.	Photos “before and after” of the cleaned area	Knowledge of Practices that can contribute to a cleaner and healthier environment and a more sustainable future
		10 times that you have used alternative ways of transportation Guidance: For instance cases where they have chosen public transport over car, or have chosen to walk. Ride a bike instead of using public transport As children depend on their parents, this requirement should be applied for older trainees who have the power to decide on their type of transportation.	Writing a report	
		Implement at least one practice aiming at reducing water pollution: - Do laundry with liquid detergent - Do laundry on lower temperature - Change self-cleaning cosmetics with biodegradable formulas	Writing a report	
		Collecting and handing over plastic garbage – 800 gr	Same options as described in previous belt rank requirements	
		Implementing at least 5 of the proposed sustainable practices at the educational materials	Writing a report	
		Collecting and handing over paper garbage – 700 gr	Same options as described in previous belt rank requirements	
Guidance for application:				
3 blue red	Food and agriculture food waste.	Monitor one week of your eating habits – do not change anything:	Writing a report	New knowledge on: greenhouse gas emissions in

		<ul style="list-style-type: none"> - Try to reduce meat for one week - Try to avoid meat for one week 		agriculture and the textile industry.
		Identify product that you consume and contain palm oil. Try to avoid them/replace them	Writing a report	Understanding the environmental impact of food waste and consumer behavior. Embracing organic farming for sustainable food production and biodiversity preservation. Composting as a natural recycling process to enrich soil and reduce organic waste.
		Purchase local products	Writing a report	
		Write about 5 things that you have investigated the date labelling that you found interesting to understand that they are good to be consumed after the mentioned date expires.	Writing a report	
		Collecting and handing over plastic garbage – 900 gr	Same options as described in previous belt rank requirements	
		Collecting and handing over paper garbage – 900 gr	Same options as described in previous belt rank requirements	

Choose at least three of the sections to be completed by the time of the exam. **Choose at least 2 quantitative requirements.**

2 red belt	Biodiversity	Counting birds for 5 minutes in natural resort and counting birds for 5 minutes in urbanized area,	Writing a report	New knowledge on: Understanding the impact of climate change on biodiversity and ecosystems. Recognizing the threats posed by human activities, such as deforestation, urbanization, and pollution.
		Plant a tree.	Photos of before and after	
		Make your own home garden	Photos of before and after	
		Organize a cleaning initiative	Photos “before and after” of the cleaned area	
		Collecting and handing over plastic garbage – 1000 gr	See previous sections	
		Collecting and handing over paper garbage – 1000 gr	See previous sections	


				<p>Importance of preserving biodiversity for the health of ecosystems and human existence. Promoting sustainable practices and conservation efforts to protect biodiversity and ensure a sustainable future.</p>
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Choose at least four of the sections to be completed by the time of the exam. **Choose at least 2 quantitative requirements.**

<p>1 black belt</p> <p>Environmental Ethics and Values: Developing a sense of environmental ethics, responsibility, and values that promote sustainable behaviors and decision-making</p>	<p>Evaluation of changed habits – at least 3 (personal actions against climate change)-</p>	<p>Writing a letter, reporting to trainer directly</p>	<p>Understanding the intrinsic value of nature and the importance of treating the environment with respect and care. Recognizing individual responsibility for environmental well-being and adopting sustainable practices.</p> <p>Importance of environmental education and awareness in fostering sustainability.</p>
	<p>Write the Main take -aways from the course. Guidance: Ask trainees to write an essay about their contribution in tackling climate and environmental challenges. What have they changed? How did they find the club initiative?</p>	<p>Write an essay and organize a competition</p>	
	<p>Share your knowledge and new practices with at least 3 fellows</p>	<p>Write a report – explain what the things were they decided to change</p>	



			<p>The influential role of sports in promoting environmental sustainability and advocating for conservation.</p> <p>Integrating environmental ethics into the sports culture to inspire sustainable practices and positive change.</p>
<p>For Black belt ensure that each athlete during the entire course has completed the following checklist:</p> <ul style="list-style-type: none">- has collected at least 3 kg of plastic and 3 kg of paper- Has plant a tree.- Has joined at least one cleaning initiative- Has organized at least one cleaning initiative			



Educational materials:

9 Yellow-white belt - climate change

Climate change is a significant global issue that has consequences for our planet and the lives of all living beings – animals and plants. It refers to long-term shifts in weather patterns and average temperatures on Earth. It is recorded that averaged across land and ocean, the surface temperature in 2021 was 1.04°C warmer compared to the pre-industrial period of 1880-1900. According to NOAA's temperature data the 2022 surface temperature was 0.86 °Celsius warmer than the 20th-century average of 13.9 °C and 1.06 °C warmer than the pre-industrial period (1880-1900).

At its core, climate change is considered to be driven by the accumulation of greenhouse gases in the Earth's atmosphere, which amplifies the greenhouse effect. The greenhouse effect is a natural process that allows the Earth to maintain a habitable climate. It works by trapping the sun's energy and heat in the atmosphere, preventing it from escaping into space. Without the greenhouse effect, the Earth would be too cold to sustain life as we know it. However, human activity adds enormous amounts of gases into the atmosphere, boosting the greenhouse effect that is contributing to global warming.

The primary greenhouse gas responsible for the majority of this effect is carbon dioxide (CO₂), although other gases like methane (CH₄), nitrous oxide (N₂O), and fluorinated gases also contribute to the greenhouse effect.


The consequences of climate change are vast and varied, affecting different aspects of our planet. One significant impact is the rise in global temperatures, which has profound implications for the Earth's oceans. As temperatures increase, not only do glaciers and ice caps melt, contributing to the rise in sea levels, but the warmer ocean waters themselves undergo thermal expansion.

Warmer oceans have a direct influence on storm patterns and intensities. As the ocean temperature rises, it provides more energy and moisture to fuel the formation and intensification of storms. This energy transfer plays a critical role in the development of severe weather events, including hurricanes, typhoons, and cyclones.

The increased warmth in the ocean surface enhances the evaporation process, leading to higher water vapor content in the atmosphere. This, in turn, provides a favorable environment for the formation of powerful storms. The added moisture contributes to the potential for heavier rainfall, increasing the risk of flooding and other related hazards.

Furthermore, warmer oceans can alter atmospheric circulation patterns, impacting the movement and tracks of storms. As the climate system adjusts to the changing ocean conditions, the behavior of storms can become more erratic and unpredictable. This variability can result in changes in storm paths, intensities, and durations, making it challenging to anticipate and prepare for their impacts.

The combination of rising sea levels and changing storm patterns poses significant risks to coastal areas. Higher sea levels increase the vulnerability of coastal communities to storm surges, coastal flooding, and erosion. The intensity and frequency of storms can exacerbate these risks, leading to more extensive damage to infrastructure, ecosystems, and human settlements.



Changes in precipitation patterns result in more frequent droughts and heatwaves. These events have severe implications for agriculture, food security (meaning that the population has access to consistent supply of safe, nutritious, and affordable food) and the availability of clean water.

Climate change also disrupts ecosystems, leading to the loss of biodiversity and the extinction of plant and animal species. It affects natural habitats, disrupts migration patterns, and increases the spread of diseases. Furthermore, it poses significant challenges to human health, increasing the risk of heat-related illnesses, respiratory problems from poor air quality, and the spread of vector-borne diseases.

The consequences of climate change are not limited to environmental and ecological impacts. They have profound social, economic, and political implications. Displacement of communities due to rising sea levels and extreme weather events, food and water scarcity, and resource conflicts are some of the societal challenges associated with climate change. Moreover, vulnerable populations, including the poor, marginalized communities, and future generations, are disproportionately affected by its consequences. They often have limited resources and resilience to cope with extreme weather events, food and water scarcity.

Future generations also face the long-term consequences of climate change, inheriting a world with potentially depleted resources, degraded ecosystems, and increased social and economic challenges.

The consequences of climate change extend beyond environmental and ecological impacts and have far-reaching effects on various aspects of society. One area greatly affected is employability, as certain industries, such as agriculture and fishing, may experience reduced productivity and job losses due to changing conditions and disruptions in the supply chain. Conversely, new employment opportunities may arise in sectors related to renewable energy, green technologies, and climate adaptation and mitigation.


The tourism industry is also significantly impacted by climate change. Shifts in climate patterns can alter travel destinations and impact natural attractions, leading to changes in seasonal tourism patterns. Certain destinations may experience shorter or less predictable tourist seasons due to extreme weather events, affecting local economies and livelihoods that rely on tourism revenue.

In the realm of sports, climate change has implications for various activities, including water and winter sports. Rising temperatures can affect water availability and quality, impacting sports like swimming, sailing, and water skiing. Changes in snowfall patterns and shorter winter seasons pose challenges for winter sports like skiing, snowboarding, and ice skating, as snow conditions become less predictable and reliable.

In summary, climate change has significant social, economic, and political implications, affecting sectors such as employment, tourism, and sports. The consequences disproportionately affect vulnerable populations and future generations, highlighting the urgent need for collective action to mitigate and adapt to the challenges posed by climate change.

[Version for children below 12:](#)

Climate change is a big issue that affects our planet and all living beings, like animals and plants. Scientists have found that the Earth's surface temperature is getting warmer compared to how it was in the past.



You know how sometimes it feels really hot outside, like during a hot summer day? Well, climate change is making the whole planet feel hotter, and it's not just about one day; it's happening over many years.

Imagine if your room was getting hotter and hotter every day, even when you didn't want it to be that way. That's what's happening to the Earth. And you know what? It's not just about the Earth feeling hotter; it's also changing the weather in different places.

Sometimes, some parts of the world get too much rain, and there are floods. Other times, some places don't get enough rain, and there are droughts, which means there's not enough water for people, plants, and animals. All of these changes can make things very hard for everyone.

You might wonder why this is happening. Well, it's because of something called "greenhouse gases." These gases are like a big blanket that traps heat from the sun and keeps it on the Earth. Usually, this blanket is helpful because it keeps us warm, just like when you wear a cozy sweater in winter. But when we use things like cars, factories, and machines that release too many greenhouse gases, the blanket gets too thick, and the Earth becomes too warm.

This warming makes the ice and glaciers melt, and it also makes the oceans get bigger and higher. So, the sea levels are rising because of this.

When the ocean gets warmer, it affects storms. The warm water gives more energy to the storms, making them stronger. This can cause big storms like hurricanes, typhoons, and cyclones.

The warm ocean also makes the air wetter, and that's why we get heavy rain and floods. The storms can move differently and be more unpredictable because of these changes.

This can be dangerous for the areas near the sea. The higher sea levels can make the water go over the land, causing floods and damaging houses and nature.


Climate change can cause many problems for nature and people. It can hurt animals and plants, and some may disappear forever. It also makes it harder for us to stay healthy because it can make us sick and affect where we live. Climate change can be tough for some people, especially those who are poor or live in vulnerable places. Even in the future, it will be important to take care of the Earth, so we have a good world to live in.

Climate change doesn't just affect nature; it also changes the way people live and work. Some jobs might become harder, and people might lose their jobs. But, new jobs can also appear in fields like renewable energy and green technology.

Climate change also impacts vacations and sports. Some places might have different weather, making holidays different. And sports like swimming and skiing might face new challenges because of the changing climate.

8 Yellow belt - What are the greenhouse gases?

The world we live in faces a critical challenge called climate change. It's caused by greenhouse gases (GHGs) that trap heat in the Earth's atmosphere, leading to global warming and its consequences for our planet and all living beings. Understanding where these emissions come from is essential for finding solutions.



Carbon dioxide (CO₂) is the most well-known and significant greenhouse gas. It is released into the atmosphere through both natural processes, such as respiration, decomposition and rotting of natural materials, volcanic activity and more, and human activities, particularly the burning of fossil fuels like coal, oil, and natural gas. CO₂ emissions from human activities have increased dramatically since the Industrial Revolution, primarily due to the burning of fossil fuels for energy production, transportation, and industrial processes.

Compared to other greenhouse gases, carbon dioxide has a significant impact on global warming because of its long atmospheric lifetime. Once released, CO₂ can persist in the atmosphere for centuries to millennia. This long lifespan allows CO₂ to accumulate and contribute to the gradual warming of the Earth's climate.

While carbon dioxide is the most abundant greenhouse gas, there are other gases that also contribute to the greenhouse effect and climate change. Methane (CH₄) is the second most prevalent greenhouse gas and has a much higher warming potential than CO₂ over a shorter time frame. Methane is released during the production and transport of coal, oil, and natural gas, as well as from livestock and other agricultural practices.

Nitrous oxide (N₂O) is another significant greenhouse gas with a long atmospheric lifespan. It is primarily emitted from agricultural and industrial activities, including the use of synthetic fertilizers and the burning of fossil fuels. Nitrous oxide is also released naturally from soil and oceanic processes.

Fluorinated gases, including hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆), have a much higher warming potential than CO₂ and can persist in the atmosphere for a long time. These gases are commonly used in industrial applications, electrical equipment, and consumer products. Efforts have been made to phase out certain fluorinated gases due to their high global warming potentials.


While carbon dioxide remains the primary greenhouse gas of concern due to its abundance and long-term impact, reducing emissions of all greenhouse gases is crucial for mitigating climate change. Efforts to transition to renewable energy sources, improve energy efficiency, promote sustainable land use and agriculture, and adopt cleaner technologies across various sectors are essential in tackling the global challenge of reducing greenhouse gas emissions.

The European Union (EU) plays a significant role in global CO₂ emissions. As the third largest emitter of CO₂ in the world, the EU faces the challenge of reducing its carbon footprint and transitioning towards cleaner and more sustainable energy sources. Efforts are being made to promote renewable energy, improve energy efficiency, and implement policies to mitigate the impact of greenhouse gases on the environment.

Understanding the sources of greenhouse gas emissions is crucial in our fight against climate change. Emissions come from many sectors, and there is no single solution to address the problem. Let's delve into each sector and its contribution to global emissions.

Energy and Electricity Generation: 73.2%

This sector is the largest contributor, accounting for approximately three-quarters of global greenhouse gas emissions. Power plants burning coal, natural gas, and oil release substantial amounts of carbon dioxide (CO₂) into the air. Additionally, the production and transportation of natural gas contribute to methane (CH₄) emissions.



Transportation: 16.2%

Coming in next, transportation is responsible for around 16.2% of global greenhouse gas emissions. Cars, trucks, and buses powered by gasoline and diesel engines release CO₂ and other harmful pollutants. Even airplanes and ships emit CO₂ and nitrogen oxides (NO_x) during their journeys, contributing to the problem.

Industrial Processes: 5.2%

Industrial processes play a crucial role, contributing around 5.2% of greenhouse gas emissions. Cement production, a critical construction material, releases CO₂ due to high-temperature processes. Chemical and petrochemical manufacturing also contribute greenhouse gases like CO₂ and methane.

Energy Use in Buildings: 17.5%

Residential and commercial activities together make up approximately 17.5% of global greenhouse gas emissions. The use of fossil fuel-based heating and cooling systems, along with energy consumption from appliances and devices, contributes to the problem.

Agriculture, Forestry, and Land Use: 18.4%

Agriculture, which provides the food we eat, contributes around 18.4% of global greenhouse gas emissions. Surprisingly, cows and other ruminant animals produce methane during digestion, a process known as enteric fermentation. Additionally, methane emissions come from rice fields under anaerobic conditions, and manure management releases methane and nitrous oxide (N₂O). Deforestation and land use changes are responsible for about 12% of greenhouse gas emissions. When we cut down trees, they lose their ability to absorb CO₂, releasing it into the atmosphere. Converting forests and natural habitats into agricultural or urban areas further adds to the problem.


Waste: 3.2%

Waste and landfills contribute around 3.2% of global greenhouse gas emissions. Organic waste decomposing in landfills produces methane, a potent greenhouse gas. Similarly, waste incineration releases CO₂ and other harmful pollutants. The Earth has natural coping mechanisms to deal with Greenhouse Gases (GHGs) and their impact on the environment. One of these mechanisms involves the vital role played by oceans, trees, and plants.

Fortunately, the Earth has its mechanism for dealing with CO₂, which however should not be overexploited.

Oceans act as important carbon sinks, which means they can absorb significant amounts of carbon dioxide (CO₂) from the atmosphere, helping to regulate GHG levels. However, as they absorb more CO₂, the oceans become more acidic, a process known as ocean acidification. This acidity can harm marine life, especially organisms like corals, shellfish, and plankton, which rely on calcium carbonate to build their shells and skeletons. With more acidic waters, these organisms find it challenging to create and maintain their protective structures, potentially disrupting marine ecosystems and biodiversity.

On land, trees and plants play a crucial role in coping with GHGs through photosynthesis. They absorb CO₂ from the atmosphere and store it within their roots and branches, helping to keep the atmosphere in balance, like a comforting blanket of gases that maintains the Earth's warmth.



In addition to oceans and forests, other natural carbon sinks include wetlands and certain ocean areas. These carbon sinks are essential for offsetting human-made emissions and reducing the impact of climate change.

Despite these natural coping mechanisms, human activities have disrupted this delicate balance. Deforestation and industrial emissions have released more CO₂ into the air than the natural coping mechanisms and carbon sinks can handle, leading to an increase in global temperatures and other environmental changes.

To safeguard the Earth's natural coping mechanisms, it is crucial for people to recognize the importance of preserving forests, supporting sustainable practices, and reducing emissions.

Version for children below 12:

Our Earth is facing a big challenge because of something called greenhouse gases (GHGs). These gases trap heat in our atmosphere, and that's what causes global warming. It affects our planet and all the wonderful creatures living on it.

One of the most famous greenhouse gases is carbon dioxide (CO₂). It comes from different places. Some of it is from nature, like when plants breathe and things rot. Even volcanoes can release CO₂! But guess what? People also add CO₂ to the air when we burn fossil fuels like coal, oil, and natural gas for energy. That's why it's essential to understand where these gases come from – so we can find ways to help!

CO₂ is like a long-lasting guest at our party in the sky. Once it's up there, it can stay for hundreds or even thousands of years! And during all that time, it keeps warming up our planet little by little.


But wait, there are other important gases too! Methane (CH₄), the second most famous greenhouse gas. It's like a turbo-powered gas because it warms the Earth much faster than CO₂! Methane comes from lots of places, like when we produce and transport coal, oil, and gas. Even animals like cows make some methane when they eat! Next, we have nitrous oxide (N₂O), another important player. It hangs out in the air for quite a while and comes from farms and industries. When we use certain fertilizers and burn fuels, nitrous oxide shows up!

But don't worry, there are people working hard to find solutions! Scientists and smart grown-ups are looking for ways to reduce these greenhouse gases and help our Earth. They're exploring clean and green energy sources, like solar and wind power. By using these, we can make the air cleaner and the Earth happier! We can also be smart about how we use energy and protect our planet.

Remember, we can all be heroes too! Even if we're young, we can do our part to protect our planet. We can use less energy by turning off lights when we don't need them and using reusable stuff instead of throwing things away. Little changes can make a big difference!

Now, let's talk about the sources of these tricky greenhouse gases! The first big one is from making energy and electricity. This is like the main culprit! When they burn things like coal, natural gas, and oil, they release lots of CO₂ into the air. Oh, and don't forget about methane (CH₄)! It sneaks in when they produce and move natural gas around.

It's like a big puzzle to solve because greenhouse gases come from many different places. But the EU is like a clever detective. They're studying each sector closely to find the best way to help our planet.



You know, there are different ways greenhouse gases are created. One of them is through transportation, like cars, trucks, and buses. When they use fuels like gasoline and diesel, they release something called CO₂, which is not good for our environment. Even airplanes and ships can also add to this problem!

There's another way greenhouse gases are made, and that's through some big factories and industries. When they make things like cement, chemicals, and other important stuff, they produce CO₂ and even methane. We need to find ways to make these processes cleaner!

Guess what? Even the buildings where we live and work can make greenhouse gases! When we use things like fossil fuels for heating, cooling, and using gadgets, they also add to the emissions.

Now, let's talk about something yummy – food! Agriculture is also a part of the greenhouse gas puzzle. Animals like cows have a funny way of making methane when they eat! Rice fields and even manure can create greenhouse gases too. And when we cut down trees and change natural places into farms or cities, it can make things even trickier.

There's one more thing we should know about – waste! When things like food and other stuff break down in landfills, they create a strong greenhouse gas called methane. Even when we burn waste, like in incinerators, it releases CO₂ and other yucky stuff into the air.

Let's dive into the exciting world of our planet and learn about some amazing superheroes that help keep our Earth in balance!

First, let's talk about the big blue oceans! They are like giant sponges that soak up a gas called CO₂ from the air. CO₂ is a greenhouse gas that can make our Earth warmer. Oceans do an excellent job of taking in this CO₂! But, as they do this, something interesting happens – the oceans become a bit more acidic. It's like a tricky puzzle for the sea creatures, especially those cute corals, shellfish, and tiny plankton. They need something called calcium carbonate to build their homes, like how we need bricks to build a house. But with the oceans getting more acidic, it's a bit harder for them to make their homes and stay safe.

Now, let's head to the land, where we have our green superheroes – trees and plants! These amazing beings perform a magical trick called photosynthesis. They use their green leaves to catch CO₂ from the air, just like how we take big breaths. Then, they store this CO₂ in their roots and branches, like putting it away in a secret treasure chest. This helps keep the air nice and balanced.

But wait, there's more! We have more superheroes – the wetlands and some special ocean areas. These spots are like hidden gems that also absorb CO₂ from the air, just like our wonderful oceans and forests. Together, they form a team of carbon sinks, making sure there's not too much CO₂ floating around.

But, you know what? We need to be careful and help these superheroes! Some things we do, like cutting down too many trees or letting out too much CO₂ from factories, can upset the balance. It's like messing up a puzzle. We don't want that! So, let's be smart and protect our forests, support things that help the Earth, and use clean energy to reduce the CO₂ we make.



7 Yellow-green. Pollution

Pollution is a critical issue that affects the health of our planet and our own well-being. It disrupts ecosystems and has detrimental effects on air quality, water resources, and the tranquility of our surroundings. In this educational material, we will explore several major types of pollution that significantly impact our environment: water pollution, air pollution, soil, noise and light pollution. By understanding the causes, consequences, and actions we can take, we can work towards a cleaner, healthier future for all.

Water pollution is the contamination of water bodies, such as rivers, lakes, and oceans by harmful substances. It is primarily caused by industrial waste, agricultural runoff, improper disposal of chemicals, and sewage. The consequences of water pollution are severe, leading to harm to aquatic life, destruction of habitats, and disruption of delicate ecosystems. Additionally, consuming contaminated water can result in various waterborne diseases and health problems.

Microplastic contamination is a significant concern when it comes to water pollution. Scientists have been conducting studies to determine the extent of this pollution, and they have found microplastics in various environments and water sources.

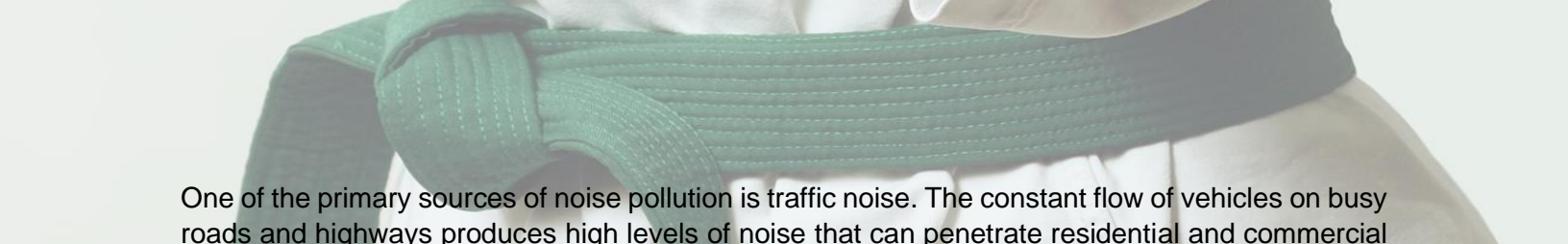
In one study, water samples collected from an area in the Pacific Ocean as large as Spain were found to contain microplastics. Furthermore, microplastics were detected in nearly 300 animals, including fish, squids, and shrimps, which are commonly consumed by humans.

Beyond marine environments, microplastics have been detected in drinking water, beverages, food products, and even table salt. Scientists have also discovered microplastics in human tissues and organs, including the placenta and newborns.

Two types of microplastics exist: primary and secondary. Primary microplastics come from personal body care products, plastic pellets used in industrial manufacturing, and plastic fibers found in synthetic textiles like polyester and nylon. They directly enter the environment through product use or manufacturing and washing processes. Secondary microplastics, on the other hand, result from the breakdown of larger plastics due to exposure to water, wind, abrasion, and sunlight.

One concerning aspect of microplastics is that they are not biodegradable, which means they persist in the environment once introduced. However, the full extent of their impact on human health remains uncertain. Air pollution occurs when harmful substances, including gases, particles, and chemicals, contaminate the air we breathe. It is mainly caused by industrial emissions, vehicle exhaust, burning fossil fuels, and improper waste disposal. The impact of air pollution is far-reaching, contributing to global warming, acid rain, depletion of the ozone layer, and the formation of smog. Breathing polluted air can lead to respiratory problems, cardiovascular diseases, and other serious health issues.

Noise pollution is a form of environmental contamination characterized by the presence of excessive or disruptive sounds that can have detrimental effects on human health and overall well-being. These intrusive sounds can originate from various sources, making noise pollution a pervasive concern in urban and industrialized areas.



One of the primary sources of noise pollution is traffic noise. The constant flow of vehicles on busy roads and highways produces high levels of noise that can penetrate residential and commercial spaces, causing annoyance and discomfort to inhabitants. Construction activities also contribute significantly to noise pollution, especially in urban areas undergoing development and infrastructure projects.

In industrial settings, the operation of machinery and factory processes can add to noise pollution. The constant humming, grinding, and clattering of industrial equipment can create a loud and intrusive environment for nearby residents and workers. Similarly, the widespread use of loud music and sound systems in public spaces, events, and entertainment venues can further contribute to noise pollution.

Prolonged exposure to excessive noise levels can have severe implications for human health. One of the most common effects is stress, as the constant bombardment of noise disrupts individuals' peace of mind and relaxation. This chronic stress can lead to various health issues, including increased anxiety levels, elevated blood pressure, and a higher risk of heart-related problems. Noise pollution is also linked to sleep disturbances. Lack of restorative sleep can have cascading effects on overall health and cognitive function, affecting an individual's concentration, memory, and decision-making abilities.

Noise pollution extends its adverse impact beyond human health; it disrupts natural habitats and wildlife as well. In natural ecosystems, loud noises from human activities can interfere with animal communication and behavior. Animals may alter their behavior, migration patterns, and reproductive activities in response to excessive noise, affecting the delicate balance of ecosystems.


To address noise pollution, urban planning and environmental policies play a crucial role. Keeping green spaces is crucial to sustain biodiversity in urban areas as well.

Light pollution is a form of environmental pollution caused by the excessive or misdirected use of artificial lighting, which disrupts the natural lighting conditions of the night sky. It has become a growing concern in urban and suburban areas worldwide as cities and towns continue to expand, increasing the presence of artificial light sources.

One of the primary consequences of light pollution is its impact on wildlife behavior. Many species of animals, including insects, birds, and mammals, rely on natural patterns of darkness and light to regulate their daily activities, such as foraging, migration, and reproduction. The presence of artificial light at night can confuse and disorient these animals, leading to behavioral changes that can disrupt their natural rhythms and life cycles. For example, migratory birds can become disoriented by bright city lights, leading them off course and potentially endangering their survival.

Light pollution can also disturb ecosystems and the delicate balance of nocturnal environments. Many species of plants and animals have evolved to adapt to the darkness of the night and rely on it for various ecological processes. The introduction of artificial light disrupts these ecosystems, affecting predator-prey dynamics, plant pollination, and the behavior of nocturnal animals. For instance, some nocturnal insects are attracted to bright lights, which can result in a higher mortality rate as they become vulnerable to predators or exhausted from circling around the light source.

Soil Pollution: Soil pollution occurs due to the accumulation of hazardous chemicals, heavy metals, and other pollutants in the soil. This can result from improper waste disposal, agricultural



practices, and industrial activities. Soil pollution can adversely affect soil fertility, crop quality, and the health of plants and animals in the ecosystem.

Individual responsibility plays a vital role in reducing pollution. By adopting sustainable practices such as conserving water, reducing waste, using eco-friendly products, and opting for public transportation or carpooling, we can make a positive impact. Community involvement is crucial, and participating in clean-up drives, supporting local environmental organizations, and engaging in community initiatives can address pollution collectively. Advocacy and policy change are necessary to promote stricter regulations on pollution control, renewable energy sources, and sustainable practices at a larger scale. Lastly, education and awareness are key, as spreading knowledge about pollution and its consequences inspires collective action and drives positive change.

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Today, we're going to learn about pollution – a big problem that affects our planet and all the living beings, including us. But don't worry, together, we can make a difference and help our Earth!

First, let's talk about water pollution. Water bodies like rivers, lakes, and oceans can get contaminated by harmful things like industrial waste, chemicals, and even sewage. This pollution is not good for the fish and other creatures that live in the water. It also harms their homes and makes it difficult for them to live happily.

Now, let's zoom in on something called "microplastic contamination." Microplastics are tiny pieces of plastic, like really small beads. They can be found in different places, including the water. Scientists have been studying this issue, and they found these tiny plastic beads in the big Pacific Ocean area as large as Spain! Wow, that's a lot!

And guess what? Even the animals that we eat, like fish, squids, and shrimps, can have these tiny plastic bits inside them. But don't worry, it doesn't mean they're not tasty – it's just not good for them or for us when we eat them.

What's more surprising is that scientists have found microplastics even in our drinking water, the food we eat, and even the salt we put on our food! These little plastic bits are almost everywhere!


There are two types of microplastics – primary and secondary. Primary microplastics come from things like our personal care products (like scrubs), tiny plastic pellets used in making stuff, and even clothes made from special materials. Secondary microplastics form when bigger plastic things break down into smaller pieces over time due to things like water, wind, and sunlight.

Microplastics are tiny pieces of plastic that don't break down in the environment. This means they stay around for a long time once they get into the oceans and rivers. While we know they can harm animals, we're still trying to understand how they might affect our health.

Air pollution happens when the air we breathe gets filled with harmful stuff like gases and chemicals. This pollution comes from factories, cars, and even the way we dispose of our waste. Breathing in polluted air can cause problems for our lungs and hearts.

Noise pollution is all about loud and annoying sounds that can bother us and the animals. Traffic, construction, and loud music can make it hard for us to relax and feel calm.

Prolonged exposure to noise pollution can stress us out and even make it difficult to sleep well. It's not just us – animals in nature can also get disturbed by all the noise, affecting how they live



and behave. It can disrupt animal habitats and change their habits, which isn't good for the environment.

To tackle noise pollution, we need to plan our cities wisely and make sure there are plenty of green spaces for animals to live happily. We can also try to be quieter and more mindful of how our actions affect the world around us.

Another type of pollution is light pollution. Light pollution is like when too many bright lights fill the night sky, making it hard to see the stars and moon. It happens a lot in big cities and towns as they grow and add more lights.

One of the sad effects of light pollution is how it messes with the animals' lives. Imagine if someone suddenly turned on all the lights in your bedroom when you were trying to sleep! Well, that's how some animals feel when the bright city lights confuse them. Birds that fly long distances to find a new home can get lost and not know where to go. This can be dangerous for them and might make it harder for them to survive.

Not only does light pollution mess with the animals' sleep and travel plans, but it also changes how nature works at night. Some plants and animals have gotten used to the dark and rely on it for their daily routines. The extra lights can mess up this natural rhythm, making it harder for them to find food or even make new plants.

You know how moths and other bugs love to fly around bright lights at night? Well, that can be pretty dangerous for them! They might end up being someone else's dinner because they can't stop flying around the lights.

To help our animal friends and keep nature in balance, we can be mindful of how we use lights. Turning off unnecessary lights at night and using dimmer ones can make a big difference.

Let's learn about another type of pollution called soil pollution. Soil is like the earth's skin that helps plants grow and gives us yummy fruits and vegetables. But sometimes, it can get sick because of harmful stuff that ends up in it.


Soil pollution happens when dangerous chemicals, heavy metals, and other bad things build up in the soil. This can happen when we throw away trash in the wrong places, use harmful chemicals in farming, or have big factories releasing pollution into the ground.

When soil gets polluted, it can be tough for plants to grow healthy and strong. And you know what? Those plants are the ones that give us food! So, if the soil isn't happy and healthy, the yummy fruits and veggies we love might not be as good for us.

Not just that, but the pollution in the soil can also harm the animals that live there. It's like making their home not very nice to live in.

But don't worry, we can all do things to help! Remember, we have talked about reducing, reusing, and recycling to keep our planet clean? Well, doing those things also helps keep the soil healthy! Using eco-friendly products and being mindful of how we use resources can make a big difference.

Also, when we work together with our friends, family, and community, we can clean up areas that are polluted and help the soil heal. We can join clean-up drives and support organizations that care about the environment.



And guess what? If we learn more about pollution and tell our friends and family about it, they might start doing things to help too! The more people know, the more we can all work together to make the world a cleaner and better place for everyone.

6 Green belt - Waste generation. E-waste and Textile waste

In recent years, waste generation has become a significant concern in the European Union (EU). In 2020, the amount of waste generated per person was nearly 5 tonnes. It is important to understand the impact of waste on our environment, particularly its role in greenhouse gas emissions and climate change.

The waste sector itself is a significant contributor to greenhouse gas emissions, accounting for about 3% of the total emissions in the EU. This places it as the fourth-largest emitter, following the energy sector, agriculture, and industrial processes. These emissions contribute to the overall increase in global temperatures and the subsequent effects on our climate.

There are different types of waste, on which depend how they will be managed. There is food waste, e-waste, textile waste, plastic waste.

To effectively manage waste, various methods are employed, including recycling, landfilling, incineration (with or without energy recovery), and composting. In 2020, more than half of the waste generated in the EU was recovered (transformed in different ways to use the materials again) - 40% was recycled (i.e. the materials were used again for the production of other products), 14% was composted, and 6% was incinerated for energy recovery (i.e. it was produced energy by burning the waste). However, there is still a considerable amount of waste that is landfilled or disposed of through other means, accounting for 31% of the total waste.


It's important to note that waste management practices vary among EU member states. Some countries have achieved high recycling rates, while others rely heavily on landfilling. For example, countries like Romania, Bulgaria, Finland, Sweden, and Greece predominantly use the landfill method for waste treatment.

The greenhouse gas emissions associated with waste depend on the chosen treatment method. When waste is landfilled, the decomposition of organic materials releases gases that contribute to climate change. Landfills must be carefully engineered to prevent pollution of surface water, groundwater, soil, and air. Therefore, reducing the amount of waste sent to landfills and increasing recycling rates can significantly help in minimizing the environmental impact.

By prioritizing recycling and reducing waste generation, we can effectively reduce the carbon footprint associated with waste disposal. Recycling allows us to recover valuable materials and reduces the need for landfilling or incineration, thus contributing to climate protection efforts.

It is crucial to raise awareness about waste management practices and encourage individuals to adopt sustainable behaviors. By promoting recycling, composting, and responsible waste disposal, we can make a positive impact on the environment and combat climate change.

While it may be easy to think of waste as someone else's problem, it is essential to realize that it is our planet that is impacted. The consequences of waste generation and climate change affect us all, regardless of geographic location or socioeconomic background. Recognizing our individual responsibility in waste reduction and sustainable practices is crucial.



Now let's look into the types of waste we generate in order to know how to effectively manage it. Lets start with e-waste.

Technology has become a big part of our lives, and that means we have lots of electronic waste, also called e-waste. E-waste includes things like computers, laptops, phones, and even solar panels. Did you know that e-waste is the fastest-growing waste sector in the European Union?

But here's the thing: Only 40% of e-waste gets recycled. Europeans are the biggest producers of e-waste, with each person making around 16 kilograms of it!

Inside e-waste, there are lots of different materials, some of which are very important for making clean technologies and reducing CO2 emissions. These special materials, like lithium, cobalt, and copper, are called critical raw materials. They are crucial for the EU's economy and for creating clean energy technologies, such as solar panels, wind turbines, electric cars, and energy-efficient lights.

But there's a problem. These materials are at high risk because they come from places where human rights might not be respected, and buying from those places could indirectly support bad things happening there.

Another thing about e-waste is that it contains valuable materials like gold! Around 10% of all the gold in the world is used to make technology.

So, what can we do about all this? First, we can repair our electronic devices instead of throwing them away. That way, we can use them for a longer time. Second, we should recycle our old electronic stuff instead of keeping it at home. Recycling helps save resources and makes sure we use them efficiently. It also helps our environment and keeps harmful stuff from getting into the air, soil, and water.


When you're done with an old device, check with retailers about their return policies. Some of them have special programs to take back old electronics for recycling.

Another big polluter worldwide is the textile industry. In Europe, each person creates around 15 kilograms of textile waste every year. Clothes and home textiles from consumers make up about 85% of this waste! It's a big problem because the textile industry contributes to around 8-10% of all global CO2 emissions. Also, did you know that nearly 17% of all pesticides are used to make cotton?

Sadly, a lot of this textile waste ends up in landfills or gets burned, which puts more pressure on the environment. The textile industry is also the second biggest polluter of our oceans, especially when it comes to microplastics. These tiny plastic particles are released when we wash synthetic textiles, and it's estimated that Europe is responsible for 8% of all microplastics that end up in our water!

Making just one T-shirt requires a massive 2700 liters of water, which is like the drinking water for one person for two and a half years! Plus, the textile industry uses more than 48 million tons of fossil fuels every year, even more than all the single-use plastic products used in Europe. That's a lot of energy!

But there's hope! Around 50% of textile waste can be successfully recycled. We can turn old textiles into useful things like upholstery materials, soundproofing and heat-insulating materials, and even road construction materials!



When it comes to recycling, it depends on whether the textile is natural or synthetic. For natural textiles like cotton, they are sorted by color and type, then pulled into fibers or shredded. After that, the fibers are rewound and ready for use in weaving or knitting.

Recycling polyester textiles is a bit different. First, the clothes are shredded and processed into small pieces called polyester chips. Then these chips are melted and turned into new fibers for making new polyester fabrics.

So, what can you do to help? Well, you can start by wearing more durable clothes and using them for a long time. When your clothes get old, ask your parents to recycle or donate them. You can also choose clothes made from organic materials or recycled ones. And remember, when washing your clothes, try using lower temperatures and only wash them when they are really dirty.

Version for children below 12

In recent years, people in the European Union (EU) have been making a lot of waste, and it's becoming a big concern. In 2020, each person made nearly 5 tonnes of waste! That's a lot! But why is waste a problem for our environment? Let's find out!

You see, waste can create something called "greenhouse gas emissions," and that's not good for our planet. The waste sector, which means how we deal with waste, is responsible for about 3% of all the emissions in the EU. That makes it the fourth-largest cause of emissions after energy, farming, and factories. These emissions make the Earth get warmer, and that's what we call "climate change." It can cause all sorts of changes in our weather.

There are different types of waste, like food waste when we throw away food, e-waste from old electronic things, textile waste from clothes, and plastic waste from things like bottles and bags.


To handle waste properly, we use different methods. Some waste can be recycled, which means we can use the materials again to make new things. Others can be turned into compost, a special type of soil that helps plants grow. Some waste can even be burned to produce energy! But, not all waste is managed this way. Some of it still ends up in landfills or other places where it can't be reused or turned into something helpful.

It's essential to remember that different countries in the EU manage waste differently. Some countries are very good at recycling, while others rely more on landfills. For example, countries like Romania, Bulgaria, Finland, Sweden, and Greece mostly use landfills to deal with waste.

You know, the way we treat our waste can make a big difference for our planet. The gases that come from waste and go into the air depend on how we handle it. When waste goes to a landfill, the things like food scraps break down and release gases that can cause climate change. That's why we need to be careful about how we manage landfills and make sure they don't pollute our water, soil, and air.

But there's something we can do to help! By recycling more and making less waste, we can actually reduce the bad stuff that goes into the air. Recycling is like giving old things a second chance. We can use the materials again to make new things, and that's good for the environment.

So, instead of throwing things away, let's think about recycling and finding better ways to deal with our waste. When we recycle, we can recover valuable materials, and we won't need to use landfills or burn waste. This way, we can do our part to protect the climate.



It's essential to talk about waste management and teach others about recycling and composting. When we learn about these things, we can make better choices and be more responsible with our waste. And remember, even if waste doesn't seem like our problem, it affects all of us and our planet. No matter where we live or who we are, we can all do our part to reduce waste and take care of our home - the Earth!

Now, technology has become such a big part of our lives, hasn't it? And with all this technology, we also have something called e-waste, or electronic waste. E-waste includes things like computers, laptops, phones, and even solar panels! Can you believe it? It's like a mountain of electronic stuff!

But you know what's surprising? Even though we have so much e-waste, only 40% of it gets recycled. That's not a lot, right? And guess who makes the most e-waste in the European Union? We do! We make around 16 kilograms of e-waste each! That's like carrying a big bag full of e-waste.

But you know what's really interesting about e-waste? Inside all those electronic things, there are special materials that are super important. They are called critical raw materials, and they help us make clean technologies and reduce CO2 emissions. Cool, right? Some of these special materials are called lithium, cobalt, and copper. They are like the secret ingredients for making things like solar panels, wind turbines, electric cars, and energy-efficient lights.

But here's the thing - getting these special materials can sometimes be a problem. They come from places where people's rights might not be respected, and that's not good. We don't want to support bad things happening in those places.


Oh, and did you know that e-waste is like a treasure chest? It's full of valuable stuff, like gold! Around 10% of all the gold in the whole world is used to make technology. Isn't that amazing?

But wait, don't worry! We can do something to help! First, instead of throwing away our old electronic devices, we can try to fix them. That way, we can use them for much longer, and that's good for our planet. Second, when we're all done with our old electronic stuff, we can recycle it! Recycling is like magic - it helps save resources, protect the environment, and keeps harmful stuff from going into the air, soil, and water.

And here's a tip - if you're not sure what to do with your old electronic things, just check with the stores where you bought them. Some stores have special programs to take back old electronics for recycling. See, we can all be little superheroes for our planet and make a big difference by taking care of our e-waste!

Next, the textile industry sure has a big impact on our planet! Did you know that each person in Europe creates about 15 kilograms of textile waste every year? That's like having a big pile of clothes and home textiles! And guess what? Around 85% of this waste comes from us, the consumers!

But you know what's even more surprising? The textile industry is responsible for about 8-10% of all the global CO2 emissions! That's a lot of pollution. And did you know that nearly 17% of all the pesticides in the world are used just to make cotton? That's like using lots of chemicals to grow cotton, and it's not good for the environment.



But wait, there's more! Instead of recycling our old clothes, a lot of them end up in landfills or get burned. That's not good because it puts even more pressure on the environment. And you know what's really sad? The textile industry is the second biggest polluter of our oceans, especially because of tiny plastic particles called microplastics. These microplastics come from washing clothes made of synthetic materials, and it's estimated that Europe is responsible for 8% of all these tiny plastic bits that end up in our water. We don't want our oceans to be filled with plastic, right?

And here's something surprising - making just one T-shirt requires a massive 2700 liters of water! That's like the drinking water for one person for two and a half years! And that's not all - the textile industry uses even more fossil fuels than all the single-use plastic products used in Europe! That's a lot of energy!

But don't worry, there's hope! We can do something to help. Did you know that around 50% of textile waste can be recycled? That's right! We can turn our old clothes into useful things like materials for furniture, soundproofing, and even building roads!

Recycling is different depending on the type of textile. For natural textiles like cotton, they are sorted by color and type, then turned into fibers to make new things. For synthetic textiles like polyester, they are shredded and melted to make new fibers for more polyester fabrics.


So what can you do to help? You can start by wearing clothes that last a long time and using them for as long as possible. When your clothes get old, you can ask your parents to recycle or donate them. And when you buy new clothes, you can choose ones made from organic materials or recycled ones. And don't forget, when you wash your clothes, try using lower temperatures and only wash them when they are really dirty. Together, we can make a big difference and help take care of our planet!

5 Geen-blue belt. Waste management Recycling– reuse and repair – providing examples

Recycling plastic is incredibly important because it helps us reduce pollution, save valuable resources, and use less fossil fuels. Fossil fuels are used to make plastic, and by recycling it, we can cut down on the need for these fuels and help protect the environment. When we recycle plastic, we also lower the amount of CO₂ emissions, which is fantastic for the fight against climate change!

The European Union (EU) needs to be more self-sufficient when it comes to resources, which means relying less on other countries for things we need. Right now, we depend a lot on other countries to supply us with primary resources, like minerals and materials, and that puts a lot of pressure on the environment and causes more CO₂ emissions.

But recycling comes to the rescue! When we recycle, we recover valuable materials from things we don't need anymore and turn them into new things. By doing this, we reduce the need to take more resources from the earth, and that's great for the environment! Plus, recycling helps us deal with waste in a better way, which also helps the planet.



So, by recycling, we can help protect our environment, tackle climate change, and make sure we have enough resources for the future.

Now let's look into plastic recycling.

Did you know that not all plastics can be recycled? Understanding the different types of plastics and their recycling possibilities can help us make more informed choices and contribute to a more sustainable future. Let's explore:

#1: PET (Polyethylene Terephthalate) - This is the most widely recycled plastic. It is commonly used for water bottles, soft drink bottles, salad dressing bottles, peanut butter jars, and cooking oil bottles.

#2: HDPE (High-Density Polyethylene) - HDPE is one of the easiest plastic polymers to recycle. Examples include milk jugs, juice bottles, shampoo bottles, detergent bottles, and some plastic bags.

#3: PVC (Polyvinyl Chloride) - PVC is not as easily recyclable. It is found in PVC pipes, window frames, vinyl flooring, shower curtains, and some plastic containers.

#4: LDPE (Low-Density Polyethylene) - LDPE is commonly used for plastic bags and is usually not recycled. Examples include plastic bags, plastic wraps, squeezable bottles (like honey or ketchup), and some flexible packaging.

#5: PP (Polypropylene) - PP is recyclable, but only a small portion is recycled in practice due to the difficulty and cost involved. It is used in yogurt containers, margarine containers, medicine bottles, bottle caps, and some food containers.

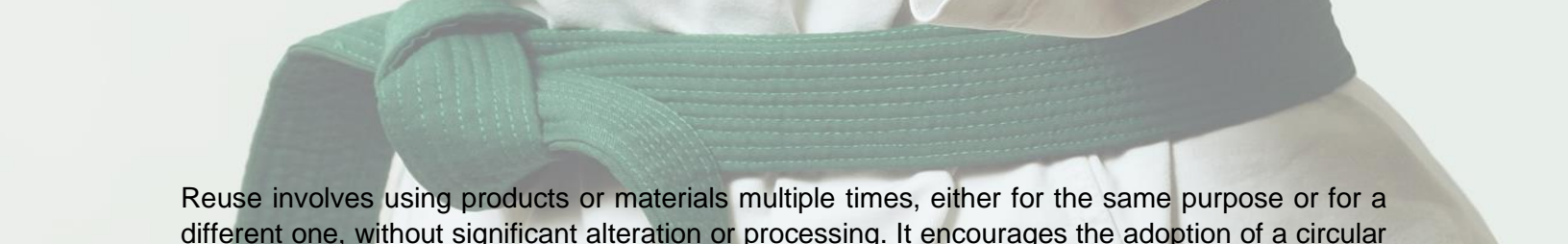
#6: PS (Polystyrene) - PS is generally not recyclable. Examples include disposable styrofoam cups, take-out containers, egg cartons, and some plastic cutlery.

#7: Other Plastics - This category includes polycarbonate water bottles, BPA-containing plastic containers, mixed plastic products, and certain types of baby bottles. These plastics are not easily recyclable.

However, it's good to know that not all types of plastic can be recycled the same way. Some plastics can only be recycled once, while others can be recycled up to ten times. Most of the time, plastic is mechanically recycled, which means it's shredded into tiny pieces, melted down, and turned into new things. But, each time plastic is recycled, it loses a bit of its quality, so it may not be suitable for all types of products. Repeated exposure to high temperatures during recycling degrades the plastic's quality, limiting its range of potential applications. While some plastics can be recycled into the same form (like PET), others are transformed into synthetic fibers, plastic lumber, insulation, and containers.

Even though there are some limitations, recycling plastic is still super helpful for the environment and for all of us. By reducing waste, recycling, and being mindful of our plastic use, we can each make a big difference in taking care of our planet.

Other beneficial waste management practices are the practices of reuse and repair that play a significant role in reducing waste, conserving resources, and promoting sustainability. Both practices focus on extending the lifespan of products and materials, diverting them from landfills, and minimizing the environmental impact associated with their disposal.



Reuse involves using products or materials multiple times, either for the same purpose or for a different one, without significant alteration or processing. It encourages the adoption of a circular economy, where products are designed to be reused or refurbished rather than disposed of after a single use. Here are some examples of reuse:

Reusable Water Bottles- Instead of using single-use plastic water bottles, opt for durable and refillable water bottles. They can be used repeatedly, reducing the need for disposable bottles.

Cloth Shopping Bags- Use cloth or reusable shopping bags when grocery shopping instead of single-use plastic bags. Reusable bags are sturdier and can be used multiple times. If, however, plastic bag is unavoidable, reuse the bag as many times, as possible, instead of throwing it away.

Cleaning Cloths: Opt for reusable cleaning cloths instead of disposable ones for your household cleaning tasks. Reusable cleaning cloths are durable and can be washed and used again and again, making them a fantastic eco-friendly choice. When you clean surfaces or wipe up spills, choose these reusable cloths to reduce waste and minimize your impact on the environment.

If you find yourself needing to use disposable cleaning wipes or paper towels occasionally, try to make the most of them. Instead of tossing them after just one use, see if you can get more mileage out of them. You might be able to rinse and re-use them for less messy cleaning tasks or find creative ways to extend their lifespan.

Reuse your old clothes as cleaning cloth.

Glass Jars and Containers: Reuse glass jars and containers for storage instead of buying new ones. They are excellent for preserving food, storing leftovers, and organizing small items.

Use Beeswax Wraps: Replace plastic wrap with reusable beeswax wraps to cover food items and leftovers. Beeswax wraps are washable and can be used multiple times, reducing the need for single-use plastic wrap.

Rechargeable Batteries: Choose rechargeable batteries for your electronic devices, like remote controls and toys. Rechargeable batteries can be reused many times, reducing the number of disposable batteries ending up in landfills.

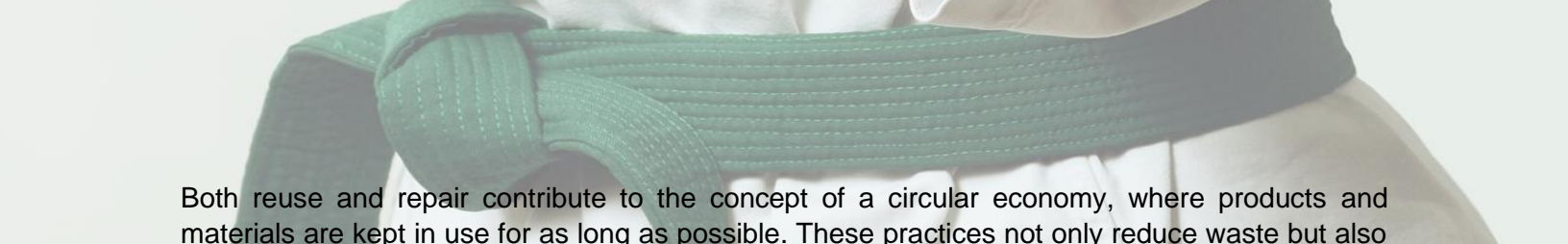
Another waste management practice is repairing. Repair involves fixing or restoring products that have become damaged or malfunctioning, allowing them to be used again instead of being discarded. Repairing items not only saves money but also prevents them from ending up in landfills prematurely. Here are some examples of repair:

Electronics Repair: Instead of replacing a broken electronic device, consider getting it repaired at a specialized repair shop. Many issues can be fixed, extending the device's lifespan. It applies to any household appliances as well.

Repair torn or damaged clothing instead of discarding them. Sewing up holes or replacing buttons can bring new life to old garments. However, if the cloths are too old, you can reuse them as cleaning cloths.

Shoe Repair: Repair damaged shoes by fixing worn-out soles or damaged heels, saving the need for new shoes and reducing shoe waste.

Furniture Restoration: Refurbish and restore old furniture pieces to give them a fresh look and functionality, preventing them from being discarded.



Both reuse and repair contribute to the concept of a circular economy, where products and materials are kept in use for as long as possible. These practices not only reduce waste but also conserve resources, lower greenhouse gas emissions, and minimize the environmental impact of manufacturing new products. By incorporating reuse and repair into our daily lives, we can play a vital role in creating a more sustainable and waste-conscious society.

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Let's learn today about recycling. Recycling is like magic for the Earth because it does so many amazing things to help our planet.

You know what's fantastic about recycling plastic? It helps us reduce pollution! When we recycle plastic, we keep it from ending up in places it doesn't belong, like our beautiful oceans or forests. That way, we can keep our planet clean and happy!

Recycling plastic also saves valuable resources. Did you know that fossil fuels are used to make plastic? And you know what's even more exciting? By recycling plastic, we can use fewer fossil fuels! That's awesome because it helps protect our environment and keeps the air clean.

Oh, here's a big word for you – "CO2 emissions." CO2 is like a tiny invisible gas that can make our planet warmer. But guess what? When we recycle plastic, we lower the amount of CO2 emissions! And that's fantastic news for our fight against climate change!

When we recycle, we can recover valuable materials from things we don't need anymore. Then, we can turn those materials into new things! By doing this, we don't have to take as many resources from the earth. And that's amazing for the environment!

Are you ready to dive into the world of plastic recycling? It's so much fun, and it helps our planet a lot!

Okay, first things first – not all plastics can be recycled. But don't worry, we're here to learn all about the different types of plastics and their recycling possibilities. Let's go on an adventure!

#1: PET – It's like a superstar in the recycling world! PET is the most widely recycled plastic. You can find it in water bottles, soda bottles, and even peanut butter jars. Wow, it's everywhere!

#2: HDPE – This plastic is a recycling champ too! HDPE loves to be recycled, and it's used for things like milk jugs and shampoo bottles.


#3: PVC – Uh-oh, PVC is not as easy to recycle. It hides in PVC pipes and vinyl flooring.

#4: LDPE – LDPE is like a shy little plastic, not always recycled. You can spot it in plastic bags and squeezable bottles.

#5: PP – PP is a bit tricky to recycle, but we can do it! It hangs out in yogurt containers and medicine bottles.

#6: PS – PS is not the best at recycling. You can find it in styrofoam cups and take-out containers.

#7: Other Plastics – This group is like a mix of unique plastics. Some are not easily recyclable, but that's okay.



Here's a secret – not all plastics can be recycled the same way. Some plastics can only be recycled once, while others can be recycled up to ten times! It's like magic!

When we recycle plastic, it's like giving it a new life. We shred it into tiny pieces, melt it down, and turn it into new things. But guess what? Each time plastic is recycled, it loses a little bit of its quality. So, we have to be careful about where we use recycled plastic. But no worries, we can turn it into so many cool things – like fibers for clothes or containers for yummy snacks!

Let's talk about reuse and repair – they are super cool!

First up, we have "reuse." It's like giving products and materials a second life – how amazing is that? Instead of using things only once, we use them over and over again. It's like a never-ending adventure!

For example, say goodbye to single-use plastic water bottles! Instead, get yourself a durable and refillable water bottle. You can use it again and again, which means fewer plastic bottles ending up in the trash.

Next, let's talk about shopping bags. You know those flimsy plastic bags you get at the grocery store? Well, we have a better idea! Use cloth or reusable shopping bags instead. They are super sturdy and can be used many, many times. But if you have a plastic bag, don't worry! Try to reuse it as much as you can before saying goodbye.

Oh, and don't forget about cleaning time! Say hello to reusable cleaning cloths. These special cloths can be washed and used again, making them the perfect eco-friendly choice. No more using disposable wipes that end up in the trash – we're saving the day!

So, sometimes we might need to use disposable cleaning wipes or paper towels for those extra messy jobs. But wait! Before you toss them away, think twice! You can get more use out of them by rinsing and reusing them for less messy tasks. How cool is that?


And here's a secret trick – your old clothes can become cleaning cloths! Instead of throwing them out, give them a new mission. Use them to clean up spills and wipe away dirt. They'll be thrilled to help!

Now, let's talk about glass jars and containers. Don't throw them away – they're the ultimate storage heroes! Keep your food fresh, save leftovers, and organize your tiny treasures with them. They're like magic boxes!

Oh, and say goodbye to plastic wrap and hello to beeswax wraps! These super wraps are reusable and perfect for covering food and leftovers. No more single-use plastic – we're on a mission to save the Earth!

Next up, we have a fantastic idea for your electronic devices – rechargeable batteries! They're like superheroes that keep going and going. Pop them into your toys and remote controls, and when they run out of power, just charge them up again. No more disposable batteries in our landfills!

Now, let's dive into the world of repair! When something breaks or stops working, don't worry – we've got a solution. Instead of throwing it away, try getting it fixed at a special repair shop. It's like giving your stuff a magical makeover!



You can even save your beloved clothes by giving them a little TLC. Sew up holes, replace buttons, and they'll be good as new! But if they're too old to wear, don't worry – they can become your trusty cleaning helpers!

Shoes looking a little tired? No worries! Repair the soles and heels, and they'll be ready for new adventures. Furniture feeling a bit worn? Give it a makeover and bring it back to life!

By reusing and repairing, we're joining the circular economy team! We keep things in use for as long as possible, and that's a win for our planet. We reduce waste, save resources, and cut down on greenhouse gases. We're Earth's ultimate helpers!

4 Blue belt - Waste management. Responsible consumer behavior


Waste management is a crucial aspect of environmental sustainability that focuses on effectively handling and minimizing waste generated by human activities. It encompasses various strategies such as waste reduction, recycling, composting, and proper disposal.

Consumer behavior plays a vital role in waste management, as our choices and habits directly impact the amount of waste generated. The industry is the biggest producer of GHG, but industry works to meet our needs. By adopting more sustainable practices, we can make a significant difference in reducing GHG emissions, waste and its associated environmental impacts.

In our daily lives we buy several groups of products – we buy food, we buy textile (both for our homes and for ourselves), we buy products to keep our home and ourselves clean; we buy cosmetics; we buy things for our homes; we buy toys, and we buy electronics.

Here are a few general examples of consumer behaviors that can be followed regardless of the type of product we buy:

- Avoiding single-use items - Opting for reusable alternatives such as water bottles, coffee cups, shopping bags helps reduce the amount of waste generated from disposable products.
- Repairing and repurposing - Instead of immediately discarding broken items, consider repairing them or finding creative ways to repurpose them. This extends the lifespan of the product and reduces waste.
- Mindful packaging choices: When making purchasing decisions, choose products with minimal or recyclable packaging. Buying in bulk or choosing products with refillable options also reduces packaging waste.
- Proper waste sorting and recycling: Educate yourself about local recycling guidelines and ensure that you separate recyclable materials from general waste. This helps optimize the recycling process and minimize contamination.
- electronic device consumption - Consider the environmental impact of electronic devices and opt for energy-efficient models. When possible, extend the lifespan of electronic devices by upgrading and repairing rather than frequently replacing them.
- Supporting eco-friendly brands and businesses - Look for companies that prioritize sustainable practices, use eco-friendly materials, or have initiatives to reduce waste. By supporting these businesses, you contribute to a more sustainable economy.
- Sharing and borrowing resources- Collaborative consumption models, such as sharing tools, books, or other items with neighbors or through community initiatives, can reduce the need for individual ownership and excessive consumption.




Now let's look more closely to each category and see how we can optimize our consumer behavior.

When **purchasing cleaning products**, we can

- **Choose Eco-Friendly Brands:** Look for cleaning product brands that prioritize sustainability, transparency, and environmentally-friendly ingredients. Seek products with labels indicating they are biodegradable, non-toxic, and free from harmful chemicals like phosphates and chlorine.
- **Use Concentrated Cleaning Products:** Opt for concentrated cleaning products that require less packaging and transportation, reducing their overall environmental impact. These products often come in smaller bottles but can be diluted with water to create the same cleaning power as traditional products.
- **Use liquid detergents instead of powder detergents for laundering your clothes -** It is proven that when laundering clothes with liquid detergents, there is less microplastic contamination in the waste water.
- **Use homemade Cleaning Solutions:** Consider making your own cleaning solutions using simple and natural ingredients like vinegar, baking soda, lemon, and essential oils. DIY cleaners are effective, cost-efficient, and free from harmful chemicals.
- **Avoid Aerosol Products:** Aerosol cleaning products often contain harmful propellants that contribute to air pollution and damage the ozone layer. Choose non-aerosol alternatives or use refillable spray bottles with homemade solutions.
- **Look for Eco-Labels and biodegradable formulas:** Check for eco-labels and certifications, such as the EU Ecolabel. The labels indicate that the products meet specific environmental standards and have a reduced impact on the environment.
- **Buy in Bulk:** When possible, purchase cleaning products in bulk to reduce packaging waste and save money in the long run. Buying in bulk can also reduce the frequency of trips to the store, saving energy and resources.
- **Support Local and Sustainable Brands:** Look for cleaning product brands that prioritize sustainable sourcing, ethical manufacturing practices, and support local communities. Supporting such brands encourages responsible business practices and fosters a more sustainable economy.
- **Dispose of Products Properly:** Dispose of empty or expired cleaning products according to local recycling and waste disposal guidelines. Check with your municipality. Many communities have special drop-off locations for hazardous household waste to ensure proper handling of chemicals.

Similar sustainable practices may be applied **for personal care products**:

- **Choose Natural and Organic Products:** Opt for personal care products made from natural and organic ingredients. Look for products with certifications such as COSMOS Organic or Ecocert, indicating that they meet strict organic and environmental standards.
- **Avoid Harmful Chemicals:** Read product labels and avoid personal care items that contain harmful chemicals like parabens, phthalates, sulfates, and synthetic fragrances. These chemicals can be harmful to both your health and the environment.
- **Refillable Packaging:** Look for personal care brands that offer refill options for products like shampoo, conditioner, and body wash. Refillable packaging reduces the need for single-use containers and minimizes waste.

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- **Reduce Plastic Waste:** Choose personal care products with minimal or plastic-free packaging. Seek alternatives like bar soaps, solid shampoos, and reusable containers to reduce plastic waste.
 - **Support Ethical Brands:** Support personal care brands that prioritize ethical and sustainable practices, such as fair trade sourcing, cruelty-free testing, and environmentally responsible production. Look for Leaping Bunny or PETA certifications to ensure cruelty-free products.
 - **DIY Beauty Products:** Consider making your own beauty products using natural and simple ingredients. DIY options like homemade face masks, scrubs, and moisturizers can be effective, cost-efficient, and eco-friendly.
 - **Biodegradable and Compostable Products:** Look for personal care items that are biodegradable or compostable, such as bamboo toothbrushes, cotton swabs with paper sticks, and biodegradable dental floss.
 - **Choose Sustainable Packaging:** When buying personal care products, choose those packaged in recyclable materials or with minimal packaging. Avoid products with excessive plastic wrapping or non-recyclable materials.
 - **Support Sustainable Palm Oil:** Palm oil production can contribute to deforestation and habitat loss. Look for personal care products that use sustainable palm oil or are palm-oil free.
 - **Eco-Friendly Sunscreen:** Choose reef-safe and eco-friendly sunscreens that do not contain harmful chemicals that can harm marine life and coral reefs.


By adopting sustainable consumer behavior when purchasing personal care products, you can contribute to a cleaner environment, support ethical practices, and take care of your well-being while minimizing your ecological footprint.

When it comes to food, consumer behavior plays a key role in minimizing food waste. By being conscious of our actions, we can make a positive impact:

- **Planning meals and making a shopping list:** This helps us buy only what we need and reduces the chances of excess food going to waste.
- **Choosing fresh and local produce:** Supporting local farmers reduces transportation emissions and promotes sustainable farming practices.
- **Check the labeling of the food:** make a difference between “best before” and “use by” date
- **Pack your dinner leftovers for the next day**
- **Look for recipes with leftovers**

In the realm of textiles, consumer behavior can also contribute to waste reduction. Here are some practices to consider:

- **Buying quality over quantity:** Investing in well-made, durable clothing that will last longer reduces the need for frequent replacements.
- **Opting for natural and sustainable fibers:** Materials like organic cotton, hemp, or linen have lower environmental impacts compared to synthetic fabrics.
- **Considering second-hand options:** Thrift stores, online platforms, and clothing swaps offer a wide range of gently used clothing, reducing the demand for new items.

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- Taking care of your clothes: Proper washing, drying, and storage practices can extend the life of your garments, reducing the need for replacements.

Remember, even small changes in consumer behavior can make a significant difference collectively. By being conscious of our choices, we can contribute to waste reduction, resource conservation, and a more sustainable future.

By incorporating these practices into our daily lives, we can make a positive impact on waste management. Through mindful consumer behavior, we contribute to a more sustainable future, where resources are conserved, and waste is minimized. Together, we can create a cleaner and healthier environment for ourselves and future generations.

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Waste management helps protect our environment. It's all about handling waste in the best way possible and making sure we create as little waste as we can. By making smart choices in what we buy and how we use things, we can make a BIG difference.

Now, let's learn some fantastic tricks that work for any type of product we buy. Whether it's toys, electronics, or anything else, these tips will make us waste warriors in no time!

First up, we have the magical "avoiding single-use items" spell. Whenever you can, say no to single-use stuff like plastic water bottles, coffee cups, and shopping bags. Instead, choose reusable alternatives, like special water bottles that can be used over and over again. It's like having a magic potion that reduces waste!

And here's another enchanting trick - "repairing and repurposing"! Whenever something breaks, don't worry; you can fix it with a little magic know-how. You can also get super creative and find new ways to use old stuff. It's like giving new life to things and saving them from the landfill!

Now, let's use our "mindful packaging choices" magic. When we buy things, we can choose products with less or recyclable packaging. Oh, and guess what? If we buy stuff in big containers or ones that we can refill, it's like we're saying "Abracadabra" to packaging waste!


Prepare for a spell of "proper waste sorting and recycling"! Let's become recycling wizards by learning the secret codes for our local recycling rules. By separating recyclables from regular waste, we'll make recycling magic happen and keep our planet happy!

Oh, and here's a super cool "electronic device consumption" charm. Whenever you get a new gadget, choose ones that use less energy. And guess what? By upgrading and fixing our electronic buddies, we'll make them last longer and reduce electronic waste. How cool is that?

Next, we have the "supporting eco-friendly brands and businesses" enchantment. When we choose companies that care about the planet, it's like we're sending magical energy to support a more sustainable world.

Finally, it's time for the "sharing and borrowing resources" spell. We can work together as a team of eco-friends and share stuff like books, toys, or tools. By sharing with neighbors or community friends, we'll create a world where everyone has what they need without making lots of new things. It's like we're weaving a web of sustainability!

Let's dive into the different groups of products we use every day and see how we can be eco-champions!



First up, let's talk about food. When it comes to food, we have some tricks to stop food waste in its tracks. First, let's plan our meals and make a shopping list. That way, we'll only buy the food we really need, and nothing will go to waste. And don't forget finish everything on your plate.

And did you know that choosing fresh and local produce is like giving the Earth a big, green hug? Supporting local farmers means fewer trucks on the road, and that's fantastic for our environment! Fresh and local food is not only delicious but also super Earth-friendly.

Oh, and here's a fun fact – when we see labels on food packages, like "best before" or "use by" dates, they actually have a special meaning! By understanding these labels, we can make sure we enjoy our food at its best and avoid throwing away stuff that's still good to eat.

Now, picture this: you finish a yummy dinner, and there are some leftovers. Instead of letting them go to waste, why not pack them for lunch the next day? It's like having a mini picnic with yourself!

And here's another cool trick – recipes with leftovers! Yep, some dishes taste even better the next day. So let's check out recipes that use up our leftovers like magic, turning them into mouthwatering meals!

Now, onto the exciting world of textiles! Being a waste warrior with clothes is easier than you think. It's all about making smart choices!

When we buy clothes, let's go for quality over quantity. Choosing well-made, durable clothing means we won't need to replace them often.

Oh, and guess what? Nature has some amazing superhero materials for clothes too! Fabrics like organic cotton, hemp, or linen are kinder to the Earth compared to synthetic ones. So let's choose eco-friendly materials that make us feel comfy and happy.


But here's a fantastic secret – we can find some treasure in second-hand stores or online platforms! That's right; there are so many gently used clothes waiting for a new adventure. It's like going on a treasure hunt and being eco-friendly at the same time!

And the final touch of being a textile waste warrior is simple – taking good care of our clothes! By washing, drying, and storing them properly, we'll keep them in tip-top shape and ready to shine. That means less need for new clothes and more love for our planet!

Next on the list is textiles – clothes and stuff for our homes. When we buy clothes, let's go for quality and choose things we love, so we can use them for a long, long time. And guess what? When we're done with them, we can pass them on to friends or family, or even donate them. That's called sharing the eco-love!

Now, let's get our homes sparkling clean. Instead of using disposable cleaning wipes, let's go for reusable ones! They're like magic cloths that we can wash and use again and again. Plus, we can even use old clothes as cleaning helpers – they'll feel super special!

Now let's dive into the magical world of sustainable shopping for cleaning and personal care products. Get ready to learn some enchanting spells to keep our planet happy and healthy!



First up, we have the spell of "Choosing Eco-Friendly Brands." When you're picking cleaning products, look for brands that love the Earth as much as we do! Find labels that say "biodegradable" and "non-toxic," and say goodbye to harmful chemicals.

Next, let's use the "Concentrated Cleaning Products" charm. These powerful potions come in smaller bottles but last a long time. All we need to do is add some water, and poof! We've got a super effective cleaner without all the extra packaging.

Now, let's work some magic with our laundry - "Use liquid detergents instead of powder detergents." When we use liquid potions, there's less microplastic pollution in the water. That's great news for the sea creatures!

Oh, and don't forget our DIY spells - "Homemade Cleaning Solutions"! With simple ingredients like vinegar, baking soda, and lemon, we can create powerful cleaners that are kind to the Earth and our wallets.

Now, let's banish aerosol products with the "No More Aerosol" charm. Aerosol potions have tricky propellants that hurt the air we breathe and the ozone layer. Instead, let's use refillable spray bottles with our homemade cleaners.

Here's a clever spell to remember - "Look for Eco-Labels and biodegradable formulas." These special labels show us which products are Earth-friendly and reduce our impact on the planet.

And guess what? With the "Buy in Bulk" enchantment, we can save the Earth and save some money, too! Purchasing in big quantities means less packaging waste and fewer trips to the store.

Remember to "Dispose of Products Properly" - follow the rules for recycling and waste in your town. We can be waste wizards by handling chemicals correctly and keeping our home safe.

Now, let's take all those amazing spells and use them for personal care products too! When it comes to shampoo, lotion, and more, we have the power to make a difference.

First, let's use our "Choose Natural and Organic Products" magic. Look for potions with natural ingredients that are kind to our bodies and the Earth. We want to be as gentle as a breeze!

Say "no" to harmful chemicals with the "Avoid Harmful Chemicals" spell. Reading labels is like a treasure hunt; we'll find the products that are safe for us and Mother Nature.


With the "Refillable Packaging" enchantment, we'll find potions that we can refill and reuse. It's like having a magic potion that never runs out!

Let's wave our wands and "Reduce Plastic Waste." Choosing products with less plastic means we're helping the ocean animals and keeping our planet clean.

By supporting "Sustainable Palm Oil," we're saying "hello" to forests and wildlife, and "goodbye" to deforestation!

And don't forget the "Eco-Friendly Sunscreen" charm. When we choose reef-safe sunscreens, we're protecting our oceans and all the beautiful creatures that live in them.

Toys and electronics are super cool, right? When we get new toys, let's take good care of them so they can be our buddies for a long time. And when we're done playing, we can pass them on to other kids who will love them too!



You've learned some fantastic spells, little green wizards! By avoiding single-use items, repairing and repurposing, making mindful packaging choices, recycling like pros, being smart with electronic devices, supporting eco-friendly brands, and sharing resources, you're making a huge difference.

3 Blue red belt - Food and agriculture. Food waste

Agriculture is a sector with significant greenhouse gas emissions, responsible for approximately 11% of greenhouse gases in the EU, which aligns with the global situation. The increasing demand for food due to the expanding global population leads to higher livestock farming, land cultivation, and fertilization, contributing to these emissions. Similarly, the textile industry exerts environmental pressure, with 86 million hectares of land used to harvest cotton, an area that could feed 80 million people if utilized for food production.

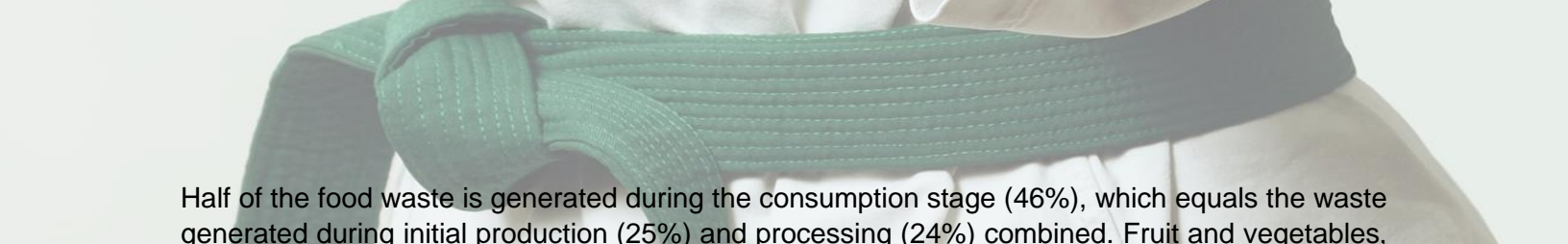
Greenhouse emissions result in climate change as human activities release an enormous amount of these gases into the atmosphere, intensifying the greenhouse effect and warming the Earth. Carbon dioxide is not the primary gas associated with the agricultural sector; rather, the majority of emissions come from methane and nitrous oxide. Livestock animals like cows and sheep produce methane during digestion (enteric fermentation) and through manure, while nitrous oxide emissions arise from nitrogen-containing fertilizers. These gases account for over 80% of total agricultural greenhouse gas emissions and have a greater heat-trapping efficiency than CO₂. There is a substantial difference in greenhouse gas emissions between meat and plant production as well. For instance, the production of 1 kg of wheat releases 2.5 kg of greenhouse gases. In contrast, it is estimated that 1 kg of beef production emits approximately 70 kg of greenhouse gases.

Beyond greenhouse gas emissions, agricultural activities exacerbate climate change in other ways. The conversion of forests into arable land reduces the Earth's natural capacity to absorb excessive carbon dioxide. In 2016, EU farms used 173 million hectares for agricultural production, comprising 39% of the total land area of the EU. Deforestation results in biodiversity loss as animals lose their habitats, and it leads to soil erosion, which trees typically prevent with their root systems. The use of pesticides and synthetic fertilizers negatively impacts the natural state of the land and its ecosystems.

Additionally, the agricultural sector contributes to water pollution. Pesticides and fertilizers used to treat the land contaminate groundwater and natural water sources surrounding farmlands, making the water more acidic and endangering the aquatic environment.

At the same time, around 20% of the food in Europe is wasted. This means that we pollute the air to produce food, which we do not eat, and then we pollute it again when dealing with this food waste.

One of the reasons for this big share of food waste is the uneven distribution, but another reason is the lack of knowledge about the meaning of food labeling, i.e., date making. Around 10% of food waste generated annually in the EU is due to wrong understanding of date marking. Only a third of consumers correctly understand the meaning of the 'best before' date. They often confuse the meaning of 'best before' date with the 'use by' date. The 'use by' date indicates food's safety – we should not eat this food after this date, even if it looks and smells good. 'Best before' speaks for its quality – the food will be safe for eating after this date, but it may not have the best quality.



Half of the food waste is generated during the consumption stage (46%), which equals the waste generated during initial production (25%) and processing (24%) combined. Fruit and vegetables, followed by bakery products, meat including fish and poultry, and dairy products are the main food categories that are thrown away.

What can you do to address these issues?

Adopt a more plant-based diet: Reduced meat consumption decreases the demand for livestock farming, which requires significant land for animal breeding and food production. A plant-based diet also offers health benefits.

Avoid food waste: Responsible consumer behavior can help minimize food waste and its associated environmental impacts.

Be mindful of products with palm oil: Palm plantations are a primary cause of deforestation in tropical forests, so opting for products without palm oil supports conservation efforts.

support Local Farmers: Support local agriculture by choosing products that are locally grown. This not only reduces the environmental impact of transportation but also strengthens local economies.

Choose clothes that are more durable: Favoring durable clothing items helps reduce the demand for frequent replacements and lessens the environmental burden of the textile industry.

Minimize your wardrobe: Simplifying your wardrobe reduces excessive consumption and its environmental consequences.


Opting for organic product – Whenever possible, opt for organic fruits, vegetables, and other products. By doing so, you endorse environmentally friendly practices and contribute to a cleaner, healthier ecosystem.

Let's see in more details.

Organic farming is an age-old method of cultivating vegetables, fruits, and crops in an environmentally conscious manner. It goes beyond just producing food; it represents a sustainable approach that aligns with nature's harmony. In stark contrast to conventional agriculture, organic farming steers clear of harmful pesticides, artificial fertilizers, and growth hormones in livestock. By embracing these principles, organic farming becomes a powerful ally in the fight against climate change.

Today, organic farming standards focus not only on food purity but also on promoting environmental preservation and safeguarding biodiversity. A set of key principles govern the label "organic," ensuring that the products meet stringent criteria. These principles include the avoidance of genetically modified organisms (GMOs), limited use of synthetic chemicals, prohibition of hormones, and careful use of antibiotics only when necessary for animal health.

To uphold the principles of organic farming, farmers employ innovative methods to maintain soil fertility and promote the well-being of plants and animals. Emphasis is placed on ecologically balanced pest control, relying on natural predators to keep harmful pests in check. Additionally, organic farmers turn to biological fertilizers derived from animal and plant waste, nurturing the soil and fostering a healthy ecosystem. The practice of crop rotation further revitalizes the soil by alternating different crops, thus mitigating the depletion of essential nutrients.



The impact of organic farming is profound. By embracing nature's wisdom, organic farmers dramatically reduce the reliance on pesticides, leading to less soil erosion and minimizing nitrate leaching into water sources. Furthermore, they employ a circular approach, recycling animal waste back into their farms, reducing waste, and closing the loop of sustainability.

Though organic farming offers immense environmental benefits, it comes with its challenges. The labor-intensive nature of organic farming and potentially lower yields can translate to higher costs for consumers. However, these costs are an investment in the health of our planet and the preservation of our natural resources.

Another sustainable and eco-friendly solution to deal with organic waste is composting, which transforms food scraps, fruit peels, and leaves into valuable organic fertilizers. This natural recycling process enriches the soil of your plants and contributes to a healthier environment.

In the European Union, a staggering 118 to 138 million tons of bio-waste is generated annually. However, only about 40% of this waste is effectively recycled into high-quality compost and digestate, highlighting the potential for further progress in composting practices.

Version for children below 12:

Did you know that agriculture and the textile industry are like two big puzzle pieces in the climate change puzzle? They play a significant role in the greenhouse gas dance, and it's time to unravel their secrets!

In the EU, around 11% of greenhouse gases come from agriculture. That's like a big burping cow in the atmosphere! Livestock farming, growing crops, and using fertilizers are the main culprits. As our world's population grows, we need more food, which puts more pressure on the land and releases more of these gases.


The textile industry is another player in this climate change game. Imagine, a whopping 86 million hectares of land is used to grow cotton! That's like having a super large cotton kingdom, but sadly, it means we have less land to grow food for hungry people.

When it comes to greenhouse gases, carbon dioxide is not the main troublemaker in agriculture. It's methane and nitrous oxide doing the mischief! Cows and sheep have a special way of making methane gas during their digestion. Even their manure adds to the trouble! Nitrous oxide comes from fertilizers used to help crops grow big and strong.

These gases are super sneaky because they trap heat in the atmosphere, making our Earth warmer and causing climate change. Methane and nitrous oxide are like the greenhouse gas dream team! They're more efficient at trapping heat than carbon dioxide.

Now, here's a curious fact: Meat and plant production have different greenhouse gas footprints. When we make 1 kilogram of wheat, it releases 2.5 kilograms of greenhouse gases. But guess what? Making 1 kilogram of beef produces a whopping 70 kilograms of greenhouse gases! That's like a heavy greenhouse gas elephant!

So, to keep our planet cool, we can try eating more plant-based foods like veggies and grains. They have a lighter footprint on the environment. And farmers can find ways to reduce methane and nitrous oxide emissions, like using eco-friendly fertilizers and taking care of animal "burps."



Let's continue our journey to explore how agriculture affects our planet and climate in different ways!

When we turn forests into farmlands, we lose our amazing natural superheroes! Forests are like the Earth's lungs, absorbing lots of carbon dioxide. But when we cut down trees to grow crops, they can't do their superhero job anymore. This leads to more carbon dioxide in the air, making the planet warmer.

Deforestation also means that animals lose their homes. Just like we need our houses to live in, animals need their habitats to survive. When we take away their homes, it's like asking them to find a new place to live. Soil erosion is another sneaky problem caused by cutting down trees. Trees are like a big net holding the soil together with their roots. Without them, the soil can wash away, making it hard for plants to grow.

Using pesticides and synthetic fertilizers may help crops grow big and strong, but they can be bad for the environment. They mess with the natural balance of the land and harm the tiny creatures that live there. It's like having a picnic with yummy food but accidentally inviting some uninvited guests who cause trouble.

Water pollution is another problem linked to agriculture. When farmers use pesticides and fertilizers on their crops, rainwater can wash these chemicals into rivers and lakes. This can make the water more acidic and dangerous for the animals living in it. Imagine if someone poured a yucky potion into your bathtub! That's how it feels for the fish and other aquatic creatures.

Wait, there's more! Did you know that around 20% of the food in Europe goes to waste? It's like making a big feast but not finishing our plates! We put so much effort into growing and producing food, but a lot of it ends up in the trash. This creates extra pollution and waste, and it's not good for our planet.


One of the reasons for all this food waste is because we sometimes get confused by food labeling. You know how sometimes food packages have a date on them? Well, there are different types of dates! The "use by" date is like a stop sign – we should not eat the food after that date, even if it looks and smells good. But the "best before" date is like a suggestion – the food will be safe to eat after that date, but it might not be at its very best quality.

Isn't it interesting that almost half of the food waste happens when we're eating? Fruits, veggies, bakery products, meat, and dairy are the main categories of food that we throw away. But we can change this! By being mindful of our food choices and using it wisely, we can help protect our planet and reduce waste.

You can become a superhero for the planet by making small but powerful changes in your daily life! Here are some things you can do to address these important issues:

Adopt a more plant-based diet: Try including more fruits, veggies, grains, and legumes in your meals. Reducing the amount of meat you eat can make a big difference for the environment and your health too!

Avoid food waste: Be mindful of what you put on your plate and try not to waste food. You can plan your meals and make a shopping list to buy only what you need. If you have leftovers, get creative and find tasty ways to enjoy them later.



Be mindful of products with palm oil: When you see palm oil in the ingredient list of a product, think twice! Choosing products without palm oil helps protect our precious forests and the animals living in them.

Support local farmers: Visit farmers' markets and look for locally grown products. By supporting local agriculture, you're not only helping the environment but also supporting your community.

Choose clothes that are more durable: When shopping for clothes, pick items that are well-made and designed to last. This way, you'll need fewer replacements, and it's better for the Earth!

Minimize your wardrobe: Simplify your wardrobe by focusing on clothes you really love and wear often. It reduces waste and keeps your closet clutter-free!

Opt for organic products: When you have the chance, choose organic fruits, veggies, and other products. Organic farming is kinder to the Earth and promotes a healthier environment.

Let's dive deeper into the world of organic farming and composting, two amazing ways to protect our environment and nurture our planet!

Organic farming is like a dance with nature, where farmers work in harmony with the Earth. Instead of using harmful chemicals and synthetic stuff, they use smart, natural methods to grow food. This not only keeps our fruits and veggies pure but also helps the environment in fantastic ways!

In organic farming, special rules called "principles" guide the farmers. They say no to genetically modified stuff (GMOs), nasty chemicals, and hormones for the animals. Only when the animals need it, they use gentle antibiotics. By sticking to these rules, organic farmers become heroes for the Earth!

They've got some cool tricks up their sleeves too. Instead of using chemicals to fight bugs, they bring in the good guys - natural predators - to keep the pests away. Organic farmers use special fertilizers made from plant and animal waste, giving the soil lots of love. Plus, they switch the crops they grow to keep the soil healthy and happy.

The results are astonishing! Organic farming helps our planet in big ways. By using fewer pesticides, there's less soil erosion and water pollution. They even recycle animal waste back into the farms, closing the loop of sustainability!

Sure, organic farming has its challenges. It takes more time and effort, which can sometimes mean higher costs for us, the consumers. But guess what? It's a small price to pay for the well-being of our planet and the future of our home!

Now, let's talk about composting - a magical way to turn kitchen scraps, leaves, and fruit peels into superhero fertilizers! Composting is like a recycling party for organic waste, where the waste gets transformed into a superfood for our plants.

Just imagine all the food scraps and peels you throw away. With composting, instead of being wasted, they become treasure for the soil. Compost adds nutrients to the Earth, making it healthier and happier.

In the European Union, a whole lot of organic waste is generated each year - about 118 to 138 million tons! But sadly, only 40% of it gets turned into awesome compost. Imagine how much more good we could do for our planet if we composted even more!



2 Red belt Biodiversity

Climate change is an increasingly evident phenomenon, affecting countries worldwide with more frequent and extreme climate events. From prolonged droughts to intense storms, heatwaves, and wildfires, the impact of climate change is becoming more pronounced. These changes in climate are a key driver of biodiversity loss and ecosystem degradation.

One of the major consequences of climate change is the weakening of natural ecosystems' ability to regulate greenhouse gas emissions and provide protection against extreme weather. As human activities expand to produce food, live, work, recreate, and generate energy, more land space is conquered, posing challenges to wildlife survival.

Biodiversity, which refers to the variety of life on Earth in all its forms, is essential for our existence and the health of ecosystems like forests and coral reefs. A delicate balance exists between wildlife and vegetation. For example, bees and other insects play a crucial role in pollinating plants, ensuring their reproduction. Preserving biodiversity is crucial for our future.

Human activities have had a profound impact on the natural world, posing numerous threats to biodiversity and contributing to the alarming process of climate change. These activities have disrupted ecosystems and habitats, leading to the loss of precious plant and animal species that form the intricate web of life on Earth.

Deforestation, driven primarily by logging, agriculture, and infrastructure development, is a significant driver of habitat loss. Large swathes of forests, which are home to diverse wildlife and plant species, are cleared to make way for human activities. This destruction of natural habitats disrupts entire ecosystems and threatens the survival of countless species.


As forests are removed, wildlife loses their homes and sources of food. The disruption in their natural habitats can lead to a decline in their populations or even push some species to the brink of extinction. Moreover, forests play a crucial role in absorbing carbon dioxide, a greenhouse gas that contributes to global warming. The loss of forests, therefore, exacerbates climate change by reducing nature's capacity to sequester carbon.

Another, human activity that disturbs ecosystems are urbanization and Infrastructure Development. The expansion of urban areas and the construction of roads and buildings alter ecological conditions, cutting through natural habitats and fragmenting ecosystems. Urbanization leads to the creation of artificial environments, which are not suitable for many wildlife species to thrive.

Urban areas produce noise pollution, which has adverse effects on wildlife. Many animals rely on sound for communication, mating, and finding food, but the noise from cities can interfere with these critical activities. It can cause stress, disorientation, and disrupt natural behaviors, ultimately leading to reduced reproductive success and population declines in affected species.

Global warming, primarily caused by greenhouse gas emissions from human activities, affects both land and water surfaces.

As temperatures rise, many land-dwelling species are faced with changing environmental conditions. Some species are adapting by migrating to areas with more suitable climates, while others struggle to keep up with the rapid pace of change. This migration of species can disrupt ecosystems and lead to imbalances in predator-prey relationships and competition for resources.



For example, certain bird species may change their migratory patterns as they seek cooler or more hospitable environments. However, this can create mismatches with the availability of food sources or nesting sites, impacting their reproductive success and survival.

Higher temperatures and water pollution affects marine life as well. Water pollution is a significant threat to marine life and biodiversity. Industrial runoff, agricultural waste, and improper waste disposal contaminate rivers, lakes, and oceans, harming aquatic ecosystems. Pollution can lead to fish kills, toxic algal blooms, and destruction of coral reefs.

Warmer oceans pose significant threats to marine life, especially to sensitive ecosystems like coral reefs. Coral reefs are home to a diverse range of marine species and play a crucial role in supporting marine biodiversity. However, they are extremely sensitive to changes in temperature, particularly when ocean waters become too warm.

Coral reefs depend on a symbiotic relationship with algae known as zooxanthellae, which provide them with essential nutrients and vibrant colors. When ocean temperatures rise, coral reefs undergo a process called coral bleaching, where they expel the algae due to stress. This causes the corals to lose their vibrant colors and makes them more vulnerable to disease and death.

If the stressful conditions persist, corals can die, leading to the loss of entire coral reef ecosystems. As coral reefs decline, marine biodiversity decreases, affecting countless species that rely on these habitats for food, shelter, and reproduction.

The loss of coral reefs and other marine ecosystems has far-reaching consequences for the entire marine food web. Many marine species, from fish to sharks to turtles, depend on coral reefs for their survival. As these habitats disappear, the populations of these species may decline, affecting fisheries and coastal communities that rely on them for sustenance and livelihoods.

In addition to coral reefs, other marine species, such as marine mammals, fish, and invertebrates, are also impacted by warming oceans. Some species may migrate to find cooler waters, while others may face challenges in adapting to the changing conditions.


Addressing climate change and its impact on biodiversity requires urgent action to reduce greenhouse gas emissions, preserve natural habitats, and promote sustainable practices. Conserving biodiversity is crucial for the health and resilience of our planet, ensuring a sustainable future for all living beings.

Version for children below 12:

Climate change is no longer just a faraway story; it's happening right here and now, affecting countries all around the world. We're seeing more extreme weather events like hurricanes, droughts, and wildfires, and it's all because of climate change.

One of the biggest problems is that our actions are making it hard for nature to do its job. Natural ecosystems, like forests and coral reefs, usually help us out by controlling greenhouse gases and protecting us from extreme weather. But as we take over more and more land for our activities, we're making it tough for these ecosystems to work their magic.

Imagine a puzzle where all the pieces fit together perfectly. That's what biodiversity is - the amazing variety of life on Earth. From tiny insects to big animals, each one has an important role



to play. For example, bees and other insects help plants reproduce by pollinating them. Preserving biodiversity is like keeping the puzzle complete, making sure everything stays in balance.

Unfortunately, we humans have been messing up the puzzle. Our activities have been harmful to the natural world, putting biodiversity at risk and making climate change worse. When we cut down forests for things like farming or building, we take away the homes and food sources for countless animals and plants. This throws the puzzle out of whack and threatens the survival of many species.

Forests are especially important because they do two critical jobs - they provide homes for wildlife and absorb carbon dioxide, a greenhouse gas that causes global warming. But when we clear forests, we lose these benefits, making climate change even worse!

Let's talk about some of the other things that humans do that can affect the animals and nature around us. One of these things is called "urbanization" and "Infrastructure Development." It might sound like a big word, but it's all about how we build our cities and roads.

When we expand our cities and construct new buildings and roads, we sometimes disturb the homes of animals and plants. Imagine if someone came and built a house right where you were living! That's how animals feel when their natural habitats get changed or broken into pieces.

All these new buildings and roads can also make our cities very noisy, just like a loud concert. But this noise can be a big problem for wildlife. Animals use sounds to talk to each other, find food, and even find a special friend to be with. But all that noise can make it hard for them to do those important things.

It's like trying to have a conversation with your friend at a loud party - very tricky! This noise can cause animals to feel stressed, get lost, and even change their normal behaviors. And that can be tough for their families and the whole animal community.

Another thing that affects our planet is something called "global warming." It happens because of the gases we release into the air from the things we do. Just like how the sun makes us warm, these gases trap some of the heat on Earth, making our planet hotter.

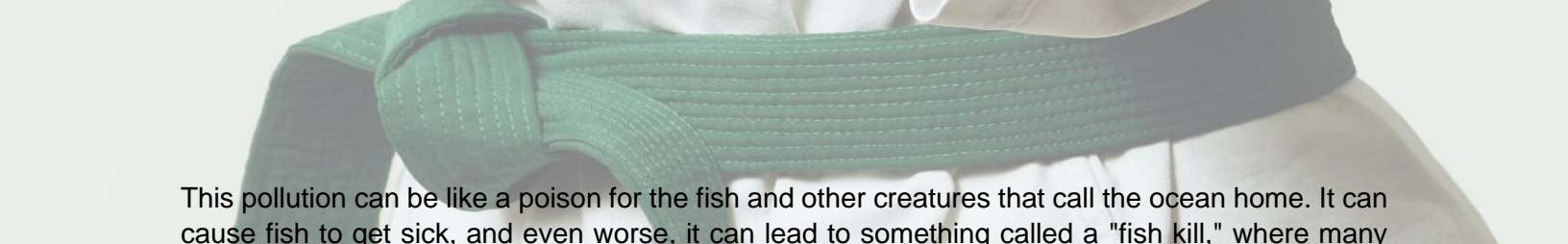
For animals that live on land, this means their homes might get too hot or too cold. Some animals can move to a better place, like going on a vacation, but others have a hard time finding a new home. It's like if your house became too hot, and you had to find a cooler place to live - not easy!

Some animals are really good at adapting, which means they can change to live in the new conditions. But for others, it can be a real challenge. And when animals move around or can't find what they need, it can make things a little confusing for the whole animal family.

For example, some birds might decide to change their travel plans, just like how we might change our vacation destination. But this can cause a problem - like if you thought there would be a big picnic in the park, but when you got there, there was no food!

Let's dive into the amazing world of marine life and learn how some things we do can affect our underwater friends.

Imagine a beautiful ocean filled with colorful fish, playful dolphins, and magical coral reefs. But there's a problem - pollution! When we don't take care of our environment, things like industrial waste and garbage can end up in the water, making it dirty and harmful for marine life.



This pollution can be like a poison for the fish and other creatures that call the ocean home. It can cause fish to get sick, and even worse, it can lead to something called a "fish kill," where many fish die all at once. Just like we need clean air to breathe, marine animals need clean water to live and thrive.

And speaking of magical coral reefs, they are like underwater cities, bustling with life and color. But they are delicate and need special care. When the ocean gets too warm, coral reefs can become stressed and lose their colorful friends called zooxanthellae. It's like if you had a best friend who always gave you delicious snacks, but when things got too hot, they had to leave.

This makes the corals very sad and can even make them very sick. It's like when we get a fever when we're not feeling well. If the stressful conditions continue, the corals might even say goodbye forever, and that's not good news for the many sea creatures that rely on them.

Marine life is like a big puzzle - all the creatures fit together to create a balanced ecosystem. But when coral reefs and other habitats disappear, it's like taking out pieces of that puzzle. It can make it hard for some animals to find food and shelter, and even cause their populations to go down.

Imagine if all the yummy snacks in your house disappeared, and you couldn't find your favorite foods anymore! That's how marine animals feel when their homes vanish.

It's not all doom and gloom, though. We can still fix the puzzle and protect our planet. By being mindful of our actions, supporting sustainable practices, and conserving natural habitats, we can help biodiversity thrive and combat climate change.


1 Black belt - Sport and environmental ethics

Developing a sense of environmental ethics, responsibility, and values that promote sustainable behaviors and decision-making is vital for creating a greener and more sustainable world. This process involves instilling in individuals, communities, and societies a deep understanding of their interconnectedness with the environment and the impact of their actions on the planet.

Environmental ethics revolves around recognizing the intrinsic value of nature and all living beings, acknowledging that the Earth's ecosystems have inherent worth beyond their usefulness to humans. It emphasizes the need to treat nature with respect, compassion, and care, just as we would treat fellow human beings. By cultivating a sense of environmental ethics, people become more conscious of the consequences of their actions on the environment and are more likely to adopt sustainable practices.

Responsibility plays a crucial role in sustainable living. It involves recognizing that each person bears a share of responsibility for the state of the environment and the well-being of future generations. Being environmentally responsible means making choices that minimize harm to the environment, conserve resources, and reduce pollution. This includes reducing waste, recycling, conserving energy and water, and choosing eco-friendly products and practices.

Promoting values that prioritize sustainability helps shape attitudes and behaviors towards the environment. By emphasizing values such as stewardship, interdependence, and long-term thinking, individuals are more likely to make sustainable choices in their daily lives. Stewardship encourages taking care of the Earth and its resources for future generations, recognizing that we are merely caretakers of the planet during our lifetime. Emphasizing interdependence reminds us that all living beings are connected and that our actions can have far-reaching consequences for



ecosystems and communities around the world. Long-term thinking encourages us to consider the impact of our decisions not only on the present but also on the well-being of future generations.

Educational institutions, families, and communities play a critical role in fostering these values and promoting sustainable behaviors. Environmental education and awareness programs can help individuals develop a deeper understanding of ecological concepts and the importance of sustainability. Learning about environmental challenges, such as climate change, pollution, and habitat destruction, can inspire individuals to take action and make more conscious choices.

Moreover, leading by example is a powerful way to promote sustainable values and behaviors. When individuals, organizations, and governments prioritize sustainability in their practices and policies, it sends a strong message about the importance of environmental stewardship.

By integrating environmental ethics, responsibility, and values into our collective consciousness, we can create a more sustainable future where human activities harmonize with the natural world rather than deplete or harm it. This collective effort is essential for addressing global environmental challenges and safeguarding the planet for current and future generations.

Environmental ethics in sport:


Why we learned about environmental sustainability within our training ? Sport plays a significant role in promoting environmental sustainability and fostering a sense of environmental ethics among athletes, fans, and sports organizations. As a powerful platform with global reach, sport has the potential to influence attitudes, behaviors, and policies towards environmental conservation.

One of the key ways sport promotes environmental sustainability is through setting an example. Sustainable sports organizations demonstrate their commitment to the environment by implementing eco-friendly practices in their operations. They prioritize green building and energy-efficient facilities, use renewable energy sources, and adopt sustainable waste management strategies. By showcasing their dedication to sustainability, these organizations inspire others to follow suit and adopt similar practices.

Athletes, as influential role models, can also leverage their platform to advocate for environmental causes and raise awareness about critical environmental issues. Many athletes use their fame and following to support conservation initiatives, promote eco-friendly behaviors, and call for urgent action on climate change. Their advocacy efforts can have a ripple effect, motivating fans and the broader community to take action and make more sustainable choices.

Sports events and competitions provide opportunities to incorporate environmental sustainability into their planning and execution. Organizers can implement measures to reduce carbon emissions, minimize waste generation, and promote responsible resource use. For example, they can encourage participants and spectators to use public transportation, provide recycling bins throughout the venue, and offset event-related carbon emissions through carbon offset programs.

Furthermore, sports events can serve as platforms for environmental education and awareness-raising. Through interactive exhibits, workshops, and educational activities, spectators and participants can learn about the importance of environmental conservation and the impact of climate change. By connecting people with nature and fostering a sense of appreciation for the environment, sports events can motivate individuals to take action to protect the planet.



Environmental ethics in sports goes beyond the field or the stadium. It involves instilling values of respect, compassion, and responsibility towards the natural world in athletes, coaches, and sports enthusiasts. Through sportsmanship and fair play, athletes learn the importance of respecting rules and principles, which can extend to respecting the rules of nature and environmental regulations.

Moreover, the sports community can contribute to environmental sustainability through partnerships with environmental organizations and initiatives. Collaborating with NGOs and nonprofits allows sports organizations to support conservation projects, promote environmental research, and fund sustainability efforts.

By integrating environmental ethics and values into the sports culture, individuals are more likely to embrace sustainable practices in their daily lives. Whether it's reducing plastic waste, conserving water, or choosing eco-friendly products, the sports community can collectively make a positive impact on the environment.

In conclusion, the role of sport in promoting environmental sustainability and fostering environmental ethics is multifaceted. Through leadership, advocacy, education, and partnership, the sports community can contribute significantly to creating a greener and more sustainable world. By embracing sustainable practices and promoting a sense of responsibility towards the environment, sports can inspire positive change and contribute to the global effort to address environmental challenges and protect our planet for generations to come.

Version for children below 12:

Hey there, young guardians of the Earth! Let's talk about something super important - environmental ethics and how it helps us take care of our planet!

Environmental ethics is like having a special bond with nature and all the living beings that call our Earth home. It's about understanding that every creature, big or small, has its own special value and deserves respect and care, just like we treat our friends and family with love.


When we have environmental ethics, we know that nature is not just there for us to use and throw away. It's like a big family, and we are all connected! So, when we take care of nature, it takes care of us too! Isn't that amazing?

Being responsible for the environment means that we all have a part to play in making our world a better place. It's like being a superhero for the Earth! We can do little things every day, like turning off the lights when we don't need them or using less water when we brush our teeth. These small actions add up and make a big difference!

And guess what? We can teach others to be superheroes too! By sharing our love for the environment and showing them how easy it is to be kind to our planet, we can create an army of Earth protectors!

When we talk about values, it's like having a set of special rules that guide us to be the best versions of ourselves. By valuing things like taking care of the Earth for the future, understanding that everything is connected, and thinking about what's best for the long run, we become superheroes for the environment!

Let's talk about how sports can help take care of our environment!



Sports are not just about playing games; they can also teach us how to protect nature. Many athletes, sports organizations, and fans care about the environment and want to keep it safe and healthy.

Sports teams can lead the way by showing us how to be eco-friendly. They build stadiums that use less energy, use solar power, and recycle to keep our planet clean. When we see them doing these things, we learn how to do it too!

Famous athletes are like superheroes, and they use their fame to talk about important things. They tell us to use less plastic, recycle, and help stop climate change. Their words can inspire all of us to be heroes for the Earth too!

Even sports events can be kind to the planet. They use less pollution by encouraging people to use buses or bikes to get there. They put recycling bins all around, so we can put our bottles and cans in the right place.

And guess what? Sports events can also teach us about nature and how to protect it! They have fun activities and games that show us how important it is to take care of animals and plants.

So, let's cheer for sports and cheer for the Earth! Together, we can make our planet a better place for everyone and everything living here.

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