



Montessori Model United Nations

International Earth Youth Summit (iYES)

What is the International Youth Earth Summit?

The **International Youth Earth Summit** is the next logical step for students interested in becoming Global Citizens. IYES is an immersive experience where students from all over the world aged 13-18 years will work together to develop action plans to construct a more sustainable world that they will implement on their return home.

Over the course of three days, UN and NGO experts will guide and mentor the participants. Participants will learn everything they need to know to implement a social action project of their own design in their home communities independently or in collaboration with others. The social action projects they design will be linked to the concept of **Environmental Sustainability**.

We encourage students to attend in pairs in order to have a partner to help develop their **Environmental Action Project**. Two participants can encourage one another, share the work, and use a variety of talents in order to accomplish their goals. Also, you will have someone to celebrate with when you reach your environment goal!

Climate Change & Environmental Sustainability

Climate Change is happening. There is no denying the evidence. Since 1998 the United States of America has experienced 10 of the hottest years on record. Around the world, 2001-2010 was the warmest decade on record since thermometers were used to record worldwide temperatures.

Glaciers are melting and causing the sea level to rise. Freeze dates of lakes has shifted one day later per decade and thaw dates have been getting earlier and earlier. 20 to 70 percent of the United States has experienced conditions where water has been less available than it has been in the past.

Therefore, we know our climate is changing and we need to think about how we can combat this problem effectively. Everybody needs to work together in order to make the changes that will ensure the next generation will have a healthy environment.

Read about climate change and use the compelling questions below to think about climate change and what you can do to reverse its effects.

What Is Climate Change?

Have you heard of **global warming** or the **greenhouse gas effect**? Both these terms refers to *climate change*. It is the changing of average temperatures around the world. The average temperate of our planet is rising and is causing our environment to change in ways that are not normal.

How Does It Happen?

The air surrounding the Earth is called the **atmosphere**¹. The main gases in the air are nitrogen (N), and Oxygen (O). Together, they make up 99% of the air. The other 1% are other gases. Two gases involved in climate change are methane (CH₄) and carbon dioxide (CO₂).

When the sun's rays hit the Earth it heats the world. Some of the heat is reflected back into space but some of it is trapped by methane and carbon dioxide. These two gases are important because they keep the Earth a stable temperature for life to exist. It is a similar effect to a greenhouse². That is why the gases that trap heat are usually called **greenhouse gases**.

However, over the last 300 years humans have been creating more and more of these gases. Now, we are feeling the effects of the gases in the air not being balanced. It is causing more heat to remain on Earth and change the natural temperature of the planet.

Where Do the Gases Come From?

¹ All the gases that are surrounding the Earth (or another planet)

² A glass structure that traps heat from the sun and keeps the temperature inside the building higher than outside

Carbon dioxide occurs naturally. Humans and animals breathe oxygen (O) and exhale carbon dioxide (CO₂). Plants take in carbon dioxide (CO₂) and produce oxygen (O). This is a process that has been going on since the beginning of time. There is a natural balance between the two.

As humans developed, however, we began burning **fossil fuels**³ (coal, oil and natural gas) in order to make energy. When we burn fossil fuels it releases carbon dioxide into the atmosphere. Since the 1700s we have been releasing more and more carbon dioxide into the atmosphere.

Methane also occurs naturally. Swamps, rice paddies, and animals all release methane. For thousands of years there has been a natural balance of methane in the air. However, producing and using natural gas releases methane. Also, livestock (cows, sheep, goats and camels) all produce methane through flatulence⁴.

Why Is It a Complicated Issue?

All the countries in the world share the responsibility for global warming. Most countries want to find a solution to the problem but there are many **barriers**⁵ to fixing the problem:

Dependence	The majority of countries need to burn fossil fuels for energy. 80% of the world's energy comes from burning fossil fuels. We cannot ask everybody on the Earth to stop using cars, stop heating their homes, and stop eating animals. Well, we could...but it would just cause a whole new set of problems.
Economics	Some countries earn money through the sale of fossil fuels. Although these countries may realize that climate change is a problem, they may not want to turn away from an energy source that makes money for the country AND provides jobs for the people.

³ Fuels that come from compressed plant and animal materials over millions of years

⁴ Pass gas through the body

⁵ Obstacles. Things that prevent you from doing something

Reliability	Although renewable energy comes from the environment, not all countries can rely on renewable energy throughout the year. For example, a country might only have access to sunlight or strong enough winds for half the year. This means multiple forms of energy need to be used. A country might need to burn fossil fuels to make energy when no other forms of energy are available.
Cost	Because renewable energy is a new technology it is more expensive than traditional technologies. In time, the price should go down. Many countries have older energy facilities that use fossil fuels and so they keep using them. Many countries have trouble finding the money to build new energy facilities that can use renewable energy.

What is Environmental Sustainability?

Environmental Sustainability means changing human practices in order to help preserve or lessen the damage human activity has on the environment. It is concerned with maintaining and/or improving the environment for future generations.

If human societies become more sustainable the problem of climate change will be lessened. The goal is to find a balance between supporting human development, economics, and community needs with the ability of the environment to support itself and the wildlife that use it as a home.

Compelling Questions

- Are there any signs of Climate Change in your community? What are they?
- What is your country doing in order to prevent Climate Change?
- In your local community, what are the biggest contributors to Climate change?
- If Climate Change were ignored, how would its effects harm your community?
- Are there any organizations that are working to towards Environmental Sustainability in your community? What are they doing?

- What do you think you could do to have an impact on your community?
- How can you get people in your community to care about Climate Change in your community? How is the natural environment important to their lives?

Environmental Sustainability Topics

At the Summit, participants will study a topic related to **Environmental Sustainability** in depth. In groups of like-minded students they will work with an expert who will help them consider how they can best work in their communities in order to solve a problem that needs to be addressed. The following are the topics for the 2015 Summit:

Water is Life: How do we take sustainable action to protect water?

No living thing exists without water. Therefore, it has been fundamental to human development and will continue to be a necessary ingredient for all human development and improvement in the future. The United Nations acknowledged this need on July 28 2010 when the right to water and sanitation was recognized.

Humans need water for more than just drinking. Farmers need water for agriculture and all people need it for safe and proper sanitation. Furthermore, many industries need water to produce products that humans need and want. In many areas, there is a struggle between rural and urban areas that need access to water for different uses.

Also, animals are dependent upon our water sources as well. Therefore, it is important that humans protect and maintain freshwater and marine ecosystems so that they provide a home for future generations of animals.

How can human communities protect local water sources so that there is enough water for all our needs and water sources will be safe and clean for future generations?

Recycle Our World: How do we make the most basic of human needs sustainable?

For much of human history people have struggled to have enough food. In the Twenty-First century, however, many people live in communities with an abundance of food. Although this means that many people do not go hungry, the Food and Agriculture Organization of the United Nations (FAO) estimates that 1/3 of all food ends up wasted.

When we produce food and it is not used, all the energy that we put into making that food is lost. That means all the water, gas, electricity, and human energy used to get that food from the farm to the table has no purpose. Food that ends up in landfills contributes to the global methane and contributes to global warming.

Furthermore, most of that food is protected and sold wrapped in plastic. Sadly, 50% of all the plastic used is just thrown away. This is becoming a worldwide epidemic and there is now a garbage patch primarily made up of plastic in the Pacific Ocean that is about the size of Texas. If we became better recyclers, this problem would be much improved.

How can we improve our local food systems so that less food is lost? How do we minimize the environmental impact of feeding ourselves? How can we begin developing recycling programs to minimize the amount of packaging that pollutes our environment?

Clean Green Energy: What changes to our use of energy can make an impact?

Human activity is the primary cause of global warming. In the United States 82% of greenhouse gas emissions come from human activity. This includes transportation, electricity and industry that are needed for human society to function effectively.

Is it possible, however, to make small changes that would have a big impact on the environment? For example, changing one light to a compact fluorescent bulb would keep a half-ton of CO₂ out of the atmosphere over the life of the bulb. How much energy would we save if more people used public transport or made more sustainable choices?

In addition, communities need to be thinking about the best ways to produce energy that take into consideration renewable energy sources that are plentiful. For example, is solar, wind, biomass, micro hydro or any other renewable energy sources a viable option for your school or community to pursue?

Sustainability means making changes that ensure human societies can grow and develop as well as protect the environment for future generations. What actions can we take that will have the greatest impact?

Get Green Together: How can communities work towards sustainability?

Human societies have been working together in order to improve our communities for thousands of years. When we work together as a group towards a goal we are capable of accomplishing anything.

All segments of a population will be affected by climate change and therefore it is important we work together to find solutions. Businesses, organizations, schools, and individuals can all work together to support one another to make greener choices and work towards improving the environment of the local community.

How would local gardening, supporting biodiversity, protecting ecosystems or being engaged in sustainable forestry practices make your community healthier and more vibrant? What local community groups would be interested in working together to help improve your community as a whole?

We need to bring people together and work together to find solutions to the problems our communities are facing. How can we work to include all members of a community and begin to make real changes that will have a great impact?

Environmental Assessment Survey

Please fill out the survey posted on the MMUN Website, scan it and return it to iyes@montessori-mun.org