



THE GREENEST OLYMPIC GAMES

GRADES 9-12



HARDLY A DAY GOES BY WHEN YOU DON'T HEAR ABOUT THE EFFECTS OF CLIMATE CHANGE. THE TOKYO 2020 OLYMPICS ARE TAKING THIS SERIOUSLY AND TRYING TO MAKE IT A CARBON NEUTRAL GAMES. WHAT IF YOU COULD HELP? WHAT IF YOU COULD HELP MAKE THE CANADIAN OLYMPIC TEAM CARBON NEUTRAL? WHAT IF YOU COULD HELP MAKE THIS CHANGE GO VIRAL?



A girl donates her mobile phone in one of the collection points in Japan



The Musashino Forest Sport Plaza, a new permanent venue to be used during the Olympic and Paralympic Games Tokyo 2020

Solar panels on the roof and other state-of-the-art technology help reduce the facility's carbon footprint.

How do you host over 11,000 athletes, their coaches and team staff with minimal impact on the environment? This puzzle has kept the organizers of the Tokyo 2020 Olympic Games awake at night.

Toshiro Muto, Chief Executive Officer of the Tokyo 2020 Olympic Organizing Committee, is a busy guy. His days are consumed with the demands of hosting the biggest sporting event in the world. However, he and his team are determined not to lose sight of their environmental goals. "We believe that measures to combat climate change represent one of its most important components." With this commitment, Japan shows how their culture values the health of their environment, their people, and the world.

Olympic host cities are now expected to play an active part in fighting climate change and reducing waste. When the International Olympic Committee chooses a new host city, bids must include rock-solid environmental plans. Cities aspiring to host are very motivated to make aggressive commitments that can be difficult to meet. Despite its green promises, London 2012 ended up getting 90% of its energy from fossil fuels. In 2016, Rio built stadiums that were too big and expensive to use after the Games.

Tokyo 2020 is aiming to win gold in Olympic sustainability. The goal is to make their Games the most environmentally friendly in Olympic history. Large-scale changes mean that the city will have zero carbon and waste output. Even the medals are made of recycled materials.



ZERO CARBON

The burning of fossil fuels and creation of carbon dioxide has been a significant contribution to climate change. Being carbon neutral means that all carbon released is offset by other carbon removing initiatives. This usually means that effort is taken to reduce carbon at its source, and trees or other carbon absorbing vegetation is planted.

Japan is using these Games to transform Tokyo into a carbon neutral city. New green technology is being used to lower emissions and create clean energy. For instance, new solar roads will let nearby buildings harvest the sun's energy absorbed on the open road space. The Organizing Committee has committed to using 100% renewable energy. The city will also improve public transportation, making trains and busses quicker and more energy efficient. To increase the absorption of carbon dioxide, the city is growing urban forests and expanding public green spaces to absorb carbon.

WASTE REDUCTION

Games with hundreds of thousands of spectators and participants creates a lot of garbage. But Tokyo is determined to have a zero waste Olympics. This will take them far beyond reducing food waste and limiting packaging.

Almost all items and goods bought for the Games will be re-used or recycled. This includes everything from the cutlery to the podiums. Tokyo 2020 will also have a sustainable supply chain. This means that a product must be environmentally friendly at every single step of its production. The factories that make all the foods and goods used must reduce waste at every step of production.

Project BATON does just that. For example, the Village Plaza (the central facility inside the Olympic and Paralympic Village) will be built using timber donated from different regions of Japan. After the Games, the Plaza will be taken apart and the pieces will be returned to the communities who donated them. Waste not, want not.

THE MEDAL PROJECT

The Olympics will give Tokyo the chance to model environmental leadership. Even small initiatives set positive examples. For instance, the world will see recycling in action at every medal ceremony. In an effort to reduce some of the harmful effects of traditional mining



Tokyo Medals made from recycled waste

practices, Tokyo 2020 made their medals using recycled smartphones and small appliances. People donated enough electronic devices to extract enough gold, silver and bronze to make over 5,000 medals. The Canadian Olympic Committee contributed to the medal project by donating 100 old cell phones. The Medal Project is turning garbage into the symbols of victory and showing how creativity can beat the global culture of waste.

BEING BETTER

As the world's largest sporting event, the Olympic Games have become more than just a sports competition. The Olympics are a celebration of humanity and challenge us all to be better. To strive for excellence, to respect differences and to embrace friendship. Increasingly, the Games are challenging us to be better stewards of our environment and to focus on the sustainability of our planet. If such a large sports event can reduce its environmental footprint, we can all do a bit more.



SCHOOL PROGRAM



Tokyo Bay and the Rainbow Bridge

HOW MUCH CARBON DIOXIDE DOES AN OLYMPICS PRODUCE?

Some experts calculate that Rio 2016 made 3.6 million metric tons of carbon dioxide. Most of this comes from flying the athletes and spectators to the Games. To reach carbon neutrality, hosts need to buy carbon offset credits.



RECLAIMING TOKYO BAY

Some environmental challenges are difficult to overcome. Preparing Tokyo Bay for the Olympic triathlon and marathon swim has been one of these challenges. Heavy rains overwhelm the Tokyo sewer system, and the excess overflows into the Bay. Water quality then declines below the standards required for competition. Tokyo has enlarged some of its sewer pipes to send more run-off water to the treatment plants, but rebuilding the whole 16,000 km sewer system is too expensive. So, Tokyo is turning to oysters to filter the Bay. Each oyster can filter 400 liters of water per day. They have been planting bamboo shoots along the shore to make a good environment for the oysters. Progress is being made, and the 2018 swim season lasted six weeks longer than the year before. But no one knows if the Bay will be safe enough for competition in the summer of 2020.



RECYCLED UNIFORMS

The television cameras always linger longer on the host team, and in Tokyo 2020 they will be zooming in on Japan's recycled uniforms. Their team sponsor, Asics, will extract the polyester from 30,000 donated clothes to create new material that will outfit the home team. Other materials from the clothing will be used for fuel. This is a response to pressure being placed on the fashion industry to become more environmentally sustainable. The fashion industry produces 10% of the world's greenhouse gas emissions and 20% of the world's wastewater. For Asics, this opportunity is a chance to create a unique bond between the people and their Olympic team.



Tokyo's recycled uniforms



SCHOOL PROGRAM

Talk About It!

Should major sporting events be concerned about their environmental impacts? Why or why not?

Do you think smaller projects like making medals and team uniforms from recycled materials are effective environmental initiatives? Why or why not?



1. MAKING TEAM CANADA CARBON NEUTRAL

What if Team Canada went carbon neutral? Imagine that you and a group of other students work for an environmental consulting firm. The Canadian Olympic Committee is soliciting proposals to determine what it would take to make the entire team of 400 athletes, coaches and team staff carbon neutral.

The Canadian Olympic Committee will consider proposals from many consulting firms and will select the best plan. They want your consulting firm to calculate the carbon footprint of Team Canada and to develop a creative plan to reach carbon neutrality. They leave from Toronto and fly to Tokyo. During their stay in the Olympic Village, they will live in air conditioned dorms and eat in the cafeteria. Most of their food will need to be brought to Tokyo from other cities and countries. After two weeks, they will fly home to Toronto. The Canadian Olympic Committee will judge the proposals based on the detail of the calculations and creativity of the carbon neutrality plan.

ACTIVITY EXTENSION

A private sponsor has pledged to plant a hectare of trees for every medal that Canadian athletes win at the Tokyo 2020 Games. Use your carbon footprint calculations to determine how many tons of carbon dioxide will be absorbed if the same number of medals from the Rio 2016 Games are won at Tokyo 2020.

2. INSPIRING CHANGE

The Canadian Olympic Team can inspire the public to take better care of the environment. The Canadian Olympic Committee wants to launch a promotional campaign challenging Canadians to reduce their carbon footprint. They want the campaign to be focused on bus shelters, inside buses and subway cars. It should feature athletes who will be competing in Tokyo. Work as a team to design a campaign. Be creative in the design and use of slogans and images.

ACTIVITY EXTENSION

The Canadian Olympic Committee wants to develop a pledge campaign for Team Canada athletes to use on their social media platforms. This would feature athletes pledging to reduce their carbon footprint and challenging others to take the pledge. The campaign will be featured on the radio. Work as a team to develop three 20 second radio ads explaining the pledge campaign. Record the ads or present them live to the class.



SCHOOL PROGRAM