

ALTERNATIVE TOPICS AVAILABLE FOR STEPPING STONES DIVISIONS

Coral Reefs 2012

Coral reefs are sometimes known as "the rainforests of the sea." Reefs are some of the world's great tropical and sub-tropical ecosystems & they support the livelihoods of millions of people. Worldwide, already 25 percent of coral reefs have been destroyed or badly degraded & some scientist predict that by 2020 up to 70% might be permanently lost. These are areas rich in marine species that are found only in a small area. Therefore, they are highly vulnerable to extinction. They supply seafood, building materials, sources for medicinal products, & draw in much needed tourism revenue. Reefs also protect shorelines & communities from storms & erosion. Coral reefs are deeply threatened by human activities & global climate change. Coral reefs are an important source of food for hundreds of millions of people, many of whom have no other source of animal protein. However, especially reefs in developing countries are threatened & if human impact on reefs is not reduced there is a great danger that some of the world's poorest people will lose an important source of nutrition and in many cases, their livelihoods.

Cultural Prejudice 2007

Given all that is happening in our world, maybe it's time to revisit this most basic but yet vital aspect of how living beings see and treat each other. We live in culturally diverse nations so we can expect contact with people who are different. Business and personal contacts take us out of our immediate neighborhoods, states, and nations. Modern transportation shrinks our world and new technology gives instant communication with distant strangers. We must be thinkers who accept differences and make fair evaluations. Will cultural prejudice continue to be a societal factor in the future?

Depletion of Oceanic Species 2005

Fish and seafood are the primary food sources for millions of people around the world. They are seen as an essential ingredient of a healthy diet. Atlantic cod have been harvested almost to extinction. Orange Roughy were almost totally depleted before anyone discovered they take 25 years to reach sexual maturity. The breeding stock has been taken and this is likely to become an endangered species. The same thing is happening in the Antarctic with the Sawtooth. Fish around the world are becoming endangered, putting the lives of many in jeopardy. Is it possible to reverse the damage before it's too late?

Desertification 2014

Desertification describes the desert-like conditions that exist in regions, often as a cause of human interaction with the environment. According to the United Nations Development Programme, "Over 40 percent of the world is drylands, where about 2.3 billion people live in nearly 100 countries." Drylands are defined as regions where rainfall is low and evaporation is high. Desertification is one of the most serious ecosystem changes facing people who live in poverty. Two-thirds of the world's poor live in areas that are susceptible to desertification, and over half of them depend on the land for their livelihoods. Many of desertification's causes are human in nature (deforestation, overgrazing, poor irrigation systems, changes in population density), but the problem can also be exacerbated as severe weather events increase in frequency and severity due to climate changes. The continued degradation of dry-lands results in a 'feedback loop': the arid land exposes carbon captured in the soil and releases it into the atmosphere with significant consequences on global climate systems, in turn, leading to desertification. As human interference and climate change continue to cause land degradation, how will governments and land landowners respond to the ever-changing condition of their lands? What will be the effect on lifestyles and livelihoods as changes resulting from desertification occur?

Drones 2019

Drones are among the most hyped products for aviation enthusiasts in recent years. Although originally developed for military use, drones or Unmanned Aerial Vehicles (UAVs) can be cool gadgets used for recreation. They can also be powerful tools for commerce, scientific research, agriculture, entertainment, photography, transportation, disaster relief, search and rescue, surveillance, and policing. UAVs can carry payloads and can be controlled remotely by a human operator or by an onboard computer. Basic drone models can be operated with little skill or training.

Regulations on the use of UAVs are already in place in nations around the world, but technological advancements and expanded applications may outpace their regulation. While UAV use is growing exponentially, concerns are also escalating. Privacy intrusion, airspace violation, criminal use, surreptitious military operations, accidental crashes, terrorist threats, and other issues have raised alarms.

What does the future hold for UAV technological advancements and accessory enhancements? Will access to UAVs be equitable? How will the pending prevalence of drones in our daily lives affect society overall, especially in areas of personal rights and safety?

Energy of the Future – 2016 International Topic

Global energy needs are great and will continue to rise along with technological advances and population growth. Alternative energies are being developed, but often with unforeseen negative impacts as a by-product. Many questions remain to be answered:

- Which technologies will be critical to generate, transmit, and store energy in the future?
- Can energy be harvested from the environment and humans wearing devices?
- Will falling costs of geothermal, wind, solar, and biomass energy impact the economic balance of the energy industry?
- Will scientists be able to improve the capture and storage of the vast amounts of solar energy?
- Could innovation convert older energy sources into new “green” technology?
- Will the sources of energy become more diverse or will efficiency improve existing sources to the point that fewer types of energy will be needed?

Enhancing Human Potential 2015

Through the use of performance enhancing drugs, personal trainers, speed-enhancing swimsuits, technologies for body and brain, people can enhance their potential in physical, emotional, and cognitive abilities. As time goes on, humans will be offered even more ways to enhance their potential in unprecedented ways: cybernetic body parts, memory-enhancing or erasing drugs, technologically advanced sports equipment, and/or human/computer interfaces, etc. Will the definition of “human” change?

Many ethical issues surround these advances: Should sports people be able to enhance their performances in any way they like? Should parents be able to choose IQ or mood boosters such as drugs or brain implants for their children? What impacts might exist with the disparities between the “haves” and the “have-nots?” How far might the human brain and body be pushed? To what extent can we “perfect” the human body? What “enhancers” do we have presently? What are the dangers, as well as benefits, of powerful new technologies that might radically change the lives of human beings?

Food Loss and Waste 2019

Hunger remains a concern in the developing world, and the resources required for food production are limited. About one-third of food produced globally is lost or wasted, leaving millions of people hungry and valuable resources squandered.

Food loss refers to a decrease in food for human consumption during production, post-harvest, and processing stages. Causes include poor harvesting techniques, weak infrastructure (markets, transportation, storage, cooling, packaging), contamination (bacteria, fungus, insects), and corruption. In addition to reduced availability, food loss contributes to higher costs, hurting farmers as well as those who cannot afford to buy their food.

Food losses that occur at retail and consumption stages are called **food waste** and refer to behaviors such as discarding edible food. Quality standards based on perfect appearance, misused “*best-before-dates*,” and careless consumer attitudes contribute to waste. Food waste is more common in the industrialized world, while food loss is a greater concern in developing nations.

Can food loss prevention combat hunger and raise incomes in developing nations? Can food waste be decreased without sacrificing quality or safety? What roles might technology or regulations serve? What are the economic, environmental, psychological, and societal implications? Can we improve global food security while meeting the needs of diverse consumers?

Healthy Living 2011

Fast foods, convenience foods, stress...all of these are affecting our lives today, resulting in a generation of people with disorders that were unknown twenty-five years ago. Stress-related illnesses - broken sleep patterns, obesity, lack of physical exercise, ADHD, mood swings and other psychological conditions - seem to all be part and parcel of the intensity at which people are living today. What impact will these have on the lives of the next generations?

Human Environmental Impact 2021

Humans have always impacted the environment. Over time, the effects have increased as industrialisation, urbanisation, deforestation, processing of natural resources, the burning of fossil fuels and more technologies have developed. Examples of human’s impact on the environment are everywhere.

Feeding the world’s growing population has adverse environmental effects such as overgrazing, deforestation, and agriculture-induced soil erosion. Water pollution from pesticides and fertilizers impacts the quality of water available for specific populations. Clearing of land and overfishing result in loss of biodiversity and disturbances to ecosystems. Industrialisation and urbanisation cause the release of toxic solid, liquid, or gaseous waste materials and are the catalyst

for serious environmental hazards. Water pollution as a result of poor disposal of sewage wastes, solid wastes, and other industrial wastes, may spread diseases and create an unfit environment for human activities. Industrialisation has also

increased consumption of natural resources for the production of goods, leading to a significant loss of non-renewable resources and excessive waste. Activities like mining and dam construction cause habitat destruction. Trends like “fast fashion” contribute to why the fashion industry is the second-leading cause of pollution in the environment. What are our challenges moving forward to create a balance between basic human needs and our need to preserve or create an environment that is fit for continued quality human existence and growth?

Living in Poverty 2020

Nearly half of the world’s population (more than 3.5 billion people) live in poverty. Of those 3.5 billion people, 1.4 live in extreme poverty, surviving on less than \$US 1.25 per day.

Across the globe, many people struggle to have and sustain basic needs such as food, clean water, basic medical supplies, and adequate shelter. Some people are forced to leave their homes to travel to other places or countries to find menial work to send money home to support their families. Due to poverty, many people are unable to access education. Some adults deliberately suffer from malnutrition so that their children can have the food that is available. Children in severe poverty are often orphaned or they have been sent away because their parents cannot afford to care for them. Healthy food can be very difficult to come by for the poor due to lack of financial and monetary resources, meaning that they depend on cheap, unhealthy foods to sustain their lives.

What can be done globally to assist those suffering from extreme poverty? How can we reverse this trend in order to decrease the adverse impact of poverty on future generations?

Megacities 2013

Megacities are cities of over 10 million people that have grown rapidly and have a dense population, often 2000 or more people per square mile (772.2 per square km). By 2030, it is estimated that 3 out of 5 humans on the planet will live in cities - many, if not most, in megacities. Urban environments offer a wide variety of amenities: arts and culture, educational institutions, and high-paying jobs. But big cities are often also home to high levels of poverty, unemployment, and crime. Many urban areas contain slums and sprawling shantytowns where the infrastructure is limited or breaking down and where unsanitary conditions and a lack of public services lead to malnutrition, poor health, and limited educational opportunities. Often two smaller cities simply grow together to form a vast urban sprawl. Should this immense growth be a concern? What special methods are required to govern such highly populated places, particularly where the residents hail from a diverse range of ethnic and religious backgrounds? What other problems will challenge the urban citizens?

Mission To The Moon, Mars And Beyond 2019

A spacecraft in orbit? A biosphere on extraterrestrial ground? Private and governmental organizations are already planning missions to set up research stations or even colonies on the Moon and Mars. Many see opportunities to learn more about our solar system, leading to a better understanding of Earth and ourselves; others question whether such missions are even feasible. One private agency is already seeking volunteers for a Mars mission. Space ventures provide an impetus for advancing knowledge and technologies with applications in space, as well as on Earth. Entrepreneurial and scientific opportunities abound to explore, to mine, and to engineer under distinct conditions. Pioneers will need to plan for a sustainable long-term stay, which will require vast investments of people, money, and other resources.

What challenges await these missions: funding, survival in the challenging physical and psychological conditions, law, government and politics? Will they ever return to Earth or will colonies expand and eventually become new civilizations? Will the missions bring humans together toward a common goal or create a global race to establish competing bases? Is this the next giant leap for humankind?

Ocean Soup 2013

In the North Pacific, a large area known as the ‘Garbage Patch’ has become ‘Ocean Soup’ and is so polluted by remnants of plastic that samples show 48 parts plastic for every part of plankton. As the plastics drift further and further into the ‘garbage patch,’ they break down into smaller and smaller pieces like confetti and cannot be tracked from the air. These floating fragments accumulate the manufactured poisons that are not water-soluble. Plastics have entangled birds and turned up in the bellies of fish.

One paper cited by the National Oceanic and Atmospheric Administration (NOAA) estimated 100,000 marine mammals die of trash-related deaths each year. NOAA has been contacted regarding cleanup of the debris in the “garbage patch” and other areas of the North Pacific; however, cleanup is likely to be difficult. What might happen to the food chain if action is not taken to clean up the Ocean Soup? What is the future of our oceans if plastics continue to contaminate the waters and wildlife?

Space Junk 2017

Since the early days of space flight, a wide variety of discarded materials have been left floating in multiple orbits around the earth. Space junk as defined by NASA is "any man-made object in orbit about the Earth which no longer serves a useful function". Ranging from minute objects, some smaller than 1cm, others include nonfunctional spacecraft, abandoned launch vehicle stages and mission-related debris up to the size of a double decker bus, an estimated 100 million pieces of space debris are hurtling round the Earth at speeds of up to 28,000 kph. Even tiny paint flecks can damage a spacecraft when traveling at these velocities. A number of the space shuttle's windows have been replaced because of damage caused by material that was analysed and shown to be paint flecks. One expert has warned that space junk is one of the greatest environmental problems facing humanity. Large pieces of space junk landing on populated areas could be catastrophic, but it could also jeopardise future generation's hopes of living and working in space. Will this space junk pose a peril for future flights? When the discards fall to earth, what damage might occur on Earth? Who should be responsible for the management of space junk?

Treatment of Animals 2016

Farmers, pet and animal owners, and scientific researchers have many different ways of treating animals in their care. Fewer than 30% of countries have animal welfare laws, and existing laws are not always enforced. Researchers assert that it is important to be able to use animals in research to test drugs and new medical procedures that can help both people and animals. Sometimes endangered animals are kept in captivity at a high cost in order to protect their limited populations. Animal shelters are often filled with feral animals or those that have been abandoned by their owners. Wild animals in many parts of the world come into conflict with human activity.

In the future, how might research impact human understanding and treatment of animals? Are zoos useful educational tools or unethical exhibitions? Are certain animals entitled to more rights than others based on cultural or intelligence differences? How can humans be better stewards in the treatment of animals? Who decides the appropriate treatment of animals and their role in society?

Wearable Technology 2021

Traditionally, clothing and accessories have all been developed to fill basic needs. They provide warmth, protection from the elements or injury, and even serve to attract attention. Recently, the industry for wearable technology has transformed the way we think about clothing and accessories. Wearables have rapidly expanded to include heating elements, internet connections, watches, body monitors, and more.

As more people grow accustomed to wearables in their daily lives, the possibilities for what the technologies can do are virtually limitless. They already monitor vital signs, send information to medical professionals, and even give individuals the ability to soar like a bird in personal flight suits. Smart sports uniforms can now reduce and identify injuries by regulating body temperature, supporting muscles and tendons, and gauging the force of impact. Attire with virtual reality functions is currently being developed to push this sector even further.

How will wearable technology enhance or jeopardize real-life experiences and connections with others? Where in the world could wearable technologies allow humans to survive? What advantages or disadvantages are inherent in the inclusion of technology in our clothing and on our bodies?

Youth In Competitive Sport 2021

Millions of children around the world participate in competitive youth sports every year. Involvement in organized sports teaches many essential life skills – teamwork, confidence, the value of hard work, and discipline. While some competitive sports promote activity and a healthy lifestyle, others build skills such as mental agility. The hyper-competitiveness of youth sports raises concerns that children are pushed too hard to win and succeed. The sports options for youth are also evolving, as competitive e-sports emerge.

Competitive sports can heighten aggression, pressure to win, and put children – who are still growing and developing – at risk for injuries. In many places, increasing costs of club sport-memberships and insurance exclude those who need social interaction and fitness the most. The costs of maintaining and running facilities can also limit the accessibility for youth.

How much should we push young people to participate in competitive sports? Do the benefits of structured competition outweigh the costs of over-competitive behavior and possible injury? How does participation in sports impact the wellbeing of youth and their families?