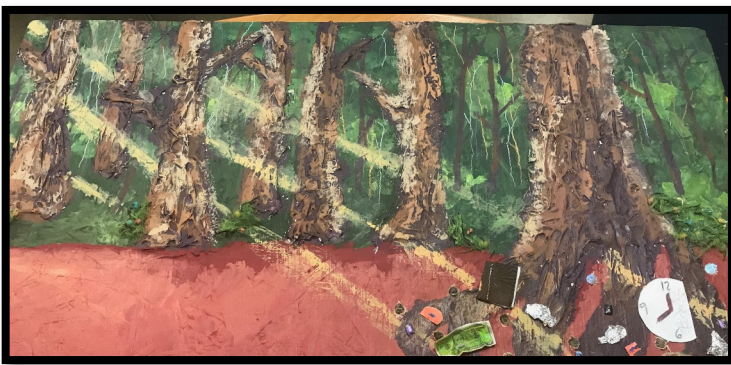# ART COMPONENT

The Art Component is designed to offer students with artistic ability an opportunity to participate in a futuristic program. As individuals, students, dealing with the same problem topics as those selected for GIPS teams for the year, develop a piece of artwork. The Art Component is open to all students and competition takes place within the following divisions:

- Junior Division - grades 4-6
- Middle Division - grades 7-9
- Senior Division - grades 10-12

For students who participate in the Global Issues Problem Solving, Creative Writing and/or Storytelling components of FPS, Art can serve as an excellent complement to their work on any of the topics. Art is also an excellent offering for students who do not participate in other components of FPS since the creative design may appeal to many students throughout your school. This program can be used as a stand-alone activity by an FPS coach, a drama/art teacher, a parent, or any instructor with students interested in creative artwork.

Participating in the CT FPS Art Component requires the study and research of one of four predetermined topics. This research should be presented in the final product and explained in the thesis. (Please see rubric for specific details.) Students may choose to use any medium of art including sculpture, painting, drawing, photography and digital. Digital artwork should be original and not contain clipart or any copyrighted material. Questions regarding your ideas should be discussed with your coach prior to submission.

To align with the model of "future problem solving" each submission will be evaluated on how the artist developed their idea to include a visual representation of a challenge, a solution and/or an overall futuristic view of the topic. Familiarizing yourself with the FPS Process will enhance your submission and add to the focus of the topic you choose. Please be sure to look through the rubric before planning your artwork.

A thesis statement (300 words or less) that addresses components from the rubric will also be evaluated. Judging takes place at the state level and all art participants are invited to display their work at the FPS State Conference on March 30, 2025. Please note that the Board of Directors reserves the right to address any questionable pieces and determine whether or not they should be displayed for the state conference audience (4th-12th grade students and their parents).

Students, if you would like to participate in this program, please talk to your coach or a teacher that might be willing to be your coach to find out more details.

FOOD SECURITY

How might food security issues of availability, access, and affordability essential for living a healthy life impact society in the future?

Background

Nutritious food is a basic human need. While global food production has expanded, approximately one in three people remain food insecure. Food availability – how much food exists – is the first hurdle to feeding the global population.

Context

Food security is different in every place and yet impacts every society. Infrastructure, environmental conditions, and political stability can all have significant impacts on the production of food. Environmental events such as droughts and rising sea levels also impact existing food sources. Economic, legal, and social barriers may thwart access to available food. Political conflicts, for example, interrupt supply chains and divert food away from those in need. Even when there is enough food available, and people have access to it, their food security may be threatened by the safety of the food.

RISING SEA LEVELS

How might rising sea levels impact our coastlines, industries, and people's lives in the future?

Background

Two processes cause sea-level rise: thermal expansion (ocean water expansion as it heats up) and additional water flow into oceans from ice that melts on land. The IPCC (Intergovernmental Panel on Climate Change) reports that sea levels have risen by 0.19m since the beginning of the 20th Century. Sea level rise will continue for centuries, if not thousands of years, after greenhouse gas concentrations are stabilized due to the long lag times involved in warming the oceans and ice sheets' response, possibly affecting over 400 million people.

Context

Historically, human civilizations have responded to the risk of rising sea levels with retreat and adaptation. As our cities have become more permanent in modern times, defensiveness is the preferred strategy. The adequate protection of low-lying regions and coastal cities from flooding, land loss, water-logging, and groundwater salinity is costly and technologically complex. Small island nations are most vulnerable to the relocation of coastal communities. Sea level rise is already occurring around the globe at unprecedented rates. The challenges will only continue to grow in the next few decades. It is important for scientists and engineers to work directly with

communities to create policies that work for the unique circumstances of each vulnerable coastline.

AGRICULTURAL INDUSTRY

How might the agricultural industry adapt to the needs of feeding a growing world population in the future?

Background

Agriculture is a complex, multi-faceted industry which impacts societies worldwide via the economy, the environment, and most importantly human development. Agriculture is based on the science of cultivating plants, animals, and other life forms for food, fiber, and fuel.

For thousands of years, farming practices have evolved in the use of land, crops, and technology. Small farms, with farmers caring for the land and its inhabitants, are increasingly rare, as most of the world's food is produced on an industrial scale. Industrial agriculture brings high-yield crops, often requiring extreme land exploitation and increased chemical applications. These advances in agriculture have made nutritious food more affordable and accessible. While the agricultural industry in place today is sufficient to feed the current population of planet Earth, it is also affecting the overall health of the planet.

Context

Agricultural industry is not only a vital component of global economies, but also a critical driver of environmental impact and social development. It encompasses a wide range of activities, from crop cultivation to livestock management. It provides food, textiles and biofuels to a growing population. While industrial agriculture has improved crop yields and increased accessibility and affordability, past and current farming practices have raised concerns related to sustainability. As the world's largest consumer of water and land, agriculture must seek sustainable farming practices to ensure its survival. The excessive use of these resources raises questions about the long-term viability of current agricultural practices. Addressing challenges will require innovative approaches, sustainable farming practices, and lastly, an analysis of how we produce and consume food.

NANOTECHNOLOGY

How might the use of nanotechnology in medicine, healthcare, and other industries affect humanity in the future?

Background

Nanotechnology deals with dimensions and tolerances of less than 100 nanometers. A single strand of human hair, for scale, is typically 100,000 nanometers thick! At this scale, individual atoms of larger materials can be manipulated. Placing atoms as though they were bricks, nanotechnology has the potential to give control over the structure of matter, allowing us to build powerful, yet microscopic substances.

ALL

Context

Nanotechnology is widely used in food industries, medicine, energy, automobiles, the environment, electronics, textiles, and cosmetics. Nanotechnology has direct benefits for medicine and the environment, but it may have unintended effects, like all technologies. Nanoparticles of typically unharmful materials, for example, can be toxic if inhaled. Not easily observed, nanotechnology poses risks to security and privacy.

AIR QUALITY

How will the quality of air, a globally shared resource essential for human health and prosperity, impact us in the future?

Background

Quality air is a globally shared resource essential for human health and prosperity. Good air quality enables animal and plant health, ecosystem balance, and environmental stability. Poor air quality is a major threat to health, food supplies, and infrastructure.

Air Quality is the 2024 International Conference topic for our world finals.

Context

Sources of air pollutants can be natural (such as volcanic eruptions and bushfires) or man-made (such as industrial processes and agriculture). Pollutants can travel long distances and are difficult to contain after being emitted.

Everyone is exposed to both indoor and outdoor sources of air pollution, with 99% of the world's population living in places where the World Health Organization's quality standards are not met. Air quality has a two-way relationship with soil and water chemistry, as well as air and sea temperatures. When breathed in, polluted air can cause serious health problems.