

2019-2020 Practice Problem Topic

International Travel, Topic Descriptor and Suggested Readings

Most people dream of visiting new and exciting places to experience culture, cuisine, and local entertainment through travel. Transportation technology makes it easier and faster than ever before to get from one country to another although travel can be very expensive and time-consuming for many people. Heightened safety concerns often mean changing security requirements and government screening processes for crossing borders.

Some experts believe that technology may begin to replace in-person travel. VR-AR-MR (Virtual Reality / Augmented Reality / Mixed Reality), are immediate, involving, engaging and immersive types of entertainment that can be accessed anywhere in the world. This could cause travel to boom if people, having used these technologies, want to experience the world “for real.” People may be increasingly comfortable in both worlds: the physical real world, and the digital world that is constructed instantly and repeatedly to fit what each person wants and chooses, using immediately responsive networks.

How will the time, technology, and expense associated with travel impact the future of international travel and tourism?

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2020 Governor's Cup District Topic

Sleep Patterns, Topic Descriptor and Suggested Readings

Approximately one-third of our lives is spent sleeping. For nearly a century, scientists have been able to record brain activity and see the dynamic changes during sleep. Lack of sleep can affect brain function, especially memory, language, and emotional balance. Physical effects include fatigue, stress and health problems including heart disease and obesity. Today, technology on our wrists can measure sleep habits and movements.

Globally, businesses developing sleep aids are witnessing significant growth due to the rising incidence of sleep disorders. This has been exacerbated by the growing senior population. It is manifest in increasing demand for sleeping pills due to stressful modern lifestyles and increasing numbers of initiatives by various health organizations to increase awareness about sleep disorders. Sleep medications often have undesirable side effects and patents of major sleep drugs expire. Wakefulness aids, stimulants and prescription drugs such as coffee, energy drinks, benzodiazepines and even illegal drugs are gaining in popularity as a perceived solution to the need to perform effectively despite sleep deprivation.

How might our over-scheduled lives and increased digital presence disrupt natural circadian and sleep patterns? Can the benefits of sleep be replicated? What new technologies might be available to help people monitor and adjust brain wave activity during sleep? Will scientists discover more about the genes that enable functionality with less sleep?

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2019-2020 Governor's Cup Regional Topic JR FPS-December Qualifying Topic

Gamification, Topic Descriptor and Suggested Reading

Gamification isn't just about leisure time digital or other games. Gamification applies the theories of game development that make games so alluring and creates sustained attention. Players and teams win points and rewards by completing designated tasks. Minecraft, for example, has been used by teachers for everything from computer science to social sciences to creative writing. Fitbit and tracking apps on the iWatch are increasingly popular and encourage competition – with yourself or with a group.

Gamification helps users focus on tasks that might normally be boring, and the process might be applied to fields such as customer loyalty, education, health, recreation, job training, self-improvement, household chores, fundraising, and activism. Gamification is being used by corporations to make marketing interactive, but it's also being used to benefit individual health and well-being.

Is there a relationship between gamification and tech addiction? How might gamification impact education and learning, inside and outside formal schools, or even in the workplace? What are some of the ethical implications, particularly around user privacy? What role will companies have in the creation of tech products to “hook” their users or the use of gamification as an educational tool? Can gamification enhance human interactions?

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2020 Governor's Cup State Finals Topic
JR FPS State Finals Topic
Individual FPS State Finals Topic

Living in Poverty, Topic Descriptor and Suggested Reading

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?

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