

Mission STEMCAP: Overconsumption
Reading-Based Discussion Questions

1. What is overconsumption and what are some types of resources that are commonly overconsumed or wasted?

- Suggested topics to discuss:
 - Overconsumption is the non-sustainable use of resources and/or consuming more than an individual's fair share of a resource.
 - Overconsumption can lead a species to near its carrying capacity at a lower population density (i.e. less people consuming more resources can cause deficits and off-balance the ecosystem as fast or faster than a larger number of people consuming a minimal amount of resources).
 - Water and food are often overconsumed. Food is often wasted, water is often used in unsustainable ways like watering a golf course in a desert.
 - Plastic is an overconsumed product in that single use plastic encourages consumers to use much more plastic than necessary and that plastic use has a negative impact on the planet.
 - Energy consumption and technological device consumption are also unsustainable in the united states.

2. Why are scientists looking into alternatives to our current food system? What do you think about growing food in a lab? What are some other ways we could change the way we produce food or change the foods we eat in order to be more sustainable?

- Suggested topics to discuss:
 - Our current food system uses a lot of land and water and produces a lot of waste. It also releases high amounts of greenhouse gases and requires long-distance shipping of many goods which further contributes to greenhouse gas emissions.
 - As population increases, the amount of land needed to produce food for that amount of people under the current system is getting harder and harder to come by.
 - We could move toward a more local-based food system; we could move away from large scale meat consumption; we could find more water-efficient farming practices; we could grow integrated crop plots in which land is used year-round by various crops and land is more fully-covered by crops.

3. How are overconsumption and pollution related? How do these issues affect other species?

- Suggested topics to discuss:
 - In many cases, the more we consume the more pollutants we release. For example, the more technological devices we use (rather than keeping old ones longer), the more heavy metals we release through toxic tech. waste.
 - The more single-use plastic we use, the more micro-plastics accumulate in our environment.
 - Many things we consume require processing that releases various pollutants into the air and/or burns fossil fuels.

- Overconsumption removes resources from their natural environment, affecting the species that live there. Many things we “consume” become waste and this waste ends up in landfills that displace local species and change species composition in that area.
- Pollution has many negative effects on other species. Pollutants from the things we consume (or waste) can poison other species, choke other species (in case of plastics), cause dead zones in rivers and lakes (in the case of fertilizer from ag. Consumption), etc.

4. How do our consumption behaviors here in Utah affect people and other species across the globe? What are some examples of hidden (or often overlooked) costs of products we use on a regular basis?

- Suggested topics to discuss:
 - Many of the items we buy and use are manufactured in various pieces all over the world. The waste from the products is also shipped to various countries to be recycled, reused, or destroyed in various forms. The products we buy, therefore, are directly related to the working conditions in the factories in which they are produced and later deconstructed. The pollutants released by the production and deconstruction of these products are also linked to our consumption behaviors.
 - The pollutants that come from products we consume and the processing of the products do not stay trapped in Utah. Air and water currents drive pollutants all over the globe.
 - When products are shipped to us from around the globe the methods of transportation release greenhouse gases which contribute to climate change.
 - Technological devices have a lot of hidden costs. They are made from mined resources. Mining is often a destructive process. The heavy metals are also toxic and they can harm the people who produce and deconstruct these products.
 - The food we eat has a very big water footprint, much of what we eat requires greenhouse gases to transport the various ingredients as well.
 - When we use the internet, we think of it as a non-consumptive resource, however water is used to cool servers and land is used to house massive server warehouses. Using the device that powers the internet uses a lot of energy as well.
 - Our plastic products pollute our environment even when we try to recycle them or dispose of them properly.