



## 2017 National Written Competition

### Overview:

Participants conduct research on a specified topic and, using the knowledge and resources gained through that research, write a short essay on that topic.

The topic for the 2017 TEAMS written competition is food deserts. Background information on food deserts is given below -- teams are expected to incorporate additional research into their essay.

Essays should describe your team's navigation through a design process while developing a solution to the challenge.

### Challenge:

Your team of engineering consultants is tasked with developing innovative and novel designs to solve the issue of food deserts around the world. You are teamed with the "Global Food Foundation", a NGO focused on creating local, personal food growing solutions (e.g. hydroponics, vertical farming). Designs should be adaptable enough to be used in any food desert in the world and should use locally available materials when possible. Essays should describe:

- 1) Background and history of food deserts
- 2) Preliminary designs (not just the final design)
- 3) Identification of constraints, criteria, and specifications used to make final design
- 4) Description of how the design might be tested and further researched
- 5) Expected outcome of implementing the team's design in at least on specific location around the world.

### Procedure:

1. The coach announces the topic and provides a copy of the competition description to team members.
2. Team members decide on a research, writing, and production schedule to produce the essay.
3. The completed essay must be uploaded to the specified judging portal by the TEAMS coach no later than 11:59 PM Eastern Standard Time, Wednesday, May 31, 2017. Submission links will be on the TEAMS website (national conference page).
4. Evaluators review entries.
5. Evaluators score each essay. The essay points are added to the problem solving and prepared presentation competition scores to determine TEAMS Best in Nation.

### Regulations:

1. Essays must be no longer than 1,000 words (not including bibliography, citations or abstract).
2. An abstract is recommended but not required.
3. Essays must be typed and double spaced. They may not be handwritten.
4. Acceptable fonts are 12 point Times New Roman or 12 point Arial.
5. Essays should be formatted according to APA guidelines, including bibliography.  
<https://owl.english.purdue.edu/owl/section/2/10/>
6. Identifying information is required during the submission process and will include: school name, coach name, team identifier, and student names for the submitting team. Identifying information should not appear in the body of the paper.



## **Food Deserts**

(Description adapted from *Food Empowerment Project*)

Food deserts can be described as geographic areas where residents' access to affordable, healthy food options (especially fresh fruits and vegetables) is restricted or nonexistent due to the absence of grocery stores within convenient travelling distance. For instance, according to a report prepared for Congress by the Economic Research Service of the US Department of Agriculture, about 2.3 million people (or 2.2 percent of all US households) live more than one mile away from a supermarket and do not own a car. In urban areas, access to public transportation may help residents overcome the difficulties posed by distance, but economic forces have driven grocery stores out of many cities in recent years, making them so few and far between that an individual's food shopping trip may require taking several buses or trains. In suburban and rural areas, public transportation is either very limited or unavailable, with supermarkets often many miles away from people's homes.

The other defining characteristic of food deserts is socio-economic: that is, they are most commonly found in communities of color and low-income areas (where many people don't have cars). Studies have found that wealthy districts have three times as many supermarkets as poor ones do, that white neighborhoods contain an average of four times as many supermarkets as predominantly black ones do, and that grocery stores in African-American communities are usually smaller with less selection. People's choices about what to eat are severely limited by the options available to them and what they can afford—and many food deserts contain an overabundance of fast food chains selling cheap "meat" and dairy-based foods that are high in fat, sugar and salt. Processed foods (such as snack cakes, chips and soda) typically sold by corner delis, convenience stores and liquor stores are usually just as unhealthy.

### **Food Desert Documentary**

<https://www.youtube.com/watch?v=jicYbi-8ZNU>

### **Vertical Farming Article**

<http://efficientgov.com/blog/2016/04/08/vertical-farms-can-address-food-deserts/>