



**WORLD FOOD PRIZE  
FOUNDATION**

# Global Challenge



# About the World Food Prize Foundation

The World Food Prize Foundation's mission is to elevate innovations and inspire action to sustainably increase the quality, quantity and availability of food for all.

## The Foundation supports this mission by:

- Recognizing and rewarding individuals making exceptional achievements in addressing food security.
- Convening global leaders to address the latest issues and innovations in food and agriculture.
- Inspiring and recognizing exceptional students in Iowa, in the U.S. and around the world by providing educational and professional experiences on pressing food security and agriculture issues.
- Addressing Iowa's challenges and successes in fighting hunger and poverty through the Iowa Hunger Summit.



## About Dr. Norman E. Borlaug

Dr. Norman E. Borlaug was awarded the Nobel Peace Prize in 1970 for a lifetime of work to address global food insecurity. Dr. Borlaug believed that "food is the moral right of all who are born into this world." He is credited with saving over a billion people from famine and starvation. In 1986, he founded the World Food Prize®, an annual \$500,000 award that he hoped would both highlight and inspire breakthrough achievements in improving the quality, quantity and availability of food in the world.

Additionally, Dr. Borlaug championed the World Food Prize Youth Programs, which engage high school and college students in efforts to end hunger and introduce them to potential academic and career paths in agriculture, food security and sustainability.



# WHAT IS THE GLOBAL CHALLENGE?

## The Global Challenge Research Paper

The World Food Prize Foundation's Global Challenge curriculum is designed to empower high school students to explore, analyze and solve the world's most pressing problems related to global food security, agriculture and sustainability issues.

To participate, a student must write a three to five page research paper on a country and a food security related topic. Each student will then share this research at a World Food Prize Foundation Youth Institute.

The Foundation believes that elevating young voices is crucial to creating a more food-secure and sustainable world, and we want to hear your solutions.

## What are Youth Institutes?

Each year, over 1,500 students present their research and share recommendations from their Global Challenge papers at a Youth Institute. Youth Institutes are life-changing experiences hosted by higher-education institutions. There, high school students engage with local leaders and experts on critical global food security challenges, participate in hands-on science activities, gain exposure to different career paths and explore exciting ways to make meaningful differences on issues related to agriculture, food security and sustainability.

The Foundation co-hosts over 30 Youth Institutes throughout Honduras, Kenya, the Netherlands, Sweden, South Africa, Uganda and the United States in partnership with major agricultural universities.

Each entity brings together industry, research, teaching and applied agricultural practices to implement the Youth Institutes, investing in the development of young agriculture and food security leaders.



**For more information on finding a Youth Institute, please visit our website:**  
[worldfoodprize.org/globalchallenge](http://worldfoodprize.org/globalchallenge)



## Benefits of participating in the World Food Prize Foundation's Global Challenge

- You will be recognized as a Borlaug Scholar.
- You may qualify for additional World Food Prize Foundation programs, such as the Borlaug-

Ruan International Internship, the USDA Wallace-Carver Fellowship, and the chance to attend the Global Youth Institute.

- You will be eligible to be chosen as a recipient of one of 10 Global Challenge Awards. The Foundation will provide two top awards of

\$1,000 for exceptional solutions to addressing global food insecurity.

- You may be eligible for scholarships from higher education institutions that co-host Youth Institutes.
- Enhance your global awareness and your research, writing, critical thinking and public speaking skills.

## The Borlaug-Ruan International Internship

The Borlaug-Ruan International Internship provides students a unique professional experience working alongside world-renowned scientists and policymakers at international research and development organizations. Since 1998, the Foundation has placed over 400 students at leading research organizations around the globe, providing transformative learning experiences aimed at addressing critical food security challenges.

**Interested in learning about the Borlaug-Ruan International Internship? Visit [worldfoodprize.org/BR](http://worldfoodprize.org/BR) for more information.**

## The USDA Wallace-Carver Fellowship

The USDA Wallace-Carver Fellowship offers college students the opportunity to collaborate with world-renowned scientists and policymakers through paid fellowships at leading USDA research centers and offices across the United States. The fellows also participate in a week-long Leadership Symposium in Washington, D.C., hosted by the U.S. Secretary of Agriculture.

**Interested in learning about the USDA Wallace-Carver Fellowship? Visit [worldfoodprize.org/WC](http://worldfoodprize.org/WC) for more information.**

## The Global Youth Institute

The Global Youth Institute is a week-long academic conference held in Des Moines, Iowa, during October. The conference is focused on youth efforts to address global food security issues. During the Global Youth Institute, student delegates selected from Youth Institutes will share key findings and recommendations from their research with international experts and their peers in roundtable discussions.

Students will have the opportunity to connect with other global leaders to discuss challenges, share ideas and develop solutions for a more sustainable and food-secure world.



## What is Food Security?

According to the United Nations 1996 Food Summit, food security is reached “when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.”

### The four essential pillars of food security:

**Availability:**

food has to be physically present in adequate quantities within communities

**Access:**

people have the ability and resources (income) to obtain food

**Utilization:**

food is prepared safely and effectively to provide nutritional value

**Stability:**

food is present at all times without disruptions

### The global impact of food insecurity:

It is estimated that there are more than 783 million people in the world facing chronic food insecurity. By 2050, there will be at least 9 billion people on the planet, and humans will need to produce 60% more food to meet the growing population's needs. We also know that:

- 1 in 9 people don't have enough safe and nutritious food.
- A child dies from hunger-related causes every 10 seconds.
- 1/3 of all food on the planet is wasted.
- 1 out of 3 schools does not have safe water and sanitation.

### It's complicated, but we can develop solutions to end hunger by:

- Improving human health.
- Increasing access to education and opportunity.
- Promoting economic growth.
- Protecting the environment.
- Reducing conflict.
- Increasing research and advancing technological innovations.

## Join the over 10,000 Borlaug Scholars who have completed the Global Challenge and help be the catalyst for sustainable change!

### We are looking for high school students who:

- Want to make a meaningful difference in the world and help cultivate a more food-secure, nourished and sustainable future for all.
- Believe everyone should have access to nutritious food, clean water, education and a fair income.
- Are problem solvers who want to be part of the solution for the critical challenges of agriculture, food security and sustainability issues.

Through the Global Challenge, explore what's working and what isn't, and use your unique perspective, talents and ideas to help solve global food insecurity issues.

# THE PROCESS

GLOBAL CHALLENGE



# 8 Simple Steps to Write Your Global Challenge Paper

**1**

Choose a country other than the one you live in as the focus of your research.

**5**

Explore solutions.

**2**

Research and describe what life is like for a typical family in your chosen country.

**6**

Propose your recommendation.

**3**

Select a topic relevant to your chosen country.

**7**

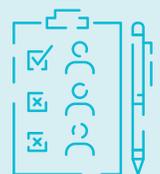
Write your Global Challenge research paper.

**4**

Analyze its impact on food security on your chosen country.

**8**

Register for a Youth Institute and submit your paper.





Select a country other than the one you live in as the focus of your research.

#### North America

- Canada
- Mexico
- United States of America

#### Central America

- Belize
- Costa Rica
- El Salvador
- Guatemala
- Honduras
- Nicaragua
- Panama

#### South America

- Argentina
- Bolivia
- Brazil
- Chile
- Colombia
- Ecuador
- Falkland Islands (U.K.)
- French Guiana
- Guyana
- Paraguay
- Peru
- Suriname
- Uruguay
- Venezuela

#### Caribbean

- Anguilla (U.K.)
- Antigua and Barbuda
- Aruba (Netherlands)

- Bahamas
- Barbados
- Bermuda (U.K.)
- Cayman Islands (U.K.)
- Cuba
- Curaçao (Netherlands)
- Dominica
- Dominican Republic
- Grenada
- Guadeloupe (France)
- Haiti
- Jamaica
- Martinique (France)
- Montserrat (U.K.)
- Puerto Rico (U.S.)
- Saint-Barthélemy (France)
- Saint Kitts and Nevis
- Saint Lucia
- Saint Martin (France)
- Saint Vincent and the Grenadines
- Sint Maarten (Netherlands)
- Trinidad and Tobago
- Turks and Caicos Islands (U.K.)
- Virgin Islands (U.K., U.S.)

#### Western Europe

- Austria
- Belgium
- France
- Germany
- Liechtenstein

- Luxembourg
- Monaco
- Netherlands
- Saint-Pierre and Miquelon (France)
- Switzerland
- United Kingdom

#### Northern Africa

- Algeria
- Egypt
- Libya
- Morocco, including Western Sahara
- Sudan
- Tunisia

#### Western Africa

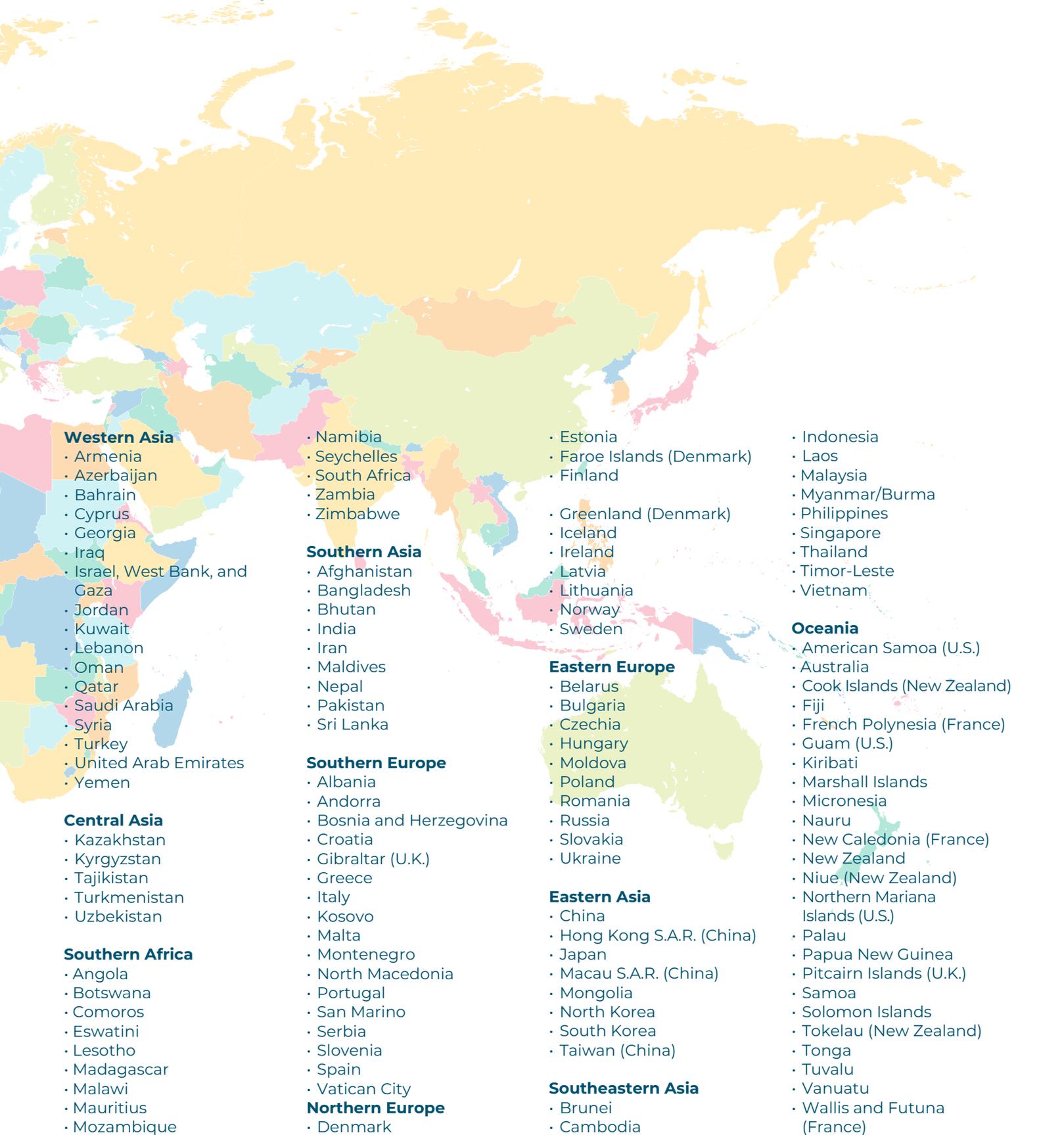
- \* Benin
- \* Burkina Faso
- \* Cabo Verde
- \* Côte d'Ivoire
- \* Ghana
- \* Guinea
- \* Guinea-Bissau
- \* Liberia
- \* Mali
- \* Mauritania
- \* Niger
- \* Nigeria
- \* Senegal
- \* Sierra Leone
- \* The Gambia
- \* Togo

#### Middle Africa

- Cameroon
- Central African Republic
- Chad
- Democratic Republic of the Congo
- Equatorial Guinea
- Gabon
- Republic of the Congo
- São Tomé and Príncipe

#### Eastern Africa

- Burundi
- Djibouti
- Eritrea
- Ethiopia
- Kenya
- Rwanda
- Somalia
- South Sudan
- Tanzania
- Uganda





## Select a country other than the one you live in as the focus of your research.

Country:

Please describe your chosen country:

■ What is the population?

---

■ What percentage of the population lives in rural communities and what percentage lives in urban areas?

---

■ How many people are food insecure?

---

■ What type of government and leadership exists?

---

■ How much of the land is currently cultivated?

---

■ What are the major crops and exports?

---

■ What is the average farm size? What can you compare it to for context?

---

■ What is the climate and geography?

---

Sources:

---

---

---

### Having trouble selecting a country?

You can choose a country you would like to learn more about or even a country you have never heard of. You can also choose your topic first, then select a country that is relevant to that topic.



## Research and describe what life is like for a typical family in your chosen country.

- What is the average family size?

---

- What types of jobs are available for the average household? What is the average wage?

---

- What does a typical family's diet consist of? Which foods are available in their community? Which foods are most nutritious?

---



---

- Where do families get food and how do they cook it?

---

- Do families have access to education and health care? Is it affordable and accessible?

---

- Does the family have access to infrastructure such as clean water, toilets, electricity, telephones, roads and local markets?

---

- What other factors might affect a typical family in your chosen country?

---



---

### Having trouble finding sources for your research?

Visit our website for some suggested places to start:  
[worldfoodprize.org/globalchallenge](http://worldfoodprize.org/globalchallenge)



#### Sources:

---



---



---

**Need a better understanding for a typical day in the life of a family in your chosen country?**

You can search YouTube for videos about food, cooking and agriculture in that country.





## Select a focus topic for your Global Challenge research. Your topic should be relevant to your chosen country.

### Animal Agriculture

The care and breeding of livestock, poultry and other animals for food, fibers or other products.

### Animal Health

Protect and improve the health, safety and quality of livestock, poultry and aquaculture.

### Climate Change

Adapt agricultural practices and policies to respond to significant changes in the Earth's climate.

### Conflict

Political, economic, environmental or social disagreements. May involve violence or armed conflict.

### Dietary Diseases

Disease caused by lack of nutrition or a lack of exercise.

### Education

The delivery of knowledge, skills and information.

### Fisheries and Aquaculture

Catching or harvesting fish, shellfish and other aquatic organisms for human consumption through wild-caught or farmed operations.

### Food Loss and Waste

Food that is lost, spoiled or discarded in production, postharvest, processing or consumption.

### Foreign Aid

Assistance given by one country to another for humanitarian relief or development efforts.

### Human Rights

Rights that all people are equally entitled to regardless of their nationality, sex, race, ethnicity, religion, language, etc.

### Infectious Diseases

Infections and illnesses that can be spread from one person to another, among animals or between animals and humans.

### Infrastructure

The physical structures and facilities critical for the operation of a society, such as roads, bridges, schools, power, etc.

### International Trade

The exchange of capital, goods and services between countries.

### Malnutrition

Deficiencies, excesses or imbalances in a person's intake of energy, protein and nutrients.

### Plants

Utilizing plants to increase and improve food, nutrition, medicine, fibers, fuels and other products.

### Policy and Governance

The implementation of policies, processes and structures that determine how power is distributed and shared.

### Populations

The characteristics and movements of the inhabitants of a country including urbanization, migration and growth.

### Poverty

Lack of financial resources needed to afford basic necessities such as food, housing, education, health care and clean drinking water.

### Renewable Energy

Energy created from naturally occurring sources such as water, wind, solar and biofuels.

### Sustainable Agriculture

Best practices to grow food and fiber with a focus on protecting the environment and natural resources.

### Water and Sanitation

Clean drinking water and adequate sewage disposal to improve human hygiene and health.

### Water Scarcity

The lack of available water resources to meet the demands within a region.



## Analyze how your topic impacts food security in your chosen country.

- What is the present status and severity of this topic?

---

- Are trends improving, worsening or staying the same?

---

- What factors are contributing to this trend?

---

---

- How does this topic affect rural and urban populations?

---

---

- Does this topic affect demographic groups differently? If so, how?

---

---

---

- How does this topic affect marginalized populations? (Examples: historically underrepresented groups, refugee populations, Indigenous communities, etc.)

---

---

---

- How does this topic affect the environment?

---

---

---

---

---

---

---

---

---

---

### Sources:

---

---

---

---

---

---

---

---



## Explore solutions.

■ What are 2-3 solutions that address the challenge?

---

---

---

■ Would these solutions meet all the needs of the population in your country?

---

---

■ Which local solutions have already been tried in your chosen country?

---

---

■ What impact did those solutions have?

---

---

---

■ What strengths or resources exist within your selected country that can help address the issue?

---

---

---

■ Are neighboring countries experiencing similar challenges? If so, how have they attempted to address this issue?

---

---

---

■ Would it be appropriate or feasible to implement a similar solution in your country?

---

---

---

---

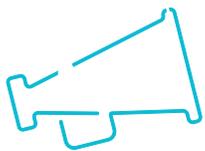
---

### Sources:

---

---

---



## Propose your recommendation.

- What solution would you recommend to solve this challenge? Describe the plan of action.

---

---

---

- What is the impact you are hoping to achieve?

---

- What are the limitations to this approach?

---

- Which cultural norms need to be considered while developing your plan?

---

---

- Who would manage and lead this project? (Examples: community members, the government, civic organizations, international development organizations, nonprofits, etc.)

---

- What resources and/or funding would be required to implement this project?

---

- What policies would need to be in place for the project to be successful?

---

- What resources, assets or strengths does your country have that can help advance the impact of your solution?

---

- How sustainable is your solution?

---

---

- Is your recommendation feasible?

---

---

---

---

### Sources:

---

---

---

---

---



## Write your Global Challenge research paper.

Now that you have completed your research, it's time to bring together your ideas.

### Paper guidance

Your paper should be three to five pages in length with a word count of 1,500-2,500 words, excluding the bibliography. Here is a recommended breakdown for your paper:

- 5% introduction
- 15% background on the country and family
- 25% challenge and impact
- 25% exploring solutions
- 25% your recommendation
- 5% conclusion

### Refining your paper

- Make sure to proofread your paper and edit for sentence structure and proper grammar.
- We recommend having at least two other people (teachers, mentors, club leaders, friends or parents) provide feedback on your paper.

## Recommendations for formatting your paper

### Citations and bibliography page

Make sure to take the time to analyze and interpret the articles and information you read and explain them in your own voice. It's important to always be careful when sharing someone else's idea or concept (even if you explain it in your own words). You must properly credit the original source. Please note that papers will be reviewed by the World Food Prize Foundation Board of Reviewers and checked for plagiarism.

Your paper should include at least five sources with in-text citations using the Harvard referencing style and you should use that style consistently throughout your paper.

### Here are some helpful resources for writing a bibliography:

- Easybib.com
- Citationmachine.net
- The Purdue Writing Lab at owl.english.purdue.edu/owl

For more information on citations and referencing, visit: [worldfoodprize.org/resources](http://worldfoodprize.org/resources)

### Formatting requirements

Your Global Challenge research paper should be submitted as a Word file (.doc or .docx) and meet the following page format requirements:

- One-inch page margins (top, bottom, left, right)
- Eleven-point font, Calibri or Times New Roman
- Single-space text, no indentation
- Double space between paragraphs
- Student information provided in the upper left-hand corner of the first page:
  - Student name
  - High school name
  - School city, state/province, country
  - Selected research country, research topic
  - Date of completion
  - Boldface paper title

### Example student information formatting

Sarah Jackson  
Manchester High School  
Manchester, CT USA  
Bangladesh, Malnutrition  
May 4, 2024

### Bangladesh: Improving Nutrition for Rural Populations

---



---



---



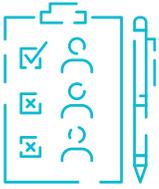
---



---



---



## Register for a Youth Institute and submit your paper.

Register to attend a Youth Institute and present your solutions from your Global Challenge research paper. For information about participating in a Youth Institute, please visit: [worldfoodprize.org/globalchallenge](https://worldfoodprize.org/globalchallenge)

If you have any questions, email the World Food Prize Foundation at: [youthprograms@worldfoodprize.org](mailto:youthprograms@worldfoodprize.org)

