



COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

# GLOBAL CHALLENGE

OHIO YOUTH INSTITUTE APRIL 14, 2024

Registration due: MARCH 13, 2024

www.worldfoodprize.org/ohio





We want YOU to solve the world's greatest challenge:

# END HUNGER AND POVERTY

No, really. We need to find sustainable solutions to feed our growing population.

IT'S COMPLICATED, BUT WE'RE MAKING PROGRESS. WE CAN END HUNGER AND POVERTY BY FOCUSING ON:



IMPROVING HUMAN HEALTH



INCREASING ACCESS
TO EDUCATION AND
OPPORTUNITY



PROMOTING ECONOMIC GROWTH



PROTECTING THE ENVIRONMENT

There have already been significant improvements but we still have a long way to go. There is no shortage of solutions. Explore what's working and what isn't, and use your unique perspective, talents and ideas to help solve the worlds greatest challenge.



# CALLING ALL STUDENTS

We're looking for high school students who:

- Care passionately about the world and want to make it a more just and equitable place 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

# WHY DOES THIS MATTER?

1 IN 9 PEOPLE DON'T HAVE ENOUGH SAFE AND NUTRITIOUS FOOD



# **TODAY:**



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 DO NOT HAVE SAFE WATER AND SANITATION

## **TOMORROW:**

- By 2050, there will be at least 9 billion people on the planet
- In the next 40 years, humans will need to produce more food than they have in the previous 10,000 years combined







# WHAT IS FOOD SECURITY?

There are three essential components:

QUALITY

Safe, healthy and nutritious food

**OUANTITY** 

Enough food to lead a healthy and active lifestyle

**AVAILABILITY** 

Finances to purchase food near where you live

# WHAT IS THE OHIO YOUTH INSTITUTE?

The Ohio Youth Institute is a life-changing experience hosted by The Ohio State University where high school students engage with local leaders and experts on critical global food security challenges, participate in hands-on science activities, and explore exciting ways to make a difference in Ohio and around the world.

Students research issues they care about, and propose their ideas to solve these grand challenges.

# WHY PARTICIPATE?

- Gain professional experience
- Become recognized as a Borlaug Scholar
- Qualify for the Global Youth Institute, paid USDA fellowships, and International Internships

# **HOW DO I PARTICIPATE?**

- Research a global challenge and write a paper about the problem and your proposed solution
- There is no cost, fee or membership required for the program! Your paper is your ticket to attend
- Register and submit your paper by March 13, 2024.
- Participate in the Ohio Youth Institute hosted by The Ohio State University and the World Food Prize Foundation on April 15, 2024.

# **QUESTIONS?**

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Ohio Youth Institute Coordinator
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# WE ARE THE WORLD FOOD PRIZE

Founded by Dr. Norman Borlaug, a Nobel Peace Prize winner who saved over a billion people from famine and starvation. The World Food Prize celebrates individuals who significantly improve global food security.

Like Dr. Borlaug they are game changers who come from a variety of backgrounds; scientists, policy makers, innovators and entrepreneurs. We want to connect you with these incredible leaders and inspire you to make a difference as well.

Ready to change the world?

# SIMPLE STEPS TO WRITE YOUR PAPER.

CHOOSE A COUNTRY

RESEARCH A TYPICAL FAMILY

SELECT A TOPIC

ANALYZE
ITS IMPACT
ON FOOD
SECURITY

EXPLORE & PROPOSE SOLUTIONS

WRITE YOUR PAPER

REGISTER FOR THE YOUTH INSTITUTE!



# choose a

# COUNLK

Select a country, territory or independent economy to focus your research on

Please note: Select a country other than the one you live in

#### Caribbean

- Anguilla (U.K.)
- Antigua and Barbuda
- Aruba (Netherlands)
- Bahamas
- Barbados
- Bermuda (U.K.)
- Cayman Islands (U.K.)
- Cuba
- Curação (Netherlands)
- Dominica
- Dominican Republic
- Grenada
- Guadeloupe (France)
- Haiti
- Jamaica
- Martinique (France)
- Montserrat (U.K.)
- Puerto Rico (U.S.)
- Saint-Barthélemy (France)

#### North America

- Canada
- Mexico
- United States of America

- 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.)

#### Central America

- Belize
- Honduras
- Costa Rica Nicaragua

• Paraguay

• Suriname

Uruguay

• Venezuela

• Peru

- El Salvador Panama
- Guatemala

#### South America

- Argentina
- Bolivia
- Brazil
- Chile
- Colombia
- Ecuador
- Falkland Islands (U.K.)
- French Guiana
- Guyana

#### Western Europe

- Austria
- Belgium
- France
- Germany
- Liechtenstein Luxembourg
- Monaco
- Netherlands
- aint Pierre and Miquelon (France)
- witzerland
- United Kingdom

#### Northern Africa

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

#### Western Africa

- Benin
- Burkina Faso
- Cabo Verde
- Cote d'Ivoire
- Ghana
- Guinea
- Guinea-Bissau
- Liberia
- Mali
- Mauritania
- Niger
- Nigeria
- Saint Helena (U.K.)
- Senegal
- Sierra Leone
- The Gambia
- Togo

#### Middle Africa

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

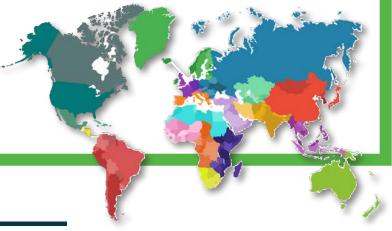
#### Northern Europe Eastern Europe Southern Europe • Albania • Serbia Denmark Iceland Belarus • Slovenia Estonia • Ireland • Andorra • Bulgaria • Faroe Islands (Denmark) Latvia • Bosnia and Spain • Czechia Herzegovina • Vatican City Finland • Lithuania Hungary • Croatia Greenland (Denmark) Norway Moldova Gibraltar (U.K Sweden Poland • Greece • Romania Kosovo Russia Macedonia Malta Montenegro Portugal Eastern Asia San Marino long Kong S.A.R. (China) Macau S.A.R. (China) Mongolia Vorth Korea South Korea Taiwan (China) Southeastern Asia Brunei • Philippines Cambodia • Singapore Indonesia Thailand • Timor-Leste Laos • Vietnam Malaysia · Myanmar/Burma Oceania • American Samoa (U.S.) Cook Islands (New Zealand) • French Polynesia (France) Western Asia • Guam (U.S.) Kiribati Armenia • Lebanon • Marshall Islands Azerbaijan • Oman Micronesia Bahrain Qatar Nauru Saudi Arabia Cyprus New Caledonia (France) · Georgia Syria • Turkey New Zealand Israel, West Bank, United Arab Niue (New Zealand) Northern Mariana Islands (U.S.) and Gaza **Emirates** Palau Jordan Yemen Papua New Guinea Kuwait Pitcairn Islands (U.K.) Samoa Eastern Africa Central Asia Solomon Islands Tokelau (New Zealand) Burundi • Rwanda Kazakhstan Tonga Comoros Seychelles Kyrgyzstan Tuvalu Southern Asia Djibouti • Somalia Tajikistan Vanuatu • Eritrea South Sudan Turkmenistan • Afghanistan Wallis and Futuna (France) • Ethiopia • Tanzania Uzbekistan • Bangladesh • Kenya • Uganda Bhutan Madagascar • Zambia Southern Africa India Malawi • Zimbabwe • Botswana • Iran Mauritius • Eswatini Maldives Mayotte (France) Lesotho Nepal Mozambique Namibia Pakistan Réunion (France)

• Sri Lanka

South Africa

# **STEP ONE: CHOOSE A COUNTRY**

Use the following pages and questions as a guide to help you write an outline as you explore your country and topic. Need ideas? Resources can be found at: worldfoodprize.org/resources



# COUNTRY: \_

What is the country's population? What percentage are urban and rural?
☐ 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 in your chosen country? For context, what can you compare it to?
☐ What is the climate and geography?

# SOURCES

JUUNGEJ



Choose a
country you would
like to know more about
or maybe one you have
never heard of. Or, choose
your topic first, then select
a country that is revelant
to the topic.

# STEP TWO: RESEARCH A TYPICAL FAMILY



Describe life for a typical family in your chosen country.

















☐ What is a typical family size? Describe the dwelling in which they live.
☐ What does a typical family diet consist of?
□ Where do families get food and how do they cook it?
☐ What types of jobs do they have and what is the average wage?
☐ Do famillies have access to education and health care? Is it affordable?
☐ Does the family have access to clean water, toilets, electricity, telephones, roads and local markets?
☐ What major barriers do typical families face including earning a living and access to nutritious food?
COUNCEC

# SOURCES

PRO TIP wikipedia
can be useful
for initial searches, but
it should never be used
as a reference since it is
not possible to evaluate the
accuracy of the information
or the credibility of the
author(s) of the
article.

# **STEP THREE: CHOOSE A TOPIC**

Select a topic (global challenge) to focus your research on. It is important to select a topic that is relevant to your country.



### **PLANTS**

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



# WATER SCARCITY

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



# RENEWABLE ENERGY



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

### **ANIMAL HEALTH**

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





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

# SUSTAINABLE AGRICULTURE

Best practices to grow food and fiber for long term environmental, economic and social success



# ANIMAL AGRICULTURE



The care and breeding of livestock, poultry and aquaculture

# SPOILAGE & WASTE

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

# WATER & SANITATION

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

## DIETARY **DISEASES**



Disease caused by unhealthy diets and a lack of exercise

#### **MALNUTRITION**

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



### **INFECTIOUS DISEASES**

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



### **POPULATIONS**

The characteristics and movements of a population including urbanization, migration and growth

### CONFLICT

Political, economic, environmental, or social disagreements, violence or armed conflict

### **HUMAN RIGHTS**

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

#### **EDUCATION**

The delivery of knowledge, skills, and information



## POLICY & **GOVERNANCE**

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

### INTERNATIONAL **TRADE**

The exchange of capital, goods, and services between countries



### **FOREIGN AID**

humanitarian relief or development efforts



### **INFRASTRUCTURE**

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



# **STEP FOUR: ANALYZE THE IMPACT**





☐ What is the present status and severity of this topic?
☐ Are trends improving, worsening or staying the same?
☐ What contributes to this trend?
☐ How does this topic affect rural and urban populations?
☐ How does this topic affect women and men differently? The elderly? Children?
☐ How does this topic affect marginalized populations? (minorities, refugees, indigenous, etc.)
☐ How does this topic affect the environment?
SOURCES SOURCES

# STEP FIVE: SOLUTIONS & RECOMMENDATIONS

Finding ideas for solutions can be tough. Start by researching what already exists.

# What are **2-3** solutions that address the challenge

- •IN YOUR CHOSEN COUNTRY: what is currently being done or what has been tried in the past? What worked and what could be improved upon?
- IN ANOTHER COUNTRY: what has been done to address similar challenges? Would they be appropriate to implement in your country?

# WHAT ARE THE STRENGTHS AND WEAKNESSES FOR EACH OF THESE SOLUTIONS? USE THIS BOX TO OUTLINE THE PROS AND CONS.

SOLUTION	STRENGTH (PROS)	WEAKNESS (CONS)

# **SOLUTIONS & RECOMMENDATIONS**

☐ Would these solutions meet all the needs of the population in your country?
☐ What solution would you recommend to solve this challenge? Describe the plan of action.
☐ Who would manage and lead this project? Examples: The United Nations, World Bank, non-profits, civic organizations, etc.
☐ How could this project be funded?
☐ What role do community members, the government, and other organizations play in implementing your plan?
☐ What policies would need to be in place for the project to be successful?
☐ What cultural norms or behaviors need to be considered while developing your plan?
☐ How can this project be sustainable?
Is the solution simple or complex? Is it expensive or affordable? These are important questions to ask yourself!

# STEP SIX: WRITE & FORMAT YOUR PAPER

Now that you have done your research, it's time to bring it all together.



# FORMAT REQUIREMENTS

Research papers must be submitted as a Word (.doc or .docx) file and meet the following page format requirements:

- One-inch page margins (top, bottom, left, right)
- Eleven-point font, Times New Roman
- Single-space text, no indentation
- Double space between paragraphs
- Identification in the upper left-hand corner of the first page providing:
  - Student name
  - High school name
  - School city, State/Province, Country
  - Selected country, Topic
  - Essay title (in bold)

Jackson Smith
Central High School
Sandusky, OH, United States
India, Malnutrition

**India:** A Holistic Approach for the Rural Population

- ☐ Proofread your paper and edit for sentence structure and proper grammar
- ☐ Ask at least three other people to read your paper and give you feedback (consider teachers, mentors, club leaders, friends, and parents)

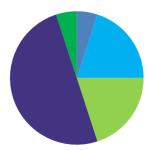


Your paper will be checked for plagiarism.

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 an idea or concept that is someone else's (even if you explain it in your own words), that you properly credit the original source.

For more information on citations and referencing, visit: worldfoodprize.org/resources

# RECOMMENDED BREAKDOWN



Your paper should be 3-5 pages in length with a word count of 1500-2500 words, excluding the bibliography.

- 5% Introduction
- 20% Country & Family
- 20% Challenge & Impact
- 50% Solutions & Recommendations
- 5% Conclusion



For great
information on how
to write a bibliography,
check out: Easybib.com,
Citationmachine.com or
the Purdue Writing Lab
at http://owl.english.
purdue.edu/owl



#### **BIBLIOGRAPHY PAGE**

Should include at least five sources with in-text citations using the standards set by the Modern Language Association (MLA) or American Psychological Association (APA). Choose one style and use it consistently

# STEP SEVEN: REGISTER & SUBMIT YOUR PAPER

All your hard work has paid off! It's time to submit your registration and final paper at: www.worldfoodprize.org/ohio

If you have any questions, contact the Ohio Youth Institute Coordinator

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