



WORLD FOOD PRIZE
FOUNDATION

MICHIGAN STATE
UNIVERSITY

College of Agriculture
and Natural Resources

GLOBAL CHALLENGE

MICHIGAN YOUTH INSTITUTE
MAY 11, 2023

Registration due: MARCH 15, 2023

www.worldfoodprize.org/michigan



hunger fighters®

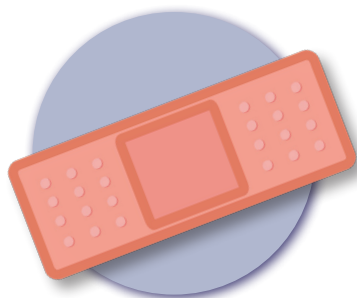
knowledge · innovation · action

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 world's 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

QUANTITY

Enough food to lead a healthy and active lifestyle

AVAILABILITY

Finances to purchase food near where you live

WHAT IS THE MICHIGAN YOUTH INSTITUTE?

The Michigan Youth Institute is a life-changing experience hosted by the Michigan State University where students in grades 7-12 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 Michigan and around the world.

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

WHY PARTICIPATE?

- Learn about critical global issues and how you can help make a difference
- 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 15, 2023
Participate in the Michigan Youth Institute hosted by the Michigan State University and the World Food Prize Foundation on May 11, 2023

QUESTIONS?

Brian Wibby & Debra Barrett

Michigan Youth Institute Coordinators

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MSU is an affirmative-action, equal-opportunity employer.

Michigan State University Extension programs and materials are open to all without regard to race, color, national origin, gender, gender identity, religion, age, height, weight, disability, political beliefs, sexual orientation, marital status, family status or veteran status.



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?

7 SIMPLE STEPS TO WRITE YOUR PAPER.

1
CHOOSE A
COUNTRY

2
RESEARCH
A TYPICAL
FAMILY

3
SELECT A
TOPIC

4
ANALYZE
ITS IMPACT
ON FOOD
SECURITY

5
EXPLORE &
PROPOSE
SOLUTIONS

6
WRITE
YOUR
PAPER

7
REGISTER
FOR THE
YOUTH
INSTITUTE!



choose a COUNTRY

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
- 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.)

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

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
- 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



Southern Europe

- Albania
- Andorra
- Bosnia and Herzegovina
- Croatia
- Gibraltar (U.K.)
- Greece
- Kosovo
- Macedonia
- Malta
- Montenegro
- Portugal
- San Marino
- Serbia
- Slovenia
- Spain
- Vatican City

Northern Europe

- Denmark
- Estonia
- Faroe Islands (Denmark)
- Finland
- Greenland (Denmark)
- Iceland
- Ireland
- Latvia
- Lithuania
- Norway
- Sweden

Eastern Europe

- Belarus
- Bulgaria
- Czechia
- Hungary
- Moldova
- Poland
- Romania
- Russia
- Slovakia
- Ukraine

Eastern Asia

- China
- Hong Kong S.A.R. (China)
- Japan
- Macau S.A.R. (China)
- Mongolia
- North Korea
- South Korea
- Taiwan (China)

Southeastern Asia

- Brunei
- Cambodia
- Indonesia
- Laos
- Malaysia
- Myanmar/Burma
- Philippines
- Singapore
- Thailand
- Timor-Leste
- Vietnam

Oceania

- American Samoa (U.S.)
- Australia
- Cook Islands (New Zealand)
- Fiji
- French Polynesia (France)
- Guam (U.S.)
- Kiribati
- Marshall Islands
- Micronesia
- Nauru
- New Caledonia (France)
- New Zealand
- Niue (New Zealand)
- Northern Mariana Islands (U.S.)
- Palau
- Papua New Guinea
- Pitcairn Islands (U.K.)
- Samoa
- Solomon Islands
- Tokelau (New Zealand)
- Tonga
- Tuvalu
- Vanuatu
- Wallis and Futuna (France)

Western Asia

- Armenia
- Azerbaijan
- Bahrain
- Cyprus
- Georgia
- Iraq
- Israel, West Bank, and Gaza
- Jordan
- Kuwait
- Lebanon
- Oman
- Qatar
- Saudi Arabia
- Syria
- Turkey
- United Arab Emirates
- Yemen

Eastern Africa

- Burundi
- Comoros
- Djibouti
- Eritrea
- Ethiopia
- Kenya
- Madagascar
- Malawi
- Mauritius
- Mayotte (France)
- Mozambique
- Réunion (France)
- Rwanda
- Seychelles
- Somalia
- South Sudan
- Tanzania
- Uganda
- Zambia
- Zimbabwe

Central Asia

- Kazakhstan
- Kyrgyzstan
- Tajikistan
- Turkmenistan
- Uzbekistan

Southern Africa

- Botswana
- Eswatini
- Lesotho
- Namibia
- South Africa

Southern Asia

- Afghanistan
- Bangladesh
- Bhutan
- India
- Iran
- Maldives
- Nepal
- Pakistan
- Sri Lanka

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?

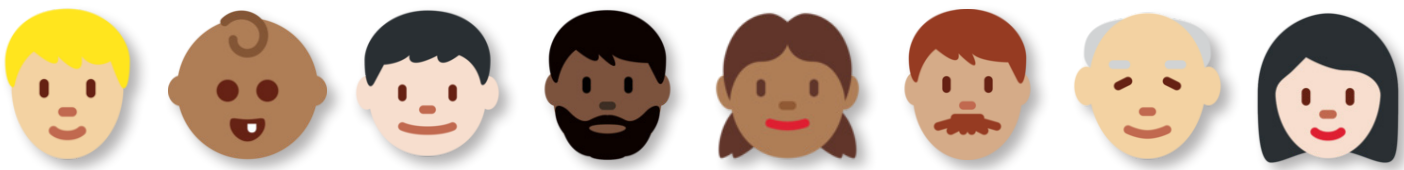
SOURCES

**PRO
TIP**

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 relevant 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 families 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?

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



CLIMATE VOLATILITY



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



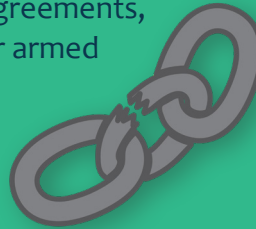
POPULATIONS

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

Assistance given by one nation to another for 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

How does your topic impact food security?



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

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?

SOURCES

**PRO
TIP**

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

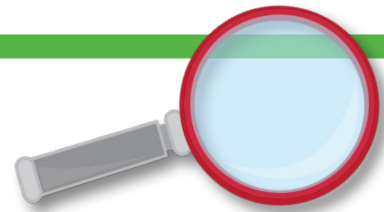
Research papers must be submitted as a Word (.doc or .docx) file and meet the following page format requirements:

- 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
 Benzonia, MI, USA
 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)



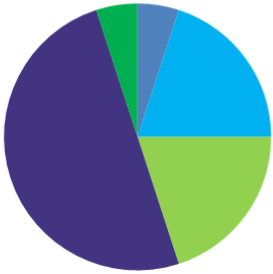
PLEASE NOTE:

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



PRO TIP

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/michigan

If you have any questions, contact the Michigan Youth Institute Coordinators:

Brian Wibby | 906-251-1417 | wibby@msu.edu

Debra Barrett | 269-240-1986 | smithde6@msu.edu