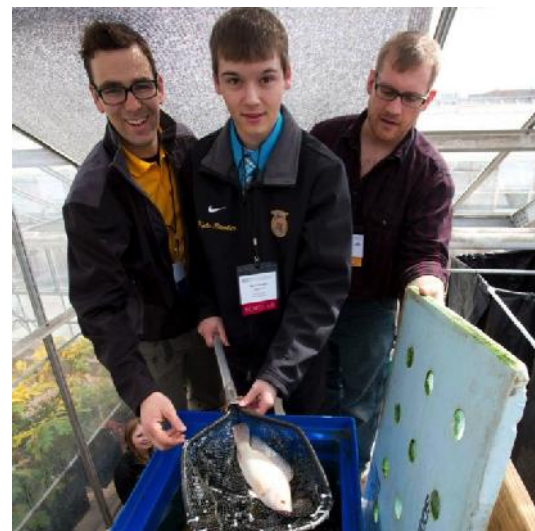




A STUDENT HANDBOOK FOR THE 2017 IOWA YOUTH INSTITUTE



THE WORLD FOOD PRIZE
IOWA YOUTH INSTITUTE AT
IOWA STATE UNIVERSITY
@THENEXTNORMA



IT ALL STARTS HERE...

WHAT IS FOOD SECURITY?

Imagine you have a stool with three legs, like the one to the right. If you sat on that stool, the stool would be stable. Now imagine if you lost one of the legs or maybe two of the legs. Would the stool still be stable? Probably not! This stool is a lot like food security. There are three legs or components of food security: **quality**, **quantity**, and **availability**.

Quality: Safe and healthy food for the appropriate age group

Quantity: Required amount of good quality, nutritious food from local, regional and international sources

Availability: Physical and economic access to enough food for an active, healthy life



6 FACTS ABOUT FOOD SECURITY & GLOBAL ISSUES

- Today, 1 in 9 people do not consume enough food to lead a healthy and active lifestyle.
- By 2050, there will be at least 9 billion people on the planet in need of food and water.
- In the next 40 years, humans will need to produce more food than they did in the previous 10,000 put together.
- 1/8 of girls and 1/9 of boys do not pursue or unable to pursue secondary education.
- Globally, 1 out of 3 schools lack access to safe water and adequate sanitation.
- Only your generation can take on these challenges.

WHAT IS THE IOWA YOUTH INSTITUTE?

The Iowa Youth Institute (IYI) is a daylong event held at Iowa State University where you have the chance to focus on food security issues. Students in grades 8th to 12th grade* are eligible to attend. **The Iowa Youth Institute is on April 24, 2017.**

5 REASONS WHY YOU SHOULD PARTICIPATE IN THE IYI

1. **Scholarship** – students that complete the paper and attend the day long event receive a \$500 scholarship to Iowa State University in any of the career paths to the right.
2. **Networking** – engage with research and industry experts, state and community leaders, members of the NGO community, and your peers to discuss solutions to global hunger and poverty.
3. **Hands on Experience** – Participate, with your teachers, in interactive activities on Iowa State University's campus to explore research and work currently taking place in Iowa to address global challenges.
4. **Global Youth Institute** – If you are one of the top students, you can advance to the Global Youth Institute. This once in a lifetime experience allows you interact with peers, like you, from across the nation.*
5. **Paid Fellowships with USDA**– Students that complete the program are eligible to apply for a USDA Wallace Carver Fellowship through the USDA working in research facilities across the United States.

HOW DO YOU GET TO DO ALL THIS?

It's simple, write a 3 to 5 page paper about an area of the world, what's happening in the area of the world, and a solution to that problem. Turn the page and find out more!

**12th grade students are ineligible to advance to the Global Youth Institute, but can still receive the scholarship, experience the IYI, and apply for the USDA Wallace Carver Fellowship.*

Eligible Career Paths at Iowa State

Global Resource Systems
 Food Science
 Diet & Exercise
 Biology
 Microbiology
 Agricultural & Life Sciences Education
 Dietetics
 Agricultural Biochemistry
 Environmental Science
 Agricultural Business
 Environmental Studies
 Agricultural Studies
 Agricultural Systems Technology
 Forestry
 Agriculture & Society
 Genetics
 Agronomy
 Horticulture
 Animal Ecology
 Industrial Technology
 Animal Science
 International Agriculture
 Culinary Science
 Nutritional Science
 Dairy Science
 Seed Science

#DYK: In 2016, 281 students from 126 high schools attended the IYI!

QUESTIONS?

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Twitter: @thenextnormia



6 STEPS TO WRITING THE IYI PAPER

STEP 1: EXPLORE THE WORLD

Use resources like the Global Food Security Index from The Economist Intelligence Unit to discover more about countries and what is happening in the world. <http://foodsecurityindex.eiu.com/>

STEP 2: ANALYZE A DEVELOPING COUNTRY

Select a developing country to focus your research on. A list of all eligible countries can be found on Page 7 & 8. Then answer the questions about that country and a typical family on Page 9.

STEP 3: INVESTIGATE A FACTOR IN FOOD SECURITY

Research and then select a factor from Page 10 & 11. After selecting a factor, answer the questions on Page 12 How does this factor affect your country?

STEP 4: PROVIDE A RECOMMENDATION(S)

Using what you have learned, answer the provide suggestions to the country on how to improve their citizen's lives. Include specific examples of how to accomplish this goal.

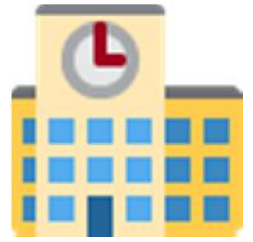
STEP 5: WORK WITH A MENTOR TO PROOFREAD AND CITE YOUR PAPER

Work with your teacher-mentor, parent, or other adult to help cite your paper correctly and to proofread your content. Follow the guidelines closely on Page 14 to insure you meet the requirements.

STEP 6: SUBMIT YOUR PAPER BY MARCH 27, 2017

Your and your teacher mentor submit your paper online at www.worldfoodprize.org/iowayouth by March 27, 2017.

CONGRATS! NOW YOU'RE DONE!



HOW DO I WRITE A PAPER FOR THE IOWA YOUTH INSTITUTE?



STEP 1: EXPLORE THE WORLD

Use resources like the Global Food Security Index from The Economist Intelligence Unit to discover more about countries and what is happening in the world. <http://foodsecurityindex.eiu.com/>

Fill out the following sections while exploring the world. Check to a variety of source to discover details about the world.

Country: _____ Region of the World: _____

What's happening in this country: _____

Was there a lot of information about the country (circle one): YES NO

Country: _____ Region of the World: _____

What's happening in this country: _____

Was there a lot of information about the country (circle one): YES NO

Country: _____ Region of the World: _____

What's happening in this country: _____

Was there a lot of information about the country (circle one): YES NO



STEP 2: ANALYZE A DEVELOPING COUNTRY

After exploring the world, select a developing country to focus your research on. The countries listed on this page and the following page are eligible. Then answer the questions about that country and a typical family on Page 9.

Caribbean:

Anguilla (U.K.)
Antigua & Barbuda
Bahamas
Barbados
Bermuda (U.K.)
Cayman Islands (U.K.)

Cuba
Dominica
Dominican Republic
Grenada
Guadeloupe

Haiti
Jamaica
Martinique (France)
Montserrat (U.K.)
Netherlands Antilles

Puerto Rico (U.S.)
St. Kitts & Nevis
St. Lucia
St. Vincent & the Grenadines
Trinidad & Tobago

Turks & Caicos (U.K.)
Virgin Islands (U.K. U.S.)

Central America:

Belize
Costa Rica
El Salvador
Guatemala
Honduras
Mexico
Nicaragua
Panama

South America Tropical:

Bolivia
Brazil
Colombia
Ecuador
French Guiana
Guyana
Paraguay
Peru
Suriname
Venezuela

South America Temperate:

Argentina
Chile
Falkland Islands (U.K.)
Uruguay

West Africa:

Benin
Burkina Faso
Cape Verde Islands
Côte d'Ivoire
The Gambia
Ghana

Guinea
Guinea-Bissau
Liberia
Mali
Mauritania
Niger

Nigeria
São Tomé & Príncipe
Senegal
Sierra Leone
Togo

Southern Africa:

Botswana
Lesotho
Namibia
South Africa
St. Helena (U.K.)
Swaziland
Zimbabwe

Central Africa:

Angola
Cameroon
Central African Republic
Chad
Congo
Democratic Republic—
of the Congo

Equatorial Guinea
Gabon
Sudan
South Sudan
Zambia



Eastern Europe:

Albania	Croatia	Lithuania	Serbia
Armenia	Czech Republic	Macedonia	Montenegro
Azerbaijan	Estonia	Moldova	Slovakia (Slovak Republic)
Belarus	Georgia	Poland	Slovenia
Bosnia/Herzegovina	Hungary	Romania	Ukraine
Bulgaria	Latvia	Russia	

Central Asia:

Afghanistan	Tajikistan
Kazakhstan	Turkmenistan
Kyrgyzstan	Uzbekistan

East Asia:

China Hong Kong S.A.R. (China)
 Japan
 Democratic People's Republic of - Korea (North)
 Republic of Korea (South)
 Macao S.A.R. (China)
 Mongolia
 Taiwan

Southeast Asia:

Brunei
 Darussalam
 Burma (Myanmar)
 Cambodia
 East Timor
 Indonesia
 Lao People's Democratic- Republic (Laos)
 Malaysia
 Philippines
 Singapore
 Thailand
 Vietnam

East Africa:

Burundi	Kenya	Mozambique	Tanzania
Comoros	Madagascar	Réunion	Uganda
Djibouti	Malawi	Rwanda	
Eritrea	Mauritius	Seychelles	
Ethiopia	Mayotte	Somalia	

South Pacific:

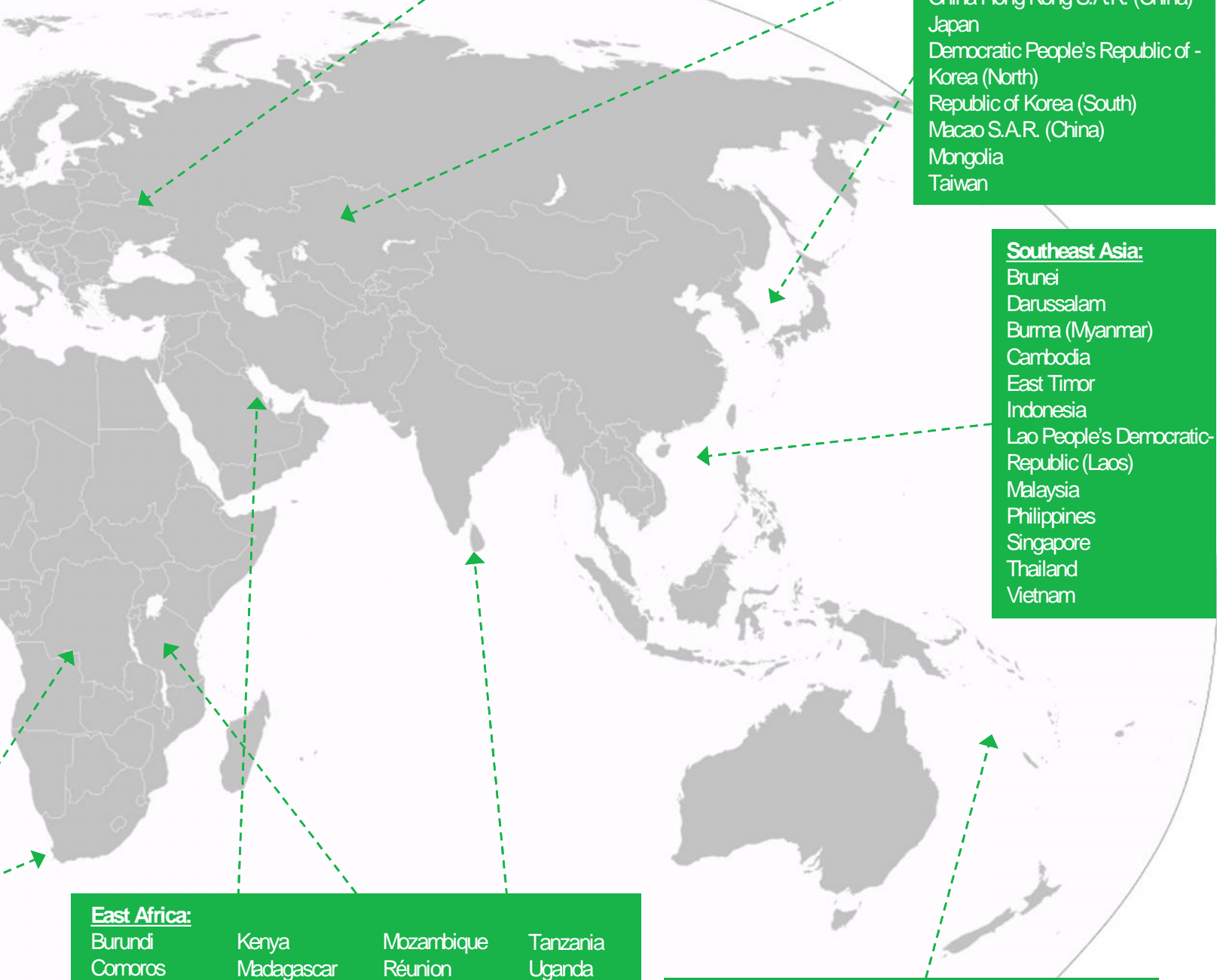
Christmas Island	Palau
Cook Island	Papua New Guinea
Federated States of Micronesia	Pitcairn
Fiji	Samoa
French Polynesia (Tahiti)	American Samoa
Guam	Solomon Islands
Kiribati	Tokelau
Marshall Islands	Tonga
Nauru	Tuvalu
New Caledonia	Vanuatu
Niue	Wake Island
Northern Mariana Islands	Wallis & Futuna

Middle East:

Bahrain	Oman
Cyprus	Qatar
Iran	Saudi Arabia
Iraq	Syrian Arab Republic
Israel	Turkey
Jordan	United Arab Emirates
Kuwait	Yemen
Lebanon	

Indian Subcontinent:

Bangladesh
 Bhutan
 India
 Maldives
 Nepal
 Pakistan
 Sri Lanka



STEP 2: ANALYZE A DEVELOPING COUNTRY

After selecting a country, research and begin answering the following questions about that country. Keep track of your sources because the paper requires in-text citation and a bibliography.

A. Define a typical subsistence farm family or poor urban family in your country:

- Family size and composition
- Diet
- Education
- access to health care

B. Define a typical subsistence farm family or poor urban family in your country:

Rural Family

- farm size
- crops grown
- agricultural practices

OR

Urban Family

- employment and wage
- where they typically purchase food
- access to private or community gardens

C. Describe major barriers facing the typical family

- major barriers to improving agricultural productivity
- employment and earning a living wage
- gaining access to food markets and adequate nutrition



Research and then select a factor from this page or the following page. After selecting a factor, answer the questions on Page 12. It is important to select a factor that is relevant to your country.



1. Plant Science

Increasing crop yields and improving disease/drought resistance through research and breeding of improved plant varieties.



6. Sustainable Agriculture

Developing and implementing sustainable agricultural practices to combat erosion, desertification and soil depletion and reduce pesticide/herbicide use and minimizing environmental degradation associated with contemporary agricultural work.



2. Water Scarcity

Managing water scarcity and adapting farming practices to reduced water supplies with improved irrigation technologies and conservation practices.



7. Animal Agriculture

Implementing sustainable practices for raising livestock and poultry (management intensive grazing, integrated livestock/poultry grazing and poultry/vegetable production systems, fish pond farming systems, etc.)



3. Biofuels

Balancing the demand on global food and energy supplies and ensuring that developing nations also benefit from the use of biofuels.



8. Spoilage & Waste

Reducing spoilage and improving the quality and shelf life of food products with improved food preservation techniques and increased processing capacity (flash-heating, aseptic processing, freeze drying, bulk storage, etc.)



4. Animal Health

Preventing the transmission of disease in livestock and poultry with improved management, investments in vaccine development, and proper application of medications to avoid antibiotic-resistance.



9. Water & Sanitation

Increasing access to safe, potable water supplies, toilets and pit latrines, and education on proper sanitation/hygiene and food preparation techniques to reduce the transmission of food and water-borne disease.



5. Climate Volatility

Responding to climate volatility by adapting agricultural practices and policies to increase carbon sequestration and support ecological resilience to erratic weather, rising temperatures/drought, saltwater intrusion, and shifting diseases.



10. Dietary Diseases

Addressing obesity, heart disease, diabetes, and other dietary diseases through nutrition education, access to nutritious foods, and healthy behavior (dietary diversification, food selection, portion-size control, exercise, etc.)

11. Malnutrition



Alleviating micronutrient deficiencies (iron, vitamin A, iodine, zinc) and protein energy malnutrition through improved access to nutritious food, fortification, supplementation, school-feeding programs, nutrition education, emergency therapeutic feeding, etc.

16. Education



Investing in education, training and extension for improved implementation of agricultural research and technology.

12. Human Diseases



Reducing the burden of illness and infectious diseases like HIV/AIDS, Tuberculosis (TB), Malaria, etc., to improve human health and nutrition and raise agricultural production.

17. Good Governance



Reducing corruption by promoting the rule of law, government accountability, democratic principles and transparency.

13. Demographics



Addressing the challenges and opportunities posed by population growth and urbanization.

18. International Trade



Removing discriminatory international trade policies to improve market access, promote fair trade and increase economic development.

14. Conflict Resolution



Preventing and resolving political and armed conflict with diplomatic initiatives.

19. Foreign Aid



Assisting vulnerable populations and improving the effectiveness of humanitarian relief and food aid in conflict zones and disaster sites.

15. Human Rights



Addressing gender, cultural and economic discrimination and improving access to credit and securing property rights for the poor and marginalized.

20. Farm to Market



Improving access to markets through infrastructure development (roads and railways, internet, mobile technologies, electricity).

E. Answer the following questions to develop your paper and understand how your selected factor affects food security in your country:

1. How does the factor you selected affect agricultural productivity, household income or food availability and quality in your chosen country?

Discuss the following:

- What role does the factor presently play in causing your family to:
 - not produce enough food?
 - earn sufficient income to purchase food?
 - access adequate nutrition?

 - What is the present status of this factor?
 - How severe is the situation?
 - Is the environment being degraded?
 - Are women, rural or urban poor, or developing countries particularly disadvantaged? If so, how?

 - Are the trends for this factor improving, worsening, staying the same?
 - How are the trends for this factor measured?
 - Do these measurements indicate the situation is changing? If so, how?
 - Because of potential change, or no change, is the situation for your rural farm or urban family getting worse, improving or staying the same?

 - How would improving or resolving this factor:
 - Increase the amount or quality of food or income available to your family?
 - Preserve the environment sustainably?
 - Lead to economic development and poverty reduction?
 - Benefit women, smallholder farmers or urban dwellers in your country of focus?
2. Describe how other major issues (climate volatility, population growth, water scarcity, energy, demand, pollution, etc.) will affect your chosen factor.
 - How will other major issues (climate volatility, population growth, water scarcity, urbanization, energy demand, pollution, etc.) affect your chosen factor and the wellbeing of your family and their community in the decades ahead?
-



STEP 4: PROVIDE A RECOMMENDATION(S)

Using what you have learned, answer the provide suggestions to the country on how to improve their citizen's lives. Include specific examples of how to accomplish this goal.

F. Answer the following questions to develop recommendations for the country. Develop a specific solution or solutions to the issue or issues you encountered.

1. Based on your research, give your recommendations on how to effectively address your selected factor to improve the food security of your family in the country.
 - What policies, technologies, practices or investments do you recommend to solve this situation?
 - Describe one or more local projects in your focus country that could be scaled up successfully.
 - Give suggestions for the appropriate role of communities, the national government, and organizations in implementing your recommendations:
 - United Nations
 - World Bank
 - international research agencies
 - non-governmental
 - civic organizations
 - How should rural farm and urban families be involved as key players in implementing these recommendations?

STEP 5: WORK WITH A MENTOR TO PROOFREAD AND CITE YOUR PAPER

Work with your teacher-mentor, parent, or other adult to help cite your paper correctly and to proofread your content. Follow the guidelines below to insure you meet the requirements.

FORMAT REQUIREMENTS

1. **Identification in the upper left-hand corner** of the first page providing the name of the student author, high school name, school city, school state, selected country and factor number, and essay title (in bold)

EXAMPLE

Norman Borlaug
Crestwood High School
Cresco, IA
Mexico, Factor 1: Plant Science

Mexico: The Benefits of Semi-Dwarf Wheat

2. **Body of approximately [3-5 pages] minimum** in length including:
 - an introduction and conclusion, each of which must be at least one-half page
 - word count of approximately [1500 to 2450] words minimum, excluding bibliography
3. **Bibliography page with at least five sources** and **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.
 - MLA Style Guide: <http://owl.english.purdue.edu/owl/resource/747/01/>
 - APA Style Guide: <http://owl.english.purdue.edu/owl/resource/560/01/>
4. **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 (11) font, Times New Roman
 - Single-space text, no indentation
 - Double-space between paragraphs

STEP 6: SUBMIT YOUR PAPER BY MARCH 27, 2017

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Contact Kelsey Tyrrell, Director of Iowa Education Programs if you have any questions: ktyrrell@worldfoodprize.org or by phone at 515-245-3702

CONGRATS! NOW YOU'RE DONE!