



at



**2019-2020 School Year
Middle Schools & High Schools**

Coordinator:
Dr. Mark Miller
Outreach Education Manager



Fairchild Challenge at Franklin Park Conservatory

Table of Contents

Challenges at a Glance

Introduction

Policies and Procedures

Challenge 1: Green Cuisine: Many-Cultured Meals (Culinary)

Challenge 2: Environmental Photography (Visual Arts)

Challenge 3: Sustainability at Your School (Community Action/Writing/Report)

Challenge 4: Growing Beyond Earth (NASA-Based Scientific Research/Poster/Video)

Challenge Entry Form

High School & Middle School Registration Forms (1 per School)

Fairchild Challenges	Maximum Points	Maximum Number of Entries	Due at Franklin Park Conservatory by 5:00 p.m.
1. Green Cuisine: Many-Cultured Meals	600 (200 points per entry)	3	Mon., October 14, 2019 **Cook-off takes place on Weds., October 16, 2019**
2. Visual Arts: Environmental Photography	600 (200 points per entry)	3	Weds., December 11, 2019
3. Community Action/Report: Sustainability	300 (300 points per entry)	1 (1 per school)	Weds., March 25, 2020
4. Research/Poster: Growing Beyond Earth	450 (450 points per entry)	1 (1 per school)	(Data) Weds., Dec. 4, 2019 (Video) Weds., Apr. 22, 2020

Introduction

Franklin Park Conservatory and Botanical Gardens is a partner in the growing consortium offering a unique program launched in 2002 by The Fairchild Tropical Botanic Garden in Miami, Florida: The Fairchild Challenge. This **free**, multidisciplinary, standards-based, STE(A)M-focused environmental education program provides teachers with a valuable tool to deliver core curriculum, and gives students an opportunity to shine. By appealing to students' innate sense of creativity and curiosity about the world around them, the Challenge invites learners to investigate environmental issues, devise imaginative and effective responses to these issues and to take action—at any level—to address them.

All central Ohio high schools, all central Ohio middle schools, and non-formal educational centers/organizations are invited to participate in the 2019-2020 Fairchild Challenge! Please contact us for more information and to arrange a meeting at your school. Share with your colleagues, administration and parents, and visit the [Franklin Park Conservatory webpage](#) about the Fairchild Challenge program for details, stories and images about this program.

Consider participating in any one or all of the challenges in this exciting program! Please call Dr. Mark Miller, Fairchild Challenge Coordinator, at [614.715.8030](tel:614.715.8030) or email (mmiller@fpconservatory.org) with any questions you may have, or to arrange a meeting at your school. We look forward to discussing the rich possibilities! Thank you.



Program Guidelines and Procedures

- **Registration:** Schools are required to submit contact information for the teachers who are interested in participating (ideally, at least three teachers from different disciplines).
- **Challenge entry form:** Each registered school (not individual student) must submit one completed entry form by the specified due date for each of the challenges in which they compete. The challenge entry form is hyperlinked within each challenge description and at the end of this packet.
- **Student work:** All work submitted as Fairchild Challenge entries must be completed **only by students**. Each entry must be clearly marked with the student(s) and school names. Entries must follow **the specified requirements in each challenge description** or they will be penalized and/or disqualified. Participants are expected to follow a strict honor code. All work must be original or from a referenced source. **Plagiarism will result in disqualification of all work submitted by the student(s) involved for the entire program year, and all accumulated points will be nullified.**
- **Deadlines:** Entries must be received by the published deadlines; **due dates are strictly enforced and late entries will be penalized**. Entries will be accepted in person, by mail or by email as noted in each challenge description. Entries may be dropped off at Franklin Park Conservatory's entrance during regular hours (seven days a week, from 10am to 5pm, unless otherwise specified). Please label mailed entries "Attn: Dr. Mark Miller, Fairchild Challenge Coordinator." We will gladly accept early-bird entries.
- **Earning Points:** Schools should encourage as many students as possible to attempt each of the diverse challenges. Each challenge has a maximum number of students' entries that may be submitted to the Conservatory for judging; additional entries cannot be accepted. Schools should always try to submit the maximum number of entries allowed per challenge in order to earn as many points as possible.
- **Evaluation Rubrics:** Teachers are encouraged to review each challenge's evaluation rubric prior to submitting student entries. Each challenge evaluation rubric is hyperlinked in each challenge description and included in this packet.
- **Judges:** Third-party independent judges use rubrics that reflect the evaluation criteria listed in the specific requirements for each challenge. All the results are final; completed judges' rubrics are not shared although judges' comments can be requested.
- **Scores:** Schools will receive their scores by email following participation in challenges. We do not release other schools' scores or school rankings during the program year. Overall results are announced at the end of the school year. **Student recognition:** Dr. Miller is happy to visit your school for any awards celebration you wish to hold. Franklin Park Conservatory posts school and student winners on the website and in emails.
- **Student Recognition:** Participation certificates for each challenge can be created and sent to teachers for distribution to all participating students.
- **Student materials:** All entries not claimed by 5pm on May 31, 2020, will become property of Franklin Park Conservatory. Select entries may be used for Fairchild Challenge fundraising or other purposes. **When submitting an entry, you must notify us in writing if you do not agree to these terms.** The Conservatory is not responsible for any materials lost, stolen, or damaged.
- **Schools consent** to Franklin Park Conservatory's **unrestricted use of student work and participants' likenesses**, including photographs and audio/visual recordings made of participants and/or their entries, at the Conservatory or elsewhere. Student entries may be exhibited and/or published by the Conservatory. The Conservatory must be notified in writing of any exceptions or non-consent.



CHALLENGE #1

GREEN CUISINE: MANY-CULTURED MEALS

For Individuals or Groups (4 People Maximum per Group); max. points: 600 (max. 3 entries per school)

CULINARY ARTS: COOKING DEMONSTRATION

YOUR CHALLENGE: To better understand and celebrate the many cultures represented in the Columbus metro area, students will research traditional cuisine within their families and/or ethnic backgrounds and map out the origins of the foods and major ingredients in a particular dish. That dish will be created by student individuals or teams, with an emphasis on obtaining locally-grown, organically-grown or ethically-sourced produce and ingredients. Cooking demonstration will take place at Franklin Park Conservatory's Wells Barn kitchen.

ENTRY SUBMISSION: Monday, October 14, 2019

Submit all materials to Franklin Park Conservatory.

- (a) Maximum three entries per school
- (b) Drop off or email [Recipe/Narrative](#) and [Challenge #1 Entry Form](#)

CONSERVATORY COOK-OFF: Wednesday, October 16, 2019, starting at 5:30pm

ENTRY REQUIREMENTS:

- Recipe and ethnic cuisine narrative; include a cost estimate for food ingredients
- Recipe must include a list of ingredients and their quantities, commonly-used measurements, tools needed and specific actions needed to make the dish. Include nutritional information per serving (similar to what one would see on a food label)
- Identify from which garden, market or food source every recipe ingredient was obtained
- Narrative (150-word minimum; 350-word maximum) must have school and student name(s)
- Minimum cook-off serving size: 8 Servings for tasting
- On-time entry submission

ADDITIONAL INFORMATION:

- Students are encouraged to explain why an ethnic cuisine or certain ingredients were chosen.

EVALUATION CRITERIA: For a detailed list of evaluation criteria and points awarded for this challenge, please review the sample [Evaluation Sheet](#) in this packet.

STATE STANDARDS: Ohio Common Core Strands and Topics that can be addressed while participating in the *Green Cuisine: Many-Culture Meals Challenge*:

- **Language Arts:** Reading, Writing, Research to Build & Present Knowledge, Speaking and Listening, Language, Literacy in History/Social Studies, Science, and Technical Subjects
- **Social Studies:** American History, Modern World History, Economics and Financial Literacy, Contemporary World Issues, World Geography
- **Science:** Physical Science, Biology, Chemistry
- **Mathematics:** Number & Quantity, Ratios & Proportional Relationships

RESOURCES:

Ohio State – <http://www.osu.edu> and Ohio Cooperative Extension – <http://extension.osu.edu>

Franklin County Local Food Council - <http://www.fclocalfoodcouncil.org/>

Local Matters – <http://www.localmatters.org>

Recipe Nutrition Calculation - <http://recipenutrition.com/>

2019-2020

Challenge 1



Challenging the way we understand and live with nature

Green Cuisine: Conservatory Cook-off

Franklin Park Conservatory
and Botanical Gardens

Challenging the way we understand and live with nature

Student(s) Name(s):

School:

Name of Dish:

Please submit your recipe on a separate sheet of paper. The narrative (150-word minimum; 350-word maximum) can be written below or submitted on a separate sheet of paper. Be sure to include: from which garden, market or food source every recipe ingredient was obtained, a cost estimate for all ingredients, and map out the origins of the major ingredients. You are encouraged to explain why an ethnic cuisine or certain ingredients were chosen.



THE FARMCHILD CHALLENGE



The Fairchild Challenge at Franklin Park Conservatory
Challenge 1 – Green Cuisine: Many-Cultured Team:



DIRECTIONS
 Please initial in the space to the right and, referring to the guidelines, write your score for each category in the space provided. Write any comments in the space designated.

RECIPE/PRODUCT		(50 POINTS)	Judge Initials	Comments
<ul style="list-style-type: none"> • Ingredients used are primarily locally sourced, fresh, good quality and of high nutritional value • Demonstrates understanding of best cooking practices and appropriate food safety techniques • Flavorful, cooked properly, seasoned & spiced appropriately, interesting and/or unique taste 		<u>50</u>		
RECIPE/NARRATIVE		(50 POINTS)		
<ul style="list-style-type: none"> • Produced clear and coherent writing in which development, organization, and style are appropriate to task and purpose • Demonstrate command of the conventions of standard English and usage, capitalization, punctuation, and spelling • Accurate & clear measurements and cooking instructions 		<u>50</u>		
Critical Thinking		(25 POINTS)		
<ul style="list-style-type: none"> • Expresses point of view with reasoning and evidence • Demonstrates understanding of relationships between concepts • Demonstrates ability to combine ingredients into a harmonious, tasty, nutritional dish 		<u>25</u>		
Originality		(50 POINTS)		
<ul style="list-style-type: none"> • Demonstrates their own ideas and experiences creatively and persuasively • Shows imagination and ingenuity with cooking in relation to topic • Successfully creates delicious ethnically-representative dish 		<u>50</u>		
FOR STAFF USE ONLY:				
1. AVERAGE: JUDGES' SCORES FROM SUBTOTALS		<u>175</u>		
		<u>175</u>		

THE FAIRCHILD CHALLENGE



The Fairchild Challenge at Franklin Park Conservatory
Challenge 1 – Green Cuisine: Many-Cultured
 Team: _____

Franklin Park Conservatory
 and Botanical Gardens



School Name:

Student:

REQUIREMENTS	(MAXIMUM 25 PTS)
<input type="checkbox"/> Recipe and narrative (length of 150 min.-350 words max.)	8 points _____
<input type="checkbox"/> Recipe includes ingredients, quantities, measurements, tools, actions, nutritional info and cost estimate; identify where ingredients were obtained	8 points _____
<input type="checkbox"/> Must be student's own words and own recipe (subject to school plagiarism policies)	4 points _____
<input type="checkbox"/> Include title, school and student(s) name(s)	3 points _____
<input type="checkbox"/> On-time entry submission	2 points _____

Meets Requirements (circle one): Y / N

Requirements
Total:

25

FOR STAFF USE ONLY:

1. AVERAGE: JUDGE'S SCORES FROM SUBTOTALS _____

2. TOTAL SCORE: ADD REQUIREMENTS
 TO AVERAGE

200



CHALLENGE #2 – ENVIRONMENTAL PHOTO NARRATIVE

For Individuals or Groups (max. 5 people per Group); Maximum points: 600 (max. 3 entries per school)

VISUAL ARTS: ENVIRONMENTAL PHOTOGRAPHY

YOUR CHALLENGE: Photographs are a powerful tool that draw attention to a complex problem and convey a message through storytelling. Students will investigate Central Ohio environmental issues through photojournalism. Your challenge is to submit a photo narrative and description that captures the visual representation of a chosen environmental issue in the natural environment near your school, your neighborhood or your community.

ENTRY SUBMISSION: Wednesday, December 11, 2019

Submit all materials to Franklin Park Conservatory. Electronic submissions will be accepted. To be included:

- (a) [Challenge #2 Entry Form](#). Maximum three (3) entries per school (max. 200 points per entry)
- (b) Maximum 5 photographs emailed to mmiller@fpconservatory.org
- (c) [Description & Bibliography](#)

ENTRY REQUIREMENTS:

- On-time entry submissions; All entries must include the student(s)' name(s), grade and school on the back of the entry and on the Description/Bibliography
- Maximum of five (5) photographs to tell your story. Photographs must feature a Central Ohio issue that relates to the environment/sustainability. Original photos may be color or black-and-white. School must email digital copies in .jpg or .png format and must be at least 1,600 pixels wide (if a horizontal image) or 1,600 (if a vertical image). There is a maximum file size of 50 MB per image. Images should be in RGB or sRGB format. Computer-generated designs will not be accepted.
- Typed description must be minimum 100 words & maximum 150 words and include: explaining the link with environmental sustainability and/or a solution to the problem/issue.
- Bibliography citing at least two sources, following MLA or APA format

ADDITIONAL INFORMATION:

Environmental issues to research can include land based (terrestrial) or stream and lake based (aquatic)

EVALUATION CRITERIA:

For a detailed list of evaluation criteria and points awarded for this challenge, please review the sample [Evaluation Sheet](#) in this packet.

STATE STANDARDS:

Ohio Common Core Strands and Topics that can be addressed while participating in the *Environmental Phot Narrative Challenge*.

- **Visual Arts:** *Perceiving/Knowing, Producing/Performing, Responding/Reflecting*
- **Science:** *Biology, Environmental Science, Life Science, Physical Science & Geology*
- **Language Arts:** *Reading, Writing, Literacy in Science, Research & Media Skills*

RESOURCES:

- [Franklin Park Conservatory and Botanical Gardens](#)
- [Photography and the Environment](#)
- [Conservation Photography](#)

THE FAIRCHILD CHALLENGE

The Fairchild Challenge at Franklin Park Conservatory
Challenge #2 – Environmental Photography

Franklin Park Conservatory
and Botanical Gardens



Reserve the space on your answer sheet and have with you.

DIRECTIONS

Please initial in the space to the right and, referring to the guidelines, write your score for each category in the space provided. Write any comments in the space designated.

RESEARCH/KNOWLEDGE OF SCIENCE (60 POINTS)		Judge Initials Score	Comments
<ul style="list-style-type: none"> Breadth and depth of research apparent in Photographs and Description presented by student Student demonstrates an understanding of the chosen environmental issue 	<u>60</u>		
ARTISTRY/TECHNICAL ABILITY (60 POINTS)			
<ul style="list-style-type: none"> Photographs have a natural flow to the narrative that reflects the chosen environmental issue Photographs display technical ability, are clear, well organized and contain artistic touches 	<u>60</u>		
CREATIVITY (60 POINTS)			
<ul style="list-style-type: none"> Photographic style, content and information presented in interesting or unexpected ways Written description creatively presented 	<u>60</u>		
FOR STAFF USE ONLY: 1. <u>AVERAGE:</u> JUDGES' SCORES FROM SUBTOTALS			
<u>180</u>	<u>180</u>		

Judges, please use the following scale to rate each item below:

Outstanding = 50-60 points Average = 40-50 points Poor = 30-40 points Missing = 0-30 points

THE FARM CHILD CHALLENGE

Developed in cooperation with the National Farm Bureau

The Fairchild Challenge at Franklin Park Conservatory
Challenge #2 – Environmental Photography

Franklin Park Conservatory
and Botanical Gardens



School Name: _____ Student(s): _____

REQUIREMENTS

(MAXIMUM 20 PTS)

- Maximum of five (5) photographs submitted. Photographs feature a Central Ohio issue that relates to the environment/sustainability. Original photos are color or black-and-white..... 5 points _____
- Description document with 100 min & 150 max words; Bibliography citing at least 2 sources 5 points _____
- MLA or APA style _____
- Emailed digital copies in .jpg or .png format, at least 1,600 pixels wide (if horizontal image) or 1,600 (if vertical image). Maximum file size of 50 MB per image. Images should be in RGB or sRGB format. Computer-generated designs will not be accepted 5 points _____
- Include title, school and student(s) name(s) on back of entry 3 points _____
- On-time entry submission 2 points _____

Meets Requirements (circle one): Y / N

Requirements
Total:

_____	/	_____
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FOR STAFF USE ONLY:

1. AVERAGE: JUDGES' SCORES FROM SUBTOTALS _____

2. TOTAL SCORE: ADD REQUIREMENTS

_____	/	_____
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CHALLENGE #3 – SUSTAINABILITY AT YOUR SCHOOL

For Groups; maximum points: 300 (1 Entry Per School)

COMMUNITY ACTION/WRITING: REPORT

YOUR CHALLENGE: Two years ago, Franklin Park Conservatory and Botanical Gardens formed an inter-departmental Green Team to identify and put in action environmental and sustainability measures to reduce waste, reduce energy consumption, and increase recycling and composting. Your challenge is to visualize how your school can do the same. Form a group of interested students; identify the current situation at your school in terms of waste, recycling, energy use and composting - which may include a waste audit; and create a report that includes: a description of your school's current situation, your green goals, suggested actions, changes in procedures and/or policies, and any actions taken by your group.

ENTRY SUBMISSION: Wednesday, March 25, 2020

Electronically submit the following:

[Challenge #3 Entry Form](#)

Sustainability Report

ENTRY REQUIREMENTS:

- Sustainability Report must include school name, Challenge #3, 2019–2020, and a student participation list (including their roles).
- Report must be a Word document submitted via email to mmiller@fpconservatory.org or submitted on a flashdrive. Minimum 1,500 words and maximum 2,500 words.
- Report must contain a minimum of 2 photos embedded in the Word document. Photos should show before & after, an action being carried out, represent your team in action, or clearly indicate a task or action undertaken. Graphs, tables and visual representation of data is encouraged.
- Bibliography must be submitted citing at least three sources, following MLA or APA format, and include school name
- On-time entry submission (late entries may not receive points)

ADDITIONAL INFORMATION:

- Students are encouraged to explain how the recommended actions in their Sustainability Report could be acted upon with a timeline included.

EVALUATION CRITERIA: For a detailed list of evaluation criteria and points awarded for this challenge, please review the sample [Evaluation Sheet](#) in this packet.

STATE STANDARDS: Ohio Common Core Strands and Topics that can be addressed while participating in the *Sustainability at Your School* Challenge:

- **Science:** *Biology, Environmental Science, Life Science, Physical Science & Geology*
- **Language Arts:** *Reading, Writing, Literacy in Science, Research & Media Skills*

RESOURCES:

- [Sustainability in Schools](#)
- [Sustainability Action Plan](#)
- [Green Flag Program](#)



The Fairchild Challenge at Franklin Park Conservatory

Franklin Park Conservatory
and Botanical Gardens

Friends of the Franklin Park Conservatory and Botanical Gardens



School:



DIRECTIONS

Please initial in the space to the right and, referring to the guidelines, write your score for each category in the space provided. Write any comments in the space designated; comments can also be made directly onto submitted work for scars.

CREATIVITY

- Video grabs audiences' attention
- Presented in a creative and original manner
- Sufficient, credible and relevant

(80 POINTS)

✓90

Judge Initials
Score

Comments

OBSERVATION & INTERPRETATION

(70 POINTS)

- Observations reflect sufficient, credible and relevant information
- Presentation of how their design addresses increased food production in urban environments is clear and well-organized

✓70

PRESENTATION

(70 POINTS)

- Video is well-edited
- Video is student-created at age-appropriate level
- Shows evidence of collaboration and teamwork

✓70

Critical Thinking

(40 POINTS)

- Expressed point of view with reasoning and evidence
- Demonstrated understanding of relationships between concepts
- Demonstrated ability to synthesize data and generalize

✓40

FOR STAFF USE ONLY: 1. AVERAGE: JUDGES' SCORES FROM SUBTOTALS

✓270

SUBTOTAL	
	✓270

THE FARCHILD CHALLENGE

The Fairchild Challenge at Franklin Park Conservatory Challenge #3 – Sustainability Report



Downloaded from www.JuniorScholar.org by [REDACTED] on [REDACTED]

School:

School Name:

Student:

(MAXIMUM 30 PTS)

REQUIREMENTS

- Video opening credits include school name, "Challenge 3" and "2018–2019" and a list of participating students 7 points _____
- All students in a Group submission take active role in the video 4 points _____
- Video is maximum 4 minutes and minimum 1 minute in length; video addresses growing food ~~demands~~ of society and how their design will increase food production in urban environments. 8 points _____
- Business Plan follows template 5 points _____
- Bibliography cites 3 sources and follows MLA or APA format 3 points _____
- On-time entry submission 3 points _____

Meets Requirements (circle one): Y / N

Requirements
Total:

30

30

FOR STAFF USE ONLY:

1. AVERAGE: JUDGES' SCORES FROM SUBTOTALS _____

2. TOTAL SCORE: ADD REQUIREMENTS
TO AVERAGE

300



CHALLENGE #4 - GROWING BEYOND EARTH

For Groups - Maximum points: 450 (max. 1 entry per school) ** see point breakdown below**

CITIZEN SCIENCE/POSTER/VIDEO

YOUR CHALLENGE: For four years, middle and high school students have participated in the NASA-partnered Growing Beyond Earth (GBE) project, and have collected growth data for over 130 cultivars of edible plants. Two of those cultivars were selected and recently grown on ISS. As we continue to test new varieties to determine which may be optimal for growing in space, this year's experiments will compare different cultivars of the same species for their biomass production and health. Upon completion of a 28-day trial, analyze your data and propose a new research experiment based on your first growth cycle. Submit a proposal to Fairchild for review and upon approval, conduct a second trial following your new proposal, analyze the data and include these new results in your poster & presentation.

PARTICIPATION REQUIREMENTS:

- Teachers must attend a mandatory workshop at Franklin Park Conservatory on **Saturday, September 14, 2019**.
- Register as a [Growing Beyond Earth National Partner](#)
- Teachers attending the workshop must submit a [Memorandum of Agreement](#) if they plan to participate in this challenge.
- Teachers must use and become familiar with [GBE Webpage](#)
- Students must submit data, research poster and research poster presentation (video) for complete entry submission.

FINAL DATA ENTRY & PROPOSAL DUE: Wednesday, December 4, 2019 by 5pm

Electronically submit the following:

- [GBE Challenge 4 Entry Form](#) (Entry Form states HS but is for both HS & MS)
- Data

Email the following to mmiller@fpconservatory.org

- Draft proposal (Maximum 1 page, includes: testable hypothesis, identification of control and variable, materials, and brief explanation of methods)

DATA REQUIREMENTS:

- All required data fields complete and valid. Any irregularities or empty fields accompanied by an explanation
- Weekly student-created, scientifically-relevant tweets including the school name, @GrowBeyondEarth, and descriptions of any photographs, illustrations or graphs
- Data entries updated weekly on provided Google data sheets
- On-time entry submission

POSTER ENTRY SUBMISSION: Wednesday, April 22, 2020 by 5pm

Delivered to Franklin Park Conservatory in person or via certified mail (electronic submission of design is not accepted)

- Research Poster ([poster template](#))

Email or electronically submit the following:

- Trial 2 raw data sheets
- Poster presentation video (see Video Requirements)

RESEARCH POSTER REQUIREMENTS:

- Descriptive title, students' name and school name clearly printed on entry
- Research poster must be 48" x 36", and must follow [supplied] poster template
- Research poster must include abstract, introduction, materials and methods, results, discussion, conclusion, and at least 3 references
- Photographs/illustrations/graphs must include captions
- On-time entry submission (late entries may not receive points)

YouTube video uploaded to www.youtube.com

VIDEO REQUIREMENTS:

- Video entry must begin with opening credits including school name, GBE Challenge #4, 2019–2020, and a student participation list (including their roles). Video must be uploaded to www.youtube.com
- All students in Group submissions must at least appear in video if not taking an active role in video
- Videos must be five (5) minutes maximum and three (3) minutes minimum in length; and must address the submitted GBE research poster including abstract, introduction, materials and methods, results, discussion, conclusion, and at least 3 references
- Video must show all Photographs/illustrations/graphs and mention captions
- On-time entry submission (late entries may not receive points)

REQUIRED TEACHER WORKSHOP DATE: Saturday, September 14, 2019 from 9am-12pm at Franklin Park Conservatory's Wells Barn. During this time teachers will learn research protocols, and receive data sheet access and materials. Registration for this workshop closes on Thursday, September 12, 2019 at 5pm. [Register for the Teacher Workshop here.](#)

CHAT WITH A SCIENTIST: We will be hosting an *OPTIONAL* online chat with NASA scientists about the Growing ~~Beyond~~ Earth project. Teachers participating in GBE will receive an invitation a week before each chat with instructions on how to participate. See below for a list of scheduled dates:

- Thursday Oct. 25, 2019 4pm EST - Plants in microgravity, (general information, history)
- Thursday, Nov. 14, 2019 2pm EST - Experiment designs around veggies (prep for proposal, ground testing)
- Thursday, January 16, 2020 4pm EST - TBD
- Thursday, Feb. 20, 2020 2pm EST - TBD
- Thursday, March 12, 2020 4pm EST - Tips for a scientific presentation
- Thursday, April 16, 2020 4pm EST – TENTATIVE TBD

EVALUATION CRITERIA: For a detailed list of evaluation criteria and points awarded for this challenge, please review the sample [Evaluation Sheet](#) and [Video Evaluation Sheet](#) in this packet.

450 Total Points Breakdown:

Data: Max 150 pts

Draft Proposal: Max 50 pts

Poster: Max 150 pts

Video Presentation: Max 100 pts

THE FAIRCHILD CHALLENGE



The Fairchild Challenge at Franklin Park Conservatory
Challenge #4 – Growing Beyond Earth

Challenging the way we understand and live with nature



DIRECTIONS

Please initial in the space to the right and, referring to the guidelines, write your score for each category in the space provided. Write any comments in the space designated. Fold along the dark lines so that your score is not visible to the other judges.

SCIENTIFIC RESEARCH

- Poster reflects both experimental findings and scientific research
- Student(s) demonstrate clear understanding of the scientific method
- Student(s) describe experiment and its significance
- Sufficient, credible and relevant information presented

(55 POINTS)

/55

PRESENTATION

- Poster clearly presents and elaborates on the following: abstract, introduction (hypothesis, independent and dependent variables, controls), methods and materials, results (data/observations), discussion, conclusion and references.
- Results are presented through graphs, tables and/or charts
- Poster is student-authored, easily read and understood, concise, and visually appealing

(35 POINTS)

/35

WRITING SKILLS

- Information is written in a clear and organized manner
- Proper grammar, punctuation and spelling used

(35 POINTS)

/35

FOR STAFF USE ONLY:

1. AVERAGE: JUDGES' SCORES FROM SUBTOTALS

125

/125

SUBTOTAL

Judges, please use the following scale to rate each item below:

Outstanding = 46-55 points	Good = 36-45 points	Average = 26-35 points	Poor = 5-25 points
Outstanding = 31-35 points	Good = 26-30 points	Average = 21-25 points	Poor = 5-20 points

THE FAIRCHILD CHALLENGE

Changing the way we understand and live with nature

The Fairchild Challenge at Franklin Park Conservatory Challenge #4 – Growing Beyond Earth

School: _____

School: _____

DATA REQUIREMENTS

- Draft proposal submitted (Maximum 1 pg. includes: testable hypothesis and methods) 50 points _____
- Data entries updated weekly on provided Google data sheets 40 points _____
- All appropriate data fields complete and valid (irregularities or empty fields accompanied by an explanation) 40 points _____
- Weekly student-created, scientifically-relevant tweets* including the school name @GrowBeyondEarth and Descriptions of any photographs, illustrations, or graphs 40 points _____
- On-time entry submission 30 points _____

Meets Requirements (circle one): Y / N

Requirements
Total: 200

School: _____

RESEARCH POSTER REQUIREMENTS

(25 POINTS)

- Poster size is 48 x 36 inches 5 points _____
- Photographs/illustrations/graphs must include captions 4 points _____
- Descriptive title, student's name and school name clearly printed on entry 4 points _____
- Poster follows provided template (includes: abstract, introduction, materials and methods, results, discussion, conclusion and references) 6 points _____
- Research poster must follow GBE poster template 4 points _____
- On-time entry submission 2 points _____

Requirements
Total: 25

Meets Requirements (circle one): Y / N

FOR STAFF USE ONLY:

1. AVERAGE JUDGES' SCORES FROM SUBTOTALS _____
2. TOTAL SCORE: ADD REQUIREMENTS TO AVERAGE _____



Changing the way we understand and live with nature

The Fairchild Challenge at Franklin Park Conservatory
Challenge #4 – Growing Beyond Earth
School: _____

School Name: _____
Student(s) Name(s): _____ (60 POINTS)

- | KNOWLEDGE & RESEARCH | (60 POINTS) |
|--|-------------|
| <ul style="list-style-type: none">• Student(s) demonstrate knowledge about project and results• Student(s) incorporates research into experiment/conclusion• Presentation touches upon all parts of research poster• Student(s) demonstrates having researched multiple plant varieties• Student(s) answers potential questions using evidence from research and results | |

STYLE & EXECUTION	(40 POINTS)
<ul style="list-style-type: none">• Presentation is informative and professional• Presentation style is fluid and clear• Student(s) are organized and work well together	

FOR STAFF USE ONLY:

1. AVERAGE: JUDGES' SCORES FROM SUBTOTALS _____
2. TOTAL SCORE: ADD REQUIREMENTS TO AVERAGE _____

100

Award Placement: Please specify the rationale for awarding this entry.



The Fairchild Challenge at Franklin Park Conservatory
Challenge 4 – Growing Beyond Earth
School: _____

Poster Number: _____

School Name: _____

Title: _____

Judge Name: _____

Score the following criteria: 20 = outstanding; 1= poor

Please include notes that can be passed on to students for future improvement.

_____ Quality of project

(Poster reflects both experimental findings and scientific research; Students incorporate research into experiment conclusion)

- Project/study was rigorous
- Project/study was innovative and complex

_____ Explained importance of project

(Students demonstrate knowledge about project and results; Students describe experiment and its significance; Presentation touches upon all parts of the research poster)

Based on student's explanation:

- Project/study explored issues relevant to gravitational and space research
- Project/study findings will make an important contribution to the field

_____ Verbal skills / Response to questions

(Presentation is informative and professional; Presentation style is fluid and clear; Students are organized and work well together)

- Voice was easy to hear and understand
- Verbal pace was not too fast or too slow
- Students were organized in their presentation
- Students knew the background to project

_____ Graphic composition

(Poster is student- authored easily read and understood, concise and visually appealing)

- Poster was graphically interesting (varied fonts, introduced color or varied gray tones)
- Poster was pleasing to view (not visually busy or confusing)
- Font size was easy to read – not too small to view from a distance
- Display showed composition qualities of balance and proportion/scale

_____ Scientific Research

(Students demonstrate clear understanding of the scientific method)

_____ TOTAL POINTS (100 pts. maximum)

Comments:



Fairchild Challenge at Franklin Park Conservatory 2019 - 2020



ENTRY FORM FOR MIDDLE & HIGH SCHOOLS

This form can be completed by filling out all requested information and submitting by email (preferred), or by printing form and submitting hard-copy (NOTE: Please be sure to print an extra copy for your records).

Challenge Number and Name: _____

School submits (please check off each required item):

- Challenge entry form
- Maximum entries per school (*please see individual challenge for specific information*)

School: _____

Entry #1 – Name of student: _____ Grade: _____

Entry #2 – Name of student: _____ Grade: _____

Entry #3 – Name of student: _____ Grade: _____

In what class/club was this challenge introduced? (*be specific*): _____

Estimated total number of students at your school who attempted this challenge: _____

This challenge was presented to students as (*check all that apply*):

- classwork
- homework
- extracurricular
- required assignment
- optional assignment

Contact Teacher for this Challenge: _____

Discipline(s): _____

Email: _____ Daytime Phone: _____ Ext: _____

Names (first and last) and emails of additional teachers participating in this challenge:

- I acknowledge that I have read, understood and abided by all rules and program policies (see program booklet) of The Fairchild Challenge at Franklin Park Conservatory.

Teacher's signature _____ Date _____

By 5:00pm of Challenge Deadline, complete and return this entry form to:
Franklin Park Conservatory • 1777 East Broad St. • Columbus, OH 43203



The Fairchild Challenge 2019-2020 Franklin Park Conservatory



Franklin Park Conservatory
and Botanical Gardens

High School Registration Form

One registration form is required per high school. To register for the Fairchild Challenge 2019-2020, please list two teachers from different disciplines to coordinate Fairchild Challenge activities at your school. You must also list an administrator and inform your administration about your school's participation in this year's Fairchild Challenge. After completion, print a copy for your records. Schools will receive an email confirmation within two business days. If no confirmation is received, please mail or fax a copy to the address or fax number below.

Please view our Fairchild Challenge packet for basic information and contact Dr. Mark Miller, 614-715-8030, mmiller@fpconservatory.org, with any questions before submitting your school's registration.

Full name of school: _____

School's street address: _____

City, Zip: _____

Type of school: (Check all applicable boxes)

9-12 Public Non-Public

Is your school a Title 1 school? Yes No

Total enrollment in grades 9-12: _____

teacher name	discipline	e-mail	phone & extension
1.			
2.			
3. administrator			

Additional Teachers (please also include discipline, e-mail and phone number)

Yes, I have informed my school's administrative team about our intended participation in the 2019-2020 Fairchild Challenge. Your name: _____

Please print a copy of the completed form for your records and then submit form by email, fax, or US mail.

Franklin Park Conservatory
Attn: Dr. Mark Miller
1777 E. Broad St.
Columbus, OH 43203

E-mail: mmiller@fpconservatory.org
Fax: 614-715-8195



The Fairchild Challenge 2019-2020 Franklin Park Conservatory

Middle School Registration Form



Franklin Park Conservatory
and Botanical Gardens

One registration form is required per middle school. To register for the Fairchild Challenge 2019-2020, please list two teachers from different disciplines to coordinate Fairchild Challenge activities at your school. You must also list an administrator and inform your administration about your school's participation in this year's Fairchild Challenge. After completion, print a copy for your records. Schools will receive an email confirmation within two business days. If no confirmation is received, please mail or fax a copy to the address or fax number below.

Please view our Fairchild Challenge packet for basic information and contact Dr. Mark Miller, 614-715-8030, mmiller@fpconservatory.org, with any questions before submitting your school's registration.

Full name of school: _____

School's street address: _____

City, Zip: _____

Type of school: (Fill in the blank and Check all applicable boxes)

Grade span (ex: 6-8) _____ Public Non-Public

Total enrollment # in all grades designated "Middle School": _____

teacher name	discipline	e-mail	phone & extension
1.			
2.			
3. administrator			

Additional Teachers (please also include discipline, e-mail and phone number)

Yes, I have informed my school's administrative team about our intended participation in the 2019-2020 Fairchild Challenge. Your name: _____

Please print a copy of the completed form for your records and then submit form by email, fax, or US mail.

Franklin Park Conservatory

Attn: Dr. Mark Miller

1777 E. Broad St.

Columbus, OH 43203

E-mail: mmiller@fpconservatory.org Fax: 614-715-8195