STEM SUMMER CAMP
1 week of fun and learning!

Brochure
2016

Science | Technology | Engineering | Math
We aim to build girls' self-esteem and engage them in stimulating STEM activities. We enable the girls to work in teams to solve real-life challenges and provide experiences for them to succeed.
ROBOTICS
TECHNOLOGY
Computer Programming
Mechanics
Public Speaking
Science
Teamwork
Confidence

DON’T MISS OUT! RESERVE A PLACE TODAY!
TABLE OF CONTENTS

Introduction P5
Selection Criteria P8
Application Process P9
Selection Process P10
Safety and Security P10
Best Behavior Agreement P10
Sample Daily Schedule P11
Outcomes P12
Partners and Mentors P13
Contact Details P17
Highlights from 2016 P18
Highlights from 2015 P19
INTRODUCTION

The science, technology, engineering, and math (STEM) fields can play a critical role in driving job creation, higher earning potential, and poverty reduction in Nigeria. The versatile skills acquired by students in STEM fields make them attractive to employers across a variety of sectors. With strong analytical thinking and robust problem-solving abilities, these students often have better employment opportunities and have greater access to well-paying jobs.

Nigeria, Africa’s largest economy, is a resource-rich country with a growing industrial and manufacturing base. Nigeria requires a large number of highly skilled professionals to help her diversify her economy and harness her potential in the non-oil sectors, for sustained economic growth and poverty reduction. Students in the STEM fields can become leaders in their chosen fields. There are numerous opportunities available to them and they can select an exciting career path that fulfills their intellectual curiosity, stimulates innovation, and transforms them into problem-solvers in an increasingly complex and competitive economy. For instance, they can undertake research and develop new drugs to treat and cure various illnesses; they can identify novel means to harness Nigeria’s vast energy resources to meet the country’s growing energy needs, they can design processes and machines to facilitate manufacturing, and can devise innovative solutions to many of life’s basic challenges.

The Visiola Foundation’s STEM Summer Camp is an exciting program designed to pique the interest of girls in the STEM fields. The camp typically holds in Abuja in August. We also plan to hold shorter
versions during public holidays throughout the year. Campers will learn valuable skills in critical thinking, problem solving, and teamwork as they are taught to view the world through the lens of STEM subjects. They will also be mentored and will be provided with the tools with which to succeed in their future careers. Their confidence levels will grow as they realize that they can become innovators who will make a difference in their communities. The aim of the program is to encourage more girls to pursue STEM careers by gaining their interest early and facilitating their success.

The summer camp will comprise engaging classroom coursework, practical team activities, fun games, and a group project. Students will learn basic concepts in computer programming, science, math, and engineering. They will additionally put that knowledge into practice by using technology creatively, building robots, water purification systems, solar powered devices, and much more. They will be encouraged to develop their own projects, which could be a simple solution to a pressing challenge that they have observed in their communities. At the end of the camp, the students will no longer view science and math as boring, but will instead realize that the concepts are interesting, exciting, and are relevant to their daily lives. In addition, the girls will be coached to become better public speakers and to give engaging presentations.

Global research notes that women with mentors, role models, and networks forged from an early age and growing throughout their careers tend to be more successful than their peers.

The specific goals of the STEM Summer Camp include:

- To increase girls’ competency in conducting scientific investigations and critical thinking/reasoning.
- To increase girls’ facility and mastery in STEM skills.
- To increase girls’ confidence and interest in conducting STEM activities.
- To increase girls’ understanding of the multiple applications of STEM in everyday life.
- To increase girls’ awareness of STEM careers and interest in pursuing STEM careers.

“Today’s Learner; Tomorrow’s Leader.”
SELECTION CRITERIA

Admission to the Visiola Foundation’s STEM Summer Camp will be through a competitive selection process that identifies high-potential candidates who will be coached in their life-long pursuits.

Applications will be accepted from eligible candidates from across Africa who meet the following criteria:

- Must be an African national
- Must be between the ages of 13 and 18
- Must have at least a “B” average
- Must be available for the full duration of the summer camp

Parents and/or guardians are responsible for paying the camp fee as well as providing transportation for their children to and from the camp venue.
APPLICATION PROCESS

- Prospective campers can download and complete the application form from the Foundation’s website: www.visiolafoundation.org

- Applicants should send their complete application package to admin@visiolafoundation.org

The application package should include the following:

- The completed application form

- A typed 500 word essay explaining the applicant’s interest in the STEM Summer Camp and what she hopes to achieve

- Academic record for the past year

- Statement of support from parent or guardian

- Explanation of financial circumstance if you attend a public school and require a scholarship
SELECTION PROCESS

The selection committee will review all applications and the 50 finalists will be notified of the committee’s decision.

SAFETY AND SECURITY

The Visiola Foundation assigns the utmost importance to the safety and security of all campers, staff, and volunteers. Appropriate security measures are in place.

BEST BEHAVIOR AGREEMENT

The Visiola Foundation requires all campers to be on their best behavior at all times to ensure that everyone enjoys a positive experience where they are free to learn and have fun. The campers will therefore be presented with a “Best Behavior Agreement,” which details our expectations for their comportment, including respect for their peers and the facilitators. Each camper will be required to sign the agreement and abide by it for the duration of the camp. It is expected that this will also have a long-term positive impact on their professionalism and interpersonal skills, which will further their personal and professional success.
SAMPLE DAILY SCHEDULE

The camp will run from 9:00 a.m. to 5:00 p.m. daily with evening group activities from 7:00 – 9:00 p.m.

The following table provides an indicative schedule of activities:

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:00 - 9:45 AM</td>
<td>Group “Pow Wow” and daily challenge</td>
</tr>
<tr>
<td>9:45 - 10:00 AM</td>
<td>Tea break</td>
</tr>
<tr>
<td>10:00 - 12:00 AM</td>
<td>STEM concepts</td>
</tr>
<tr>
<td>12:00 - 1:00 PM</td>
<td>Lunch</td>
</tr>
<tr>
<td>1:00 - 2:00 PM</td>
<td>STEM Mentor Hangout</td>
</tr>
<tr>
<td>2:00 – 4:00 PM</td>
<td>STEM practical applications</td>
</tr>
<tr>
<td>4:00 - 5:00 PM</td>
<td>Games/Group exercise</td>
</tr>
</tbody>
</table>

The campers will benefit from a daily “Pow Wow” to motivate and encourage them. Their successes from the previous day will be publicly...
acknowledged to build the girls’ confidence and self-esteem. They will be given a daily challenge to solve a simulated problem in Nigeria, on which they will report the following day. They will also be exposed to successful professionals in the STEM fields who will share their personal experiences and help the girls better visualize the possibility of succeeding in a STEM career.

**OUTCOMES**

Out-of-school STEM programs that specifically target girls have proved successful in a number of countries worldwide. By combining formal and informal instruction with challenging activities, these programs often lead to a stronger understanding of STEM concepts, improved academic performance, and a higher interest in pursuing careers in the STEM fields.

The Visiola Foundation’s STEM Summer Camp aims to produce the following outcomes:

- Improved attitudes toward STEM fields and careers, while tackling inhibiting gender stereotypes.
- Increased STEM knowledge and skills, evidenced by improved academic performance.
- Increased confidence in studying STEM subjects.
- Increased number of young women graduating from university with STEM degrees.
- Increased number of women leading successful careers in the STEM fields.
- Increased number of female innovators tackling important challenges to improve socio-economic development in Nigeria and Africa.
PARTNERS AND MENTORS

DON'T MISS OUT! RESERVE A PLACE TODAY!
Engineer Yewande Akinola ~ Design Engineer at LaingO’Rourke; 2012 Young Woman Engineer of the Year; and host of UK TV’s "Impossible Engineering" (UK)

Dr. Johanna Amunjela ~ Namibian Scientist and PhD Scholar focused on cancer research at the University of Aberdeen (UK)

Ms. Mudiame Apoe ~ Computer Scientist and Vice President, Goldman Sachs (UK)

Engineer Marieme Doukoure-Amoa ~ Industrial Engineer and Manager, Raytheon Corporation (USA)
Dr. Rabia Sa’id ~ 2015 Elsevier Foundation Award Winner for her research in nanoparticle physics, atmospheric physics and space weather physics; Deputy Dean, Bayero University, Kano (Nigeria)

Mr. Francis O’size ~ Biochemist Operations Director, e² Young Engineers (Nigeria)

Engineer Lola Soyebo Harris ~ Chemical Engineer; New Product Development Manager at Wholesome Sweeteners (USA)

Dr. Jeremy Goettel ~ Instructor in Pediatrics, Boston Children’s Hospital Harvard Medical School (USA)
SECURE YOUR DAUGHTER’S FUTURE!

GIVE HER A HEAD START ABOVE HER PEERS!

ENROLL HER IN THE STEM SUMMER CAMP TODAY!!!

DON’T MISS OUT! RESERVE A PLACE TODAY!
HIGHLIGHTS FROM 2016
The STEM Summer Camp creates an environment where risk is rewarded, curiosity is encouraged, and creativity is expected. At the end of the camp, the girls will be more confident and better networked. The camp will ultimately help to make girls more successful and will inspire them to take on the world’s greatest challenges.