



PHOENIX
SPACE



SUNFLOWER

IMPACT REPORT

The Sunflower Trust
STEM Spark Course
January – July 2025

Course Overview

Between January and July 2025, Sunflower Trust delivered the Phoenix Space STEM Spark course in the Kibera slums outside Nairobi, Kenya. This course is designed to **introduce refugee and marginalised students to fun and exciting STEM topics** under the theme of space science. The custom Airbus Foundation/Phoenix Space curriculum blends theoretical knowledge and essential STEM competencies with hands-on experiments. **251 girls aged 9 to 15 years old completed the course.**



"I have learned more about space and now have confidence to teach others about what I have learned."

Loice, 10

Student Demographics



100%

From marginalised
communities`

251

Students

12

Average Age



100%

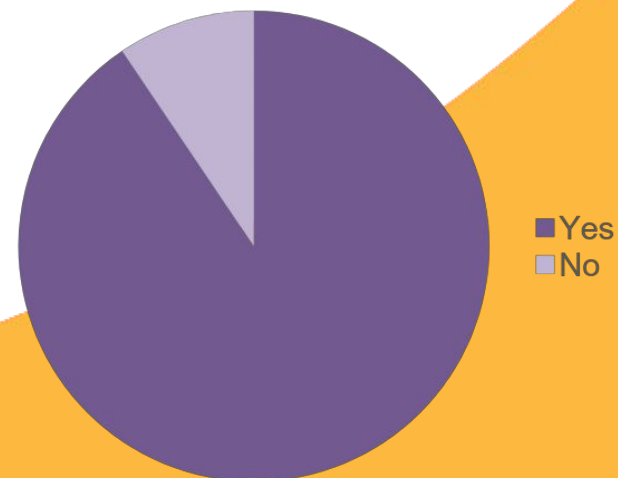


All students are of
Kenyan descent living
in Kibera, Nairobi.

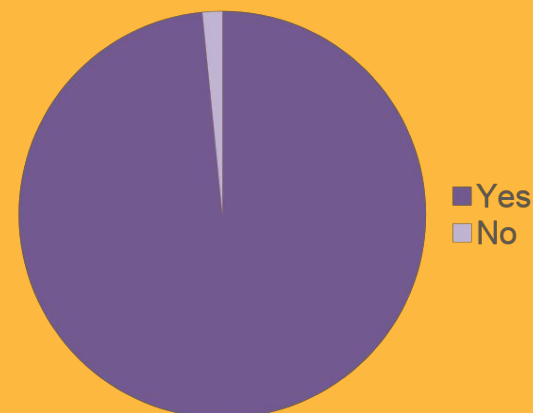
Student Education Data



Do you have any gaps in education?



Are you currently enrolled in school?



Course details

Course Length

18

learning hours

over

6

weeks

A 2-part course

Part 1: Airbus Foundation Lessons: In each of the first practical lessons students learn about some aspect of a fictional mission to a space hotel. Students learn through a combination of a video-assisted practical lessons followed by a theoretical question.

Part 2: Phoenix Space Lessons: 5 lessons to equip students with fundamental knowledge and skills in physics, programming and maths.



Course details



Areas of Focus

Gravity and Other Forces

Scientific Method

Heat & Heat Transfer

Weight & Combined Forces

Geometry

Computer programming

Practical Exercises

Investigating air resistance with different objects

Testing theories using homemade objects

Making matchbox rockets

Making composite materials to measure weight

Making different shapes with paper and tape

Scratch lessons on laptops

Student and Teacher feedback

100%

of students would recommend this course to their friends

100%

of teachers would like this programme to be a continuous course for their learners, having found it fills gaps in curriculum

“How could the course be improved?”

56%

of students want more time! (more time for lessons, experiments and laptops)



Skills development

97%

Believe learning
science, maths and
computers is
**important for their
future.**

96%

Are more
comfortable applying
critical thinking skills
to the data presented
to them in class.

95%

Are more
comfortable
collaborating and
sharing opinions with
their peers.

95%

Are more confident
practically applying
what they've learned in
their daily life.

92%

Are better able to find
solutions to problems
and will **persevere** until
they do.

93%

Are more comfortable
applying **analytical skills**
– taking information and
figuring-out its meaning.

Our Students' Voices



“

I have learned how to use a computer! Now I want to learn more about STEM subjects.

Diana, 12

“

I have learned that multiple forces can be affecting an object at the same time.

Caisy, 14

“

We learned how to make composite materials and that they are used to make rockets lighter.

Jayline, 12

“

I now feel more able to figure things out and ask questions when I don't understand something.

Abigael, 11

Our Students' Voices



“

I joined the STEM Spark course because I am entering secondary school and plan to study STEM subjects there.

Following this course, my dream is to become an astronaut. I want to be the first Kenyan woman to visit space.

Sherly, 14



“

In STEM Spark, we learned that a rocket plus an aeroplane makes a space plane.

I learned about the airfoil shape that is designed to generate motion through water and air, and two forces; lift and drag.

Dorcas, 14

The School Teachers' Voices

“

The learners who take this course return to school more motivated to learn. And those who are falling behind their peers have motivation to catch-up.

Teacher William, St. Stephan Educational Centre

“

The STEM Spark course has helped to fill gaps in our curriculum. Firstly, the students have ample time in the course to learn and interact with computers, so much so, they are assisting others students. It has helped the students change their attitudes toward STEM subjects; particularly, Maths, which has been made easy and enjoyable.

Teacher Mirriam, Miracle and Victory Academy

“

The course has exposed and built student morale and confidence, as well as the students' ability to express themselves.

Teacher Max, Global One Kibera School

“

The STEM Spark aligns with the new Competency-Based Curriculum, where STEM is a mandatory track at the secondary school level.

Teacher Victor, St. Stephan Educational Centre



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1206724.