


# Class Report

## Bissau, 2021/2022

### Guinea-Bissau



# At a glance

**12** pairs student-scientist   
**74** letters exchanged  
**5194 km** distance flown by letters that travelled the furthest (between Osasco, Brasil, and Bissau)

## Students: evaluating perceptions

**100%** would like to attend higher education

**83%** would like to learn more about science

## Students: what they say

**100%** see science as “fun”

**92%** see science as “important”

**57%** believe they could become scientists one day, if they wanted to

## First time that...

**100%** students met a scientist

**77%** students wrote or received a letter

*“I’m so excited I got my first letter; suddenly, replying is the most important deadline I have”*

Scientists classified letter exchanges as:

61% fun | 67% gratifying

56% challenging | 44% inspiring

## Scientists

Coming from Angola, Brazil, Cape Verde, Italy, Portugal, and São Tomé and Príncipe

Living in 6 different countries in 3 continents

## Students: favourite topics

**Computers** (40%)



**School** (40%)



# 1. The first class in Guinea-Bissau

At first, a partnership was established between Cartas com Ciência and ADESCOM – Agir para o DESEnvolvimento de COMunidades (Acting for Communities' Development) – an association in Guinea-Bissau that acts in the areas of health and human rights, education, community development, and food and environmental health, especially focusing on women, children, and young people, particularly those that carry or are orphans due to HIV. The idea of establishing a letter exchange programme with children and young people accompanied by ADESCOM has then come up, and the teacher Marcelino Có has promptly shown willingness to mediate the programme in Bissau. The associative context in which the program took place has granted it more flexibility, namely the several sessions that took place around the letters, as well as a programme extension until the end of 2022.



## Class responsible

**Marcelino Có**

Teacher

Courses: Mathematics and Portuguese



## Coordination

**Sónia Silva**

Portuguese Researcher and Teacher in Portugal

## Supporting the teacher

**Capec de Jesus Tomás**

Educational Resources Team,  
Cartas com Ciência

**Mónica Lourenço**

Researcher at CIDTFF,  
University of Aveiro



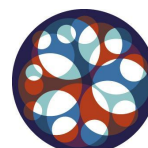
## Association

**ADESCOM**

Website: <https://adescomongafrica.blogspot.com/>

Facebook page: <https://www.facebook.com/adescomgb/>

*The letter exchange programme with the Bissau class of 2021/2022 was specifically supported by the Biochemical Society through a Scientific Outreach Grant.*



**BIOCHEMICAL  
SOCIETY**



## 12 Students

They are 9 to 14 years old, and visit ADESCOM weekly. According to the class responsible's record, 25% are female and 75% are male.

### Scientific Capital

85% of the students have people in their family who have attended higher education, however, 100% met a scientist for the first time through the letter exchanges. 17% reported having scientists in the family.

### Linguistic Capital

All students (100%) speak Guinea-Bissau Creole and Portuguese at home. For 77% it was the first time they wrote or received a letter.

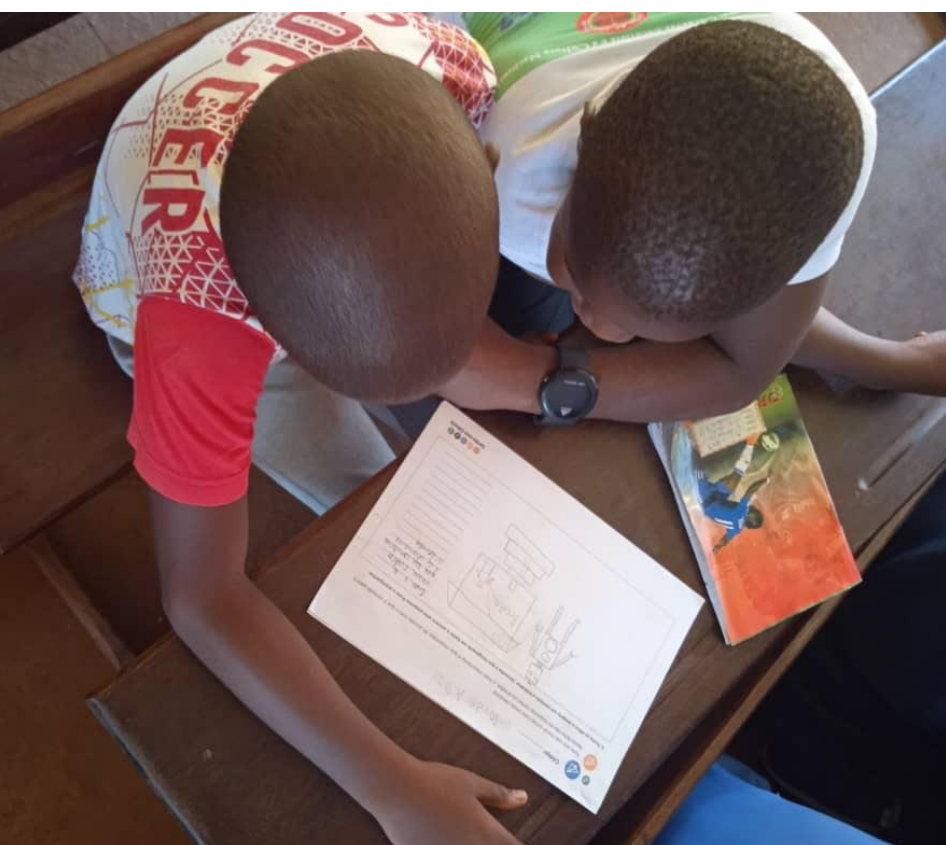
## 12 Scientists

They are at different stages of their careers: 27% are Ph.D. students and at least 40% have a Ph.D. (27% teach in higher education); 80% of these scientists work in academia. 53% identify as female, 13% as male, and 33% did not answer. 27% of the total identify as being or having been a first-generation higher education student (whose family has no academic history in higher education).

### Cultural Capital

With nationalities from four of the nine Portuguese-speaking countries: Angola (7%), Brazil (14%), Cape Verde (7%), Portugal (74%), and São Tomé and Príncipe (7%); two scientists have dual nationality. They live all over the world: Brazil, Spain, The Netherlands, Portugal, São Tomé and Príncipe, and Switzerland.

*Left, students fill in the impact sheet at the beginning of the programme. Right, excerpt from a scientist's letter.*





## 2. Student-Scientist Pairing

To form each student-scientist pair, the "scientific" interests of each student are taken into account, ascertained through a questionnaire with a list of science-related topics (each student chooses up to three). In cases of a tie, the selection of scientists is made based on the students' and scientists' hobbies.

### Scientific Interests

The most popular topics chosen by students as their first choice were Climate, Computers, and School (20% each). Considering all three options, the most popular topics chosen were Computers and School (40% each), followed by Climate, Pollution, and Health (33% each).

### Aspirations

The most popular professional areas among these students are Law and Education (40% each), followed by Architecture, Engineering, and Medicine (33% each). One student selected "Scientist" and specified "Chemist".

### Hobbies

The most popular hobbies amongst the students were playing and reading (67% each), followed by making or watching sports (27%).

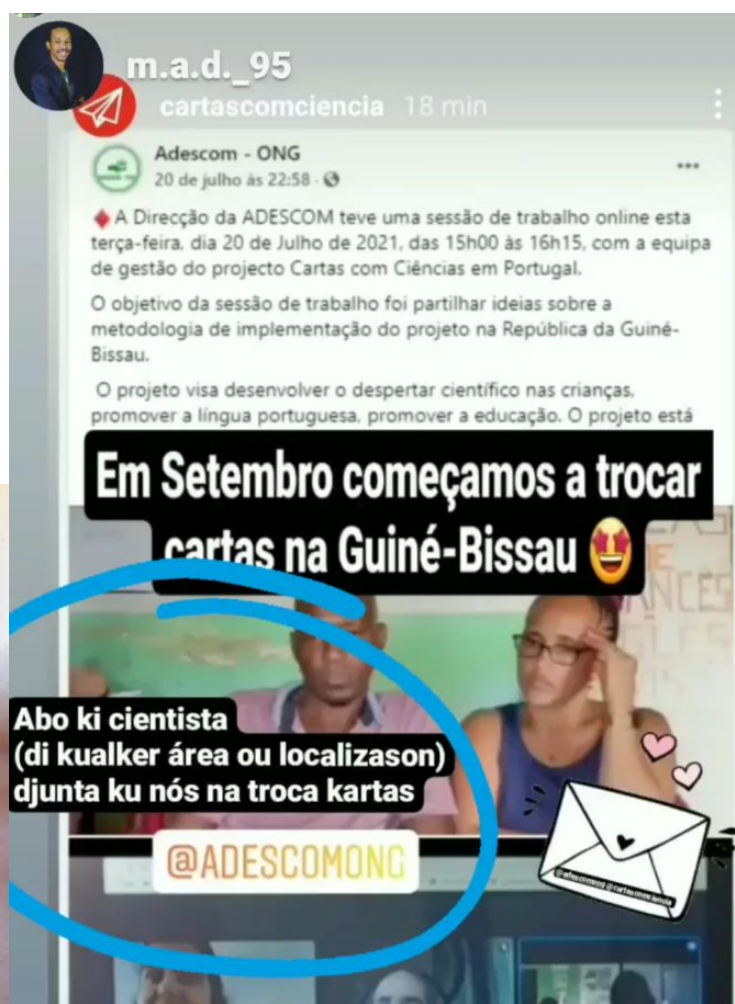
### Research Areas

The most represented area of knowledge among the scientists paired with this class is Biology/Biochemistry (40%). Other areas include Climate Science, Marine Science, Communication Science, Education Science, Engineering, Linguistics, Mathematics, Psychology, and Chemistry.

### Hobbies

The hobbies most chosen by these scientists were also reading (60%), riding the bike (47%), and listening to music (47%).

Left, session to fill in the impact sheets at the beginning of the programme.  
Right, member of Cartas com Ciência's team makes a post that includes invitation in Guinea-Bissau Creole for scientists to join the programme.



### 3. Students: what do they say?

Each student wrote the first letter of the program, which gave them freedom to partly determine the course of the conversion. They share mostly about their daily lives, but also about curiosities they have regarding science and the countries and cultures where each scientist lives. In several letters from this class, a social and political concern is also noticeable, which is perhaps linked to its associative context.

*In the future, I intend to be a scientist to help other children with the same and different problems.*

**Student**

*I would like to be a teacher to be able to contribute for the well-being of my society and my country.*

**Student**

*I admire and regard as extraordinary the people who work with science because they can make a society move forward.*

**Student**

*I very much enjoy reading action books, watching TV, playing football, learning about chemistry. In the future, I think about becoming a scientist in physics-chemistry.*

**Student**

*I am happy to exchange letters with you. I hope we can establish a relation of strong friendship and exchange, and perhaps one day meet in person.*

**Student**

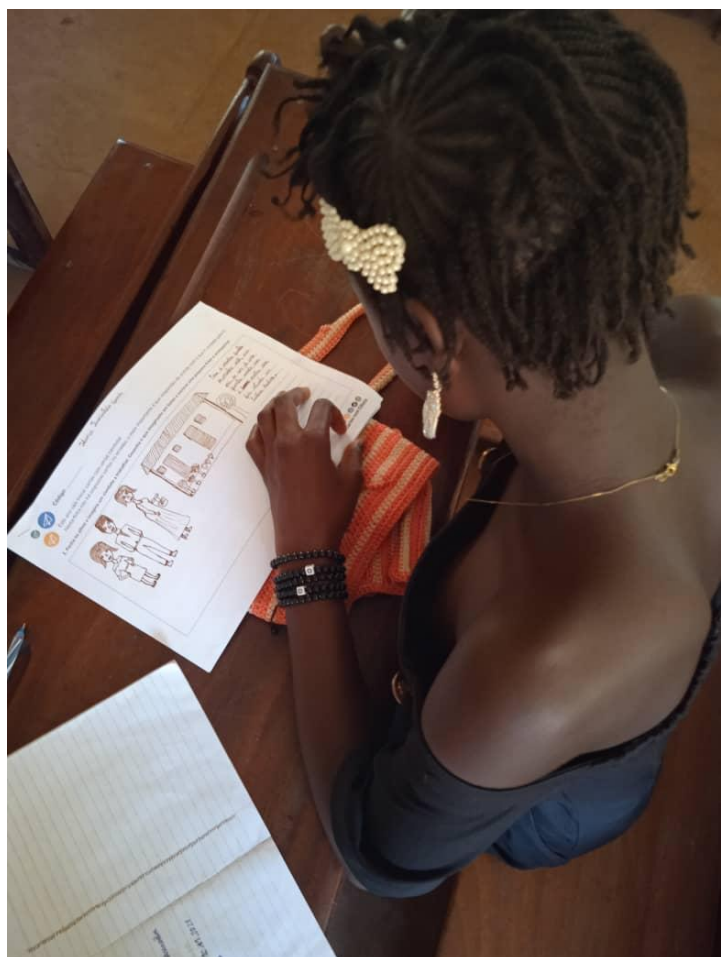
*When I get home, I conduct the experience we learnt in class to see what happens and I note it down in a notebook.*

**Student**

*I would like to learn about sunscreen from you.*

**Student**

*Student finishing their drawing and sentence about how they imagine a scientist at work.*



### 3. Students: what do they say?

*When I finish my education, I would like to go to law school to defend the weakest and also contribute to my country.*

**Student**

*What is the level of scientific development in your country, what subjects do children study, and what is their development level?*

**Student**

*My favourite season is the rainy season, because the weather becomes gorgeous and I like to sleep listening to the sound of the rain falling on the ceiling.*

**Student**

*From your letter, I learnt things I did not know before about the microscope.*

**Student**

#### Exchanging letters with a scientist, I would like...

*... to meet and work together one day, for the benefit of the world.*

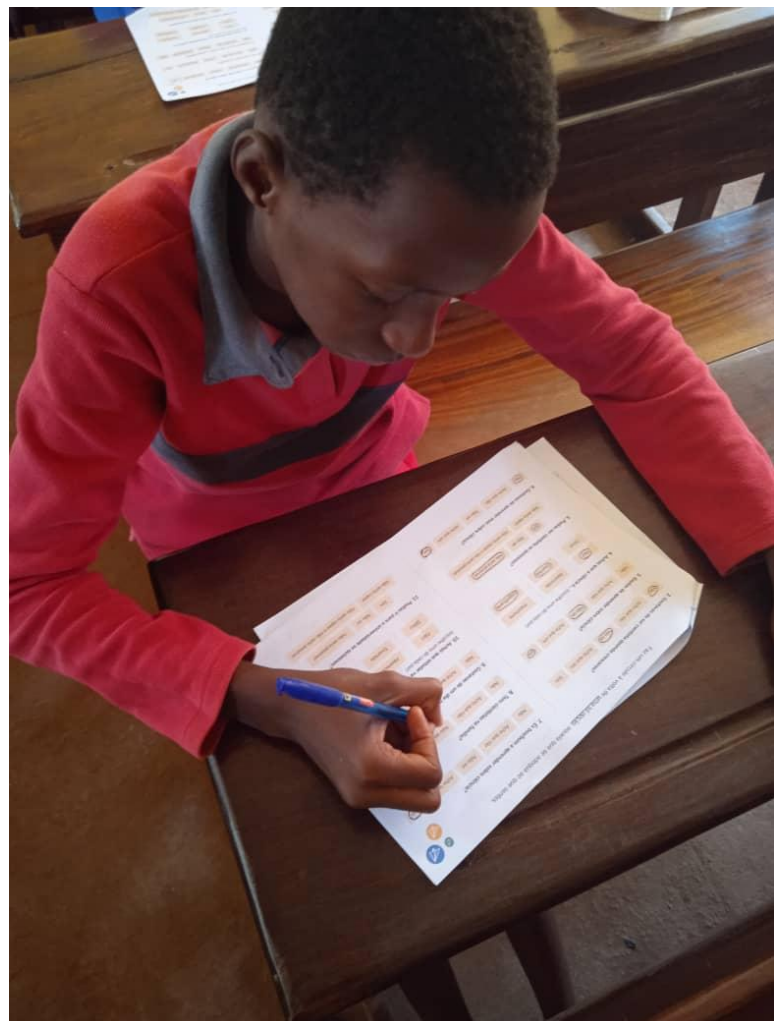
**Student**

*... to learn and get to know your culture.*

**Student**

*... to exchange ideas, become friends, and also watch a scientist developing their own experience.*

**Student**



*Student fills in the impact sheet at the beginning of the programme. The sheet gathers perceptions about science, higher education, and the Portuguese language.*



## 4. Students: attitudes and perceptions

13 students answered a questionnaire in the beginning of the programme (1 changed city and had to leave the programme), allowing us to assess their perceptions regarding science, higher education, and the Portuguese language. At the end of the programme, they will fill in a similar questionnaire, which will allow performing a comparison analysis.

### Science is...

At the beginning of the programme, 100% considered science to be "fun" (as opposed to "boring") and 92% considered science to be "important" (as opposed to "insignificant"). As for whether science is "easy" or "difficult," opinions at the beginning of the year were more divided: 69% and 31%, respectively.

### Learning about science

At the beginning of the programme, on a scale about whether they like learning about science, 75% said "yes" or "I think so." As for whether they liked to learn *more* about science, most (83%) said "yes" (71%) or "I think so" (29%).

All (100%) said "yes" or "I think so" on a scale about their perception of being "good" at learning about science.

### Being a scientist one day: wanting vs being able

On a scale about whether they would like to be a scientist one day, 67% said "yes" or "I think so."

We also asked them if they could be a scientist one day if they wanted to. At the beginning of the programme, 58% said yes, 25% said they did not know, and 17% said it would not be possible. The answer "I would not be able" was never chosen. Among the two students who said it would not be possible, both would like to be scientists one day.

### Studying in "university"

At the beginning of the programme, most felt that studying at "university" (as an approximation to higher education, as a more familiar word) could be "fun" (77%) and "important" (92%) – as opposed to "boring" and "meaningless". As for "easy" or "difficult", the opinions were more divided: 54% and 46%, respectively.

As for whether they would like to go into higher education, 100% said "yes". We also asked them if they could go to university if they wanted to: 58% said yes, 17% said they did not know, and 25% said it would not be possible. The answer "I would not be able" was never chosen.

### Literacy and Portuguese language

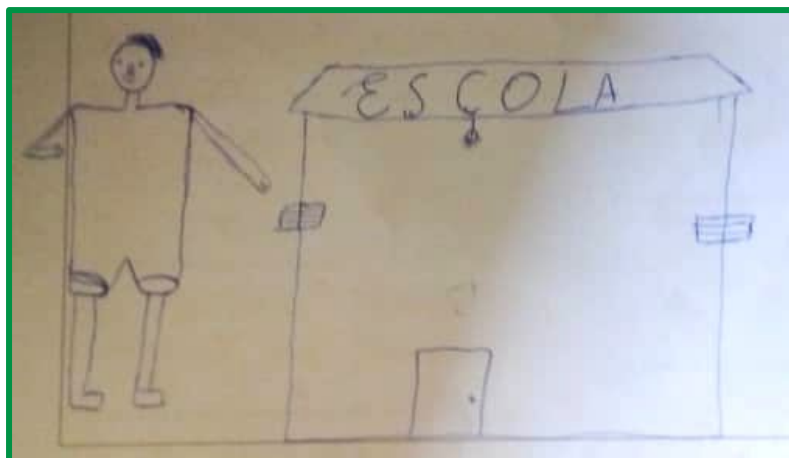
The entire class (100%) expressed enjoying learning Portuguese (language spoken at home for 100% of the students together with Guinea-Bissau Creole). 77% considered it "important" to speak Portuguese (as opposed to "insignificant"), 92% considered it "fun" to speak Portuguese (as opposed to "boring"), and 85% considered it "easy" (as opposed to "difficult").

As for writing as an activity in classroom or during leisure time, 77% considered it an "important" activity, 77% an "easy" activity, and 69% a "fun" activity.

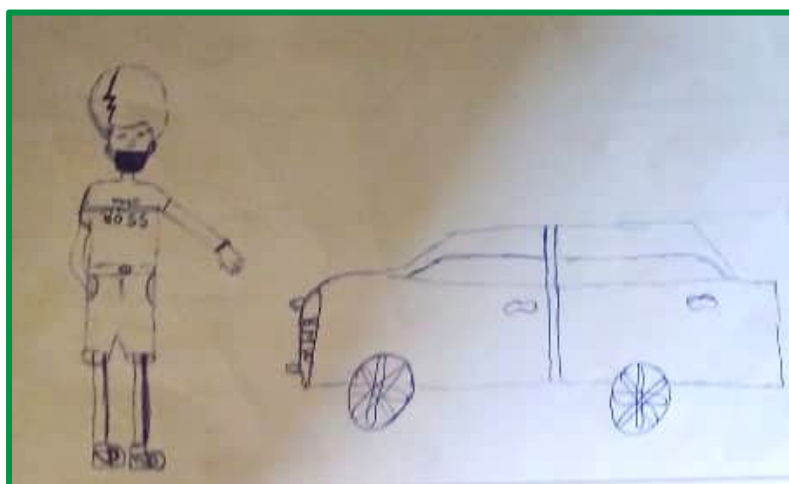


## 5. Perceptions about being a scientist

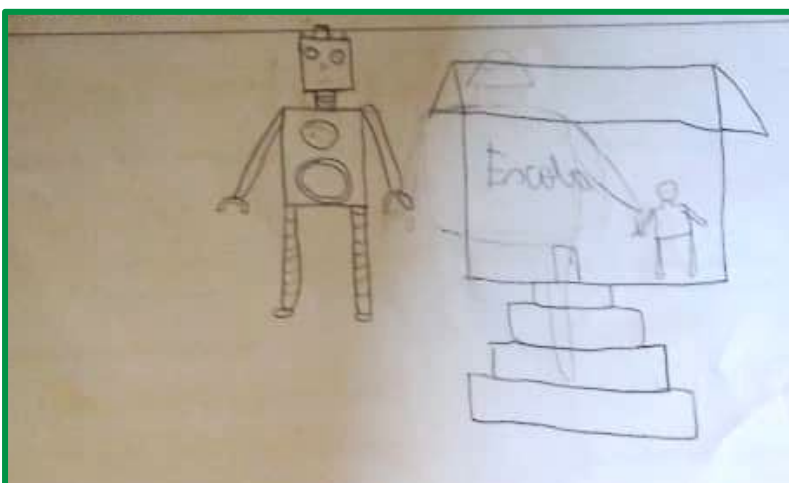
Each student accepts the challenge to close their eyes, imagine a scientist at work, and then draw what they imagined (writing a sentence about what they drew). Most students (77%) drew their family, their house and/or school. The remaining three students drew the following:



*"I and this drawing as a good scientist I like to draw but I like to play football"*



*"I drew this picture about the scientist who invented their own machine to improve and change the ways of daily interaction, and I would also like to be a great scientist who gives their all to the world, especially my country G. Bissau."*



*"This is my robot, which I built, and my name is Orlando"*

## 6. Scientists: testimonies

During the digital submission of each of their letters, we invited scientists to choose fitting adjectives (from a list) to describe the experience each round. The most chosen were “gratifying” (67%), “fun” (61%), and “challenging” (56%). Also chosen were “inspiring” (44%) and “easy” (11%). The adjectives “boring”, “tiring”, “difficult”, and “stressful” were never chosen. We also collected social media posts from corresponding scientists.

 **Silvana Munzi**  
@MunziSilvana

I'm so excited, I received my first #CartasComCiencia!  
I have two weeks to answer and, suddenly, this is the most important deadline I have.  
#CientistasPorCorrespondencia @CartasCiencia #scicomm

*My second letter is still under construction – in this round we talked further about the sunscreens that I studied, and I encouraged my new friend not to give up on his dream to become a scientist and help other children.*

**Scientist Natércia Lopes**

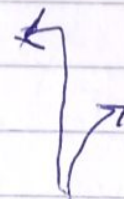
 **Laura Luzia @yeastiegirl** · 22 fev.  
Great initiative of @CartasCiencia

My letter its already on its way to Guiné Bissau! 🚀  
#CartasComCiencia  
#CientistasPorCorrespondencia



Cartas com Ciência

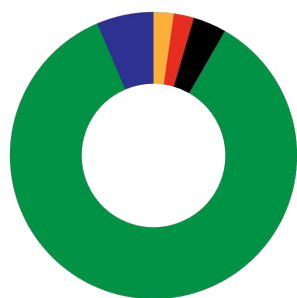
*Excerpt from a scientist's letter.*



Liquenes do meu jardim. Lichens from my garden.

## 7. Expenses

Expenses for this program totaled 2615 € (factoring in as well expenses with human resources, which do not exist yet de facto; the management of the programme(s) is done by volunteers for now). The portion spent on postage was less than expected due to the fact that some letters were sent with carriers. A significant portion of the expenses was covered by the Biochemical Society through a Scientific Outreach Grant, and the remainder by individual sponsorships.



- Program management, human resources (2260 €) - *pro bono*
- Marketing and communication (150 €)
- Training of scientists (60 €)
- Postage (60 €)
- Data storage services (85 €)

## 8. Other considerations

This report was prepared by the Cartas com Ciência team. The data presented here was obtained from questionnaires given to stakeholders at different times throughout the programme, or from shares made to the team or on social media. Student sentences were sometimes corrected for spelling and edited for clarity, but were not corrected for syntax or sentence agreement.

We recognize our inability to use completely gender-neutral language, but we tried to do so whenever possible.

*Introductory class about the programme of Cartas com Ciência.*





## 9. Acknowledgments

We would like to express our many thanks to those who contributed, in various ways, to make this letter exchange programme possible:

- Teacher Marcelino Có
- ADESCOM and Ms. Mussa Jaló
- Mail carriers: Fatumata Baldé, Mamadu Djaló, Baltazar Cá
- Capece de Jesus Tomás and Mónica Lourenço for following-up on the programme
- Gislaine Teixeira, Margarida Victor, and Patrícia Galupa for the support preparing this report
- Participants: scientists and students, and their families

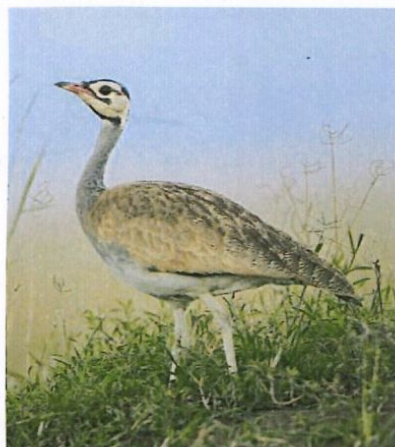
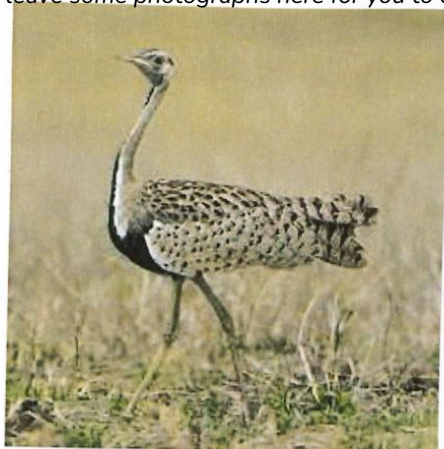
We thank the whole ecosystem of Cartas com Ciência: [team](#), [partners](#), [patrons](#), [sponsors](#), followers and supporters, and the rest of the community.

We also thank the Biochemical Society for the financial support especially dedicated to this letter exchange program through a Scientific Outreach Grant.



*Excerpt from a scientist's letter, where she mentions there are bustard birds in Guinea-Bissau.*

Vou deixar umas fotografias para veres se sabes que aves são e se já as viste, ou se conheces alguém que as viu.  
*will leave some photographs here for you to check if you know which birds they are and if you have seen them or know someone who did.*





*This report was translated from Portuguese by Filipa Borges (Cartas com Ciência)*



*Letters with Science is an organization incubated by Native Scientist and inspired by the American project Letters to a Pre-Scientist.*

[www.cartascomciencia.org](http://www.cartascomciencia.org)

[info@cartascomciencia.org](mailto:info@cartascomciencia.org)



# Class Report

## Huambo, 2021/2022

### Angola



**Cartas com Ciência**

# At a glance

**48** pairs student-scientist



**192** letters exchanged

**14468 km** distance flow by letters that travelled the furthest (between Coquitlam, Canada and Huambo)

## Students: evaluating perceptions

**96%** would like to attend higher education

**94%** would like to learn more about science

## Students: what they say

**83%** see science as “fun”

**100%** see science as “important”

**62%** believe they could become scientist one day, if they wanted to

## First time that...

**77%** students met a scientist

**74%** students wrote or received a letter

*“My pen pal had lots of questions for me, which is great and shows how curious he is”*

Scientists classified letter exchanges as:

63% fun | 67% gratifying

51% challenging | 62% inspiring

## Scientists

Coming from Angola, Brasil, Cabo Verde, Espanha, Itália, Moçambique, Portugal, São Tomé and Príncipe

Living in 12 different countries in 4 continents

## Students: favourite topics



**Music** (50%)

**Sport** (33%)



**Computers** (31%)





# 1. The first class in Angola

The idea for the implementation of this program was born with the scientist Anil Vila, who, in a session to clarify doubts during the training of corresponding scientists of Cartas com Ciência, made himself available to mediate the efforts in the field. This is how Professor Silveira was arrived at, and thanks to the diligence and dedication of both, the program with the largest number of student-scientist pairs was developed. Due to logistical delays, not three but two rounds were held, but both were marked by opening parties with very original letters – the first with “a toast” to science (with juice!) and a work of art prepared by students, the second during the prom. With science a little more present in their daily lives this year, each student is now heading to a new school to continue their secondary education.

## Class representative

**Silveira Ferreira**

Teacher

Courses: Portuguese

## Anil Vila

Researcher and Teacher

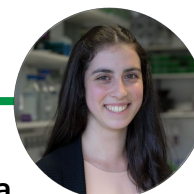
ISP Humanities and technology (Huambo)



## Coordination

**Catarina Pechincha**

Portuguese researcher in  
Germany



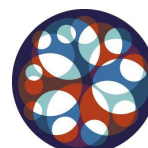
*In addition to being able to have a closer contact with science, as a Portuguese teacher, I believe that it may also be a reason to enjoy and learn more about the techniques of textual production and lexical enrichment.*

**Teacher Silveira Ferreira**

## School

School of São José of Cluny — Huambo

*The letter exchange program with the Huambo class of 2021/2022 was specifically supported by the Biochemical Society through a Scientific Outreach Grant.*



**BIOCHEMICAL  
SOCIETY**



## 48 Students

They are 14 to 16 years old, and attend the 9<sup>th</sup> year of schooling in the Angolan education system. According to the class representative's record, 56% are female and 44% are male.

### Scientific Capital

96% of the students have people in their family who have attended higher education, however, 77% met a scientist for the first time through the letter exchanges. 23% reported having scientists in the family.

### Linguistic Capital

All students (100%) speaks Portuguese, English (13%), Spanish (2%) and Umbundo at home. 15% reported speaks more than one language at home. For 74% it was the first time they wrote or received a letter.

## 48 Scientists

They are at different stages of their careers: 46% are students (PhD students, master or interns) and 38% have a PhD (25% teach in higher education); 81% works in academia; 56% identify as female, 8% as male and 35% did not answer. 33% of the total identify as being or having been a first-generation higher education student (whose family has no academic history in higher education).

### Cultural Capital

With nationalities from six of nine Portuguese-speaking countries: Angola (2%), Brazil (38%), Cape Verde (7%), Mozambique (8%), Portugal (44%) and São Tomé and Príncipe (2%); one scientist has dual nationality. They live all over the world: Germany, Angola, Australia, Brazil, Cape Verde, Canada, Hungary, England, Island, Mozambique, Portugal and Switzerland.



Photos from the first letter opening party: on the left, school with a group of students with letters in hand; on the right, a “toast to science” with juice.

## 2. Student-Scientist Pairing

To form each student-scientist pair, the "scientific" interests of each student are taken into account, ascertained through a questionnaire with a list of science-related topics (each student chooses up to three). In cases of a tie, the selection of scientists is made based on the students' and scientists' hobbies.

### Scientific Interests

The most popular topics chosen by students as their choice were Music/Sound (15%), Mathematic and Statistic (13%), Books (10%) and Health (10%). Considering all three options, the most popular topics chosen were Music/Sound (50%), Sports (33%) and Computers (31%).

### Aspirations

The most popular professional areas among these students are Engineering (48%), law (42%) and Medicine (40%). Twelve students (25%) choose "Scientist" and one of those specified "Biologist".

### Hobbies

The most popular hobbies amongst the students were listening music (58%), watching TV, series or movies (42%) and cooking (27%).

### Research Areas

The most represented areas of knowledge among the scientists paired with this class were Biology/Biochemistry (35%), Physics (13%), Education Sciences (8%), Mathematics (8%), Medicine (8%) and Sociology (8%). Other areas include: Archeology, Computer Science, Communication Sciences, Climate Sciences, Marine Sciences, Engineering, History, Linguistics and Technology.

### Hobbies

The hobbies most chosen by these scientists were reading (79%), watching TV, series or movies (69%) and listening music (50%), in alignment with students' hobbies.



Photo on the left with students holding canvas painted by the class symbolizing letter writing around the world; photo on the right of the second card opening party, which coincided with the class prom.

### 3. Students: what do they say?

The expectation of the class regarding the exchange of letters are very varied – some students want to know more about science in general, others expect answers to very specific scientific questions. Others show curiosity about their path and career, or their answers denote the conceptions they have about what it means to be a scientist.

#### When exchanging letters with a scientist, I would like...

*... to learn more about the human body and nature.*

**Student**

*... to know more about the origin of the universe.*

**Student**

*... to learn more about how the human mind works.*

**Student**

*...to learn things that are unknown to me.*

**Student**

*... that there was a positive interaction, that I can extract as much knowledge as possible and that I have an idea of what it is like to be a scientist.*

**Student**

*... to meet a computer researcher who works with hardware and software, who knows the structure of various hardware and that we can talk about it.*

**Student**

*... to know if there is still a possibility for chemical elements of the periodic table from the seventh group being discovered, by whom, in what year, and why they were not discovered before.*

**Student**

*... to know why scientists always like to go the long way.*

**Students**

*... to know if it is easy to be a scientist and why they chose to be.*

**Student**

*... to know the secret of being a good scientist.*

**Student**

*... to know what his life is like, if he is rich.*

**Student**

*... to know some techniques on how to be smart, successful, and also how to decide.*

**Student**

## 4. Students: attitudes and perceptions

47 students (98%) answered a questionnaire in the beginning of the program, allowing us to assess whether their perceptions regarding science, higher education, and the Portuguese language. It was not possible to complete a similar form at the end of the program due to timing and logistical issues.

### Science is...

At the beginning of the program, 100% considered science to be “important” (as opposed to “insignificant”), 83% considered science to be “fun” (as opposed to “boring”) e 81% considered science as “difficult” (as opposed to “easy”).

### Learning about science

At the beginning of the program, on a scale about whether they like learning about science, 96% answered “yes” or “I think so”. As for whether they liked to learn more about science, the majority (94%) said “yes” or “I think so”. At the beginning of the program, 89% answered “yes” or “I think so” on a scale about their perception of being “good” at learning about science.

### Being scientist for a day: like vs power

On a scale on whether they would like to be a scientist one day, at the beginning of the program 74% answered “yes” or “I think so”.

We also asked them if they could be scientists one day if they wanted to. At the beginning of the program, 62% said yes, 23% said they didn't know and 15% said it wouldn't be possible and/or wouldn't be able to. Of the latter, more than half say they don't want to be a scientist one day, but all say they enjoy learning about science.

### Studying at “University”

At the beginning of the program, the majority considered that studying at “university” (as an approach to higher education, as a more familiar word) could be “fun” (91%) and “important” (94%) - as opposed to “boring” and “insignificant”. Regarding “easy” or “difficult”, opinions were more divided: 55% and 45%, respectively.

As for whether they would like to enter higher education, 96% said “yes” or “I think so”. We also asked them if they could go to university if they wanted to: 87% said yes and 13% said they didn't know. The answers “would not be able” or “would not be possible” were never chosen.

### Literacy and Portuguese language

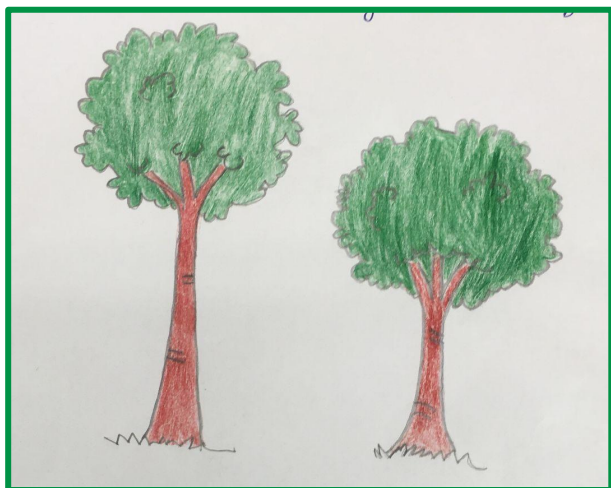
The majority (87%) said they enjoyed learning Portuguese (the language spoken at home by 100% of students). 96% considered it “important” to speak Portuguese (as opposed to “insignificant”), 83% considered it to be “fun” (as opposed to “boring”) and 72% considered it to be “difficult” (as opposed to “easy”).

As for writing, as an activity in the classroom or in leisure time, 91% considered it to be an “important” activity, 72% an “easy” activity and 70% a “fun” activity.

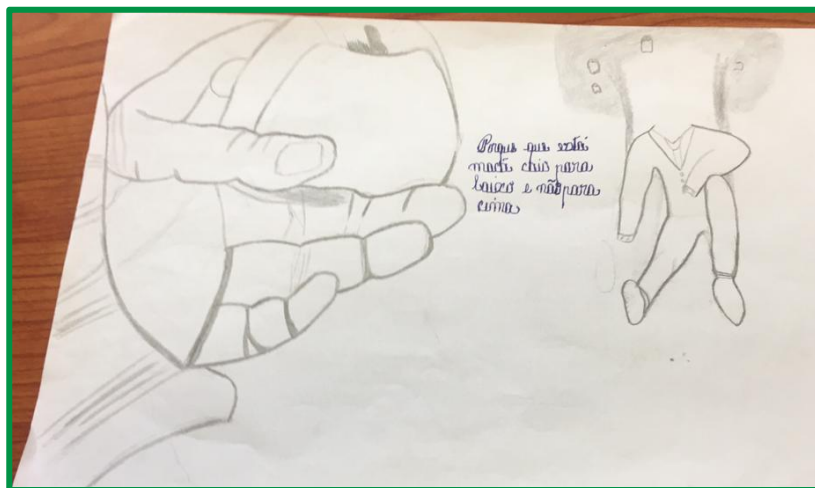


## 5. Perceptions about being scientist

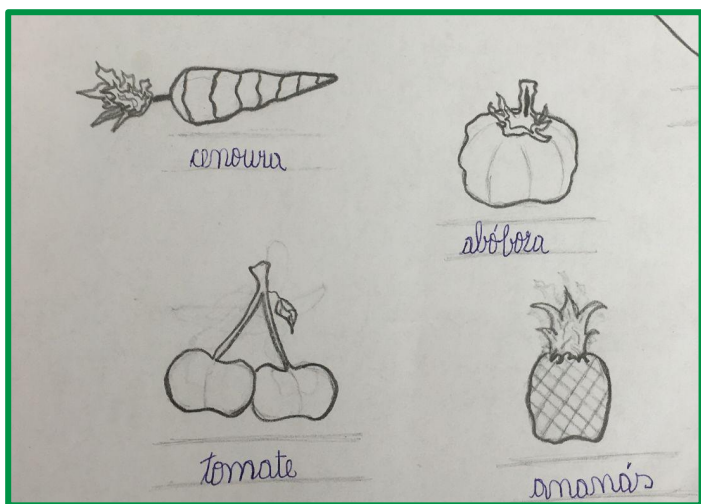
Each student accepts the challenge to close their eyes, imagine a scientist at work, and then draw what they imagined (writing a sentence about what they drew). Many choose things, usually related to science.



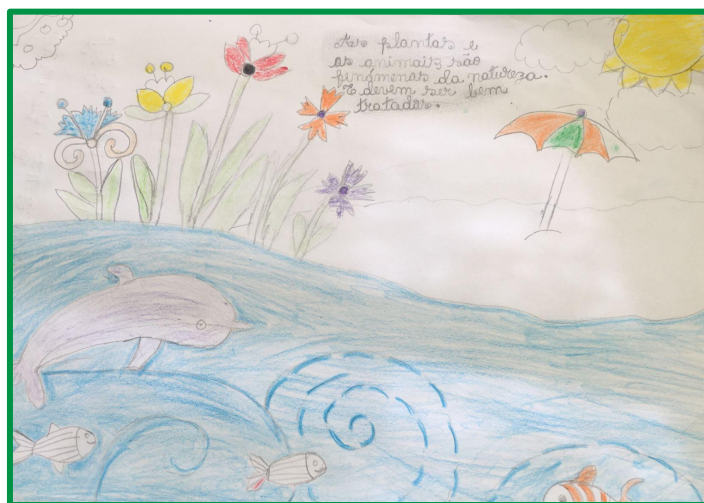
*“Trees are the lungs of the earth, hence their great importance for living beings and their preservation.”*



*“Why did this apple fall down and not up?”*



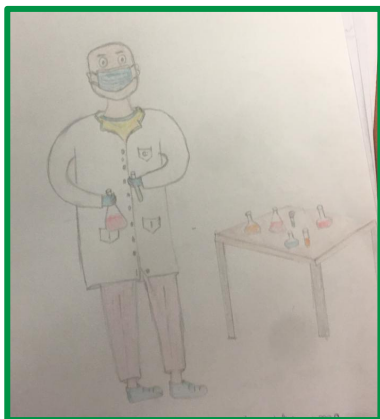
*“Agriculture as a basis for the development of a country.”*



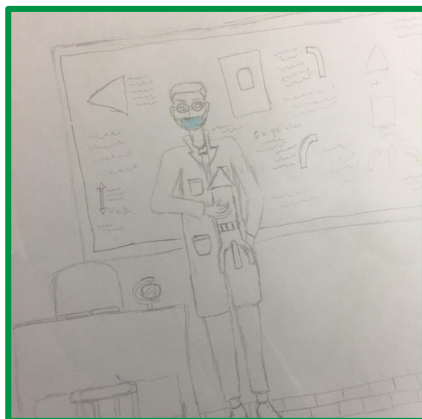
*“Plants and animals are natural phenomena and must be treated well.”*

## 5. Perceptions about being a scientist

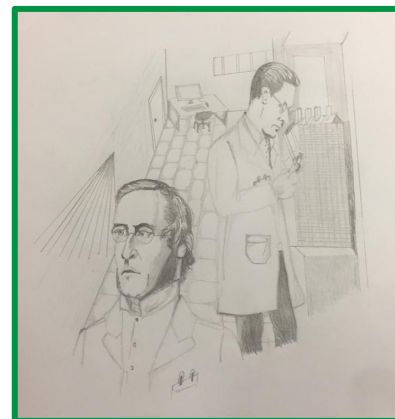
In the pictures, in which a scientist appears, they always identified as male and in the laboratory or linked to inventions and technologies.



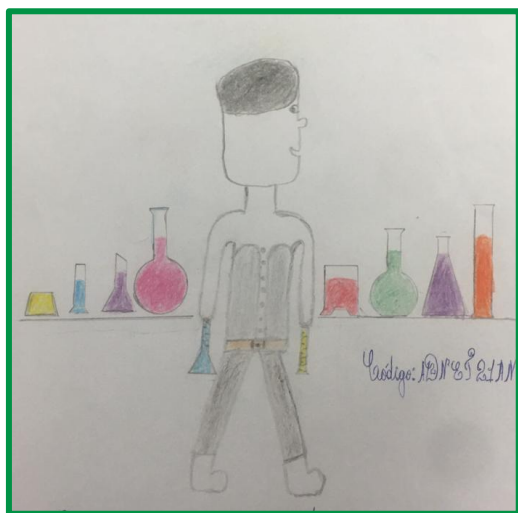
*“A scientist trying to find a cure.”*



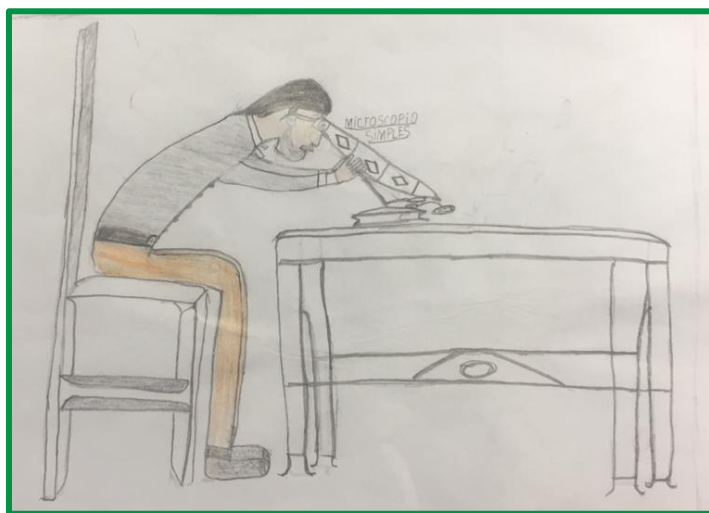
*“A scientist explaining how to make a spaceship.”*



*“The draw of two scientists working on an invention”*




*“A chemistry doing experiments.”*



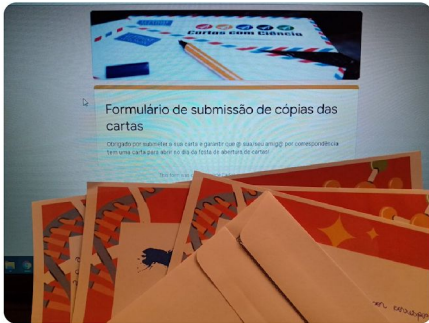
*“A Scientist working to solve cell problems.”*

## 6. Scientists: testimonies

In the digital submission of each letter, we invite each scientist to choose, from a list, adjectives that best fit to describe the experience of each round. The most chosen were “rewarding” (67%), “fun” (63%) and “inspiring” (62%). Also, “Challenging” (51%), “easy” (12%), “(e)stressful” (5%), “difficult” (5%) and “boring” (2%) were chosen. The adjective “tiring” was never chosen. We also collect social media posts from corresponding scientists.

 **Liã Bárbara Arruda**  
@libarbaraa\_

Emocionada demais por iniciar minha jornada como cientista por correspondência. Cartinha digitalizada e pronta pra embarcar no envelope pra viajar pra outro continente.  
[@CartasCiencia](#)  
[#CientistasPorCorrespondencia](#)



17:59 · 01 mar. 22 · Twitter for Android

*I'm so excited to start my journey as a scientist penpal. The letter is scanned and also ready to go inside the envelope to travel to another continent.*

 **Rodrigo Pacheco (🇺🇲)**  
@jailsonrp

Primeira carta do projeto @cartascomciencia. Pronta para ser postada para uma estudante de [#Angola](#). [#cartascomciencia](#) em Curitiba, Paraná [instagram.com/p/CZ4g5WSlyD7/...](https://www.instagram.com/p/CZ4g5WSlyD7/)  
11:55 · 12 fev. 22 de Curitiba, Brasil ·

*First letter of the project @cartascomciencia. Ready to be mailed to a student in #Angola. #cartascomciencia in Curitiba, Paraná [Brazil]*

*Excerpt from a scientist's letter (legend: "the robots we create")*



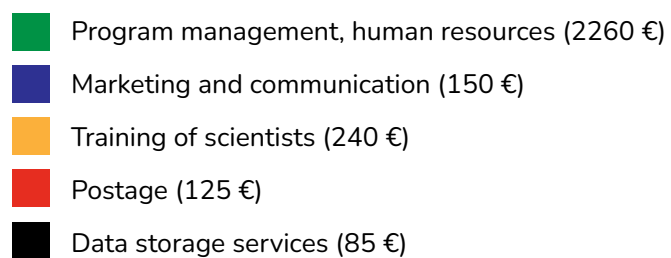
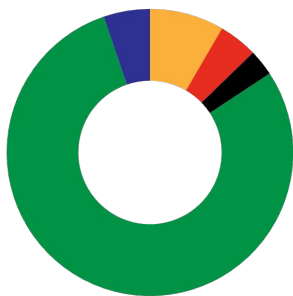
Os robôs que criamos.





## 7. Expenses

Expenses for this program totaled €2860 (factoring in as well expenses with human resources, which do not exist yet in fact; the management of the programme(s) is done by volunteers). A significant portion spent on postage was covered by the Biochemical Society through a Scientific Outreach Grant, and the remainder by individual sponsorships.



## 8. Other considerations

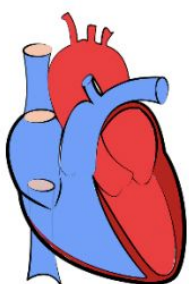
This report was prepared by the Cartas com Ciência team. The data presented here was obtained from questionnaires given to stakeholders at different times throughout the programme, or from shares made to the team or on social media. Student sentences were sometimes corrected for spelling and edited for clarity, but were not corrected for syntax or sentence agreement.

We recognize our inability to use completely gender-neutral language, but we tried to do so whenever possible.

## 9. Hyperlinks

[Here](#) you can find a video of the first letter opening party, with a toast to science!

*Schematic from a letter by scientist Ana Luiza Rocha: on the left an anatomical heart with the legend "my sister takes care of hearts like this", on the right a red heart draw with the legend "I take care of emotions".*



→ Minha irmã  
cuida de  
corações como  
esse



→ eu  
cuido  
das emoções

## 10. Acknowledgments

We would like to express our many thanks to those who contributed, in various ways, to make this letter exchange program possible:

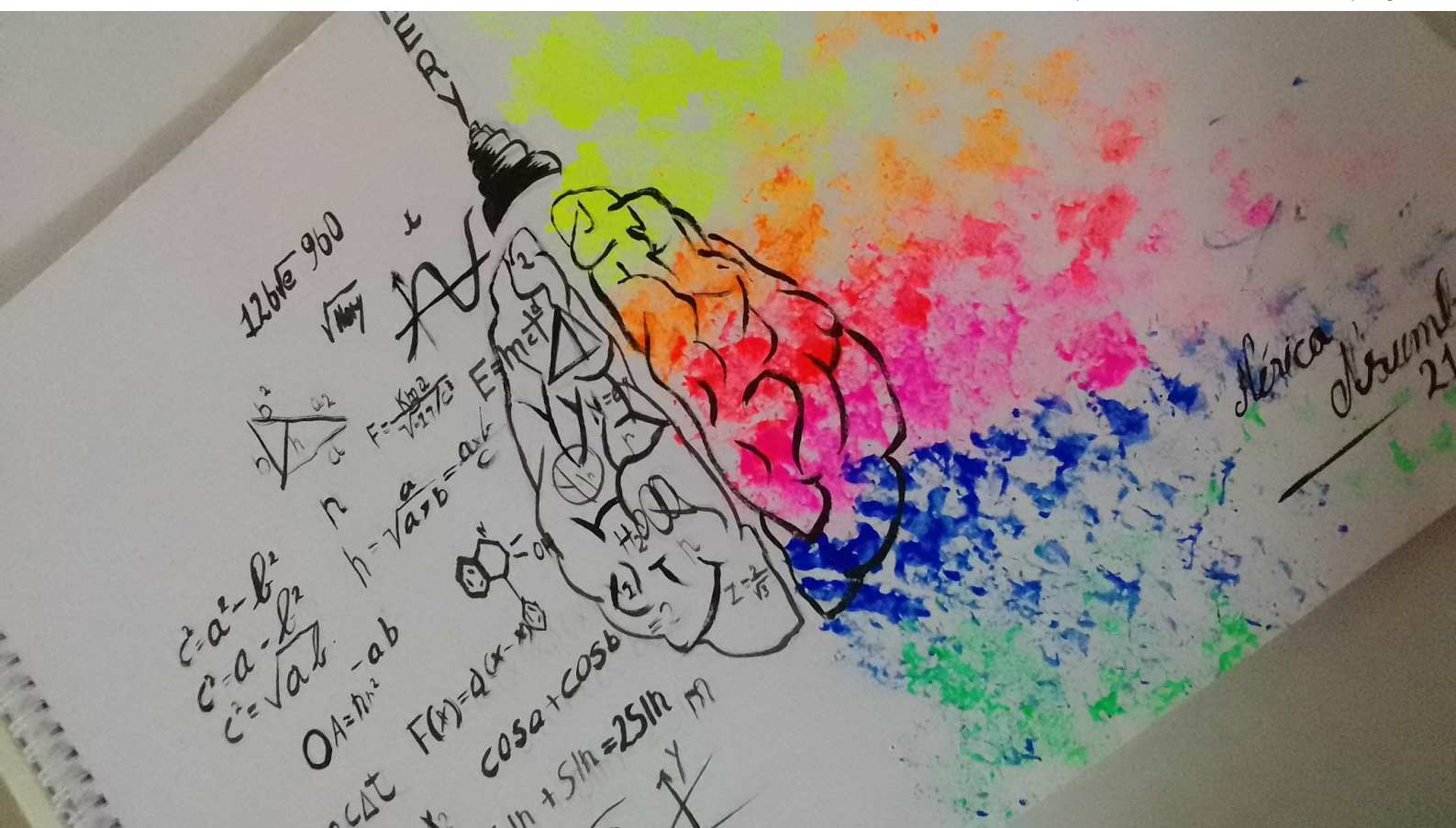
- Teachers Silveira and Mestre Anil Vila
- School of São José of Cluny — Huambo
- Carrier pigeons: Fernanda Alves and Patrícia Galupa
- Gislaíne Teixeira, Margarida Victor, and Patrícia Galupa for the support preparing this report
- Participants: scientists, students and their families

We thank the who ecosystem of Cartas com Ciência: [team](#), [partners](#), [patrons](#), [sponsors](#), followers and supporters, and the rest of the community.

We also thank the Biochemical Society for the financial support especially dedicated to this letter exchange program through a Scientific Outreach Grant.



*Letter/illustration sent by one of the students of the program.*





*This report was translated from Portuguese by Johnatas Silva (Cartas com Ciência)*



**Cartas com Ciência**

*Letters with Science is an organization incubated by Native Scientist and inspired by the American project Letters to a Pre-Scientist.*

[www.cartascomciencia.org](http://www.cartascomciencia.org)

[info@cartascomciencia.org](mailto:info@cartascomciencia.org)