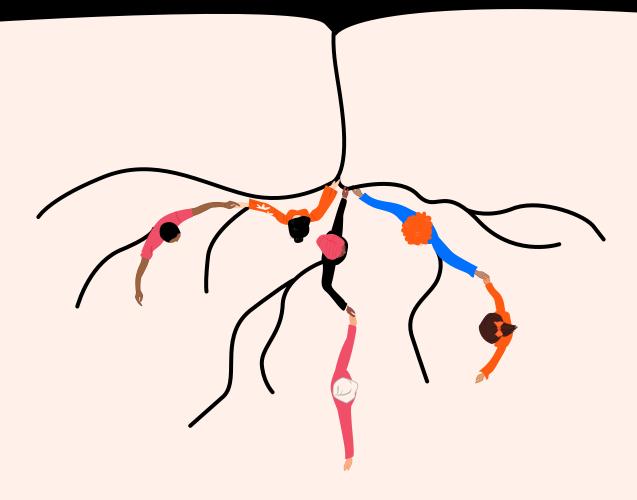
# ROOTS OF RESILIENCE

### PRACTICAL GUIDE

OF METHODOLOGIES OF ART EDUCATION TO ADDRESS THE CLIMATE CRISIS

**PEOPLE'S PALACE PROJECTS** 



WHAT FUTURE DO WE WANT TO BUILD FOR THE YOUNGEST AND FORGENERATIONS TO COME?

### **CREDITS**

#### ARTISTIC DIRECTOR, PEOPLE'S PALACE PROJECTS

**Paul Heritage** 

#### **PROJECT MANAGERS**

Gustavo Möller Natália Nunes Aguiar

#### PROJECT ASSISTANT

Vitória Kramer

#### METHODOLOGICAL APPROACH

Lucas Fabrício Silva Araújo Janaína da Silva (Jana Janeiro) Javér Ribeiro de Sales Raíra Gomes Dias Andrade Reinaldo Santana Silva (Reibatuque) Renata Campos Vilaça Samanta de Jesus Paula Thiago Franco Maluf Martins (Thiago SKP)

REPORTING AND DEVELOPMENT Eduardo Carvalho

#### EDITING AND ORGANISATION Natália Nunes Aguiar Vitória Kramer

REVISION OF TECHNICAL CONTENT Marina Monteiro Mendonça

GRAPHIC PROJECT Layla Coan

#### ABOUT PEOPLE'S PALACE PROJECTS

People's Palace Projects (PPP) is an arts and research centre based in the Drama department at Queen Mary, University of London, established by Paul Heritage in 1997. PPP brings together artists, activists, academics and the general public to engage with social justice issues through the arts in the UK, Brazil and around the world.

FOR MORE INFORMATION, PLEASE SEE: www.peoplespalaceprojects.org.uk

August 2023

#### FUNDING



Queen Mary University of London



Arts and Humanities Research Council





Supported using public funding by ARTS COUNCIL ENGLAND



Department for Digital, Culture Media & Sport

# SUMMARY

ABOUT THE GUIDE CLIMATE CHANGE HOW TO USE THIS TOOLKIT MUSIC AND THE CLIMATE CLIMATE SINGING KNOWLEDGE ON DISPLAY

TAKING A RIVER FOR A WALK

TIPS FROM THE ARTISTS

REFERENCES

**READING RECOMMENDATIONS** 

ANNEXES

# **ABOUT THE GUIDE**

How does climate change affect the vulnerability of territories affected by environmental disasters?

And what is the role of the arts and culture in communicating with others about the climate crisis and building resilience in communities affected by extreme events?

These issues culminated in work carried out over two years by People's Palace Projects (PPP) through the Raízes de Resilience (Roots of Resilience) project. In cooperation with cultural organisations and artists working in the region of Minas Gerais known as the Hydric & Iron Quadrangle, the project sought to assess the social and economic impacts of cultural organisations in the region. We also wanted to understand the role of the arts and culture in preserving material and intangible heritage in communities affected by extreme weather events and environmental disasters linked to mining activities, which are very common here.

To this end, PPP carried out extensive research with cultural organisations and independent artists, in order to understand how art and culture can positively contribute to building resilience in territories with a high degree of climate vulnerability, under the constant threat of environmental disasters caused by industry. One of the research's main findings was the importance of educating and engaging with new generations about preserving local cultural heritage and building initiatives to strengthen populations located in territories affected by extreme weather events and environmental disasters and make them cohesive. Additionally, the research highlighted the cultural and artistic sector's role and potential to promote this resilience, education and engagement, as well as providing economic alternatives to the region's characteristic mineral dependence.

The Roots of Resilience Educational Programme, developed over two editions in 2022 and 2023, is one of the main consequences of this research. Through multiple and innovative methodologies, partner artists and cultural organisations prepared arts-based educational activities aimed at raising awareness among different audiences: teachers from the whole school communities, system, young people and children participated in a series of workshops focused on the relationship between art, cultural heritage and climate issues.

This toolkit is inspired by the methodologies developed within the Educational Programme and aims to provide creative tools to address the issue of climate change with children and young people. Thus, the activities suggested in this material seek to stimulate reflection on climate change and its relationship with environmental disasters, in addition to promoting awareness about the importance of preserving local cultural heritage and about how the arts and culture can be used as tools to address environmental and climate issues.

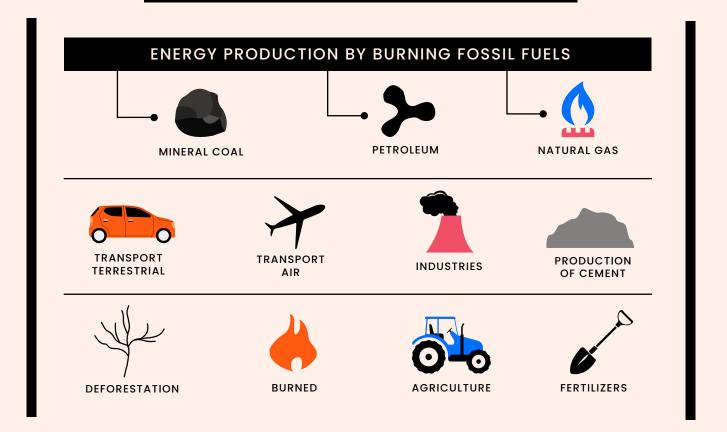
The suggested activities start by recognising that children and young people are key agents in building a more resilient and sustainable future and that art and culture can play a significant role in this process.

To this end, the toolkit brings approaches that aim to awaken creativity, critical thinking and empathy among children and young people, allowing them to understand the importance of acting responsibly in relation to the environment and communities affected by the effects of the climate crisis.

We hope this toolkit will be a valuable contribution to teachers, (arts) educators, artists and all those interested in promoting environmental awareness and resilience in communities threatened by environmental disasters and extreme weather events. Climate education is an indispensable tool for building a more sustainable future, in which present and future generations can live in harmony with the environment, valuing and actively acting to preserve their territories, their cultural identities and their heritage.

#### THE CONTEXT OF

### **CLIMATE CHANGE**



Humanity faces one of its greatest challenges. We live in a climate emergency due to the RISE in the planet's temperature caused by greenhouse gases emissions into the atmosphere. But how did this happen? Since the Industrial Revolution, between the 18th and 19th centuries, we have significantly increased greenhouse gases emissions which have contributed to global warming.

From the 19th century onwards and especially throughout the 20th century, technologies for extracting and using mineral resources such as oil were developed, perfected and widely used. The global population grew: massive waves of migration took place from rural areas to cities, which required investments in power generation, transport, telecommun cation services, water distribution and food production.

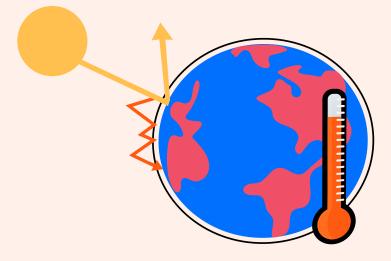
More and more industries, from different sectors, were taking shape. Car culture has taken over the planet. The use of different fossil fuels, such as mineral coal, oil and its derivatives, in addition to natural gas, have caused high emissions of polluting gases into the atmosphere – one of the main reasons for the Earth's temperature rising, causing climate change.

#### **ACCENTUATED GREENHOUSE EFFECT**

We've already talked about an increase in greenhouse gas emissions since the Industrial Revolution. But what is the greenhouse effect? Our planet is surrounded by an atmosphere that has several layers and can be up to 10,000 kilometres thick. The "Greenhouse Effect" is caused by the interaction between the gases in our atmosphere and solar and terrestrial radiation.

The Earth receives light and heat directly from the Sun and is heated. And, like any hot body, it emits infrared radiation. Earth's radiation is emitted into space. The so-called "greenhouse gases", such as carbon dioxide and methane, are responsible for absorbing this heat and preventing it from being lost to space, keeping the planet warm. Thus, when we emit everincreasing amounts of these gases, we are contributing to an intensification of this phenomenon.

What are the consequences of this? There is irrefutable evidence that the increase in greenhouse gas concentrations recorded since 1750 is the result of human activity. The 2023 report by the Intergovernmental Panel on Climate Change indicates that, between 2011 and 2020, it was possible to observe an increase in the average global temperature of 1.1° C compared to the same measurement for the period between 1850 – 1900.



In addition, scientific research indicates that the probability that by 2100, the global average temperature will increase by at least 2° C relative to pre-industrial levels, is very high, especially if the burning of fossil fuels continues at the current rate and if effective climate policies are not put in place.

As society disregards nature's limits, we become disconnected from the ways in which the environment provides the resources that sustain life on planet Earth.

We are beings that occupy everything around us, connected among ourselves, but with little awareness of our relationship with the other species with which we share the planet. What future do we want to build for the youngest and for generations to come?

## HOW TO USE THIS TOOLKIT



This toolkit was developed to become a tool for artists, art educators and teachers from different communities on how to address the climate agenda in cultural activities that value the identity of the territory of the people involved.

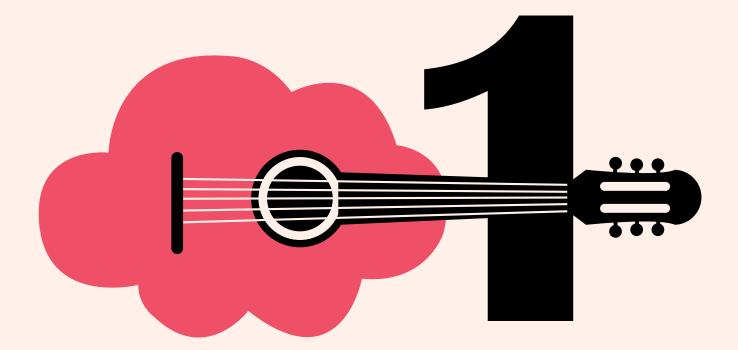
Developed through a co-creative process between artists and audiences of different ages and locations, the material seeks to contribute to skills development, knowledge exchange and debate on climate-related solutions, the appreciation of culture and the preservation of cultural heritage. The activities presented here are related to theatre, the visual arts and music. Its contents work as a suggested script and can be adapted to different realities.

#### **AN IMPORTANT POINT:**

the methodology created by People's Palace Projects includes the application of a brief questionnaire before and after carrying out the activities.

This research aims to understand four dimensions related to the topic of climate change: public awareness of the topic, this public's knowledge of the climate crisis, these people's perception of the urgency of the topic, in addition to understanding art as a tool to address climate issues.

Comparing these dimensions before and after carrying out the activities allows for the evaluation of how the workshops contributed, reinforcing their strengths and and making necessary adaptations. Questionnaires can be found in the "Attachments" section of this toolkit.



# MUSIC AND THE CLIMATE

#### AGES: 6 YEARS OLD AND ABOVE

Do you know what happens to the brain when we listen to music?

According to scientists, while listening to music there is a vast network of neurons working together to analyse the rhythm, melody, harmony, style, subject and to recognise the work itself. It is truly a neural symphony.

Scientists Steven Brown, Michael Martinez and Lawrence Parsons (2006) analysed the brains of amateur musicians and identified that music and language activate almost identical brain areas. Addressing this sharing of brain resources for language and music processing, researcher José Fornari (2019) argues that music "acts on the structural basis of human understanding", where our thoughts and actions arise and, therefore, can be considered a powerful tool to direct both individual and collective feelings and conclusions.

Therefore, in this themed workshop, we suggest using music to raise the audience's awareness of the climate crisis.

#### **SUGGESTED MATERIALS:**

- A mobile phone with internet access;
- A speaker;
- Any musical instrument;
- Cardboard for creating cards with questions and reflections.

#### **PREPARING THE ACTIVITY:**

 Create cards with the cardboard for the audience to write on later by hand. Divide the cards equally into three groups. Each group represents a subject: Cause – Consequence – Solution.

'CAUSE' CARDS: on these cards, we will point out the impacts of climate change or illicit environmental activities that affect different territories.

FOR EXAMPLE:

CAUSE 1	Illegal hillside occupations
CAUSE 2	Droughts
CAUSE 3	Air Pollution

'CONSEQUENCE' CARDS: on these cards, we will point out the consequences caused by the impacts and/or the environmental activities.

FOR EXAMPLE:

CONSEQUENCE 1	Landslides				
CONSEQUENCE 2	Price rises for essential food items				
CONSEQUENCE 3	Respiratory illnesses				

'SOLUTION' CARDS: on these cards we present solutions for the problems stated before. The idea is that most of these solutions are suggested by the actual participants in the exercise.

FOR EXAMPLE:

SOLUTION 1	Urbanisation policies and preservation of vegetation
SOLUTION 2	Use of renewable energies and reduction in fossil fuel use
SOLUTION 3	Invest in public transport and better regulation of polluting industries

2. Choose songs that address environmental themes. Some suggestions:

- Sobradinho, by Sá & Guarabyra, which addresses dam construction in the Northeast;

- Chuva, by Jaloo, about rain formation in the Amazon;

- Passarinhos, by Emicida and Vanessa da Mata, about the planet's environmental crisis;

- Asa Branca, by Luiz Gonzaga, about the drought that affects parts of Brazil;
- O Mar, by Dorival Caymmi, about the importance of conserving the Ocean;
- Xote ecológico, by Luiz Gonzaga, on the human impact on nature.

You can search for other songs in specific playlists on digital streaming services.

You can find more options using the QR Code to the side.



Listen to some examples of songs related to the environment in this playlist prepared by the Museum of Tomorrow for the exhibition "Fruturos – Tempos Amazônicos".

| ROOTS OF RESILIENCE

## HANDS-ON ACTIVITY

Hands-on activity This activity is divided into three stages: welcome and presentation, development and closure.

Instructions for the welcome and presentation:

- Apply the pre-activity form (see annex) to understand the public's perceptions of the climate issue;

- Explain how the exercise will work;

- Play the first song and reflect about it with the group;

- Have a chat about what climate change is and how it happens.

#### **DEVELOPMENT:**

- It's time to use the Cause - Consequence - Solution cards. Only use the 'Cause' and 'Consequence' cards at first, separating them into two different piles. Ask a participant to select a 'Cause' card. Ask them to talk a little about the problem mentioned on the card, relating it to the region in which they live. Then, the participant must identify the card in the "Consequence" pile which relates to that cause. Facilitators should provoke a debate involving everyone present. After all the "Cause" and "Consequence" cards have been used, it's time to present the "Solutions" related to each one of them.

It's important to remember that we need to overcome the development model only focused on "extracting, transforming and discarding" and ask: what future do we want to build for the youngest and for the generations to come?

#### **CLOSURE:**

After the exercise, the facilitator starts a guided conversation, proposing participants reflect on what was presented, and relates points of discussion to actions that can be taken by the group to reduce the impact of climate change in their region. Finally, we suggest playing a final upbeat song offering a solution to the environmental crisis, followed by the application of the post-activity form (see attachment).

#### WHAT IS THE TAKE-HOME?

The exercise was inspired by activities carried out by the Banda São Sebastião, from Brumadinho, Minas Gerais. In addition to encouraging coexistence and self-expression, the project found ways to raise awareness and assess how participants perceive environmental crises, climate change, arts and culture, as well as their resilience in the face of these challenges.



#### AGE: 10 YEARS OLD AND ABOVE

Making phrases and stanzas on the spot is an art that requires remarkable creativity. Rhythm and poetry are essential in the verbal improvisation of Rap, the soundtrack of Hip Hop, and of Repente, musical poetry typical of Brazil's Northeast. These genres represent a reinterpretation of reality as experienced by populations marginalised by society, both in the rural environment (Repente) and in the urban environment (Rap).

Fun fact: in addition to being good for the brain, hip hop is also good for the body. A study carried out by the University of California, in the United States, showed that adolescents who danced to this rhythm spent more energy compared with other dances, which contributes to improved mental and physical health.

In this themed workshop, we suggest transforming debates and studies on the aforementioned musical genres into creative activism that will result in writing a song.

#### **SUGGESTED MATERIALS:**

- A mobile phone with internet access;
- A speaker;
- Any musical instrument;
- Paper;
- A pen or pencil.



#### **PREPARING FOR THE ACTIVITY:**

The facilitator can choose from one of the rhythms below to use in the activity. Understand a little more about Rap and Repente.

#### **KNOW THE RAP**

Sabotage, a Brazilian rapper who died in 2003, used to sing that "rap is a commitment, not a

journey", a message that rap should be viewed with respect and that whoever sings it (rapper) must have a mission to speak the truth and speak about the reality where they live. Judice (2019) states that it is a form of expression, identification and part of a resistance movement against the current political-economic system that "excludes people".

Rap (short for the English words "rhythm and poetry") is one of the essential elements of the Hip Hop movement, born in the United States in the 1970s, which has a very strong connection with black culture. Because its language is accessible, this musical genre can be used to teach different subjects, including the sciences.

#### **KNOW THE REPENTE**

Repente is a genre of sung poetry that originated in the Northeast of Brazil, considered part of Brazil's cultural heritage by Iphan, the country's National Historical and Artistic Heritage Institute. Normally, there is a battle between two repentistas (the Repente artists), who take turns singing stanzas accompanied by a musical instrument.

This cultural tradition of spoken and improvised poetry can be accompanied by an accordion or tambourine. Over two hundred years old, it emerged with people from a region called the Sertão who recounted the struggles of the people and their reality that included subjects such as drought and hunger – which both provoked the mass migration of northeasterners in the 20th century.



Listen to the rap "A Viagem", by Ian Wapichana, from the Wapichana indigenous people.



Listen to the sudden "The claims of nature", by Jorge Macedo and Jocival Viana.



## HANDS-ON ACTIVITY:

The activity is divided into three stages: welcome and presentation; development; and closure.

Instructions for the welcome and presentation:

- Apply the pre-activity form (see annex) to understand the public's perceptions about the

climate issue;

- Explain what rap or repente is, giving the historical context of these musical genres - especially their connection with social agendas;

- Introduce the structure of rap or repente lyrics, giving examples of existing songs. Stimulate a debate: how were these songs constructed? What do they talk about?

- Debate with participants on issues related to climate change and environmental disasters;

How do these agendas relate to everyday life?

#### **DEVELOPMENT:**

- It's time for the participants to create their own rap or repente with messages that propose reflections on the climate agenda. With the papers in hand, ask the students to write a word related to the theme "climate change";

- Read the words out loud and leave them in plain view for everyone to see; - Divide students into groups of four. Participants will have half an hour to write the song in one of the styles of improvisation using the words presented by the exercise's participants;

- Encourage the students singing their rap or repente in a mini showcase Assure everyone that this is a safe environment where everyone is learning.

#### **CLOSURE**

After the exercises, the person in charge of facilitating the activity leads a guided conversation and reflection on what was presented, and relates their discussion to actions that can be taken by the group to reduce the impact of climate change in their region. Don't forget to apply the post-activity form (see attachment) at the end of the meeting.

#### WHAT ARE THE TAKE-HOMES?

The dynamic was inspired by the work carried out by Thiago SKP, who put together the song "O clima tá tenso", composed during the "Raízes de Resilência" project, carried out in Minas Gerais in 2022. The artist carried out interactive work with young people by taking poems, texts, books and songs to empower the participants' discourse and sensitise them to climate-crisis related issues.



# KNOWLEDGE ON DISPLAY

In order to plan actions that transform realities, it's essential for the activity to engage the population in building attitudes that mitigate the impact of climate change, inviting them to take collective action for a sustainable world.

For this to happen effectively, we need to humanise messages, using empathy as raw material to give context to facts and policies that influence all aspects of life. It's also necessary to welcome opinions and exercise active listening – factors that contribute to sharing intergenerational experiences and between people from different places and cultures.

A study published in 2023 by the journal Nature provided pioneering evidence regarding the impact of art on the public's emotional engagement with regard to climate change. In it, scientist Nan Li and four colleagues used the visual arts as a resource to present information related to the climate. For this, a work of art by Diane Burko containing data on the buildup of carbon dioxide in the Earth's atmosphere was presented to one group of people, while another group had access to the same data in more academic formats, usually available to the public, like graphics.

The reactions and behaviour of both groups were compared, and the results of the study suggest that: people who were presented with the data through the artwork showed stronger positive emotions than those who viewed the information in a conventional way. Furthermore, in some cases, artistic representations of data have shown they can reduce the political divide in individuals' perceptions about the relevance of climate change.

This project aims to invite the exercise participants to become part of the climate solution by creating an exhibition or work of art linked to the climate crisis. Suggesting that they create the narrative for the exhibition is an excellent opportunity for the group to have access to reliable data sources, learn to discern information that is based on valid evidence, as well as get used to constructing evidence-based arguments. Examples of where reliable information can be found are: credible media organisations or the portals of Brazilian universities, where abstracts of scientific articles produced in the country can be accessed.

Therefore, we suggest that teachers value and use knowledge about the physical, social, cultural and digital worlds, and exercise their intellectual curiosity.

#### **SUGGESTED MATERIALS:**

- Recycled items, such as lids, food jars, mineral water bottles, sanitised containers from cleaning products, tubes and connections, general bags, toy parts, etc.;

- Gouache paint;
- A large cardboard box;
- Tables and chairs;
- Scissors and glue;
- Pens and pencils.

#### **PREPARING FOR THE ACTIVITY:**

This is an activity that can take place over several days. It's important that the facilitator provides recyclable packaging for the activity, as well as other items that can be used. A partnership with small local businesses or a cooperative of recycling collectors can be a solution when looking for the necessary materials.

Talk to participants on issues related to climate change and environmental disasters. How are these agendas related to everyday life? Talk about the concept of Climate Justice.

#### WHAT IS CLIMATE JUSTICE?

According to the Alana Institute, a social organisation with an environmental focus, Climate Justice is a movement that wants to guarantee global justice for the population vulnerable to the impacts of climate change who are usually forgotten: poor people, women, children, black people, indigenous people, immigrants, people with disabilities and other marginalised groups around the world. Thus, Climate Justice is based on the aim of guaranteeing and protecting human rights and by trusting that community work is the most effective way to secure the present and future of the next generations, especially for more vulnerable communities, such as indigenous peoples and the black population.

## HANDS-ON ACTIVITY:

This activity is divided into eight stages:

 WELCOME
 CONCEPTION
 RESEARCH
 NARRATIVE CONSTRUCTION

 DETAILING
 IDEA REVISION
 EXECUTION AND PROJECT PRESENTATION

#### WELCOME AND PRESENTATION:

Arrange the group in a circle in order to facilitate participant communication and interaction;
Apply the pre-activity form (see attachment) to understand the public's understanding of the climate.

#### **CONCEPTION:**

The participant or group will curate an exhibition and will have the opportunity to tell a story about the relationship between climate change and traditional knowledge (how these are affected or how they can be part of the climate solution). This information needs to be given context. Ask them to define the subject, avoiding repetition.

#### **RESEARCH:**

Ask the participants to search for information about the subject they want to explore. Suggest conversations with possible sources or research on the internet and in books and magazines. Be careful to make sure that the suggested content comes from reliable sources.

#### NARRATIVE CONSTRUCTION:

One of the main steps for putting together the exhibition is to develop the story to be told. From the research carried out, write down the main idea for the exhibition. In addition, ask the following questions: What are the main facts to be narrated? And what is your story's message or future?

#### **DETAILS:**

The way of presenting the exhibition is fundamental to attract the public's attention. It's time to be creative and explore different ideas and materials. The person in charge of facilitating can demonstrate the different techniques used by artists in Brazil, such as ink painting, art made with paper or even sculptures that can inspire the work's creative process.

#### **IDEA REVISION:**

Before executing the idea, ask the participants to check that they are sure the exhibition's message is clear and that they are comfortable with building the exhibition prototype.

#### EXECUTION AND PROJECT PRESENTATION:

With recycled materials, the participants can use the cardboard box to set up their small exhibition. It's always good to remember that the person responsible for facilitating is the students' ally during the learning process.



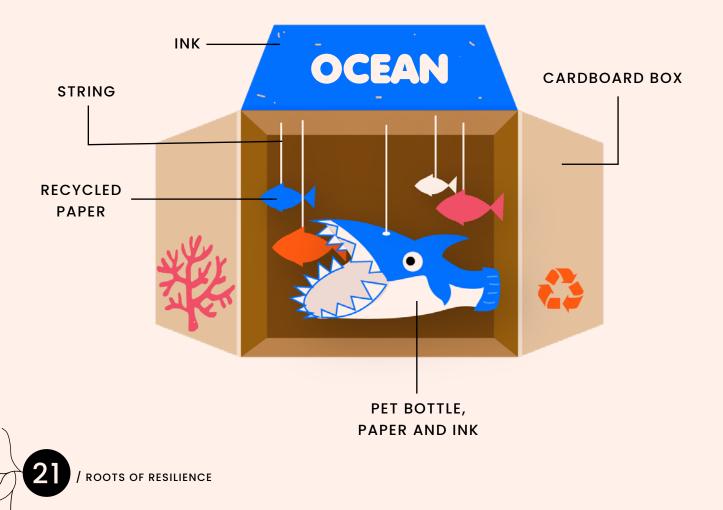
It's important to interact and reinforce examples of how the project can move forward. With the prototype ready, the project presentations are a moment of celebration. It's important to reinforce the message that no project is better another, but they all share the goal of conveying the message that we need to engage in fighting the climate crisis.

#### **CLOSURE:**

After this exercise, the facilitator mediates a conversation by proposing participants reflect on what was presented and list actions that can be taken by the group to reduce the impact of climate change in their region. Don't forget to apply the post-activity form (see attachment) at the end of the meeting.

#### WHAT ARE THE TAKE-HOMES?

The debate around the climate agenda aimed at promoting intergenerational dialogues and sharing traditional knowledge was at the heart of the activities carried out in the Roots of Resilience project by facilitators from Casa Quilombê, Clube Osquindô and Grupo Atrás do Pano. The model for this activity is inspired by the book "Oceano", part of the Turma do Pererê Climate Education Collection by Eduardo Carvalho and Eduardo Quintanilha.





# TAKING A RIVER FOR A WALK

The last suggested activity in this guide takes its inspiration from the theatre to propose artistic experiences that address issues in the territory and encourage cooperation as a way of redefining our relationship with nature. We need to reflect on how we can create authentic stories about what it is like to live in the world today.

This is a challenge aimed at creative people. The exercise encourages them to contribute to shaping a new reality so that oppressive narratives are broken and the stories of everyone affected by the climate crisis can be given space. Through theatre, as well as cinema, we can tell tell stories and transport spectators to other realities, exercising their imagination and expanding horizons without them having to leave their own territory. Therefore, this is an exercise about parallel realities – among them, the future we want to build for our society.

In this themed workshop, we propose carrying out a group exercise involving interaction with a scenic object to recognise natural spaces and aspects related to climate change.

#### **SUGGESTED MATERIALS**

- 2 to 3 metres of blue fabric.

## HANDS-ON ACTIVITY:

This activity is divided into three stages: welcome and presentation; development; and closure.

Welcome and presentation:

- Welcome and presentation (this is an activity that requires the group's participation for one hour, though it's possible to adapt it to different age groups);

- Apply the pre-activity form (see attachment) to understand the public's ideas about climate;

- Go outdoors or somewhere with a lot of space.

The educational and artistic proposal of the workshop "Pretend it's a river" uses make-believeas a device to encourage participants to experience imaginary situations related natural space and climate to change. Right at the beginning of the activity, there is a moment of physical exercise for group integration and individual presentation. The aim is to focus on personifying images and representing situations related to climate change. Both focuses are stimulated by theatrical "action--verbs" through which the creation of hypothetical contexts is encouraged: "what if..." and "pretend to be...".

#### FOR EXAMPLE:

- When I count to three, you will become what I say... 1, 2, 3. Now, what if everyone was a tree, what would it be like? What about clothes drying on the hanging rack? Very heavy rain? A windstorm? A bonfire?

#### Then the facilitator will say:

- Now everyone, close your eyes, and when I count to three, you will open your eyes. When you do, pretend there's a giant river in that space. What is the water of this river like? What lives in it? Who lives near it? What can we do on the river?

#### **DEVELOPMENT:**

After the initial moment, a large blue fabric is placed in the center of the room – a resource to enter our imagination about rivers and stimulate the creation of actions, situations and points of view about them.

The fabric is an object that presents countless possibilities for exploration, in addition to allowing the whole group to join in at the same time. You can go under the fabric or over it, stretch it, hold it, roll, walk or crawl on it, as well as place it over the head and walk around the school with it. These actions seek to collectively encourage physical activity, in addition to addressing the importance of rivers for cities, as well as water for humanity.

Through the imagination, the natural space is worked on, initiating a dialogue with climate change and with the school's surroundings. . This encourages the preservation of this territory, identification with its characteristics and a sense of belonging.

Finally, ask the group some questions that will lead to a reflection on the state of the area where the activity took place:

- What is this place?
- What's it like?
- How do you feel in this place?
- Do you think this place needs to change?

- Should it be greener/less polluted? Why?

Do you believe you can contribute to making this space more pleasant
Who do you think can (help) make changes to this space?

- What would you say to them??

#### **CLOSURE:**

After the exercises, the facilitator leads a guided conversation, proposing they reflect on what was presented, and relate the discussion to actions that can be taken by the group to reduce the impact of climate change in their region.

WHAT ARE THE TAKE-HOMES?

The methodology presented here is inspired by the work developed by the artist Lucas Fabrício, from Nova Lima – MG, for the Roots of Resilience programme. For Lucas, the experience "Taking a river for a walk" sought to inspire other educational projects in Brazil, having opened opportunities for local artists who can contribute to promoting contextualised debates about the reality of nature in different locations.

#### FROM THE ARTISTS WHO DEVELOPED THE METHODOLOGIES AND STRATEGIES IN THIS TOOLKIT

The construction of this toolkit of climate-based cultural activities was inspired by the numerous actions applied by different teams of artists, cultural organisations and art educators. These experiences took place within the scope of the Roots of Resilience Project, which aimed to assess the social and economic impacts of the cultural sector in the Hydric & Iron Quadrangle in Minas Gerais, focusing on the consequences of mining in the region. The project also involved artistic-cultural interventions to address climate issues in the towns of Brumadinho (including a quilombo – a term for historic settlements founded by people who escaped slavery – in the district of Marinhos), Itabira, Mariana and Nova Lima. Below, we present some tips given



"The educational programme started as a challenge. Linking the themes of climate change and cultural heritage seemed impossible. But, as we debated the proposal and structured the actions, it all made sense! At that moment, we felt honoured to convey the importance of culture as a regulator of human behaviour in the face of adversity and environmental crises and how our heritage can be affected by these crises. The playful and poetic language of art was an efficient mechanism to reach young people, promoting awareness of knowledge in the search for a better world."

BANDA SÃO SEBASTIÃO - RENATA VILAÇA

"Educating people to engage with climate change seems to take education to be a practice of community living. It is by listening to each school's context and its perception of its territory that we find the best pedagogical paths and art is a means of imagining possible destinations, stirring the care and affection within us and inventing ways of existing that are less exploratory and more respectful of the environment. May this Educational Programme be a map to guide pedagogical adventures and may music, dance, poetry and theatre be allies in the struggle for environmental justice in each territory."

LUCAS FABRÍCIO

"The invitation is for you to embark on this journey on the subjects of art, education, territory and climate change and be open to new perspectives. We call for adaptation, reinvention, improvisation and redesign based on the experiences and specificities of the subjects involved and their territories, using active listening, engagement with the public, community protagonism and horizontal structures in the processes, so that a porous movement is made possible and that the experiences pervade all those involved. May art education, in its powerful execution, be a bridge to raise awareness about environmental impacts, social responsibility and commitment, and may we be the seeds of change."

CASA QUILOMBÊ – JANA JANEIRO E REIBATUQUE



"Doing this project means showing how much art can create paths, stimulate reflection and raise questions. Through hip hop culture, combined with information about climate change, I managed to deal with a serious subject in a creative and interesting way, getting the attention of young people. At the same time that art captivates people, the content it carries is of great importance for giving information, provoking reflection and creating awareness and attitude on the subject. More than harvesting fruits, it's about planting seeds."

THIAGO SKP

/ ROOTS OF RESILIENCE

### REFERENCES

BROWN, Steven; MARTINEZ, Michael J.; PARSONS, Lawrence M. Music and language side by side in the brain: a PET study of the generation of melodies and sentences. **European journal of neuroscience**, v. 23, n. 10, p. 2791–2803, 2006.

IPCC, 2023: Summary for Policymakers. In: Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Genebra, Suíça, 36 p.

FORNARI, José. O compartilhamento de recursos cerebrais entre música e linguagem. **Musicologia na Mídia, Blogs de Ciência da Universidade Estadual de Campinas**, v. 31, 2019.

LI, Nan; Villanueva, I. I., Jilk, T., Van Matre, B. R., & amp; Brossard, D. Artistic representations of data can help bridge the US political divide over climate change. **Communications Earth & amp; Environment**, v. 4, n. 1, p. 195, 2023.

/ ROOTS OF RESILIENCE

## **READING RECOMMENDATIONS**

- Developed with the support of the PRCEU cultural extension programme at the University of São Paulo (USP) and Santander bank, the booklet "Mudanças Climáticas e a Sociedade" presents urgent environmental issues facing the planet today in language accessible to the lay public. https://www.climaesociedade.iag.usp.br/livreto.pdf

- Developed by the UN and available in English, the material "What is climate change?" brings together videos, texts and links with information on the causes of the problem, its impacts and the necessary measures to contain global warming.

https://brasil.un.org/pt-br/175180-o--que-sao-mudancas-climaticas

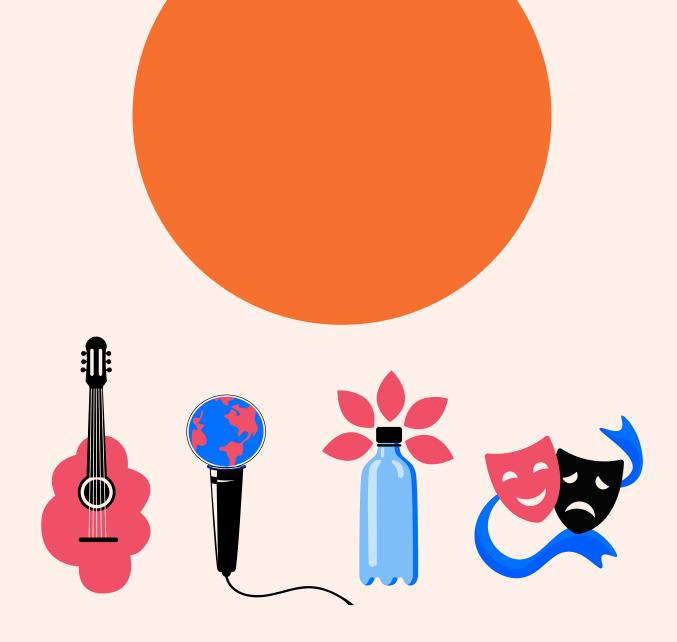
- Published by Jornal da USP, the text "Alterações climáticas provocam aumento de enchentes" serves as an introduction with an audio interview with environmental engineer Marcelo Marini Pereira de Souza. During the conversation, he mentions the various aspects that cause climate change leading to a greater occurrence of floods and suggests measures to minimise the damage caused by this phenomenon. https://jornal.usp.br/?p=234148

- Discover other songs that address environmental issues and that can be studied in activities. https://www.letras.mus.br/blog/musicas-meio-ambiente/ - The Adapta Clima platform, run by the Environment Ministry, brings content on the impact of climate change on various sectors, including a section focused on Biodiversity and Ecosystems. http://adaptaclima.mma.gov.br/biodiversidade-e-ecossistemas-no-contexto-da- mudanca-do-clima

- The exhibition "Inovanças - Criações à Brasileira", shown at the Museum of Tomorrow in 2017, addresses the paths and deviations of innovation, infused with Brazilian aspects. In this virtual version, learn about creations designed and developed by Brazilians that transform lives across the country and around the world: from social technology to high financial investment processes. https://artsandculture.google.com/story/OwWRkTxtx7LtJw

- In this article published in "Revista Digital", learn a little more about the relationship between rap and repente. https://www.efdeportes.com/efd149/a-relacao-entre-o-rap-e-o--repente.htm

- To understand more about Climate Justice, access the content prepared by the Instituto Alana, specialising in working with the impact of climate on children. https://alana.org.br/justica-climatica/



# ANNEXES

#### PRE AND POST ACTIVITY QUESTIONNAIRE . PRIMARY AND SECONDARY SCHOOL .

29 / ROOTS OF RESILIENCE

### **PRE-ACTIVITY QUESTIONNAIRE**

#### PRIMARY SCHOOLS

Hi! We're going to do an activity with your class today, but first we'd like to ask you a few questions. Is that ok?

1

Have you ever heard of CLIMATE CHANGE? (Please choose one of the options for your answer.)

- 1. Never
- 2. I don't think so
- 3. Not sure
- 4. I think so
- 5. I've heard of it, sure

And which of the following things do you think have to do with climate change? (You can choose more than one option if you want, ok?)

- () Earthquakes
- () The hole in the ozone layer
- () A lack of rain, droughts
- () The planet getting too hot
- () Hurricanes
- () Ice melting at the poles
- () Too much rain and flooding
- () Oceans getting warmer and rising

3 Do you think ART can be used to help fight climate change? (Please choose one of the options for your answer.)

- 1. No way
- 2. I don't think so
- 3. Not sure
- 4. I think so
- 5. Yes, definitely

Is this subject unimportant or very important for you? (Please choose one of the options for your answer.)

- 1. Unimportant
- 2. Kind of important
- 3. Very important

### **POST-ACTIVITY QUESTIONNAIRE**

#### **PRIMARY SCHOOLS**

#### Hi! Let's talk a little bit about our activity!

Do you think you learned a little bit about climate change today? (Please choose one of the options for your answer.)

- 1. No, nothing
- 2. I don't think so
- 3. Not sure
- 4. I think so
- 5. Yes, definitely

Tell me THREE consequences of climate change? What I mean is: what does climate change do to the world?



Do you think it's important for us to talk about this subject? (Please choose one of the options for your answer.)

- 1. I think it's not really important
- 2. I think it's kind of important
- 3. I think it's very important

What if we told you that you can use art to talk about climate change, would you agree? (Please choose one of the options for your answer.)

- 1. You can't use art to talk about this subject at all
- 2. I don't think you can use art to talk about this subject, no
- 3. I don't know if you can use art to talk about this subject
- 4. I think you can use art to talk about this subject, yes
- 5. You can definitely use art to talk about this subjecto

## **PRE-ACTIVITY QUESTIONNAIRE**

#### SECONDARY SCHOOL

Hello! We're from PPP and we're going to do an activity with your class today. But first, we want to ask you some questions.

#### Have you heard about climate change? (Please choose just one answer.)

- 1. Never
- 2. I don't think so
- 3. Not sure
- 4. I think so
- 5. I've heard of it, sure

#### Which of the following do you think have to do with climate change? (You can choose more than one option if you like.)

- () Earthquakes
- ( ) The hole in the ozone layer
- () A lack of rain, droughts
- () The planet getting too hot
- () Hurricanes
- () Ice melting at the poles
- () Too much rain and flooding
- () Oceans getting warmer and rising

#### Thinking of climate change, which of these phrases do you agree with? (You can choose more than one option if you like)

- () Fires contribute to carbon dioxide (CO2) production
- ( ) Carbon dioxide (CO2) is a gas that contributes to the greenhouse effect
- () Plants absorb carbon dioxide (CO2)
- () The concentration of carbon dioxide (CO2) has increased in recent centuries
- () The hole in the ozone layer causes climate change

# Do you believe that art can be used to talk about climate change? (Please choose just one answer.)

- 1. No way
- 2. I don't think so
- 3. Don't know
- 4. I think so
- 5. Yes, definitely

#### Is this subject unimportant or very important for you? (Please choose one of the options for your answer.)

- 1. Unimportant
- 2. Kind of important
- 3. Very important

## **POST-ACTIVITY QUESTIONNAIRE**

#### SECONDARY SCHOOL

Hello! Let's talk about the activity!

Do you think you learned about climate change today?

- 1. No, nothing
- 2. I don't think so
- 3. Not sure
- 4. I think so
- 5. Yes, definitely

A lot has been said recently about climate change and the increase in the average world temperature. Do you think climate change is happening?

- 1. Yes
- 2. No

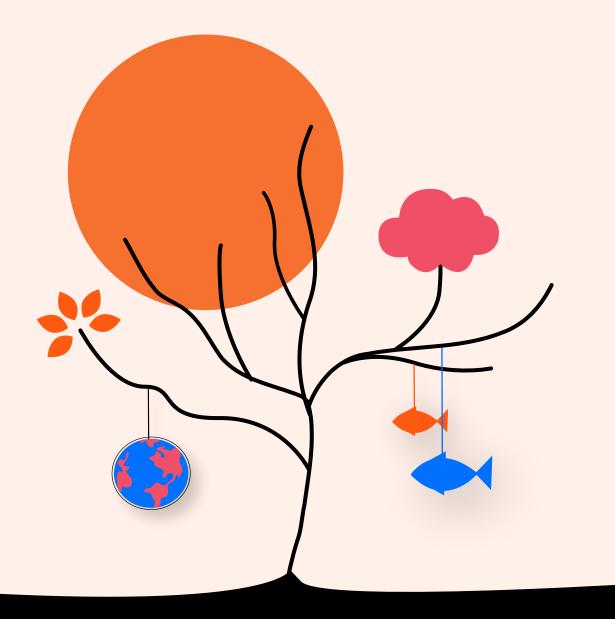
Can you name THREE consequences of climate change? What I mean is: what does climate.

If we said that you can use art to talk about climate change, would you agree?

- 1. You can't use art to talk about this subject at all
- 2. I don't think you can use art to talk about this subject, no
- 3. I'm don't know if you can use art to talk about this subject
- 4. I think you can use art to talk about this subject, yes
- 5. You can definitely use art to talk about this subject

Between 1 and 5, where 1 means that you totally DISAGREE and 5 that you totally AGREE, what do you think of the following sentences?

"Climate change can harm future generations"								
1 Strongly Disagree	2	3	4	5 Strongly Agree				
"Climate change is harming the quality of life in Brazil"								
1 Strongly Disagree	2	3	4	5 Strongly Agree				
"Climate change can harm me and my family"								
1 Strongly Disagree	2	3	4	5 Strongly Agree				



# / ROOTS OF RESILIENCE