



## **IHME Helsinki Teaching Material: Maaleipä Challenge**

This is an educational package based on IHME Helsinki Commission 2024 – Maaleipä Challenge – for secondary school groups, especially 9<sup>th</sup> graders. The package combines art, the environment and food security. It has four sections that can be used independently in schools.

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You can pick and choose sections to suit your interests and the time available. Some of the materials can also be used with pupils working independently or remotely.

During spring and summer 2024, the London-based artist duo Cooking Sections – **Daniel Fernández Pascual** and **Alon Schwabe** – invited everyone in Finland to create bread recipes that combine the well-being of the land, water and people’s guts. This took the form of the Maaleipä Challenge. The Challenge also inspired the adoption of food security as the theme of the second edition of the Climate Security Festival. IHME Helsinki and the Safer Climate network joined forces to organise the Festival. The three-day event started with the Climate Security Festival programme at the Finnish Meteorological Institute in Kumpula, Helsinki, on 19–20 September and continued with the IHME Helsinki Commission 2024 programme at Teurastamo Kellohalli, Helsinki, on Saturday, 21 September.

Established in London in 2013, Cooking Sections investigate the systems that organise the world through food. They use site-responsive installation, performance and video, to explore the overlapping boundaries between art, architecture, ecology and geopolitics.

The sections of the educational package include:

- suggestions for videos to watch
- material to read
- useful websites to visit

The material helps us understand the impact of our choices of what food we eat and the ways in which they affect the environment. The package can be incorporated into study plans for many subjects, such as art, geography, biology and home economics.



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Each section is followed by a series of questions or assignments to help you reflect on what you have watched or read. You can easily come up with more questions. Sections 1–4 can be selected according to the time available or they can be used for planning a larger project. Along the way you can find additional information and material to go through.

The duration of the videos is indicated in the links. It is recommended to allow at least 10-15 minutes for discussion.

**The material can be used to explore issues such as:**

- What is the impact of the food we eat on the environment?
- What are researchers saying about land use?
- Building awareness about climate change through baking.
- Exploring contemporary art forms and public art.
- Why is public art important?
- Exploring how research can be creatively expressed.
- What do baking and food preparation do for community building?
- Reflecting on the forms that art can take.



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## 1 INTRODUCTION TO THE ARTISTS

The Maaleipä Challenge was a nationwide Finnish contest and an artwork realised by the London-based artist duo Cooking Sections and IHME Helsinki. The Challenge is part of Cooking Sections' CLIMAVORE project that asks how we are to eat as humans change climates.

New human-made “seasons” are blurring the lines between spring, summer, autumn and winter, or annual monsoon events. Instead, periods of polluted seas, soil exhaustion or fertiliser runoff are having a greater influence on our foodscapes. CLIMAVORE, a term coined by Cooking Sections in 2015, is a call to rethink a truly broken food system, and to move beyond a carnivore, omnivore, locavore, vegetarian or vegan diet to tackle these new shifts of season.

Cooking Sections challenged participants to create new bread recipes that can be used in large kitchens, homes, restaurants, and bakeries. The Challenge was run in cooperation with farmers' and growers' networks, promoting awareness of the cultural heritage of seeds, grain diversity, agroecology, and climate-resilient varieties that require fewer chemicals.

The health of the soil and the health of us humans are one. Monoculture farming impoverishes the ground and pollutes our waters, and nutritionally poor food harms our digestive systems. The Challenge aimed to raise awareness of the importance of plants in human nutrition for tackling the climate emergency.

Between mid-April and the beginning of September, around 30 candidate recipes for Maaleipä – bread for the soil – were received, from which 14 finalists were selected. The Challenge supports forms of land use that promote diverse soil cultures, and which are currently neglected or overlooked by regulatory and subsidy frameworks. The Challenge's main event, the Maaleipä Feast, took place at Teurastamo Kellohalli on Saturday 21 September.

**[Watch a YouTube video of Cooking Sections talking about the Challenge](#), duration 3:33**

**[Check out Cooking Sections' website](#): [cooking-sections.com](http://cooking-sections.com)**

**[Check out CLIMAVORE website](#): [climavore.org](http://climavore.org)**

**[Read the artists' interview in NO NIIN Magazine](#): [no-niin.com](http://no-niin.com)**

**[Read what is meant by being a climavore and how to eat like a climavore](#): [inkcapjournal.com.uk](http://inkcapjournal.com.uk)**

**[Read about the Maaleipä breads](#): [ihmehelsinki.fi](http://ihmehelsinki.fi)**



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### Questions:

- What words come to mind when you think about CLIMAVORE?
- What does it mean to be a Climavore?
- Who did the Challenge invite?
- Why is Maaleipä the bread of the future?
- Which professionals have the artists worked with?
- What do the artists want their artwork to be like?
- What inspires the artists?
- How can art change the environment and what we eat?
- Why did the artists work with farmers and environmental researchers?
- Why was bread chosen as the main theme?
- Can bread be art?
- Why do the artists feel that bread is an important theme for Finland?
- Why do we need art to fight climate change?



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## 2 MAALEIPÄ CHALLENGE

The Maaleipä Challenge encouraged people to think more about the ways in which our choices of food ingredients affect the land and our guts. It prompted an enquiry into how the two are interconnected.

### Assignment 1

Bread-culture entrepreneur **Eliisa Kuusela** introduces us to the benefits of sourdough baking and the microbial connection between the soil and our gut. Kuusela encouraged experimentation with different raw materials in bread. She says bread dough can contain dozens of raw materials, and it would be amazing to try to bake bread with as many as 100 different ingredients.

For this assignment you can write or draw a mind map. Students can work in small groups of 3 to 4. Mind mapping is always a creative way of notetaking, and it increases students' knowledge retention. Students and teachers can decide if they want to use the template attached and make it their own, or perhaps adapt a greater variety of elements, such as surface size, added colour, drawings, collage etc.

[Watch a YouTube video of Eliisa Kuusela](#), duration 5:08

[Read the call to participate in the Challenge](http://ihmehelsinki.fi): ihmehelsinki.fi

### Questions students can think about while mind mapping-

- What words come to mind when you think about the Challenge?
- What are the benefits of baking sourdough bread for our guts and for our soil?
- What do we become more aware of in the process of preparing and baking sourdough?
- What role does wild yeast play?
- What else can you experiment with once the basic sourdough mix is ready?
- What important questions does the Maaleipä Challenge highlight?

### Assignment 2

Research Professor **Minna Kaljonen** from the Finnish Environment Institute describes the close connection between agricultural farming and the Baltic Sea, and how alternative farming methods can help reduce nutrient overload.

[Watch the video of Minna Kaljonen](#), duration 4:13

[Find out about the Maaleipä recipes](http://maaleipa.fi): maaleipa.fi



This assignment can also be done in small groups where one or two breads can be chosen to go through, depending on the size of the class. Each group can either make a table or write:

- In what ways do the bakers address climate change through their breads?
- How many different types of flour do they use?
- What new, creative uses of ingredients did the recipes entail?

**Example of table:**

Bread	Tackling climate change	Types of flour	Creative use of ingredients

Each group can discuss its findings with the rest of the class. During the discussion of what each group has found, the following questions can also be addressed

- Why and how does farming affect the Baltic Sea?
- How can we keep nutrient emissions in check?
- Why are landrace varieties with longer roots important?
- Looking through the recipes, we see that some of the unique ingredients used by a few of the bakers came from the forests. What were those ingredients?
- Where else did the other bakers find their ingredients?

As an extended assignment students can be asked before class to bring in empty bread wrappers. They can explore what grains and what percentages of them are used. What are the similarities or differences between industrial breads and Maaleipä breads? What was different about the ones that won prizes? You can also add these questions to the previous table.

**Additional material:**

[Read more about the use of natural herbs and vegetables in baking:](http://ihmehelsinki.fi) ihmehelsinki.fi

[Get to know the Maaleipä breads made by food influencers:](http://ihmehelsinki.fi) ihmehelsinki.fi

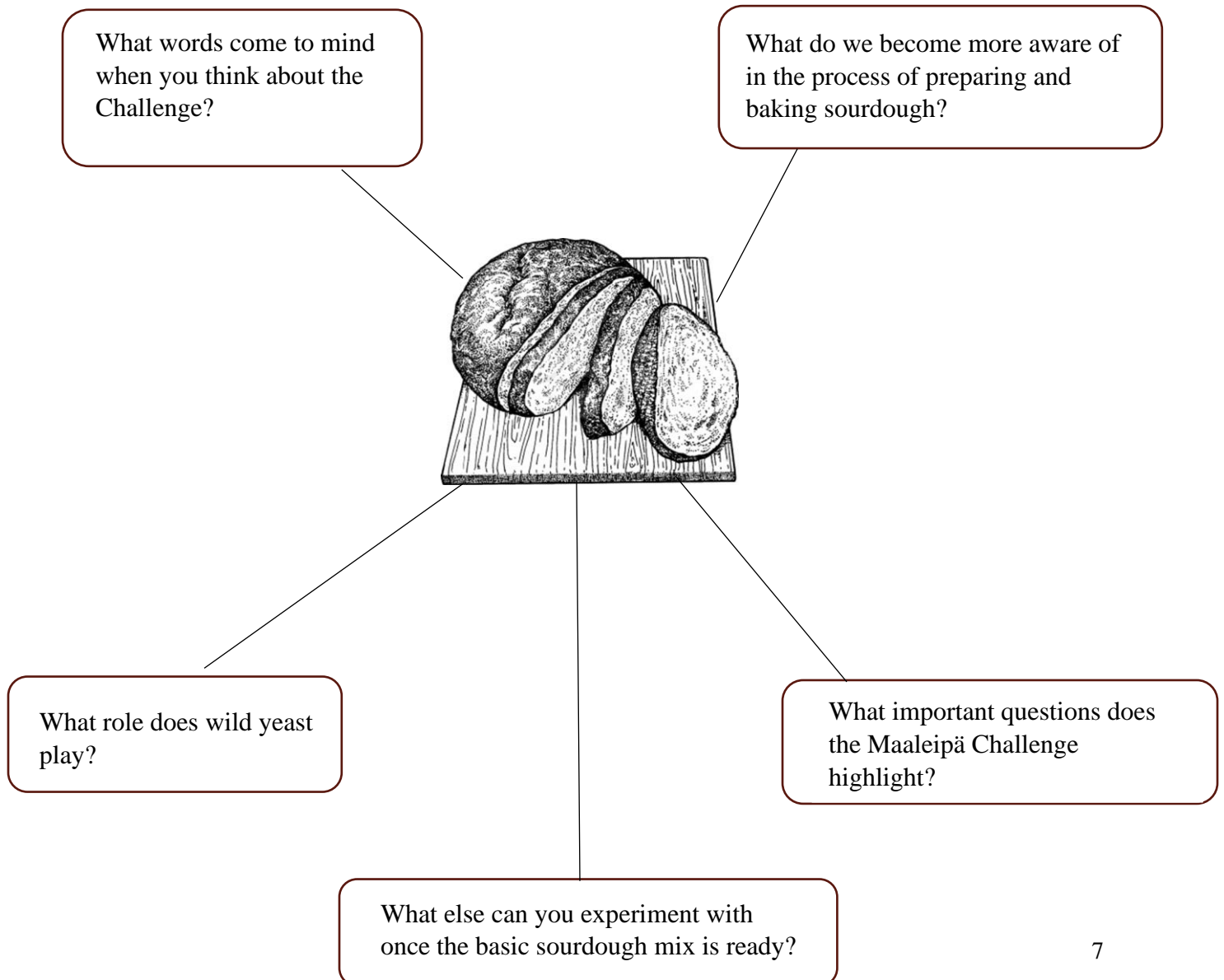
[What kind of Maaleipä baker are you?:](http://ihmehelsinki.fi) ihmehelsinki.fi



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Attachment for assignment 1

## ANATOMY OF A SOURDOUGH BREAD





### 3 REGENERATIVE FARMING AND CROP PRODUCTION

Start by reading an article about what Maaleipä is and why we need it. After reading it, watch the videos by **Joshua Finch** and **Kari Koppelmäki**

[What is Maaleipa and why is it needed?: ihmehelsinki.fi](https://ihmehelsinki.fi)

Project Leader Joshua Finch of Novia University of Applied Sciences describes how intensive farming affects the soil and crops, and how both farmers and consumers, as well as the soil, could benefit from regenerative farming and the diversification of agriculture.

[Watch the video of Joshua Finch, duration 5:31](#)

Postdoctoral researcher Kari Koppelmäki of the Ruralia Institute tells how growing animal feed affects nutrient cycles in soils, water systems, and the Baltic Sea, and how perennial plants and crop rotation could improve agriculture and the environment.

[Watch the video of Kari Koppelmäki, duration 4:06](#)

#### **Assignment:**

The Maaleipä Challenge brings into focus the complete cycle of food production, from where the raw ingredients are grown, to how they benefit the soil and environment, to the final product. Discuss, write or draw a picture that depicts the chain or link that the Challenge creates from crop growth to the final product, including some of the problems that may arise and the ways in which they can be solved. Think about:

- What does it mean to care for the land?
- How do we treat the soil?
- How do we treat plants?
- What is regenerative agriculture about?
- What happens when farmers diversify their plant species?

#### **Other questions to consider discussing together depending on time:**

- Why are trees that are typically considered non-productive also important?
- How can diversifying crop rotation also help farms economically?
- What is the biggest challenge for livestock and crop farms?
- How much agricultural land ends up being used for livestock feed?
- What is the biggest challenge in food production?
- What is the process that causes nutrients to be washed into the waterways?





## **ADDITIONAL MATERIAL – BALTIC SEA COUNTER**

Finland's share of the Baltic Sea's nutrient load is about 10 percent. Food production accounts for approximately 60 percent of the average Finn's footprint in the Baltic Sea. The share of waste water is also significant, about a quarter. The easiest way to reduce that load is to increase the proportion of domestic wild fish and plant food in our diet.

The Baltic Sea counter is the first of its kind in the world. The counter is based on the best available information and expertise, but the knowledge base still needs to be expanded.

Students can get help from their families to use the Baltic Sea Calculator. You can share and discuss the results together. You can also choose simply to reflect as a group on the impacts of our eating habits on the Baltic Sea by considering the questions below.

**[Calculate your Baltic Sea footprint](http://ymparisto.fi)**: [ymparisto.fi](http://ymparisto.fi) (Only in Finnish)

### **Reflections through questions:**

- What is the footprint on the Baltic made by a non-meat diet, mixed diet, and a completely vegan diet?
- What leisure activities does the Baltic Sea Counter take into account?
- Where did the idea of the Baltic Sea Calculator come from?
- What does the Baltic Sea Footprint take into account?
- What does Eutrophication cause?
- What other ways are there to reduce the load, apart from understanding and changing eating habits?



## 4 THE INTERCONNECTEDNESS OF OURSELVES AND OUR COMMUNITY THROUGH FOOD

Read how climate-friendly eating habits can influence climate change and watch the video about the Oma maa food cooperative and Lassila farm, as well as documentation of the Maaleipä Feast. You can also read about the participants' experiences of Maaleipä Challenge.

[Read about climate-friendly diets:](#) [un.org](http://un.org)

Producer member **Ruby van der Wekken** of the Oma Maa food cooperative and farmer **Jukka Lassila** of the Lassila family farm explain the importance of changing the Finnish food system, and what biodiversity in agriculture entails.

[Watch the YouTube video of Ruby van der Wekken & Jukka Lassila,](#) duration 4:41

[Watch the documentary about the Maaleipä Feast,](#) duration 5:55

[Read about the participants' experiences:](#) [ihmehelsinki.fi](http://ihmehelsinki.fi)

**Answer the following questions:**

What are Oma Maa's values?

What words come to mind when you think of 'food citizens'?

How did Maaleipä encourage connections between different people and professions?

What might be the future of the Maaleipä project?

What does a climate friendly diet consist of?

What diet is the friendliest to the environment?

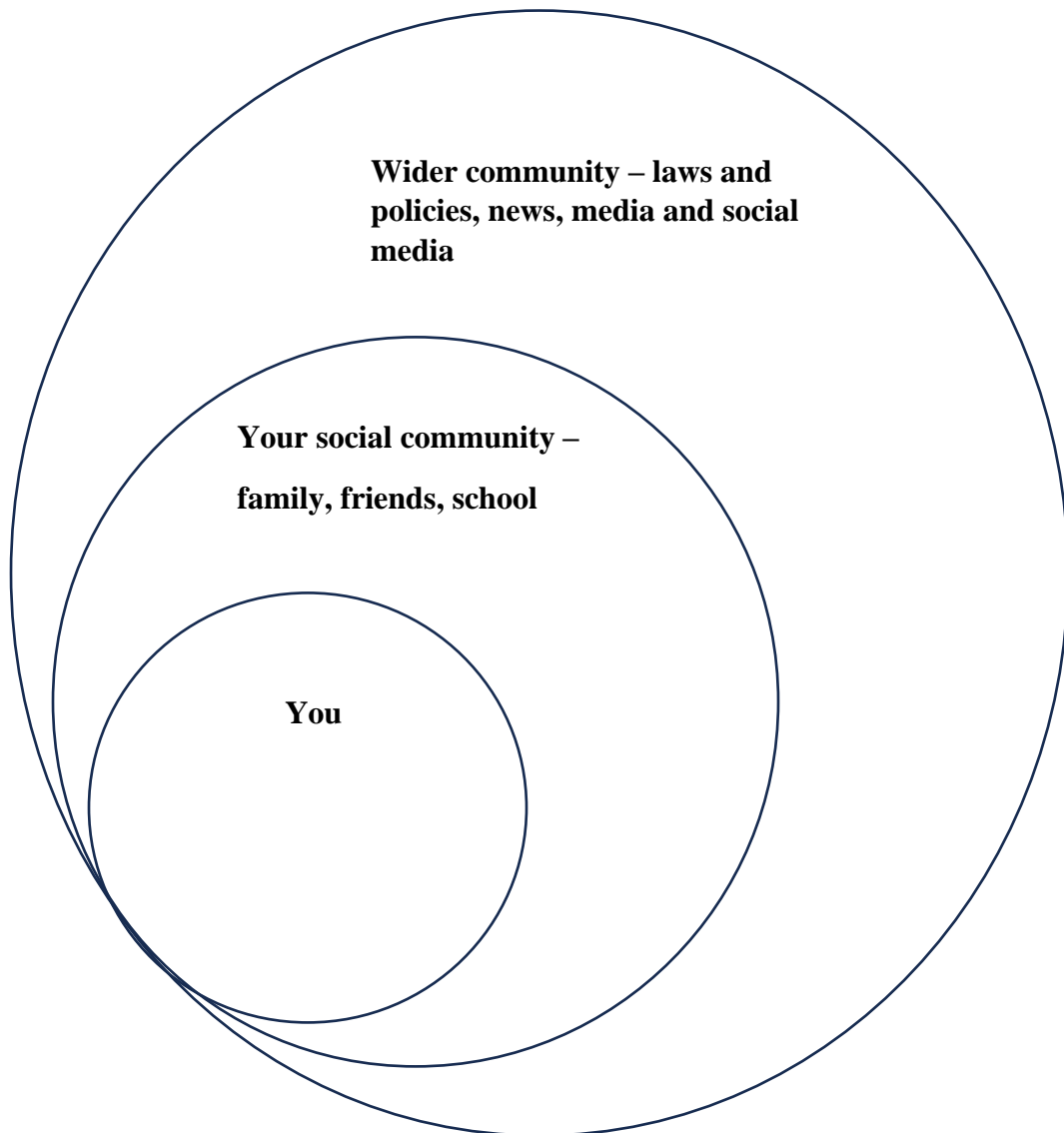
Regenerative, organic farming practices care for the soil and treat it as a living, dynamic ecosystem. Soil is alive; it is filled with microorganisms, fungi, bugs and bacteria, and its wellbeing is directly related our wellbeing. We can support the soil by thinking about our lives through food: what we eat; where it comes from; what we eat in our own communities. For example, in schools: Do we enjoy cooking together with family and friends? Do we grow our own food? etc.

Change starts with Maaleipä! It brought people together and connected different aspects of people's lives, both personally and collectively. This assignment can be carried out in small groups, so students have a chance to discuss and reflect together on the interconnectedness of personal, social and community spheres and how food choices affect us. You can work on these



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questions and answer them in relation to the diagram below. You can use the template, write or draw it, or even think about other ways of illustrating the role of food in the community.





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### **Individual sphere**

- Which vegetable or fruit do you like the most?
- What is your favourite way of eating it?
- Do you have it often?
- Have you tried to grow it?
- Do you know if it is organically grown?
- Is the same vegetable or fruit, but organically grown, easily available at your local grocery shop?
- In your opinion, what does it mean to care for the land?
- How might you take care of the soil?

### **Social sphere: The community of family, friends, school**

- Do you, your friends or people in your family like the same fruit or vegetable?
- Have you made food with this fruit or vegetable with your friends or family?
- Does the school kitchen use it in meals or as a snack?
- What happens to the food that is left over at home or in school?
- What does making food do for community building?
- As a school community, can we develop a process for increasing art and community engagement through food? Think about the Maaleipä Challenge as an example.
- Do you know anyone in your circle who grows some of their own food?
- Are there public places in your community where people grow food or engage in interesting projects around food?

**Think about what is outside your community, the structures and systems that influence you and your community, for example, the media or social media, laws and policies, etc.**

### **The sphere of the wider community:**

- What food advertisements have you seen on television, in newspapers or social media?
- Do any of them mention organic food?
- Have you recently heard or read any news related to food production or environmental crises that affect food and our diets?
- Do you come across food-related content on social media? What ideas or information does it give you?
- Is organic food easily accessible to you, your immediate circle, and the broader community?
- Healthy eating and climate-friendly eating support each other. How do our personal choices also affect the community at large?