

Kama recipe in language and mathematics classes in Estonia

Age of students: 13 to 18 years old

In **mathematics, Estonian and English** language classes, students explored the diverse dimensions of one of the most famous foods in Estonia: a cereal mix powder for drinks or deserts called *kama*. The interdisciplinary approach bringing together different aspects of the element encouraged students to compare the preparation and uses of the *kama* in different contexts and motivated them to engage more in the lessons.

Learning objectives

Kama¹ was used in three different subjects, each with specific learning objectives.

Estonian language:

- ▶ Recognizing the different periods in the evolution of the Estonian alphabet and the different forms of written Estonian;
- ▶ Listing the different stages in the history of the Estonian language and describing the life of a peasant at the turn of the 20th century based on prior knowledge of literature and history;
- ▶ Reading Gothic script with some help;
- ▶ Exploring the etymology of the other meanings of the word *kama*.

English language:

- ▶ Translating the names of typical Estonian foods, including the ingredients in *kama* and critically analysing translations found on the internet;
- ▶ Expressing an opinion on food and on healthy and unhealthy lifestyles;
- ▶ Preparing a recipe that includes *kama* flour.

Mathematics:

- ▶ Converting measurement units (from the imperial system to the metric system);
- ▶ Calculating proportions using percentages.

Objectives related to the ICH element:

- ▶ Raising awareness about the importance of living heritage in a broad sense, of food related traditions that Estonian people relate to and of *kama* in particular;
- ▶ Identifying the ingredients and process with which *kama* flour is made;
- ▶ Comparing and reflecting on life in Estonia a hundred years ago and nowadays.

Preparation

This school aims to foster a sense of openness toward the rest of the world among students. With this project, the pilot teacher particularly welcomed the opportunity to connect several subjects with local culture and to encourage students to reflect upon their identity and elements that are meaningful for their own community.

Description of the ICH element and the way it is practised today:

Kama is a finely milled cereal mixture that can include various combinations of roasted barley, rye,

wheat, oat, beans and peas. In the past, Estonian people prepared large quantities of *kama* at home, packing it as an easy-to-prepare nutritious food for journeys or days spent working in the fields. Traditionally, it was eaten mixed with fresh or sour milk. Nowadays, while the ingredients remain the same, it is mostly served with milk, buttermilk, kefir or yoghurt and can be sweetened with sugar. It is also a popular ingredient in desserts and snacks and has become a trendy item featured in fashionable restaurants or at formal receptions.

¹ Kama is a cereal mix powder typically used for breakfast or light meal as a drink or desert. The element is inscribed on the national list of intangible cultural heritage. More information is available online at <https://rahvakultuur.ee/2020/03/17/kama-valmistamine-ja-soomine-mulgimaal/>, accessed on 6 November 2020

Kama was selected for this project because food and related practices offer multiple dimensions that are easy to link to several school subjects. In particular, *kama* has been used for centuries and provides communities with a sense of belonging and connection with their past generations. *Kama* has been inscribed on the national list of intangible cultural heritage and all Estonians can relate to it. While it may not exactly be considered a delicacy, Estonians are likely to mention it to foreigners as a typical food in Estonia.

Linkages between the ICH element and the school subject:

Kama is a real-life example that is familiar to all students and offers several dimensions on which students can build knowledge. A *kama* recipe published in Gothic script in 1909 provided the entry point and background information for the three subjects.

Involvement of learners in the preparation of the activity:

The lessons were mostly prepared by the three teachers. Learners were involved in researching and creating recipes that were later used in the English class.

Involvement of bearers and local community in the preparation and/or implementation of the activity:

Kama is known and eaten all over Estonia. Therefore, some teachers and many students considered themselves practitioners. Bearers from outside the school were not involved in this project.

In the future, some activities could be held in cooperation with the neighbouring Estonian Agricultural Museum, which has already partnered with the school, hosting all of the grade 9 crafts and technology lessons at the museum.

Description of the activity

The participating teachers chose a recipe for *kama* flour found in an early 20th century cookbook as their main source and identified ways to integrate it in their respective subjects.

The Estonian language lesson focused on analysing the evolution and history of the language. The recipe, written in an old form of Estonian, provided some background information. Students rewrote the original gothic script in modern Estonian, an exercise that proved to be more challenging than expected. Then, they talked about the life of Estonian peasants during the late nineteenth century and about the food they ate and how it compares to modern diets.

In mathematics, students converted the Imperial Russian measurement units used in the recipe (examined in their Estonian lesson) into their metric system equivalents. They then calculated the ratio and proportions of the various ingredients and discussed different issues related to reading the quantities from the recipe.

The English classes started with a discussion on typical foods in Estonia. Food is a frequent discussion topic when meeting people from other countries, and this lesson allowed students to acquire specific vocabulary to describe the ingredients and process. They translated the recipe and formatted it into a contemporary style, including the unit conversions. Then they searched for additional information online, looked up different foods sold in shops that incorporate *kama* and developed a print advertisement for *kama*. The group also watched an episode of an English-language cooking show that discussed modern Estonian cuisine and included a recipe that incorporated *kama*. Finally, working in groups, students developed their own *kama*-based recipe, such as *kama* balls or a variation of a typical *kama* dessert, and prepared it for their classmates.

Learning outcomes

Developing a range of lessons around the same source required more preparation time, the ability to think outside the box and a higher level of cooperation among teachers than a regular lesson. The tight timeframe under which the pilot project was implemented also created planning challenges. With more preparation time, aligned with the planning of the academic year, the school team may have been able to integrate *kama* into more lessons and activities, and to mobilize partners (e.g. the Estonian Agricultural Museum). Even so, however, the results were worthwhile. **Students were more focused and engaged than in conventional classes.**

While *kama* generates mixed levels of appreciation among Estonians, the students enjoyed sharing recipes and cooking together. The activities increased their interest in this food product; some of them even pleaded for the return of the traditional *kama* drink at the school canteen in addition to the *kama*-based desserts that are sometimes served. As highlighted by a student, the different approach encouraged them to work harder. This project showed that something as commonly shared as *kama* can be exciting and generate many new learning experiences for students from different levels and across disciplines.

The teachers concluded that this interdisciplinary approach was successful and has the potential to be expanded to more subjects in the coming years. For example, *kama* can be an entry point to speak about nutrition in health studies. It can also be used as a case study for technology classes and for handicrafts and home economics lessons.



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