2018 EUROPEAN YEAR OF CULTURAL HERITAGE #EuropeForCulture

FOOD IS CULTURE

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THE BITE OF THE APPLE

TASTE

Teaching Activity 4

Taste

The final activity focuses on taste. Like every aspect of human culture, taste is a product of history and changes in time and varies in space. Individuals, peoples and regions of the world are characterized by choices, exclusions and preferences. Taste develops on two different levels: the first is flavor, the individual sensation on the tongue and the palate, an experience that is by definition subjective, moot and hard to convey. At the same time, taste is also knowledge, the evaluation of what is good or bad, what we like or don't like. The evaluation is cognitive because we have been taught to recognize and classify flavors; in this case, taste is not subjective but collective and shared, a cultural experience that is the fruit of a tradition and an aesthetic that society transmits to us from birth. Taste thus has to be trained from early childhood.

In this final get-together, pupils are asked to perform a sensory analysis activity that gives them a firsthand experience of the components of taste and the other sense organs.

Taste is regulated above all by our genetic inheritance. Through our reception of flavors, nature has endowed us with the innate ability to evaluate and control the composition of food, helping us to protect ourselves from potentially harmful ingredients and to recognize the ones most beneficial for our health. We have an innate aversion to bitterness in food, for example, which may correspond to the presence of potentially toxic compounds, whereas we have an instinctive preference for sweetness, associated with carbohydrates, an easy-to -use source of energy. A distaste for bitter flavors may constitute a problem insofar as bitterness is associated not only with the presence of poisonous substances in food, but also with protective active principles that are important for the health such as polyphenols, which are to be found in many vegetables.

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It would wrong to give in, however. Together with genetic inheritance, culture and environment also play an important role in defining our food choices. So what should we do?

Nutritional information is not enough on its own: however correct and necessary it may be, it is too obscure and abstract for children to understand. Children may learn theoretical information about food by heart from an early age but without fully understanding its significance and importance for the health.

Experience plays a fundamental role because it can change our way of sampling tastes, hence of accepting them. This is why experts recommend "exposing" young children to many different foods—even though they may taste unpleasant at first—to go on doing so throughout the children's growth. Yet it would be a mistake to go no further than an exercise in tasting and training of the taste buds. For preferences and aversions also develop on the basis of emotional stimuli, traditions, atmospheres and environment. Manipulating food playfully and creatively, tasting it with others—thus encouraging social exchange—activates a process of transformation in which unknown, unfamiliar food may become familiar and enjoyable. Moreover, tasting recipes at the table is a way of helping to learn and hand down habits and customs that involve not only our history, ingredients and the culture of our local area and family, but also dishes from other places and traditions, thus keeping them alive.

Preparation and set-up

- Choose a fruit or vegetable of which a number of varieties may be sourced locally. This teaching outline is based on sensory analysis of different varieties of apple of which one (if possible) is local.
- Procure different varieties of apple (see the teaching material). Clean, wash and slice the apples so that each participant can taste a bite.
- Assemble the mystery box (see instructions annexed) or, alternatively, procure a sack or a blanket.
- For the sensory analysis, put a few pieces of apple in paper cups or dark containers, cover with tin foil and adhesive tape and pierce holes in the top. Alternatively, the cups or containers may be covered with three or four strips of gauze secured with an elastic band so that the content is invisible but the aroma passes through. Mark each cup or container with a different letter of the alphabet.
- Divide the class into four or five groups, each with the same number of members, and hand out sheets of paper and pens or pencils to allow them to take notes. Ask each group to choose a leader.

Description of the activity

The teacher guides the students in their analysis of the food products, using one sense at a time and gathering each group's impressions after analysis with each sense.

We suggest that the students begin the activity blind, without being told what foods are to be analyzed. The first senses to be involved are thus touch and smell, so that the children can guess what the relevant food product is without actually seeing it.

Setting

A suitable space for group activities and washable surfaces.

Teaching aids, foodstuffs and disposable equipment

A quarter of an apple of each variety for each child, plus a few whole apples to put in the mystery box, to smell and to observe; a mystery box (see description annexed) or, alternatively, a sack or a blanket; tea infusors (or paper cups/dark containers, tin foil, adhesive tape); biodegradable saucers and/or serviettes; sheets of paper; pens or pencils; chopping board.

Additional teaching aids

The following texts are available to develop sensory analysis activities:

- ***To the Origins of Taste***, a sensory education course;
- ***The Slow Food Education Handbook***.

Both may be downloaded from the "What We Do" section on the Slow Food international website https://www.slowfood.com/what-we-do/food-and-taste-education/taste-education-resources/

Annexes

- Mystery box assembly instructions (see teaching activity 1)
- Sensory analysis fact sheet

SENSORY ANALYSIS FACT SHEET

Put the different apple varieties in the mystery box. Pass the mystery box containing the apples round from team to team or, alternatively, cover the apples with a sack or a blanket.

The participants from each team put their hands through the holes in the box, touch the apples, and try to recognize them and describe their characteristics.

As the box is being handed to the next team, the students who have just touched the apples write down their tactile sensations using every adjective they can think of. The tactile characteristics they should concentrate on are: **shape, texture, size, surface and temperature.**

Give each team the containers with the pieces of different varieties of apple and ask them to smell them blind to guess what they contain. Ask the students write down the similarities and differences they have noted smelling the different apples.

Each child tries to remember an occasion or a story connected with the mysterious ingredient. In this way, it is possible to gather accounts of personal and family experiences of ingredients and reflect on the link between customs, food and emotions, highlighting any intercultural elements.

The olfactory characteristics the children should concentrate on are: smell (**pleasant, unpleasant, intense, delicate, pungent, vegetable**) and its intensity (**light, moderate, strong**).

If the smell is hard to identify, the visual analysis may be carried out first.

Give each team an apple for each variety. After the students have established what they are (i.e., does seeing them confirm the guesses based on touch and smell?), they should observe them and try to describe them using the most suitable adjectives. Develop analysis of the apples' characteristics through visual perception—such as shades of color and differences in shape—to perfect the appropriate vocabulary. Ask the students to use similes: **physical state** (as solid as ...), **surface** (as smooth as ..., as rough as ...), **shape and size** (as round as ...), **the effects of light** (as dull as ..., as glossy and bright as ...), **shades of color** (as white as ..., as yellow as ..., as red as ...) **and uniformity of color** (uniform, spotted, patchy ...).

Give each student a saucer or a serviette with at least two slices of apple of different varieties, leaving at least one apple of a single variety whole, so that it stays stamped in the memory as a demonstration. Tell the children to taste the apples and encourage them to identify the flavors that characterize the different varieties (sweet, sour, bitter ...).

Point out that, in addition to flavor on the palate, it is also possible to perceive fragrant and tactile sensations (mouth smell and texture, respectively).

- **Smell sensations**: mouth smell (or retronasal olfaction) refers to the smells perceived through the nasal passages when air entering from the mouth, enriched by volatile substances emanated by food and drink, rises directly through the nose without passing through the lungs. To understand the phenomenon empirically, it is possible to perform the following test. Blindfold the tasters and hold their noses with two fingers or a clothes peg. Sprinkle a little cinnamon on a slice of apple and let them taste it with their eyes blindfolded and their noses held. With their smell and sight isolated, the tasters will find it difficult to detect the cinnamon. By impeding breathing through the nose, the clothes peg produces the effect of a common cold, with the apparent sensation of loss of taste. Repeat the experience after removing the clothes peg: once the connection between nose and mouth has been restored, it will be possible to perceive the cinnamon, too (through the back of the nose).
- **Tactile sensations**: : in addition to those specialized in perceiving flavors, there are also tactile receptors in the mouth that allow us to identify data transmitted by contact with the surface of foodstuffs when we chew them.

There are five different types of tactile stimuli:

1. Real tactile stimuli: these allow us to define form, size, surface texture (smooth/rough), and general condition (grainy, oily, creamy etc.);
2. Stimuli that allow us to perceive **texture**;
3. **Thermal** stimuli (heat/cold);
4. Stimuli that allow us to gather unique sensations of **astringency** (e.g., unripe persimmon, grape stalks and so on);
5. Stimuli that allow us to perceive the **burning sensation** or irritation typical of spices and spicy substances.

Tasting also involves hearing analysis. Ask the children to pay attention to the generally different sounds released between the first bites and after, when the saliva has softened the apple, hence altering its texture.

Have fun repeating the sensory experience with other foodstuffs!