

JOINT PROJECTS

projects developed in cooperation between teachers from different countries, one of whom at least participated in a previous Science on Stage festival

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Two cuisines joined by science!

Our project involves preparing classical dishes from two countries to engage students with the physics and the chemistry of cooking. Students are encouraged to link what they observe to the fundamental laws underlying the preparation of the dishes.

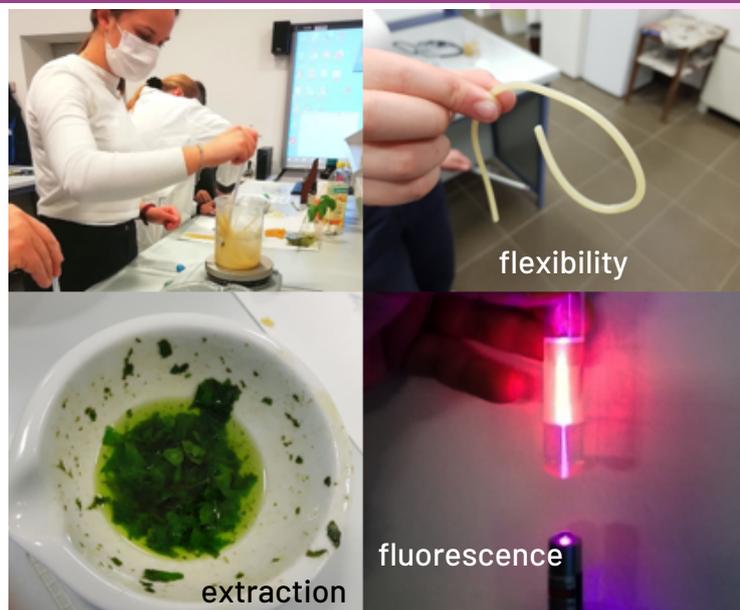
Experiments with boursak

The dough traps the CO₂ produced by the yeast and expands because molecules of starch in the flour, lubricated by the liquid, can slide across each other. The dough balls float when fried because the warm gas inside them makes them less dense than the oil. A chemical reaction in the mixture causes the golden brown colour.

- Which factors influence the outcome?
- Which gives the best result?



Didactic approach
 We looked at the preparation of food through the lens of the scientific method: noting the steps, listing the materials, making observations and measurements. In this way, the kitchen becomes a real laboratory for exploring science!



Concepts

Dimensions	Change of state	Reactivity
Strength	Interaction with light	Extraction
Density	Fermentation	Absorption
Rigidity		Dissolution
Plasticity	Heat	Mixtures
Forces	Odour	Solvent/solute
	Diffusion	

Playing with pasta and pesto

The physical properties of pasta change during cooking: from being rigid and inelastic, it increases in size, becomes flexible and sticky.

Making pesto involves extracting the colour and the aromas of basil leaves into olive oil.

- Why do the properties of pasta change?
- Why is pesto red in UV light?



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