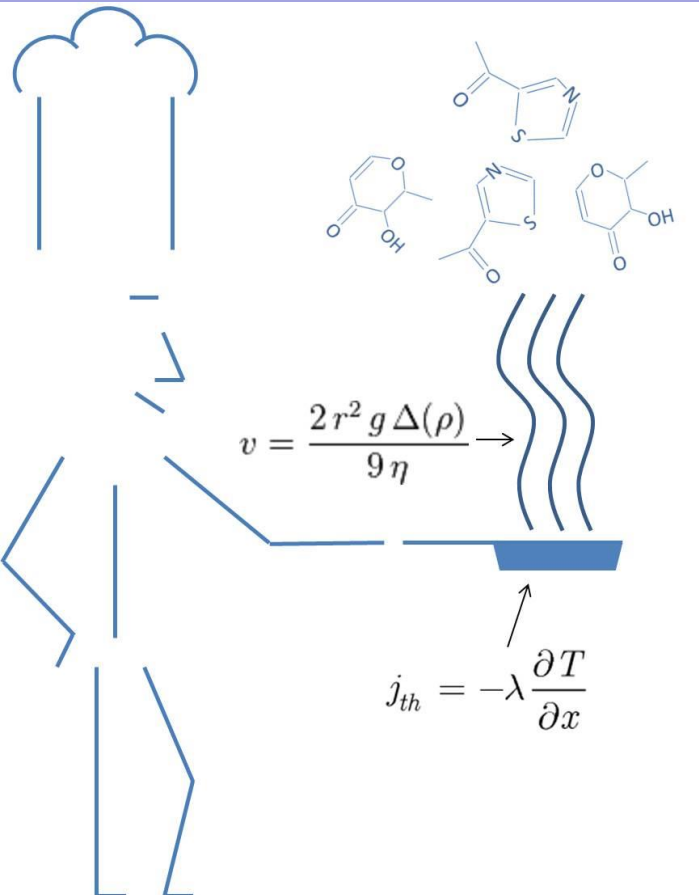


Science & cooking: teaching the teachers



Christophe Lavelle
CNRS – MNHN - Sorbonne Universities, Paris, France
INSPE , Toulouse/Antony, France
christophe.lavelle@mnhn.fr

Knowledge and methods

Molecular

at the molecular level

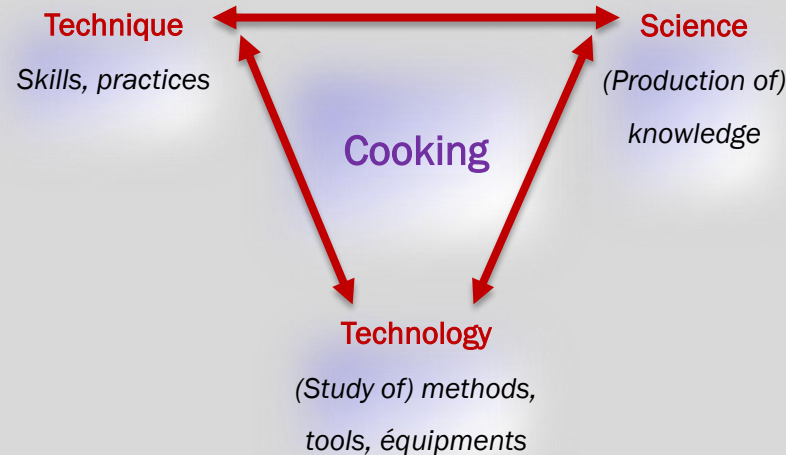


↓
"Gastronomy is **the knowledge** and understanding of all that relates to man, as he eats."
Jean-Anthelme Brillat-Savarin, *Physiologie du Goût*, 1825

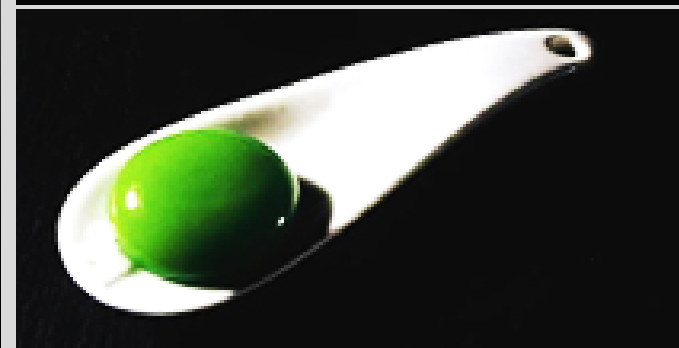
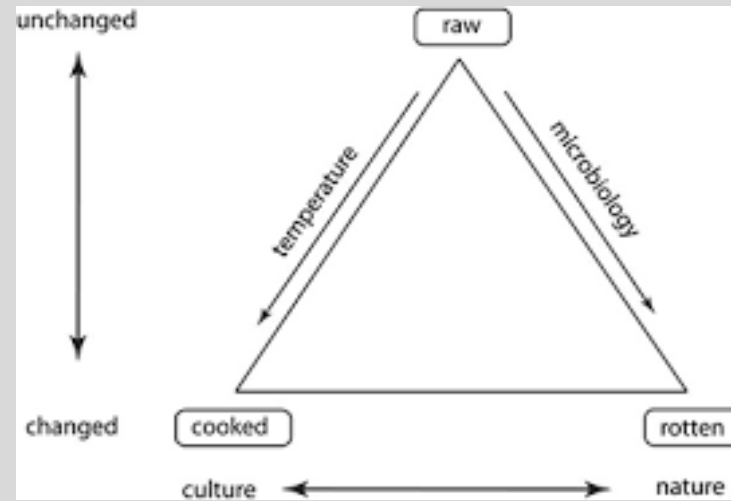
"...It pertains to **natural history**, by the classification of food substances, to **physics**, by the examination of their compositions and qualities, to **chemistry**, through various analyzes and breakdowns it subjects them, and to **cooking**, through the art of preparing food and make it palatable."



"Cooking, without ceasing to be an art, **will become scientific** and subject its formulas, too often empirical, to a method and a precision that will leave nothing to chance."
Georges Auguste Escoffier, *Guide culinaire*, 1907

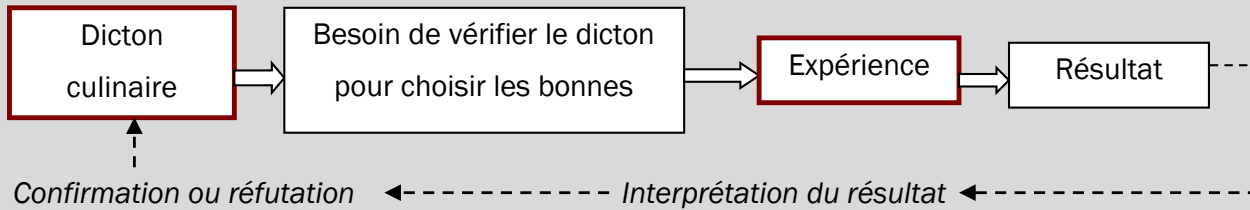


Preparing/transforming food

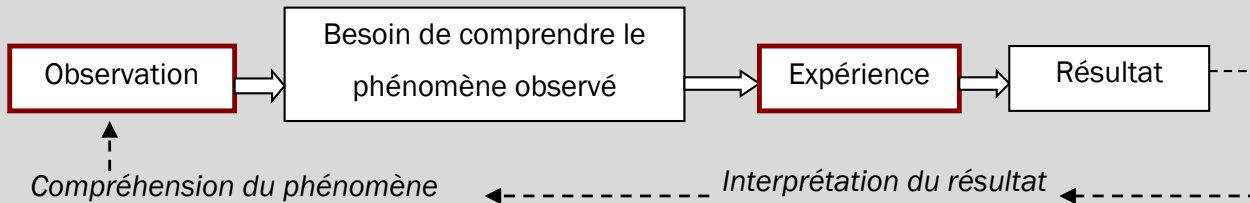


Motivations for experiments

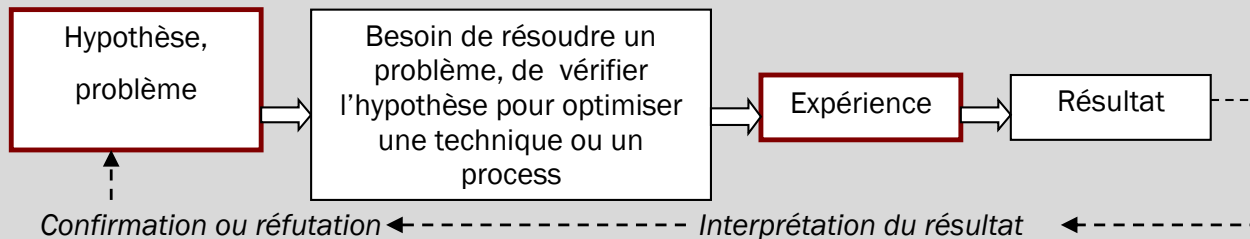
Contexte n° 1 : Le dicton induit l'expérience.



Contexte n° 2 : L'observation induit l'expérience.



Contexte n° 3 : L'hypothèse induit l'expérience.



2015 - series "science and technology for hotel and restaurant" Program "culinary science and technology"

To identify **key physical/chemical phenomena** generated by the culinary act:

- Transformations: fat, protein, carbohydrates, water
- Impact of temperature
- Foams and emulsions

The implementation involves a strategy adapted to the class level, **avoiding the strict reproduction of techniques**. As part of the observed processes, the physical/chemical phenomena will be demonstrated. These discoveries will be further revealed during **experiments, observations, demonstrations...**

The link will have to be done with the science class.



Get inspiration



Ferran Adria
(El Bulli, Rosas, Spain)



Heston Blumenthal
(The Fat Duck, London, UK)



Georgianna Hiliadaki and Nikos Roussos
(Funky Gourmet, Athens, Greece)



Sang Hoon Degeimbre
(Air du Temmps, Liernu, Belgium)



Grant Achatz
(Aliena, Chicago, USA)



Alex Atala
(DOM, Sao Paulo, Brazil)



Homaro Cantu
(Moto, Chicago, USA)



Denis Martin
(Denis Martin, Vevey, Switzerland)



Christèle Brua



ESPE Toulouse



ESPE Antony



Sang Hoon Degeimbre



ESPE Antony



Lycée Sarreguemines



Lycée Sarreguemines



ESPE Antony







ESPE Antony













Thanks for your attention