The “La main à la pâte” Foundation

La main à la pâte aims to develop inquiry-based science education in primary and lower-secondary schools. Launched in 1996 at the initiative of Georges Charpak (Nobel Prize in Physics), Pierre Léna, and Yves Quéré, with the support of the Académie des sciences, La main à la pâte became in 2012 a foundation for scientific cooperation founded by the Académie des sciences, the École normale supérieure (Paris) and the École normale supérieure de Lyon. The La main à la pâte foundation pursues and develops the activities carried out in France and the rest of the world.

Index
- La main à la pâte in numbers
- Priorities, principles, and goals
- A brief history of La main à la pâte
- Organisation of the La main à la pâte Foundation
- Partners

La main à la pâte in numbers

Today, La main à la pâte is:
- A team of thirty people
- Nearly 400 class activities available online
- 6 translations of the La main à la pâte website (English, German, Spanish, Chinese, Serbian, Arabic)
- 10 educational projects since 2000 and freely distributed to 55,000 teachers worldwide
- International collaborations developed with more than 50 countries worldwide within three regional networks (European Union, Southeast Asia and Latin America)
- More than 200 foreign partners from all over the world having participated to the International Seminar of La main à la pâte
- A network of twenty pilot centres in France
- More than 160 middle schools involved an integrated science education project
- 8 Houses for Science, regionally based since 2012

Priorities, principles, and goals

The La main à la pâte Foundation aims at five main goals:
- Produce and disseminate pedagogical and scientific resources
- Contribute to the training of teachers and trainers
- Develop an international cooperation around science education
- Favour Equal opportunities
- Involve scientists and industrialists in the development of science education

These follow the 10 principles supported by the La main à la pâte operation, encouraging a simple pedagogy based on the pupils’ active behaviour, the writing of personal and/or common products, the involvement of families and scientists.

- the pedagogy:
  Science is not a popular field in primary or junior high school: grades are low, very few pupils are interested in science, and even fewer of them admit they want to study or work in science. To counterbalance this fact, La main à la pâte promotes a new science education based on an active appropriation of knowledge, through reasoning, guided investigation, experimentation. The teacher guides the pupils in their discoveries, and limits top-down rhetorical lessons. Yet, this requires good skills in both science and pedagogy, which La main à la pâte tries to improve thanks to specific training sessions as well as multidisciplinary thematic projects.
- the language:
  Science teaches pupils to use the right word and the right wording. Oral language is compulsory for debate, communication, and socialisation; overall, pupils learn critical thinking and argumentation. Written language, on the other hand, encourages the crystallisation of ideas, trains the production of summaries, keeps track of results and conclusions.
- the citizenship education:
  La main à la pâte proposes activities which scientists, families, local authorities, industrialists, associations can involve in. This can renew the local social network, in particular in areas in need. Furthermore, the thematic projects of La main à la pâte also advertise health education, sustainable development education, or natural hazard prevention: educated children will grow into better citizens.
- the scientists involvement:
  La main à la pâte brings together the scientific and pedagogical communities. Scientists review and develop teaching resources, they support teachers during science lessons (ASTEPP), they form a network of experts and consultants answering questions asked by teachers, trainers, or pupils on our website. Scientists can also dedicate part of their time to the training of teachers: this is a feature of the “Graines de Scienctes” (“Seeds of Science”) autumn training session, and the very heart of the Houses for Science network.

A brief history of La main à la pâte
In 1992, Leon Lederman - Laureate of the Nobel Prize in 1988 – had launched the Hands on Science experiment. After meeting him, he immediately immediately subscribes to this project; he would launch the operation La main à la pâte, in collaboration with the French Academy of Science, to which he belongs. According to its statutes (article 2), the Academy of Science must "work to improve to the quality of science education!". In April 1998, a three-day conference in Poitiers, France, three members of the Academy of Science, Georges Charpak, Pierre Léna, and Yves Quéré present the conclusions of a ministerial report on the north-American experiment to an assembly of school inspectors. The subsequent proposal is unanimously voted by the Academy in July 1996.

The operation La main à la pâte officially sees the light on September 5th, 1996, [official bulletin here], when 344 schools in France join the project. The Academy of Science, the French Ministry of Education, and the Interministerial Delegation to the City support the operation through a website (launched in 1998) as well as the dissemination of the translated versions of the American teaching modules Insights, while genuine French resources are being created. By 1998, up to 2,000 schools are involved in the project throughout the country. In November 1997 the first La main à la pâte Trademarks are registered, while the La main à la pâte trademark is registered in 1998.

1999 is marked by a major national conference held at the National Library of France, entitled "About La main à la pâte: science and primary school", where the Minister is presented the report by Jean-Pierre Sarmant (General Inspector of Education) who sees in a favorable light the project of renovation and its principles. In June 2000, the Ministry of Education announces the creation of a three-year plan for the renovation of science and technology teaching in school (PRESTE) [official bulletin here]. The official curriculum is revised in 2002, in close collaboration with the Academy of Science and the La main à la pâte team.

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Organisation of the La main à la pâte Foundation

The La main à la pâte operation became a public Foundation in 2011 (first board meeting : December 14th, 2011) starting a five-year programme on 2012, January 1st. The official statutes have been approved by decree (Official Journal #238, 2011 October 13th). They include four main entities:

- **Founding members**
  - Academy of Science
  - Ecole Normale Supérieure
  - Ecole Normale Supérieure de Lyon

- **Governing board**
  - The 9 members include 5 members of the Funding Institutions, 2 Qualified Personalities, and 2 team representatives:
    - Daniel Rouan (President, member of the Academy of Sciences), Odile Mači (Vice-President, Treasurer, member of the Academy of Sciences), Jean-François Bach (Permanently Secretary at the Academy of Sciences), Marc Mezard (ENS Director), Jean-Philippe Pinton (ENS-Lyon CEO);
    - Sir John Holman (chemist, Professor at York University, UK and founder of the National Science Learning Centers) and Claude Thélot (Honorary Advisor-Master at the Court of Accounts);
    - Frédéric Perez and David Wilgenbus (representative members of the Foundation)

- **Scientific and educational development board**
  - In 2012, the board includes 14 personalities: Yves Bréchet (Board Chairman, member of the Academy of Sciences, High Commissioneer for Atomic Energy, Professor in engineering, National Polytechnic Institute of Grenoble), Martin Acder (Professor in Mathematics, University of Versailles Saint-Germain-en-Yvelines), René Blachotet (member of the Academy of Sciences, Professor Emeritus - sciences of the Universe - ), University of Nice-Sophia Antipolis, former Rector), Gilles Dowek (Director of Research - IT sciences - , INRIA, Sadiay, France), Christian Dumas (member of the Academy of Sciences, Professor of History and philosophy of Science, Stendhal University, Grenoble, France), François Morel-Diville (researcher at INRA and IFE - sciences communication sciences, ENS-Lyon), André Pigeau (member of the Academy of Technology), Elisabeth Piti (Associate Professor in science didactics, University of Reims Champagne-Ardenne, Reims, France), Brigitte Proust (Honorary Associate Professor in chemistry), David Quéré (Study leader in physics at the CNRS and ESPCI), Edith Saltiel (Honorary Lecturer in physics education, University Paris Diderot), Jean-François Pinton (former President of the French Academy of Science, to which he belongs).

- **Steering Committee**
  - Dominique Pojar (General Inspector of Education, Dean of the biology group), Didier Miraton (CEO of Pierre Fabre, administrator of the Vilmorin group -Limagrain-) , Ludovic Julien (Director of the ENS Laboratory of Chemistry, Professor at the Pierre & Marie Curie University, director of the research unit UMR 8640), and Jean-Paul Dubacq (elected representative at Mantes-la-Jolie, France, honorary director of scientific studies of the ENS).

- **Team**
  - About 30 people are part of the team, which is headed by the director, David Jasmin, and a board of 6 coordinators, Pierre Léna, member of the Academy of Sciences, is President of Honor of the Foundation.
Partners

La main à la pâte actions are supported by a wide network of partners:

Institutions

- French Ministry of Education
- French Ministry of Research and Higher Education
- French Ministry of Foreign Affairs
- National Agency for Social Cohesion and Equal Opportunities (ACSE)
- Investissements d'Avenir ("Investment with Prospects")
- French Academy of Technologies

Companies

- Michelin
- Saint-Gobain
- Total
- Mérieux Foundation

Occasional partners

At the occasion of a specific project, public or private partners can support the Foundation. They are listed on the webpage of their respective projects.

Source URL: https://www.fondation-lamap.org/fr/page/17992/the-la-main-a-la-pate-foundation