

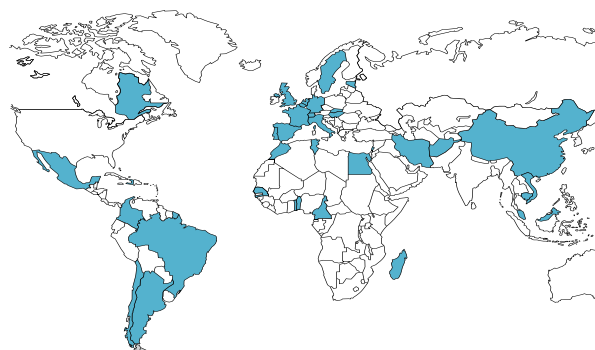
International partnerships

La main à la pâte develops active cooperation with more than 30 countries and 3 regional networks (European Union, South-East Asia, Latin America).

All actions are carried out with the support of teachers training centres and *La main à la pâte* pilot centres. They mainly deal with expertise and support for launching similar programs abroad, training trainers and exchanging learning and scientific resources.

Agreements and partnerships are set up with developed countries as well as emerging (Brazil, China...) or developing ones (Cambodia, Senegal...). Since *La main à la pâte* is a public program, no benefit is realized through international cooperation. Costs reductions enable concrete actions in most countries, especially through in-service training sessions for trainers and teachers and free resources transfer.

A special attention is paid to Europe, particularly through the Pollen project, launched in 2006 at *La main à la pâte* initiative, that gathers 12 countries in a large network of *seed cities for science*. About 30.000 pupils will benefit from this initiative.



La main à la pâte's international partnerships in 2007

Please note that a full document on the international cooperation of *La main à la pâte* is available in English in the *International* section of the website.



Partners

Both in France and abroad, *La main à la pâte* is supported by many prestigious institutions and personalities.

In France, the early support of the Ministry of national education, the National institute for pedagogical research and the *École normale supérieure* (Paris) were decisive, as well as the constant help received from the Ministry of Foreign affairs, the Treilles foundation, the Christophe-et-Rodolphe-Mérieux foundation, PSA Peugeot-Citroën and numerous universities and research centres, such as *École Polytechnique*, several *Écoles des mines*, *École Nationale Supérieure des Arts et Métiers*...

Abroad, this initiative received very early the endorsement of the InterAcademy Panel, federating 92 Academies of sciences, and of the International Council for Science. *La main à la pâte* has thus taken part of a much wider debate where many international partners share its concern for a deep renewal of science education, like the Francophone University Agency, the *Bibliotheca Alexandrina*, the Directorate General for research of the European Commission, the *Convenio Andrés Bello*, the Southeast Asian Ministers of Education Organization and UNESCO, among others.

Contact

La main à la pâte
1, rue Maurice Arnoux
92 120 Montrouge
France
Tél. : + 33 1 58 07 65 94 - Fax : + 33 1 58 07 65 91
Courriel : contact-lamap@inrp.fr

www.inrp.fr/lamap

Teaching sciences at primary school



La main à la pâte is a national French program aiming at revamping and developing science and technology education at elementary school (both kindergarten and primary). It recommends that teachers implement investigative and inquiry activities with pupils, combining exploration of the world, scientific learning, experimentation and reasoning, mastery of language and argumentation, so that all children deepen their understanding of the objects and phenomena around them. Curiosity, creativity and critical attitude are the core of competencies *La main à la pâte* aims to develop.



conception : www.lesat-graphique.net

A full tutoring and support system which develops science and technology education through :

- a national team of about 20 persons, advocating for dissemination, empowering and public awareness of inquiry-based science education (IBSE) through conferences and seminars, expertise and recommendations, evaluation and assessment, training and publications ...;
- a large network of resource persons and associated trainers in France and abroad, all main actors and practitioners of science and technology education;
- a decisive involvement of the scientific community, particularly through teachers coaching;
- a continuous elaboration and dissemination of free pedagogical and scientific resources;
- annual prizes under the aegis of the *Académie des sciences*, for primary teachers and trainers.

Launched in 1996 by Georges Charpak, Physics Nobel prize winner, with the support of the French *Académie des sciences* and the Ministry of education, *La main à la pâte* has been in constant development since then, entering in a partnership with the National Institute for pedagogical research and the *École normale supérieure* (Paris).

The work undertaken with the Ministry of education led to the launching, in 2000, of a national plan to renew science and technology teaching in schools, followed, in 2002, by a profound change of science teaching curricula for primary education.

A rough estimation gives a number of about 100 000 primary teachers (33% of classes) actually practicing science education in France, with about 30 000 doing it in accordance with *La main à la pâte* recommendations. Only 3% of teachers were doing so in 1996.

A network to disseminate innovation

Fifteen *La main à la pâte* pilot centres throughout France constitute the main areas where innovation can be experimented and tested. Each pilot centre gathers numerous partners (local educational authorities, universities, science labs, city hall, teachers training centres, associations...) acting jointly to the benefit of about 3000 classes. This network is expanding and plays a prominent role for implementation and dissemination of good practices, as well as for assessing the impact of IBSE methods on teachers and pupils.



Resources from *La main à la pâte*

- online library of free learning units and scientific documents for French-speaking teachers with more than 300 activities covering all scientific topics;
- collaborative and interdisciplinary projects linking dozens of classes : *On the steps of Eratosthenes*, *European discoveries*, *Living with the sun...*;
- methodological guidelines and multimedia documents on teaching, training and sciences;
- learning units, scientific publications and science kits edited with private publishers;
- an itinerary exhibition : *Teaching sciences at school : what an amazing story ! (1830-2005)*.

All these documents and some publications from private publishers are submitted to the *La main à la pâte* trademark committee in charge of quality certification.

Many of them have been translated to other languages (Arabic, Chinese, English, German, Portuguese, Spanish, Serbian, Vietnamese...). The basic document *Teaching sciences at primary school* is for instance available :

- in Spanish : www.paueducation.com/lamap
- in English : www.pollen-europa.net
- in Portuguese : <http://educar.sc.usp.br/mm/>

La main à la pâte website

Launched in 1998, upgraded in 2005, the *La main à la pâte* website (www.inrp.fr/lamap) is one of the most significant tools provided for teachers. Largely consulted with more than 200.000 visits per month (on a yearly average), it freely provides teachers with :

- units for science teaching;
- documents on science and science teaching;
- list of useful scientific material and kits;
- tools for cooperative work through ICT;
- access to a network of scientific or training experts, which reply to teachers enquiries through Internet;
- a section devoted to *Science training*;
- mailing list and discussion forum.



Foreign websites adapted from *La main à la pâte*

The website contents and functionalities have been adapted or are under adaptation in the following countries :

- Egypt (*Bibliotheca Alexandrina*) : <http://lamap.bibalex.org>
- China (Learning by doing) : <http://lamap.handsbrain.com>
- Europe (Pollen project) : www.pollen-europa.net
- Germany (*Freie Universität Berlin*) : www.lamap.de
- Latin America (*Universidad de los Andes – Colombia*) : www.indagala.net
- Serbia (*Ruka u testu*) : <http://rukautestu.vin.bg.ac.yu>