

Newsletters N° 3 and 4: October 2007 *

Regularly, we published this Newsletter, reporting on the Pollen project current and future actions by highlighting partners work. Do not hesitate to send your comments, remarks and suggestions to pamela.lucas@inrp.fr, raynald.belay@inrp.fr or to claudia.alsina@paueducation.com.

Seed cities life

Leicester: Food & Science Challenge

(contact: Tina Jarvis at jar@leicester.ac.uk)

The Pollen schools in City of Leicester were challenged to carry out a science project about food during June and July. They were asked to carry out investigations which involved people or businesses from the wider Leicester City Community in some way. Six schools took up the challenge. Pupils from aged 5 to 11 were involved. In some cases the investigation was started by a letter. For example, one school received a letter from the local supermarket asking them to invent a new fruit drink. In another, the local farmer wrote to the pupils saying that they were having problems growing tomatoes and could the pupils help by testing tomato plants grown with and without fertiliser. In other schools visits were arranged from a dietician, a lecturer from a local university and a local ice-cream manufacturer. Links were made with local businesses by Leicestershire SETpoint (www.leics-ebc.org.uk/lebc/setpoint).

The investigations included testing different types of chocolate; ways of making the best ice-cream; identifying the salt and fat content in pupils' lunch boxes; testing packaging to keep fruit drinks cool; and trying out different ways to make compost. A visit from parent, who showed the pupils how Indian 'Cha' was made, prompted investigations into the best material for teabags.

The pupils shared their results in many different ways including giving presentations to parents and writing letters to their visitors. Other groups made posters and displays. One group made a computer animation on healthy eating and another created an advertisement jingle for a 'radio'.



Berlin: More schools, teachers and children participating in Pollen in the seed city.

(contact: Petra Skiebe-Corrette at skiebe@zedat.fu-berlin.de)

After the summer vacation, Pollen is in full swing again in Berlin. The number of participating schools increased from seven to eleven. The new schools are Grundschule am Amalienhof, Katholische Schule St. Ursula, Robert-Reinick-Grundschule and the 39. Grundschule.



In addition, Pollen Berlin added two new science topics to our teacher training program. In 2006, teacher trainings were held on the topics "Motion & Design" and "Chemical Tests". This year, we added the topics "Electrical Circuits" and "Microworlds", thus covering biological, chemical and physical topics. The teachers were trained with "Science and Technology for Children" materials, developed by the National Science Resources Center. The number of teachers participating in the teachers training in 2007 was 62. Each of these teacher trainings lasted one day and included 16 different teaching lessons, which build on each other.

Teachers from the Grundschule perform a chemical test during a filtration experiment.

* Because of scholar calendars (summer vacations), contents of newsletters N°3 (July 2007) and N°4 (October 2007) were grouped in a unique issue.

Although the teachers had to work hard, they enjoyed the training: "Because we did all the experiments ourselves, we will be able to identify the difficulties and stumbling stones the children will face. The atmosphere was positive and motivating". Due to requests by their teacher coordinators, an information evening about Pollen was held in two of the participating schools.



Teachers from the Heinrich-Zille-Grundschule document one of their electrical circuits.

Ljubljana: Pollen Workshops and dissemination

(contact: Ana G. Blagotinšek at ana.gostincar@quest.arnes.si)



The Seed city of Ljubljana organizes a workshop "Motion" on October 18th for primary teachers and future primary teachers (students at the Faculty of Education in Ljubljana). Three more workshops are already scheduled till the end of the year ("Balancing and Weighting", "Light and Colours" and "The Weather").

Kindergarten teachers are very interested to participate, so workshop "From counting to Measurement" will take place this autumn in at least three different kindergartens in Ljubljana.

Pollen project in Slovenia is extended to another Seed City, Kamnik. Teachers from Kamnik were attended Pollen seminars in Ljubljana last year, and due to their good experience City Council of Kamnik assigned financial funds to buy experimental equipment to start Pollen project in their schools and kindergartens. Introductory Pollen workshop was organized in Kamnik on September 20th.

Saint Etienne: The French seed city highlighted in French Press

(contact: Clémentine Transetti at transetti@emse.fr)

The newspaper "Le progrès de Lyon" has published last June a set of four articles about the Pollen Seed city of Saint-Etienne: « A project at European dimension », « How to tackle sciences differently" (both project presentations), "Wake up children curiosity" (article about the scientific coaching carried out in Pollen classes) and "Teacher, how can we do to draw the air?" (A testimony of a primary teacher involved into the project).

Articles online (in French) at:

<http://www.pollen-europa.net/?page=gYZ8PdOPtKM%3D&element=5F4hGNGyHXE%3D>



Saint Etienne:

The science gathering bees N°2 ("Les butineurs de science")

(contact: Clémentine Transetti at transetti@emse.fr)



This is the newspaper from Saint -Etienne seed city, written by the pupils from Pollen classes. It aims at disseminate project activities to the whole Saint-Etienne community. Children describe a science lesson, a visit to a museum; make questions, present challenges....

In this bulletin there is an interesting testimony of Pollen children about the role of Laurent, during a science lesson. Laurent is an engineering student who is their scientific coach. Next issue scheduled on December 2007.



The bulletin is available online on Pollen website at:

<http://www.pollen-europa.net/?page=gYZ8PdOPtKM%3D&element=2ST57UhPxlA%3D>

Brussels, another Pollen seed city on the newspapers

(contact: Pasquale Nardone at pnardon@ulb.ac.be)



The Belgian newspaper Le Soir published a supplement called "L'extra" devoted to Science education. In this supplement Pasquale Nardone, Pollen national coordinator referred to Science education in Belgium. In one of these articles, he made a focus on Pollen actions.

Article online on Pollen website at:

<http://www.pollen-europa.net/?page=qYZ8PdOPtKM%3D&element=s8fZe85B9LQ%3D>



Loures - Sacavem: Materials : good conductors, poor conductors and isolators” – The video

(contact: Rosario Oliveira at roliveira@cienciaviva.pt)

Alberto Ferro from Instituto Tecnico Superior - Engineering of materials Dept. carried out a session called "Materials : good conductors, poor conductors and isolators " with pupils coming from Camarate School (nº 6) from Loures (Portugal). This work was done within the framework of the Science week in the Pavillion of Knowledge – Lisbon Science Centre. The video of the session is now available with English subtitles at:

<http://www.pollen-europa.net/?page=qYZ8PdOPtKM%3D&element=pNKW%2ByMI7IY%3D>

and

<http://www.cienciaviva.pt/projectos/pollen/index.asp?acao=changelang&lang=en>

It can be viewed on two separate parts: Section Nº1: "Identifying the characteristics of the materials" and section Nº2: "Which materials are pots and frying pans made of? ".Documents of support for teachers and pupils are also available in Portuguese on Ciência Viva website.

Loures - Sacavem:

Pollen experiments in a shopping mall

(contact: Rosario Oliveira at roliveira@cienciaviva.pt)

Come to help us to make butter out of cream with no machine! Why cannot I make jelly with fresh pineapple? These were the starting points for people to join the Pollen team, in an activity for kids and adults, carried out in the Loures shopping mall on a summer weekend.

The event followed an invitation by the shopping mall manager, after an initial meeting that did not seem very promising.

Water in food (popcorns); enzymes (pineapple, kiwi, etc) and jellies; making butter were some of the experiments people got involved in. This was quite challenging for our team as we had no idea how the population would react. But, after a while, a group had formed around our team, kids in front and parents behind. Kids started carrying out the activities and answering questions.

Hand-outs with information concerning the scientific concepts and a recipe as an add-on might be a good help. Hopefully, this might work as a motivation for parents to carry out experiments with their kids, becoming aware that science is all around, even in traditional cooking.

CONVERSAS DE FACA E ALGUIDAR

SOBREMESA DE ANANÁS

INGREDIENTES

- 1 lata de ananás em pedaços
- 1 lata de leite evaporado
- 1 pacote de gelatina de ananás

PROCEDIMENTO

- Deitar, a frio, a gelatina na calda do ananás. Deixar uns minutos.
- Levár ao lume brando (para não queimar), até dissolver.
- Bater, numa tigela, o leite evaporado até formar uma espuma volumosa (é bastante mais prático usar uma batedeira).
- Na cozinha, as espumas preparam-se introduzindo um gás num preparado. Na nossa sobremesa esse gás é o ar, tal como nas claras em castelo.
- Juntar, a esta espuma, a gelatina dissolvida, já quase fria, mexendo cuidadosamente para não se perderem as bolhas de ar que foram introduzidas.

Fiz grafia de espuma que nunca observada ao microscópio.



Stockholm : Student's interest for science and technology

(contact: Karin Barman at karin.barman@kva.se)



The 19th of November the Stockholm Pollen team has invited a group of secondary school teachers to the Royal Swedish Academy of Sciences. Britt Lindahl, Senior Lecturer in Science Education, PhD is invited to talk about her study on pupils' responses to school science and technology. She has followed a group of pupils from the age of 12 until they leave secondary school at the age of 16. She has described and analyzed how their attitudes and interest in science and technology develop and change but also how other factors such ability, understanding of scientific concepts, gender and home background influenced their choice for upper

secondary school. Stockholm Pollen team wants to discuss with the teachers if hands-on inquiry methods in the NTA unit has increased the interest in science and technology for the secondary school pupils and how the NTA programme can support the teacher in their work.

Amsterdam Seed City: prospects for the future

(Contact: Ed van den Berg at eberg@science.uva.nl)

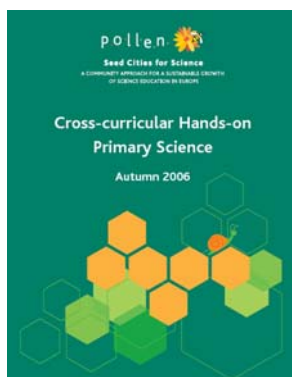
On September 12th, the annual Summer School was held, during which 60 teachers came to the University of Amsterdam and Science Center NEMO for a mix of science and science education workshops. Three one-hour workshops for 20 teachers each were carried out using the module on mirrors. Since then regular requests for the teacher guide and worksheets were received. At least 12 schools should implement the module in coming months.

In addition, during the first week of October the partner Hogeschool Amsterdam finally received the green light for a Centre for Expertise in Primary Science and Technology Education in which the AMSTEL Institute and Science Centre NEMO are involved. In coming months it will be develop a program which will be very much in line with POLLEN activities. Furthermore, it is expected to participate in a national program for in-service education of teachers in science and technology and reaching new POLLEN targets. Then efforts will allow linking POLLEN to the pre-service training of elementary teachers in the seed city of Amsterdam.



Pollen publications (news releases, ...)

• Cross-curricular Hands-on Primary Science booklet - Autumn 2006



In **Leicester**, in-service sessions were given to 33 teachers involved during the first year of the project. They were intended to support teachers to develop innovative practice. During these training sessions, discussions tackled cross-curricular links with science (the seed city key issue topic), science skills, literacy and history in the context of light and electricity. Following the training sessions, each teacher tried out and extended at least one the ideas with their classes. The pamphlet gives a taste of the wide variety of sessions observed and the children's science work resulting from the teachers training.

Pdf file at:

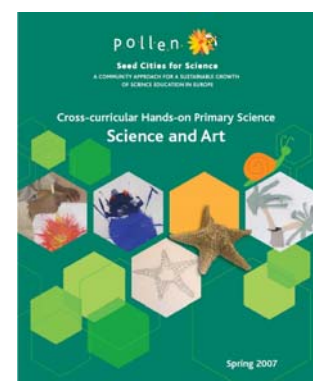
<http://www.pollen-europa.net/?page=Y2z37kcGjK0%3D&element=SbuivDi8BsE%3D>

• Cross-curricular Hands-on Primary Science: Science and Art

This pamphlet summarises the work carried out by pupils after in-service training sessions for teachers organised in **Leicester** about Science and Art on February 2007. The document gives examples of how art helps in developing observational skills, how to use scientific phenomena as a stimulus for artistic creation but also how to learn about science ideas through art activities. Some teachers' testimonies are also included.

Pdf file at:

<http://www.pollen-europa.net/?page=Y2z37kcGjK0%3D&element=SbuivDi8BsE%3D>



- **Inquiry teaching at primary school (Berlin)**



This document (in German) describes Pollen actions developed in **Berlin** on 2006. It includes information about training sessions (some of them with the support of the Swedish partner), materials and learning units carried out on the classrooms and some teachers' testimonies.

Document online at:

<http://www.pollen-europa.net/?page=Y2z37kcGjK0%3D&element=cVSijE351j8%3D>



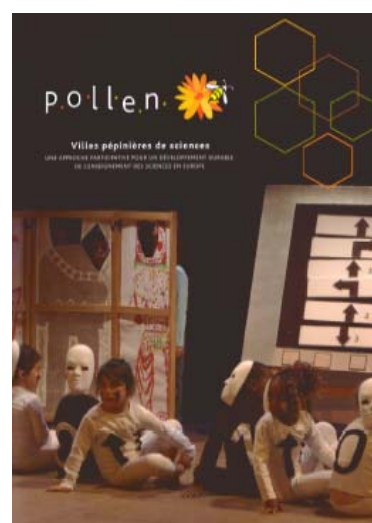
- **Booklet from Brussels**



Balance report (in French) of the activities carried out on the seed city, listing and thanking the teachers of the different schools involved. A focus in schools is done. Main objectives, tackled topics and out-of-school activities are also included. This booklet invites some other schools and partners to join the project.

Booklet online at:

<http://www.pollen-europa.net/?page=Y2z37kcGjK0%3D&element=slztiPObCiQ%3D>



European Coordination highlights

Pollen empowering seminar

From May 12 to 15, all Pollen coordinators and trainers met in Gerona (Spain) to participate to Pollen "Empowering seminar".

Pollen yearly seminar gathered about 50 persons from 15 European countries, to discuss the project's achievements and prospects. Apart from regular Pollen partners, newcomers from Luxembourg, Romania and Slovakia joined the participants to consider their association to the project.

Nine key Pollen topics were targeted opening on critical issues: Resources produced inside Pollen / Testimonies of what happened in a Pollen classroom / Seed cities pairing and schools networking / University and science community / Presentation of local material and kits / Project follow-up and scaling up / City, parents and companies involvement / Key issue implementation / Beyond Pollen: next steps for more inquiry-based science education in Europe.

Dr. Jorge Wagensberg, former Director of the Science museum of Barcelona gave a key lecture opening the seminar.

Changes on Pollen coordination in Girona

Barbara Mayoral has left PAU Education, the role of National Coordinator has been taken over by Sabine Schumann. Claudia Alsina ensures local coordination and Lidia Ochoa, local training. You can join them at: sabine.schumann@paueducation.com, claudia.alsina@paueducation.com and /or lidia.ochoa@udg.es

Assisted European collaborative science projects for POLLEN schools - Great opportunities for the collaborative work between the Pollen classes!

The collection of topics to be developed within the framework of collaborative projects between schools is now carried out by PAU Education.

A template was sent to Pollen coordinators to list teachers' ideas about projects they would like to achieve with other Pollen classes. Completed forms should be sent to Claudia Alsina (claudia.alsina@paueducation.com) before November the 30th and a summary will be published on the web. The template, that should be filled out with the teachers, is available on the Pollen website at: www.pollen-europa.net, section "personal workspace"/ Workspace "Collaborative projects on Pollen classes" (document to download on folder "files"). Registration is required for reaching the document.

Website news www.pollen-europa.net

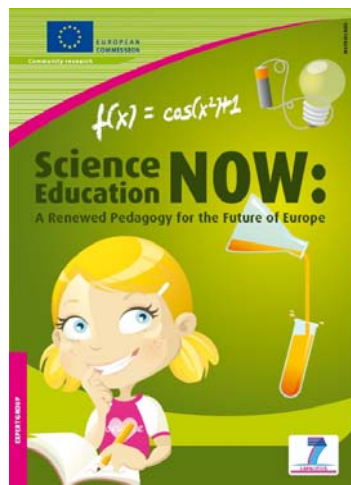
The website development is now over. It ended with the internationalization of the website. Menus, forms and main automatic texts are available on 12 different European languages. If main contents remain in English, website surfing would be easier for non speaking English users. After opening a session (login) the user language will be automatically displayed by according to user's profile.

Workspaces are part of the new features of the website. There are three types of workspaces: national, personal workspaces (open to all users) and coordinator's workspaces (restricted to Pollen coordination team). Each workspace has its own manager (the user who created the workspace) and could be restricted or open to all users according to workspace manager wishes. Through them, users can communicate, work and share different types of documents bringing close Pollen participants. Forums for online discussions are also available on each workspace.

Images galleries are new elements of the website, too. Albums are sorted by seed city. Images can be used by project partners or by all persons demanding it, to make written, electronically documents, and/or presentations devoted to Pollen information and promotion. Commercial use of such material is forbidden. Files on line at: <http://www.pollen-europa.net/?page=mED4SDkdAJI%3D>

Science Education World

Rocard's report on science education: "New approach to science teaching needed in Europe".



The European Commission has tasked a group of experts, the "High Level Group on Science Education" chaired by Michel Rocard, to examine a cross section of on-going initiatives and to draw from them elements of know-how and good practice that could bring about a radical change in young people's interest in science studies - and to identify the necessary pre-conditions. The diagnosis established by the group was presented in the report "Science education now: A renewed pedagogy for future in Europe".

It makes recommendations ranging from the need for collective action, how improvement in science teaching can be brought about, and what could be done at all levels: local, national and European. The main message, however, is that we need to revise radically the way that science is taught in our schools. Pollen project was mentioned as an initiative to follow for reaching a renewal in science teaching education. The report came out on June 12th, 2007

Report on line at:

<http://ec.europa.eu/research/science-society/index.cfm?fuseaction=public.topic&id=1100&lang=1>

Globalization & Education: Proceedings of the Joint Working Group, The Pontifical Academy of Sciences, The Pontifical Academy of Social Sciences, 19 - 17 November 2005, Casino Pio IV

Published on May 2007, this document was edited by Marcelo Sánchez Sorondo, Edmond Malinvaud and Pierre Léna. It presents the results of a joint meeting organized by the Pontifical Academy of Sciences and the Pontifical Academy of Social Sciences where renowned international scholars discussed the importance of education in an increasingly globalize world. The papers cover a wide range of topics, including immigration, education in developing countries, knowledge transfer, social, economic, cultural, and political conditions in global education, technology, communication, access to information and knowledge, as well as, bio-anthropological issues.

“About swarming”: European Union research magazine, research*eu, focuses on Pollen

This article included into the special issue of European Union research magazine from June 2007 presents Pollen project as an approach that develops over Europe sciences teaching at primary school, taking into account local situations. German and French versions of **the article** are available on line at:

<http://www.pollen-europa.net/?page=gYZ8PdOPtKM%3D&element=p2ncYgZv5n0%3D>

Research*eu is a European Union research magazine edited by the Communication Unit of the European Commission's DG Research which presents and analyses projects, results and initiatives contributing towards reinforcement and federation of scientific and technological excellence in Europe. This special issue shows examples of original experiences on science education over Europe as complement of classical teaching methods. Parallels to scholar teaching they take place at informal sites and times where each one can express own self, can experiment and “make mistakes”.

Whole Special issue available on line at:

http://www.ec.europa.eu/research/research-eu/pdf/research-specedu_fr.pdf (French version)

http://www.ec.europa.eu/research/research-eu/pdf/research-specedu_de.pdf (German version)

The GRID project records La main à la pâte and Pollen

The GRID project (www.grid-network.eu), funded within the framework of the EU Socrates Programme, has the objective of creating a network for the exchange of good practice in science teaching in Europe, at the level of decision makers and of schools directly involved in innovation and experimentation in the broad area of science education (including technology and mathematics). The GRID project aims to identify as many innovative projects as possible, but it relies on individuals involved in these projects detailing the innovative projects involved. Within the framework of its action a video in French and in English including interviews was produced for referencing la Main à la pâte action as well as Pollen project. A study case is also available online at: http://www.grid-network.eu/initiatives_view.php?id=713&lang=en

“Science Education in School”

The international workshop “Science Education in School” was held in Bucharest on October 11 to 14, 2007. This event was organized by the Center for Science Education and Training (National Institute for Laser, Plasma and Radiation Physics) in collaboration with the European Network « Hands-on Science », with the financial support of the Romanian National Agency for Scientific Research in the frame of the CEEX Project “Science Education and Training in a Knowledge-based Society”.

The workshop audience was: researchers in science education, managers and personnel of the institutions directly or indirectly involved in science education (universities, research institutes, science museums, theoretical, technical and vocational schools, education policy makers, non-governmental organizations and local authorities).

Satellite events:

- «Science Fair Hands_on_Science@Moisil.ro» (3rd edition) with national participation and its audience was: teachers and school students from middle and high school.
- Training course «Hands-on Science experiments in primary schools» intended for primary school teachers and kindergarten educators.

More information on <http://education.inflpr.ro>

Subscribe to newsletter: www.pollen-europa.net (registration required)



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