

# Press Announcement

Nucleus Education Initiative

## NUCLEUS: Major European science education initiative planned

**Stockholm, Aug 27, 2004** – Fifty of Europe's science centres, top research institutions, universities and other organisations announce that over the past months they have been working together to join forces in a major initiative to give a huge boost to science teaching in European schools. Called "Nucleus", the initial budget foreseen for this collective project is over nine million Euros, with expected funding by the European Commission and the EIROforum (Europe's seven major intergovernmental research facilities). The project aims to reach thousands of teachers over the next three years, either by directly involving them in activities or by providing them with vital new resources. "PENCIL," a proposal submitted by the ECSITE network of science centres and museums with the education network European Schoolnet, will play a central role in structuring Nucleus.

Last year, the Directorate General for Research of the European Commission invited proposals for a European Science Education Initiative. The motivation was the need for a large-scale effort to motivate children to pursue scientific careers as well as to help society cope with new discoveries and technologies in a healthy way. Recent analyses reveal that the falling interest among young people for science studies and careers can be attributed in large part to the lack of appeal of study courses at school.

The breathtaking speed of today's research and the growing need for more young scientists pose special challenges for Europe's science teachers and schools. It has been estimated that Europe will need an additional 700,000 researchers by the year 2010. Nucleus hopes to contribute to this by disseminating methods, techniques and best practices to primary and secondary schools across Europe, infusing what happens in informal learning

environments into the formal education system, and developing new mechanisms for involving researchers in science education.

In financial terms it would be the Commission's largest single contribution ever in the area of Science and Society. Responding to this call, the "Nucleus" Programme is a tightly-integrated set of projects drawing together partners with a wealth of expertise in generating new activities and resources for teachers and schools. The partners are currently producing detailed plans and, subject to final agreement with the Commission, will be ready to launch the project later this year.

Nucleus will comprise pilot projects that link schools, laboratories, science centres and academia, national and international teaching festivals, a major web portal providing the latest science teaching resources, a new international journal for science teachers, opportunities for training, and new methods for using science-related films in the classroom. These mechanisms aim to bridge the gap between formal and informal education, cutting-edge research and the classroom. Nucleus will set up long-term relationships between scientists, teachers, schools, and other partners in education, identifying best practices and needs, and developing and testing new strategies for science teaching. From that perspective, Nucleus aims to become the start of a broader process that might include other components over time.

Nucleus comprises the following organisations and their partners: the ECSITE network of science museums and centres, the education network European Schoolnet, the EIROforum, The University of Reading (UK), the Vienna University of Technology and the CISCI-consortium, the Ecole Normale Supérieure (Paris, France). ●

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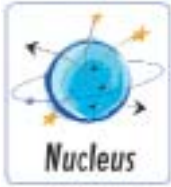
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# NUCLEUS project components

## PENCIL

The PENCIL project is coordinated by the ECSITE network of museums and science centres and has two main components. First, it will combine field programmes and academic research to identify what makes an informal science learning activity into a high-quality tool for science teaching. 14 science centres/museums will use pilot projects to create mini-networks involving schools, pupils, teachers associations, research laboratories, educational authorities, and education and science communication specialists. These will be monitored and assessed by a "resource centre" that identifies the criteria of innovation and quality of successful projects. Secondly, PENCIL includes the European Science Education Portal (ESEP), to be operated by European Schoolnet ([www.eun.org](http://www.eun.org)), a unique international partnership of 26 Ministries of Education from Europe and beyond, encouraging communication and information exchange at all levels of school education using innovative technologies, and acting as a gateway to national and regional school networks. EUN already operates an established web portal that is extensively used by thousands of European science teachers. ESEP will serve as a gateway to all NUCLEUS resources, activities, and events as well as a wealth of information about issues related to European science teaching.

ECSITE will stimulate other members to contribute to the content of the portal and will go on doing this after the end of the initial contract.

## The European Science Teaching Initiative (ESTI)

Coordinated by the EIROforum (CERN, ESA, ESO, EMBL, ESRF, ILL, and EFDA), ESTI combines two elements: Science on Stage (SOS) and a new Journal of European Science Teaching (JESTI). Formerly known as "Physics on Stage," also sponsored by the Commission and the EIROforum, SOS is a cycle of science teaching festivals with dozens of national events across Europe culminating in an international festival every two years. Alongside seminars conducted by top scientists and numerous workshops, the festival includes a major teaching prize and a fair in which teachers show off and exchange their best ideas. SOS will be held twice during the NUCLEUS project. The Journal will showcase the best of European science teaching from Nucleus and many other sources – offering concrete teaching activities, explaining cutting-edge science, highlighting new ideas, best practices, informing teachers of events, resources, and places to go for help, spotlighting young scientists and great teachers, etc.

## VOLVOX

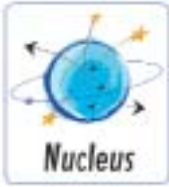
Volvox consists of a team of biologists and biology teachers actively working in nine European countries (Denmark, Estonia, Germany, Italy, Luxembourg, Poland, Portugal, Sweden and the United Kingdom). They will provide educational resources covering a range of modern biology to be accessed via the European Science Education Portal and the Journal of European Science Teaching. The materials will be tailored to meet local needs, increasing the chances that teachers will wish and be able to use them. The resources will include authoritative briefings, proven laboratory protocols, classroom activities addressing the social impact of bioscience, accounts of the careers of young scientists and numerous other educational resources to help motivate teachers and their students.

## CISCI

CISCI includes 11 partners from across Europe and will combine the two most popular media among youngsters, namely movies and the Internet, aiming to raise the attractiveness of science while dispelling widely-spread misconceptions that arise from pseudo-science. The idea of CISCI is to set up a web-based platform containing clips from films and videos with scientific themes, analyzing their scientific content from the point of view of many different disciplines, and providing new classroom resources based on these clips.

## SCIENCEDUC

SCIENCEDUC aims at renovating science education in elementary schools through the establishment of a Network that will enhance exchanges and the development of good practices in science teaching in primary schools over Europe. This network will focus on teachers, training, evaluation, on-line projects and the dissemination of good practices. The project is coordinated by the Ecole Normale Supérieure (Paris) in partnership with Tartu University (Estonia), La main à la pâte – Académie des sciences (France), Apur Vilmos Catholic College (Hungary), Ciência Viva (Portugal), and NTA- Royal Swedish Academy of Sciences (Sweden) – all partners having a solid background in inquiry-type teaching (questioning, hypotheses, observation, experimentation, team-work and written expression).



## Learn more about NUCLEUS at ESOF!

ESOF Events planned by organisations involved in Nucleus

### Wednesday 25 August

13.00-15.00

“Latest Research on Exo-planets” (ESO)

*Venue: Eiroforum booth, Norra Latin 7*

Contact: Richard West (rwest@eso.org), ESO, Garching bei München, Germany

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### Thursday 26 August

09.00-11.00

“Self-organising molecules in the cell” (EMBL)

*Venue: Eiroforum booth, Norra Latin 7*

Contact: Richard West (rwest@eso.org), ESO, Garching bei München, Germany

13.00 – 15.00

“Synchrotron X-ray Scattering” (ESRF)

*Venue: Eiroforum booth, Norra Latin 7*

Contact: Richard West (rwest@eso.org), ESO, Garching bei München, Germany

14.45 – 16.45

“Electronic visits from our neighbouring laboratories in Europe”

*Venue: Folkets Hus Congress Hall C*

Contact: Richard West (rwest@eso.org), ESO, Garching bei München, Germany

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### Friday 27 August

13.30 – 14.10

**Press Announcement of the Nucleus Initiative**

*Venue: Eiroforum booth, Norra Latin 7*

Contact: Walter Staveloz (wstaveloz@ecsitem.net), ECSITE, Brussels, Belgium

14.45 - 17.15

“Communicating life sciences - Raising the Debate at European Level with the Science Centres Community”

*Venue: Folkets Hus Congress Hall C*

Contact: Michaël Renvillard (mrenvillard@ecsitem.net, mobile: +32 478 983 350), ECSITE, Brussels, Belgium

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### Saturday 28 August

09.00 – 11.00

“Fusion as the Energy Source of the Future” (EFDA-JET)

*Venue: Eiroforum booth, Norra Latin 7*

Contact: Richard West (rwest@eso.org), ESO, Garching bei München, Germany