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The Hands-on Science Network

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Energy and CO_2 - A Common Challenge for Europe

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Abstract. In this communication we will present a Comenius school cooperation project "Energy and CO_2" - a common challenge for Europe". The aim of our project was to get 12 to 16 years' old pupils from various secondary schools in different countries to work together for a better future within the EU' Comenius framework. This project includes a cross curricular dimension since it will involves classes and teachers in many different subjects, such as physics, biology, information technology and English.

Each school will work about their own region and present and discuss their solutions for this major problem with the pupils of the other schools to get a Europe perspective on the subject. Pupils' work will all be reported in English enabling the exchange of information between participating schools.

Towards the end of each school year, several pupils from the different schools come together for discussing and exchanging of ideas and solutions from their research. Pupils will discuss the solutions sound for other regions/countries and think on the possibility of use it in their own region.

We promoted new approaches in this research process with and extended use of the internet, computers, digital cameras and even building and using robotic models.

Saving resources and using alternative energies is the key to a positive view in the future!

An Experience on: How to Disseminate Scientific Knowledge to the Community

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Abstract. In Portugal, aquariophilia is a popular hobby but fish frequently dye in home aquariums because of lack of knowledge. It is frequent, even in some shops, to see species of different environments and requirements together or predators and preys being put together.

So it is necessary to teach people in how to properly set up an aquarium, taking care of it, choosing the correct species to put together, the water chemistry, and so on.

There is much literature on the subject in the market, but in foreign languages and sometimes using a scientific language not understood by the common hobbyist.

So it was decided to put forward an action in the biggest animal fair in Portugal. In order to accomplish this, another Portuguese association in the hobby was contacted, as well as a university and we had the support of the fair organization. A workshop was set forth during the two afternoons of the weekend of the fair.

Normally the public would come to the fair to see different species and to buy some animals and related products. To attract people a stand was established in the middle of the exhibition area with chairs, a projector and sound equipment and was surrounded by several aquariums with different environments in a total of 72 m2. The public reaction was above our expectations, all chairs were occupied and there was public assisting standing up.

Because of the success of this workshop, included as an attraction event in the fair, the organization of the fair are interested in doing something similar this year and other local fairs

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are inviting the association to promote other events.

Science Communication - Present Scenario and Future Trends

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Abstract. Science and Technology is considered a very important tool to eradicate hunger and poverty and offers opportunities for substantial increase in the standard of living of people. Science achievements contribute to our everyday life, improve social development and create fundamental conditions for innovations in industry and economy. It is important to promote new scientific inventions in a way that helps people who do not work in this specific area to understand the role and significance of science. In India there is a gap between society and economy on the one side and science on the other side. Potential animosity between society and scientific community is caused by lack of mutual understanding and distrust. Consequently, this negative trend prevents proper application of research and development to foster improvements in both society and economy. People in general usually do not understand the importance of science and are unaware of the fact that science can contribute to growth of their living standard. They therefore do not quite see the reason of investing major amounts of public investments in science. The existing barrier between society and the scientific circles in India is one of the main reasons why science is not considered to be one the priorities of public spendings. Our main goal should be to change general perception of the importance of science for society and economic development. This can be achieved by means of providing various projects in the area of science popularization and the related services for research institutions. Article 51 A (h) of Indian Constitution reads (citizen have a duty) "to develop the scientific tamper, humanism and the spirit of inquiry and reform". This article is of a subtle in nature and seems to need inputs from Govt., NGO's and voluntary groups of educated or devoted citizens (especially Scientists). Popularization of science comes to bridge a gap in communication channels between science and society. It should be listed as an Information Science (IS) subject in the syllabus of some working Groups. The objective of the popularization of science is to increase public understanding of science. Since the reader is not a scientist, a 'translation' has to be made, making science more accessible. Central Govt. & Institutes like NCSTC, NISSAT, NISCAIR, Science magazines, many newspapers are trying to popularize science. Supporting events such as National Science Day, Technology Day, Earth Day, and CSIR Foundation Day are organized for the general public by the R&D organizations and other science festivals contributes understanding of science in public. This paper intends to explain the efforts required in science popularization, suggest roles for information scientists in the promotion of science literacy and efforts taken by CBRI / CSIR in this direction.

Keywords: science, science communication, science journalism, society introduction.

Every society rests on certain general principles which serve as its foundation, ensuring it stability and strength. Amongst these are that was is bad, peace is good, terrorism needs combating and poverty must be wiped out etc. Over the past few years, another claim has been added to the list – scientific and technological progress is a virtue. This has not always been so – and may not always be so – but for the moment, few voice serious opposition to the claim. But, the changes science and technology have made, and continue to make, strike one and all in one or the other way. Science and its corollary, information, are certainly as old as humanity. Science is knowledge, and knowledge is not inborn, it is acquired and accumulated only if it is transmitted. Experiments must have been carried out and the accounts kept. However, the need to popularize science arose towards the end of seventeenth century, when the emergence of a quantitative, mathematical approach to knowledge of the physical world left behind the majority of readers. Science communication is nothing else than an endeavor to image scientific ideas in such a way that everyone (especially non-scientists) can grasp the fundamental concepts and have an idea of what science in