



Cooperation for health science at school: the experience of a research institute

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ISS projects of science education

from 2001 with two main objectives: to disseminate cutting-edge biomedical findings to high school science teachers and, through them, to students; to help students develop critical thinking, teamwork and communication skills

The projects

New drugs: a reciprocal investigation between schools and scientific institutes.

Scientific and ethical aspects of biotechnology in medicine: a joint action between schools and scientific institutes.

The metabolism of learning in young adults: an interactive experiment between schools and research institutes.

Having a meal with microbes: an education program about microbes and food.

Chemicals, the environment and us: a joint action between schools and research institutes.

Animal use and abuse: hints for an educational action.

Training of high school teachers

A team coordinated by the Publishing Unit of ISS, composed of researchers, educational experts and high school teachers, has carried out short courses for teachers both on scientific topics and active learning methods.

teaching methods

topics

problem based learning

concept cartoons

animal welfare

biotechnology

new drugs

toxicology

Educational paths at school based on active learning methods

After the training sessions, the teachers engaged and challenged their pupils to explore biological concepts by means of real-world examples through the use of PBL and concept cartoons methods. The students played a leading role experimenting self-centered learning/teaching methods, while the teachers were converted into tutors.

The final meeting at the ISS

In front of a large audience of students coming from other schools and scientists, the pupils gain huge success in presenting, eagerly and passionately, the results of their works at school.

Educational materials

Educational supplements were published for each Project. These materials cover information not available in standard textbooks and can give teachers an useful support in training science education.

OUTCOME

About 200 schools were involved into the projects

Training activities:

- more than 400 participants
- 44 researchers as teachers
- 5 high school teachers as researchers
- more than 8000 students involved (about 1000 experienced active learning methods)



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