Goerudio – effective ways of studying science subjects 20.11.2015, Dubrovnik National CARNet Conference





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Goerudio - Managing Learning process in science education

KA4 LLP (543223-LLP-1-2013-1-LV-KA4-KA4MP)

Duration: 24 months (January 2015 – December 2015)

Project website: www.goerudio.pixel-online.org

8 Partners from 7 countries:

- Riga State technical school (Latvia)
- •Pixel (Italy)
- 36,6 Competence Centre (Poland)
- Connectis (Italy)
- Fundația EuroEd (Romania)
- Transfer Slovensko, s.r.o. (Slovak Republic)
- Association Alqueria (Spain)
- ZinevArt Technologies (Bulgaria)

















Aim

The aim of the project is to create a learning community of European science teachers and students willing to identify:

- Solutions to overcome the main obstacles when studying scientific subjects
- Innovative teaching methods for science

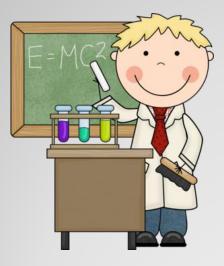


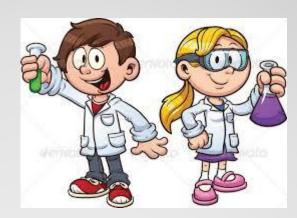


Target groups

The project is addressed to:

- Science teachers
- Science students
- Policy makers in the education sector





Main Activities

 Creation of a network of European science teachers and students

 Sharing information concerning the main obstacles when teaching and studying scientific subjects

- Identification and review of existing projects and initiatives in the field of teaching scientific issues in a more interactive and involving way.
- Production of teaching resources for scientific subjects
- Organisation of national workshops for sharing the produced resources

Goerudio network

46 schools from 7 countries are involved in the Goerudio project activities. In each school there are minimum 2 teachers involved, what in total gives more than **90 science teachers**.

Assuming that each teacher has 20 students, there are **1800 students** involved in the project.

Goerudio Portal

www.goerudio.pixel-online.org



Experience of science teachers and students

- science <u>teachers' experience</u> in adopting teaching methods to promote students' interest towards scientific issues
- science <u>students' experience</u> describing their difficulties and successes in learning science

Portal contains the repository of:

375 teachers' experience

841 students' experience (available in all languages of the project)

Relevant initiatives promoting science

Identification of **219 projects** from all over Europe



Educational Products

More than **120 educational products** (database is updated constantly) developed by teachers and students:

- Lesson plans
- Interactive science lessons
- Educational models
- Videos
- Methodologies

Goerudio community - Facebook

facebook.com/goerudioscience



Community – Virtual Meetings

Virtual Meeting – video conferences to allow the teachers involved in the project to exchange their opinions on the project activities





Community – national seminars

Seminars promoting the educational projects developed by teachers and students involved





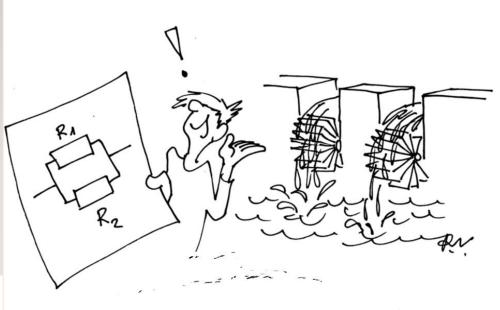
Goerudio Approach



Goerudio Method

Goerudio method was developed by Riga State Technical School, Latvia.

It is based on creation of so-called **comprehension models.**



Model

Here a word "**model**" denotes the interpretation of concepts or relations used in a theory, rule, instruction or another notion by expressing them by/through well-known, familiar phenomena and natural, conventional relation that creates a conception that is easy to perceive intuitively – **image**.



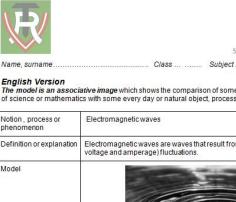
Approach based on observation

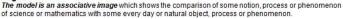
A person does many **observations** during his life and there are many fields where each individual has some comprehension (notions, causations and processes which seem natural to him and he feels comfortable among them).



Goerudio Model

The model is an associative image which shows the comparison of some notion, process or phenomenon of science or mathematics with some every day or natural object, process or phenomenon.





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Notion , process or phenomenon	Electromagnetic waves
Definition or explanation	Electromagnetic waves are waves that result from electrical quantities (charge, voltage and amperage) fluctuations.
Model	
Description of the model	Throw a stone in the water. This will cause waves in the water, which will be directed around the place where the stone fell.



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