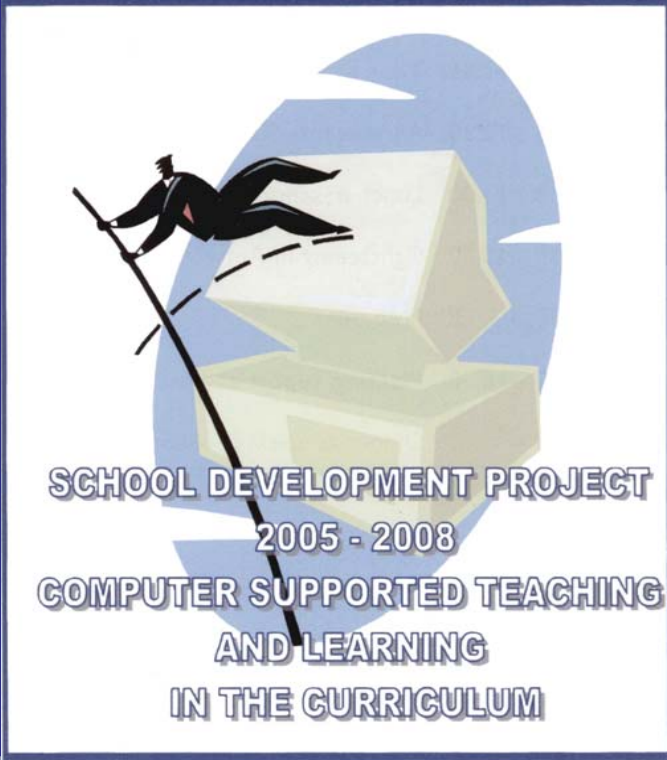
“COSTIN NENITESCU” HIGHSCHOOL FOR CHEMISTRY

Bucharest – Romania
2007

Comenius Project Meeting

COMPUTER SUPPORTED TEACHING AND LEARNING IN THE CURRICULUM

School Development Project



7-11 November 2007
Bucharest - Romania

Romanian Comenius Team

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English teacher Adriana GASPAR
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English teacher Catalina RINESCU
French and English teacher Gabriela CIOLACU
Informatics teacher Claudia Marin
Romanian Language teacher Ioana GROSULEAC

Coordinator: Physics teacher Felicia HUIDES

The Structure of the Romanian Teaching System

Age (years)	Grade	Key-stage	Educational level				Qualification level
> 19		6 5	University				5 4
		4	Post-18 Education (below university level)				3
18	XIII					Technologies	3
17	XII	3	Languages & Science	Vocational Qualifications	Technologies	Additional Year	2
16	XI			(Fine Arts, Sports, Theology)			
15	X		General	Vocational Qualifications	Technologies	Apprenticeship	1
14	IX		School			School	
13	VIII	2					
12	VII						
11	VI						
10	V		Foundation Stage				
9	IV						
8	III	1					
7	II						
6	I						-
5	Upper Level						
4	Middle Level	0	Key-stage 0 Kindergarten				
3	First Level						

The romanian educational system analysis: changes, expectations

In the last fifteen years, the Romanian School on its whole has achieved a series of important changes, with great effects on all educational activities and institutions, including ours.

Some of them have become effectively strong points in the development process:

- A new, more flexible curriculum, which ensures the teenagers socialization through education;

- A well-organized system, with different educational levels and routes, which helps the pupils to gain easier their true vocation;

- The compulsory school moves its upper limit from 14 to 16 years;

- A whole new offer of alternative textbooks, completed with other modern didactic instruments;

- Increasing interest for the modern social requirements: foreign languages knowledge, use of computers and Internet, communication abilities;

- A gradual autonomy concerning the management of each school, together with the implication of the community in all important decisions;

- A coherent system of quality in school evaluation;

- Standardized national tests at the end of the 8th and the12th grade.

Nevertheless, the social realities (constant decreasing of the number of children, the growing lack of interest of the students in studying sciences, too many study hours in the hard-core curriculum, the parent's lack of responsibility due to their hard work for living) have developed into some real threats for the educational reform.

In this context, the expectations concerning this complex process of modernizing the educational system might include:

- **A further development of the curriculum flexibility, including the diminishing of the amount of information in the hard-core curriculum;**
- **The continuation of the process of modernizing the educational base;**
- **To create the right motivation for the students in order to increase their interest for study, and for their parents, to involve actively in the school modernization.**

About "Costin Nenitescu" High School for Chemistry

"Costin Nenitescu" High School for Chemistry was founded in 1968. Our school is in Bucharest, the capital of Romania, close to an important industrial platform.

Until 1989, our high school has represented one of the most important chemistry schools in the country. Many chemistry engineers and researchers graduated here.

In the last fifteen years our educational offer has diversified even though the name remained related to the idea of CHEMISTRY.

Today, we may say that our school has developed a tradition in teaching both sciences and technology.

Our school offers general and technical education to approximately 1082 students (15 to 19 years old).

Our students attend our school in classes of different profiles such as: Informatics, Natural Sciences, Environment Protection, Electronics, Modern Languages (English, French).

On the 1rd of September, 2005, we had in our school:

- 55 *classes*
- 1451 *students*
- 93 *teachers*
- 9 *auxiliary didactic staff*
- 17 *administrative staff*

On the 1rd of September, 2006, we had in our school:

- 51 *classes*
- 1292 students
- 85 *teachers*
- 9 *auxiliary didactic staff*
- 17 *administrative staff*

On the 1rd of September, 2007, we have in our school:

- 47 *classes*
- 1082 students
- 82 *teachers*
- 9 *auxiliary didactic staff*
- 17 *administrative staff*

Head of institution: *Mrs. Vasiliu Doina – Principal*
Deputy director: *Mrs. Huides Felicia*

Our school is situated in a mini campus.

The mini campus includes 2 buildings with classes and laboratories, 1 building with workshops for practical studies and a big sports hall.

"Costin Nenitescu" has:

- **2 Informatics Systems laboratories, completely equipped, permanent INTERNET connection;**
- **5 Chemistry laboratories**
- **1 Physics laboratory**
- **1 Biology laboratory**
- **2 electronic measurements laboratories**

SPECIALIZATION EVOLUTION - Number of classes during 2001-2008

HIGH-SCHOOL	NORMAL PROGRAM					AFTERNOON PROGRAM	
ROUTES	SCIENCES ROUTE			TECHNOLOGIES		TECHNICAL ROUTE	
TYPES	Languages & Sciences			Natural Resources and Environment Protection	TECHNICAL	Natural Resources and Environment Protection	TECHNICAL
SPECIALIZATION	INFOR MATICS	NATURAL SCIENCES	LANGUA GES	Environment Protection	ELECTRONICS/ ELECTRICAL ENGINEERING	Environment Protection	ELECTRONICS/ ELECTRICAL ENGINEERING
2001-2002	3	3	1	3	3	-	-
2002-2003	1	2	1	2	2	1	-
2003-2004	-	1	-	4	2+1*	3	-
2004-2005	1	2	-	4	1+1*+1**	1	1
2005-2006	1	1	-	1*	1**	1	1
2006-2007	1	-	-	1*	1**	-	-
2007-2008	-	**1**	-	**1***	**1****	-	-

CONVENTIONAL SIGNS:
*EXTRA ENGLISH CLASSES
**EXTRA FRENCH CLASSES

	APPRENTICESHIP SCHOOL				
ROUTES	INDUSTRIAL CHEMISTRY	ELECTRICAL ENGINEERING	ELECTRO-MECHANICS	ELECTRONICS	MECHANICS
2001-2002	2	2			
2002-2003	2	2			
2003-2004	3	1	1	1	1
2004-2005	2	3	2	-	1
2005-2006	2	-	2	-	1
2006-2007	2	1	1	-	1
2007-2008	**2**	**1**	**1**	-	-

2003-2004
72 CLASSES
1675 STUDENTS
106 TEACHERS

2004-2005
69 CLASSES
1646 STUDENTS
98 TEACHERS

2005-2006
55 CLASSES
1451 STUDENTS
93 TEACHERS

2006-2007
51 CLASSES
1292 STUDENTS
85 TEACHERS

2007-2008
47 CLASSES
1082 STUDENTS
82 TEACHERS

One may easily observe that the number of the first high-school classes (the 9th) is gradually decreasing, and this phenomenon has at least two reasons:

-The demographic decline;

-The poor interest of the pupils in Sciences and Technologies routes

2001 – 2002 – 17 classes of nineth grade (Sciences and Technologies);
2002 – 2003 - 12 classes of nineth grade (Sciences and Technologies);
2003 - 2004 – 11 classes of nineth grade (Sciences and Technologies)
7 of Apprenticeship School***;
2004 – 2005 – 10 classes of nineth grade (Sciences and Technologies)
8 of Apprenticeship School;
2005 - 2006 - 4 classes of nineth grade (Sciences and Technologies)
5 of Apprenticeship School;
2006 - 2007 - 3 classes of nineth grade (Sciences and Technologies)
5 of Apprenticeship School;
2007 - 2008 - 3 classes of nineth grade (Sciences and Technologies)
4 of Apprenticeship School;

***The Apprenticeship School classes are specially meant for the students who don’t pass the National Tests.

Most of our graduated students are highly-skilled workers in production enterprises belonging to this platform.

We have also graduated pupils that have followed university courses and they are practicing today different professions: teachers, medical doctors, engineers, journalists, etc.

These performances of our former students are mainly due to the following reasons:

- experienced teachers in our school;
- enthusiastic locum tenens young teachers, wishing to be confirmed
- rich teaching material base, permanently up-dated, due to the synchronized contribution of the Ministry of Education and Research, The City Hall, Parents Committee and some extra budgetary financial resources identified by the School Board;

Today, our school has two Informatics system laboratories, completely equipped, permanent INTERNET connection, video projector, educational soft-wares for Mathematics, Physics, Chemistry, Biology, Technology and a Smart Board in the Physics Lab.

For seven years we have been using in our curricula the following software: Crocodile Physics, Interactive Physics, Crocodile Chemistry, Crocodile Technologies and Crocodile Mathematics.

Nevertheless, we confront with a big problem, the gradual decreasing of the hours of study from the optional curriculum, so that the teachers are frequently forced to take from the core curriculum hours in order to provide the pupils extra-information.

In 2002, there were 12 classes to study optional hours of computer assisted lessons, whereas today we have only 3 classes.

This problem seems to have a solution.

In September 2004 we have started with a virtual learning environment, called AeL (Learning Educational Assistant), which is a platform launched in every single high school in Romania, by the Ministry of Education and Research. For the moment, AeL is being used in the Physics, Chemistry, Geography and Biology.

In the 2005 spring, 40 teachers took initial learning courses of ICT and AeL, supported by the Ministry of Education and Research.

The problems are still waiting to be solved.

Implementing this system of computer-assisted lessons had been made long before the teachers' initiation in ICT.

Today, even if the teachers are prepared, they silently refuse to use the computers in their lessons, because they aren't totally confident in their ICT knowledge.

Sometimes, the students seem to know more than their teachers.

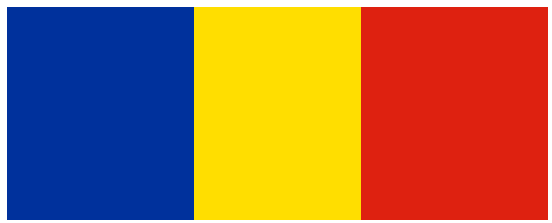
In February 2007 - 30 teachers have passed the Course "How to create a WEB page using Microsoft Front Page".

"Costin Nenitescu" High School for Chemistry

Activities

Since 2005, our school has attended each year the activity Spring Day in Europe.
Our students made PowerPoint presentations about the European values and took part in a drawing contest on the theme "Romania's Integration in European Union". They also posted on www.eun.org essays on the theme "The European Constitution":

SPRING DAY IN EUROPE



Our teachers are permanently preoccupied to involve the students in extra-curricular activities.

- On the 26th of February 2007 and 1st of March - Lectures of scientific works for students: ”All science is computer science” also participated students from secondary schools within our district.

- Developing the school magazine: “CRISTAL”

- The school’s magazine ”CRYSTAL” was awarded 2nd place within our district and 2nd place within the city contest , called: NATIONAL CONTEST OF SCHOOL MAGAZINES.

- The international contest „Young Energy”- organized by ENEL (ITALY) and THE MINISTRY OF EDUCATION OF ROMANIA: we were awarded the 2nd place, nationally, for a calendar done using ICT techniques.

„HOW TO CREATE A WEB PAGE USING MICROSOFT FRONT PAGE" - a course organized for our school's teachers within the Comenius school project. (February 2007)

„HOW TO CREATE A WEB PAGE USING MICROSOFT FRONT PAGE" a course which was awarded the 3rd place at the NATIONAL CONTEST „MADE FOR EUROPE", contest organized by the EDUCATION MINISTRY OF ROMANIA.

On the 28th of May- Lectures of scientific works for teachers:
"All science is computer science"- teachers from Bucharest also participated. This activity was part of the COMENIUS WEEK organized between the 28th of May and the 1st of June 2007.

Having this occasion, our teachers presented their web pages, made after they took the course up-mentioned.

We believe that this international development educational project allows people to work together, blending different cultures in terms of respect, behavioural conduct, cultural understanding of each other and, last but not least, common teaching experience and knowledge.

We are sure that the concrete outcome our institutions will achieve, a common platform for computer supported learning in the curriculum, shall make us a part of a modern European learning process.

We would like to become a permanent presence in the European collaboration sector and warm relationships with various institutions abroad, in order to share the experience of working and learning together.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