Guide through the

Croatian National Educational Standards

for Primary Schools

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Croatian National Educational Standards
for Primary Schools

Republic of Croatia
Ministry of Science, Education and Sports

Guide to the Croatian National Educational Standards for Primary Schools

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Dragan Primorac, M.D., Ph.D., Minister

Text:
Coordination Board for the Drafting of the CNES

Editing Coordinators:
Ivan Milanović Litre, Krešimir Rašan

Translator:
Vera Jovanović

Language Editor:
Theo Dolan

Proofreading:
Gerhard Šarić
Ingrid Jurela Jarak

Concept and Graphic Design:
Boris Ljubičić / STUDIO INTERNATIONAL

Illustrations:
Boris Ljubičić

Photographs:
Petar Dabac, Damir Fabijanić, Boris Ljubičić,
Ivo Pervan, Željko Stojanović

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Trg hrvatskih velikana 6
HR - 10000 Zagreb, Croatia
Tel.: +385 1 45 69 072
Fax: +385 1 46 10 490
E-mail: ured@mzos.hr
URL: http://www.mzos.hr

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Guide to the Croatian National Educational Standards *for Primary Schools*

Zagreb, 2005

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Foreword

Dear teachers, parents and pupils!

This publication is intended to serve as a guide to the Croatian National Educational Standard (CNES) for Primary Schools. For several decades there have been discussions in Croatia about overloading pupils and also about inadequate curricula and teaching methods, insufficiently defined goals for primary education, and insufficient and unreliable monitoring and evaluation of the quality of education. All of these factors have led to the dissatisfaction of parents and the pupils.

Based on the above situation, we have started to take action concerning the planning and improvement of primary education throughout Croatia.

The CNES is the result of the wholehearted efforts of the broad scientific and professional community, which has recognized the need for change in order to improve the quality of education, as well as its application, as the foundation of a knowledge-based economy and society.

The CNES, which has received strong support from the World Bank, is an integral part of a broader education development plan in the Republic of Croatia for the 2005-2010 period.

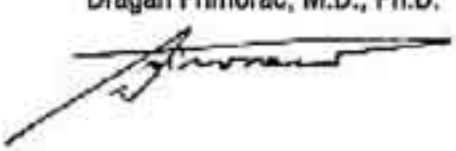
I would like to begin by thanking the hundreds of teachers from all over Croatia who showed their great interest in, support for and dedication to the development of the CNES. By providing their best practical experience, they have shown themselves to be promoters and bearers of a modernized educational system. I would also like to thank all the university professors and scientists who contributed their vision and experience to the development of a quality CNES.

Furthermore, I would like to express my gratitude to those institutions that participated in the drafting of the CNES, especially the Croatian Academy of Sciences and Arts , teacher training faculties, teacher education academies, teacher training schools, the Institute for Education of the Republic of Croatia, the Ruđer Bošković Institute, the Croatian Institute for History, the Ivo Pilar Institute of Social Sciences, the Institute for Social Research, the National Competitiveness Council, the Economic and Social Council and many others.

I also want to thank the Croatian public, which assisted in the creation of the CNES by showing its interest and providing its critical opinions and suggestions.

Thanks also to all those who will continue to provide their critical feedback and thus contribute to the continued development of the CNES, which will be an open and dynamic document, subject to constant change and improvement.

Dragan Primorac, M.D., Ph.D.



Ministry of Science, Education and Sports

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I. Introduction

The fundamental starting point for the proposed development of education is to recognize education as a powerful driver both for advancing the quality of an individual's life and for advancing a knowledge-based economy and society as a basic precondition for success in the 21st century. Such an approach has already been considered in the developmental document entitled 'Declaration on Knowledge and the Application of Knowledge' by the Croatian Academy of Sciences and Arts (2003). The development of the Croatian National Educational Standard (CNES) is directed towards a gradual and flexible improvement in the quality of teaching, knowledge and the ability to learn.

Over the past several decades the most advanced countries have been developing and changing the content and organization of their educational systems. In the process, each country respects its own particularities, values and traditions. The educational system reflects the values of the society and is sensitive to social change. Croatia is also working intensively to improve the quality of education by similar principles.

Who is the *Guide to the CNES* intended for?

This guide is primarily intended for primary school teachers who will implement the CNES through their work. The Ministry of Science, Education and Sports aims to present the essence of the CNES in a simple, clear and concise manner, and to offer important information relating to the implementation of this basic document.

The guide also serves as a source of information for pupils and parents who would like to know more about the planned changes to the educational system. The guide can also serve other institutions and individuals whose area of interest is education, as well as the public at large. The CNES document is in its final preparatory stages, and is available, together with its introductory texts and teaching topics for all subjects, on the Ministry website at www.mzos.hr.

The teacher: pivotal to the quality of education

The teacher is the key to all success in education. The teacher shapes the educational process, serves as the main stimulator and cooperates with pupils in the development of their knowledge and abilities. The teacher plays an important role in setting clear and achievable educational goals in concrete terms.

Based on the educational goals, the teacher can set concrete educational standards. We must not forget that only a creative and dedicated teacher can foster creativity in a pupil. It is not simple to alter stereotypes in the classroom, and how successful the change will be depends on the quality of education and the professional training of the teacher. Initial education, internships and continuous professional training of teachers have become priorities in the process of improving the educational system in Croatia.

Which basic questions does the CNES answer?

The European Union Member States have adopted a framework of educational objectives regarding the attainment of basic knowledge and skills in linguistic and mathematic literacy, natural sciences, information and communication technologies, foreign languages, general culture, entrepreneurship and social skills. This knowledge and these skills are widely applicable and are developed throughout the pupil's entire life. The goal is to make individual national education systems compatible,

particularly in terms of their quality and common goals. This compatibility will make it easier for the citizens of Europe to find employment.

The increasing world trend is to replace the rigid concept of a centralized curriculum with adaptable systems of curricula and standards. This new concept allows for the constant and systematic development of the school system, adaptable to societal needs.

The National Educational Standard is a comprehensive approach to the educational process, and includes the educational goals, educational content, proposed teaching methods, expected teaching outcomes and the desired classroom environment.

Over time, individual sections of the Standard can be adapted and upgraded. The CNES represents an open approach that makes the constant improvement of schooling possible, and is in line with the demands and needs of the economy and society. In order to improve the quality of education, which plays an important role in the economic and social development in the 21st century, it is important to relieve pupils from encyclopaedic content and direct them toward creating a basic system of permanent essential knowledge, as well as creativity, problem-solving abilities and life-long learning. These educational objectives set in Croatia correspond to the educational objectives in the developed countries of the European Union, the United States and Japan. They are directed at building a knowledge-based society in which the school system is primarily intended to prepare the pupil for higher and specialized education, and for life-long learning.

In the globalizing world of the 21st century, an environment of rapid and unpredictable changes imposed by scientific and technological revolutions, the objective of education is to prepare the younger generations for finding their way in an unpredictable and constantly changing environment. Knowledge is becoming the main factor of success and competitiveness. Directing education toward concrete goals, which was the main characteristic of the last century, is now being abandoned. Even the more detailed determination of long-term educational goals, directed at specific economic branches, is being abandoned, as the development of science and technology is too fast and unpredictable. The objective is to prepare the pupil to work and operate in present conditions, but also to operate in unpredictable future situations, which will demand even more applied skills and expertise in a knowledge-based economy and society. In that sense, the CNES is in line with the strategic document by the National Competitiveness Council entitled "55 Recommendations for Improving the Competitiveness of Croatia."

Studies in developed European countries recognize that implementing a national educational standard is in the professional and personal interests of the teachers as well as in the interests of the pupils and their parents.

The long tradition of Croatian education

The Benedictines in Rižinice near Soline founded the first school in Croatia in the 9th century under the rule of Prince Trpimir. It is also known that in the early 14th century a school operated in Dubrovnik, and another somewhat later in Zagreb.

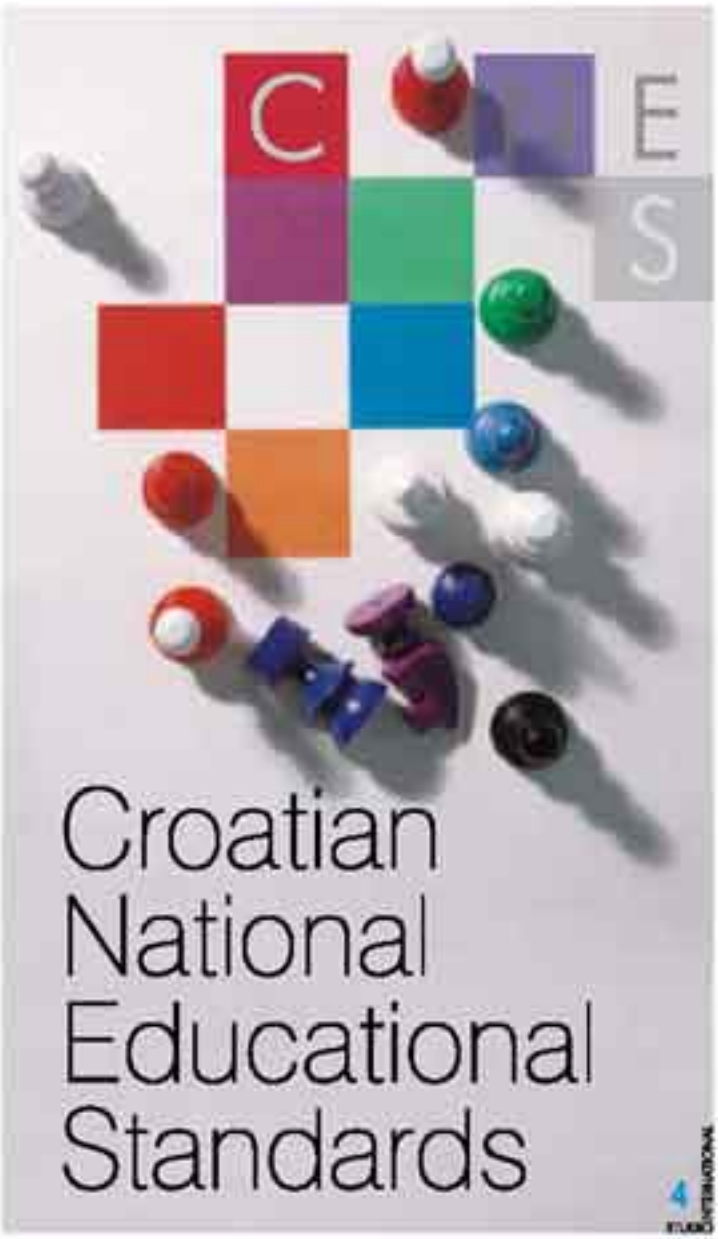
In the mid 20th century, eight-year primary schooling was introduced in Croatia. Today this system corresponds to the concept of mandatory schooling for all children. The duration of primary and mandatory schooling became the same thing.*

The most recent data show that 96.5 percent of all school-aged children attend primary school, with 91.0 percent of them completing it successfully. 79.2 percent of all children continue in secondary school, with a 69.5 percent rate of successful completion.

* In Croatia, *pre-school* education is optional, but not mandatory for children. *Primary school* consists of a total of eight years (age 7-14). Upon completion of 8th grade, Croatian pupils advance to *secondary school* with the option of enrolling into either a four-year *Grammar school* (Gimnazija) or three-/four-year *vocational schools*.

II. Toward Higher Quality Croatian Schooling

The existing Croatian school system is primarily directed at encyclopaedic knowledge, rather than functional knowledge. Teaching content is dominated by encyclopaedic information, and classes are most frequently held in a lecture-style format. This form of teaching is supported by class programs and textbooks aimed at teaching facts. What have been lacking until now were well-defined national standards of knowledge, the development of pupils' abilities and skills in individual subjects, and any orientation towards creativity and exploration. There is currently no method of monitoring and evaluating the results of the educational process. A series of strategic decisions will be needed to achieve any permanent improvements in the quality of education. These decisions will be aimed at improving quality rather than implementing general systemic reforms. The future development of education will be directed toward teaching processes whose goals are to provide basic knowledge, problem-solving skills, preparation for future challenges and development of pupils' general abilities, all in the spirit of true moral values. Future education should also develop skills such as observation, critical thinking, sound judgement and logical deduction. It is also important to foster active participation in a democratic society. External evaluation will monitor the functioning of the educational system and improve the quality of teaching. Such evaluation will also stimulate pupils to systematically and actively learn, while teachers will be motivated to implement contemporary teaching methods, and schools will seek to obtain a clear picture of their own success. It is particularly important to emphasize that external evaluation will lead to the equalization of educational achievements on a countrywide level, and will allow for the comparison of our educational system with systems in other countries. Considering that the teacher is the driving force, creator and guide of the educational process, as well as the main motivator and partner with pupils in attaining and developing their knowledge, abilities and skills, it is clear that



the teacher's role is vital for success in education. Therefore, education for the teaching profession and systematic professional training will be priorities in the process of improving the educational system in Croatia. Although debates on school reform in Croatia have been ongoing for several decades, the class curricula are still overburdened with large amounts of inappropriate content, with increasingly more inappropriate content being added.

Below is an example of an assessment of the educational system, as presented in the press:

"Pupils are under stress due to the inappropriate, overburdened programs which primarily lead students to memorize numerous facts with no analytical thought, and then reproduce knowledge which has no purpose or objective."

However, overburdened programs are not the only problem in our schooling system. Other problems also need to be emphasized, such as the training and motivation of teachers, the unclear objectives of the educational system, and problems of methodical monism, poverty and so on.

Examples of overburdening pupils with textbook content

Example one:

Third grade pupils age nine, learn the following from the Nature and Society textbook:

"... Contours are curved lines, which unite areas of equal altitude. In order to depict altitude, we use different shades of the colour brown. The higher the altitude, the darker the shade of brown. We can recognize the basic shape of a rise from the map contours. The altitude of a rise is recognized with the help of the shades of brown of the contours, and the number of contours. The slope of the mountain is determined with the help of the density of the contours. Where the contours are closer to one another, the slope is steeper."

Example two:

An eleven year-old pupil reads the following text in a textbook:

"Mesopotamian gods: Enlil - the god of wind, Enki/Ea - the god of water, Ninhursag wife of Ea, An/Anu - divinity of heaven, Inanna/Ishtar - goddess of love, Dumuzi/Tammuz - god of vegetation, lover of Ishtar, Uttu/Shamash - god of the sun, Nanna - god of the moon, Nergal - god of destruction, Ereshkigal - wife of Nanna, Marduk - king of the gods, Nabu - son of Marduk, god of literacy and wisdom."

Example three:

From a fifth grade geography textbook, children learn the following information, which is unclear as well as incorrect: "Atmospheric pressure is the weight of the layer of air surrounding the earth. The unit of pressure is the hectoPascal."

The child asks, "Why is weight not measured in hectoPascals in everyday life? When I hold a book in my hand, why don't I feel the weight of the atmosphere pushing downwards?"

Contrary to this example, the seventh grade pupil learns in physics that the unit of force is the *Newton*, and not the *hectoPascal*, and that pressure is something other than what was learned in the fifth grade geography class. It is not equal to weight, and is therefore not expressed in units of mass. It acts equally on all parts of a body, not only downwards from above, but also upwards from below.

How does the pupil feel when faced with such contradictory information, and how does this impact his intellectual development?

What do such encyclopaedic texts mean to a child?

How does the child feel when studying such contradictory content?

How does this influence the development of creativity?

How does this contribute to the child disliking school?

A pragmatic approach to unburdening the pupil

Unburdening the pupil does not mean reducing the knowledge and abilities attained by the pupil in primary school. On the contrary, unburdening means increasing knowledge and skills. We unburden the pupil by eliminating excessive, irrelevant and incorrect class content and teaching methods inappropriate for the pupil's age. This process alters the role of the pupil as a mere observer in the learning process. We do not require any additional research or studies to make this decision to unburden pupils. Instead, it should be based on the competence of our scientists and professionals, and especially on the experiences of our skilled practitioners the teachers.

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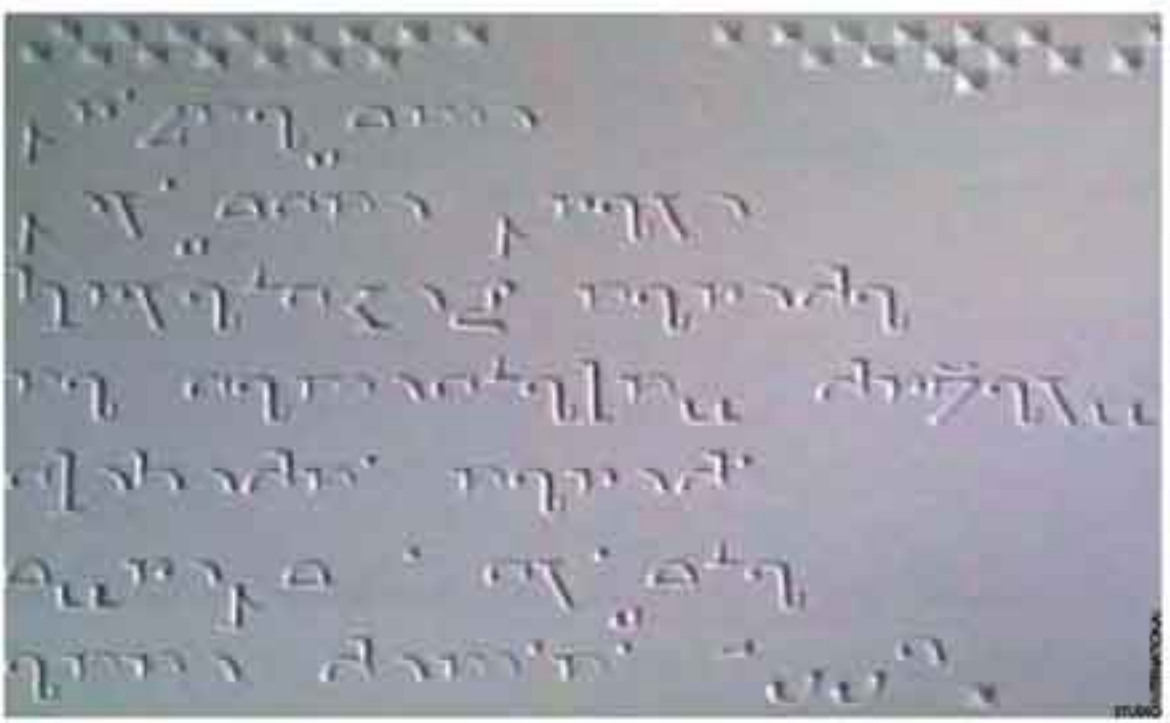

III. The Croatian National Educational Standard (CNES)

What is the CNES?

In line with the general characteristics of the *Development of The National Educational Standard* (Bundesministerium für Bildung und Forschung, Berlin, 2004), its role is to guide and lead schools toward the realization of mandatory educational objectives and toward the desired outcomes of learning.

The National Educational Standard is a road map for teachers, pupils and parents in achieving, and constantly improving, education. The CNES is also the foundation for creating a National Curriculum as a dynamic developmental document.

Moving toward the Croatian National Educational Standard (CNES)

The drafting of the CNES began by removing unnecessary content from teaching material. The current status was a starting point. To date, pupils have been overburdened by encyclopaedic-style class content and partly by inappropriate teaching methods and material inappropriate for the age of the pupil.

In 2004, the committees for drafting the CNES for primary schools, formed within the competent Ministry, prepared the first working version of subject programs within the framework of the CNES. The majority of the committee members were practicing teachers, university professors, pedagogues, physicians, psychologists, special-education needs teachers and other experts (the term *teacher* refers to all staff members who instruct at a primary school).

From the end of 2004 to early April 2005, a series of large-scale public debates was held throughout Croatia. In particular, county-level councils were convened and debates were held via the Internet on the working version of the CNES. Numerous professional meetings were also organized. Teachers, pupils and parents, educational and scientific institutions as well as the interested public all participated in these debates. Subject committees monitored the public debates and reviewed the submitted comments and suggestions, from which they continued to attempt to improve the working version of the CNES.

By publishing the working version of the CNES on the website of the Ministry of Science, Education and Sport, and by launching public debates, a dynamic process for developing and continually improving the CNES was initiated. This is of exceptional importance at times when an explosion of knowledge and its application, as well as the rapid changes in the world of labour, require the constant critical re-examination and improvement of educational content and teaching methods. Besides educational goals and content, the CNES also covers goals and content as they become integrated into the topics of each subject. This is a current trend in the European Union Member States. It is important to emphasize that this streamlining and improvement in quality is being implemented within the framework of the current teaching plan. There are no plans to reduce or

increase the number of lesson hours for any individual subject. The existing lesson hours will, with various presented materials, leave more time for the pupil's independent and creative work, repetition and practice, better understanding of the material and a more appropriate evaluation of accomplishments. Furthermore, in terms of long-term objectives and a transition to full-day education in schools similar to that in the European Union Member States, additional, elective and facultative lessons will gradually be introduced.

After the decision to adopt the CNES has been made, the Minister will appoint National Council for the Curriculum, which will draft the final proposal for the National Curriculum. The structure and objectives of the National Educational Standard and new aspirations in education can be compared to the approaches found in the following documents about education: *Development of National Educational Standard*, Bundesministerium für Bildung und Forschung, Berlin (2004); H. Goldstein and A. Heath (eds.), *Educational Standards*, Proc. Brit. Acad. 102, Oxford University Press, Oxford, (2000); National Research Council, *National Science Education Standards*, National Academy Press, Washington, DC (1996); *European Report on the Quality of School Education, Sixteen Quality Indicators*, European Commission (2000); *The National Curriculum, Handbook for Primary Teachers in England, Key Stages 1 and 2, Key Stages 3 and 4, Qualifications and Curriculum Authority*, London (1999); *A Report to the Nation from the National Commission on Mathematics and Science Teaching for the 21st Century*, U.S. Department of Education, Washington, DC (2000).

The application of standards depends on the concrete circumstances, conditions and the traditions of each individual country.

Objectives of the Croatian National Educational Standard

- unburdening pupils by reducing the proportion of encyclopaedic content that requires memorization and reproduction;
- lessons based on the process of teaching instead of exclusively on lecturing / presentation;
- teaching directed at the pupil, taking into account the pupil's abilities and natural tendencies;
- leading the pupil into exploratory learning;
- acquiring permanent and useful knowledge;
- acquiring abilities and skills;
- developing abilities to solve problems and make decisions;
- developing an entrepreneurial spirit;
- training for lifelong learning;
- strengthening the socialization role of schools;
- strengthening cooperation among schools and the local community;
- acquiring social and moral habits and abilities.

Content areas of the Croatian National Educational Standard

The National Educational Standard applies to the following areas:

- language;
- mathematics;
- natural sciences;
- technical sciences;
- history, social and national subjects;
- communications and information;
- ecology;

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- art and aesthetics;
- ethics; and
- education.

What does the Croatian National Educational Standard contain?

The National Educational Standard includes:
- standards for the content of education;
- standards for educational achievements (knowledge, skills and abilities);
- standards for teaching;
- standards for monitoring and evaluating a pupil's accomplishments;
- standards for the professional development and training of teachers.

What else does the CNES contain?

The CNES also contains:
- standards for textbooks, manuals, workbooks, teaching aids and facilities;
- standards for IT equipment;
- standards for equipping classroom labs for technical studies;
- standards for equipping school laboratories;
- standards for equipping school libraries, etc.

School equipment standards in line with the CNES

Using the results of the public debates, standards that are in line with the requirements of the CNES will be drafted for equipping schools. The number of necessary laboratories and the standards of their equipment will be determined for each subject. Modern forms, methods and means of learning and teaching will be taken into consideration when determining the standards of the necessary equipment. The county-based teacher councils and offices of the state administration can also submit their proposals for equipment standards.

CNES and the school library

A well-equipped and professionally run school library is an important factor in modernizing the educational process. Such a library serves as a place where various sources of information, from books and magazines to the Internet, are compiled, processed and made functional. By using modern technology, the library becomes an informative and stimulating educational, cultural and creative center. By providing space, materials and an educational concept determined by the school librarian in cooperation with teachers and pupils the library plays an active role in the desired educational changes. The school library is also an important factor in the development of computer literacy as the basis for lifelong learning and for training pupils to promote human rights and become actively involved in democratic society.

Double periods in primary school

In order to update subject topics in accordance with the CNES, lessons should be organized in a flexible way, permitting and introducing the use of double periods (two consecutive school hours with a regular break in between hours) in teaching certain subjects.

Practical experience and discussions by the expert county-based councils have shown that double periods are very effective for teaching in fields such as the natural sciences (physics, chemistry,

biology, nature), technical subjects and art, and also when teaching differentiated lessons to pupils with special educational needs.
Double periods permit great efficiency in conducting lessons that require experiments or field work (the first lesson is reserved for practical work, while the second lesson is used for the analysis and processing of results, and the discussion and interpretation of what was achieved). In the lower classes of primary school teaching can be organized in various forms, including double periods. This then reduces the volume of homework and lightens the pupil's schoolbag, as the pupil uses fewer textbooks on that day.

Field work in line with the CNES

The CNES provides much more efficient out-of-classroom teaching and, in particular, a greater proportion of field work. Field work is specified in the proposals made by the subject committees for the CNES. Apart from field work pertaining to a particular subject, interdisciplinary field work is also envisioned by means of cooperation between two or more subject committees. In this way, full-day field work may combine several subjects, along with the joint participation of the teachers from these subjects. For example, biology, physics, geography and chemistry are subjects that could be combined.

Working with gifted children - development of a new system in line with the CNES

Elective teaching activities for existing mandatory subjects and optional subjects within the CNES are primarily available for gifted pupils and those who express special interest. Therefore a system of assessments and awards for gifted pupils must be developed.

Development of a new system of working with children with special educational needs

The CNES improves the Croatian educational system by promoting the principle of schools for everyone and by taking into consideration special educational needs and the special needs of groups and individuals. Teachers are required to enable each pupil to be successful. Along with the content-related and organizational adjustments made through a differentiated teaching approach, necessary structural adjustments are also required. An individual focus and an adjusted curriculum are planned for pupils whose achievements fall significantly below the expected level. This primarily refers to the senior final classes and teaching matter based primarily on abstract thought. In cooperation with the pupils and their families, certain activities are planned to lead students into the employment world based on their future interests and needs and the abilities of the local self-government to help them find employment. Cooperation is also envisioned with institutions that come under the jurisdiction of other Ministries.

CNES as the basis for new textbooks

The final content of the CNES, arranged by school subject, will be the starting point for authors writing new textbooks and for publishers editing and publishing textbooks.

Apart from the required subject matter, a textbook may also contain optional subject matter. Optional material may comprise up to one-third of the textbook, including optional teaching matter found within the required topics and overall optional topics. Optional teaching matter must be differentiated from the required teaching matter by means of graphic representation in the textbooks. The CNES gives authors a greater amount of freedom in shaping the suggested methods, and especially in shaping the optional teaching matter. When writing a textbook, each topic must comprise a

meaningful and logical unit. Teachers are independently responsible for deciding on the order in which they will cover specific topics, the number of lessons necessary for each topic to be covered, exercises, and the revision and testing of acquired knowledge, i.e. the level of the achieved educational objectives. According to the CNES, a teaching topic does not have to coincide with the teaching unit, but it may be covered in one, two or even three teaching units, depending on the quality of the equipment at the school, the local and social environment, and the nature and interest of the teacher and pupils. Several related teaching topics in a textbook may be combined into larger topical units. A textbook should emphasize key words, specific new terminology, numeric data that requires memorization, as well as illustrative and interdisciplinary matter interrelated with other subjects.

One must bear in mind that the aim is to decrease the amount of teaching matter and adjust it more appropriately to the age of the pupil. The textbook should also contain optional teaching matter for gifted pupils and for pupils more interested in the subject. Optional teaching content is covered by separate components of the CNES within the framework of mandatory topics, and as special optional topics. Textbooks should indicate that optional topics are intended for independent study projects and research work, and they are not subject to grading. Apart from the optional topics suggested by the CNES, authors may include additional optional topics in the textbooks. The optional topics become part of the textbook, but they are not subject to testing and assessments. Textbooks do not cover suggestions concerning work with special needs pupils. Instructions for work with pupils with special needs and a more detailed elaboration of related teaching matter will be available on the Internet and may also included as a part of the teacher's manual.

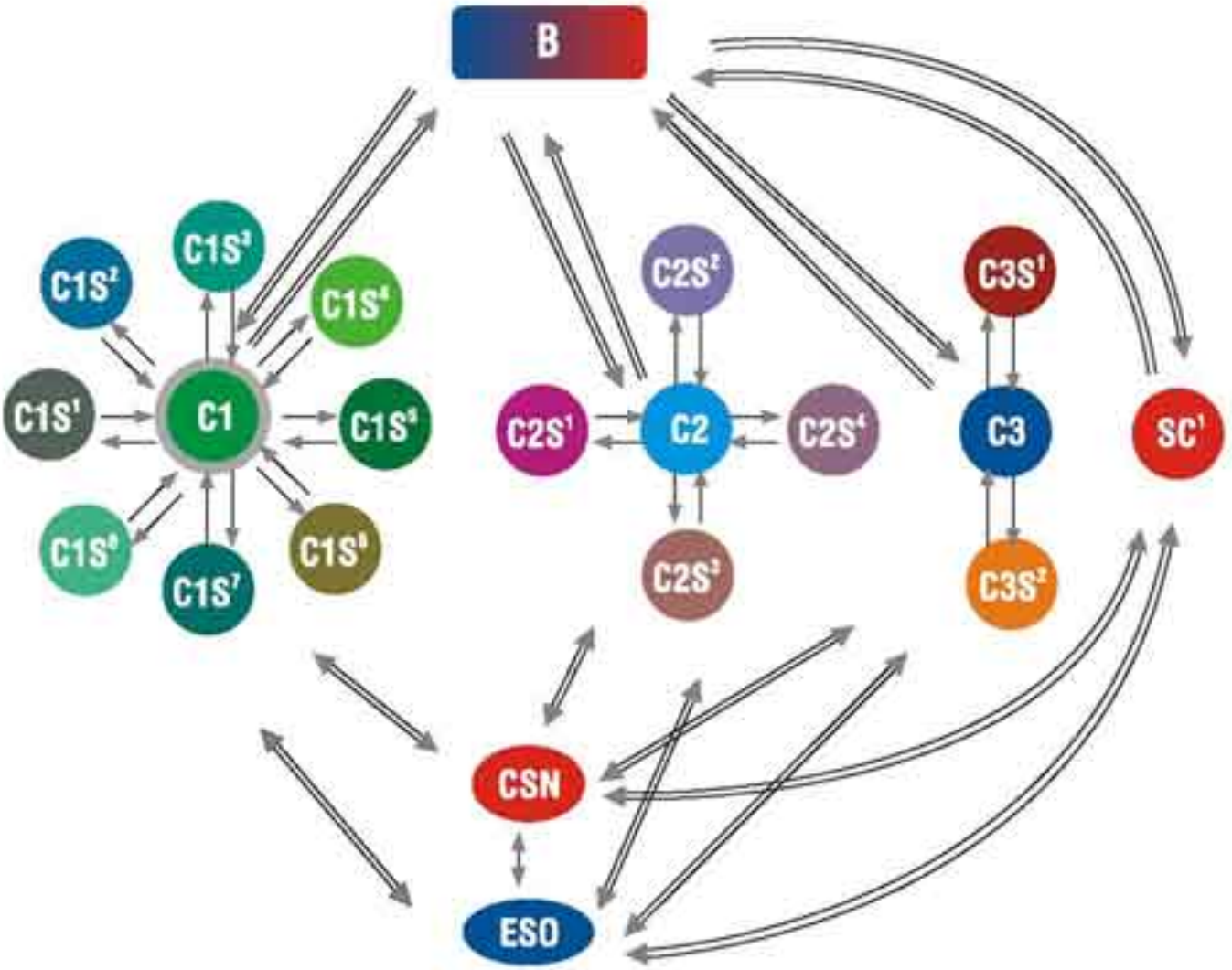
The Ministry is currently preparing a Textbook Act, which will regulate the currently unresolved textbook issue.

Legal framework of the CNES

Before the CNES becomes integrated into regular education in schools, amendments to regulations are required in accordance with the needs of the educational system.

Curriculum for primary schools

The CNES has been prepared for the existing curriculum (teaching subjects and the existing number of lesson hours). The possibility of harmonization with the curricula of Central European countries may be considered a long-term plan. However, these countries have better developed optional and facultative lessons than Croatia. In the future, Croatia also hopes to introduce single-shift schooling with a full-day teaching schedule and a better selection of elective and optional classes.



Organizational structure of the drafting of the CNES

B	**CNES Board**
C1	**Coordination body for natural sciences/mathematics/technical sciences**
C1S¹	Subject Committee for Mathematics
C1S²	Subject Committee for Physics
C1S³	Subject Committee for Chemistry
C1S⁴	Subject Committee for Biology
C1S⁵	Subject Committee for Natural Sciences
C1S⁶	Subject Committee for Geography
C1S⁷	Subject Committee for Technical Sciences
C1S⁸	Subject Committee for Computer Sciences
C2	**Coordination body for social sciences/humanities**
C2S¹	Subject Committee for the Croatian Language
C2S²	Subject Committee for Foreign and Classical Languages (English, German, French, Italian, Latin, and Greek)
C2S³	Subject Committee for History
C2S⁴	Subject Committee for Nature and Society
C3	**Coordination body for the arts**
C3S¹	Subject Committee for Music Education
C3S²	Subject Committee for Art Education
SC¹	**Subject Committee for Physical Education**
CSN	**Working Group for Children with Special Needs**
ESO	**Working Group for Educational and Socializing Objectives and Teaching Content**

IV. How was the CNES Drafted?

The organizational structure for drafting the CNES

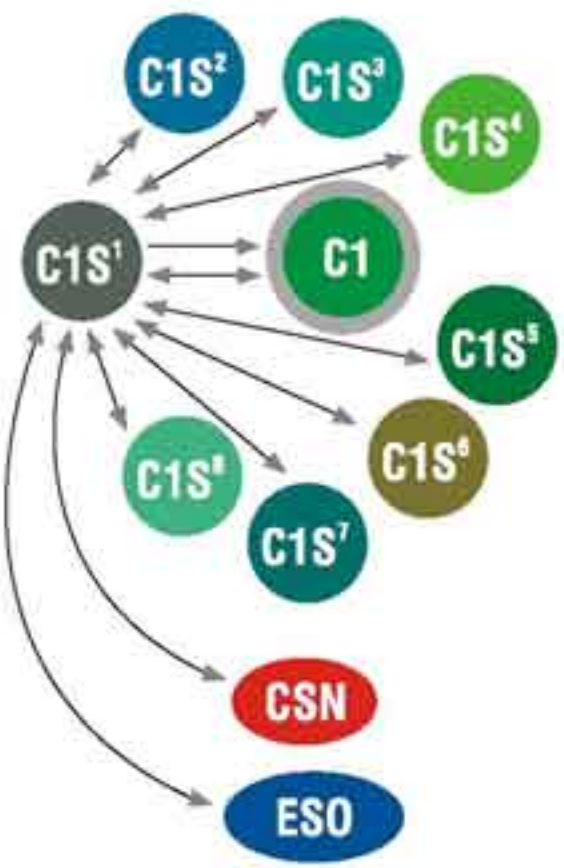
A board heads the teams in charge of drafting the CNES and directly harmonizes the work of the three coordination bodies.

These are the:
- Coordination body for the natural sciences/mathematics/technical sciences;
- Coordination body for the social sciences/humanities;
- Coordination body for art.

The following are separately organized:
- Committee for physical education;
- Working group for children with special needs;
- Working group for educational and socializing objectives and teaching content.

Each coordination body unifies the work of the subject committees within their own area of expertise. In this way a professional structure is established vertically throughout the entire primary school system. A total of 15 boards have been set up for primary schools, one board for each subject. At the same time, horizontal coordination has also been established in order to foster interdisciplinary cooperation among the boards.

Thus, a matrix has been created ensuring vertical harmonization of content (subject vertical) and horizontal harmonization (interdisciplinary horizontal).



Example of horizontal interrelations

Horizontal interrelations are achieved by harmonizing the work of a particular subject committee (for example, C1S¹ for mathematics) with the work of other subject committees and working groups within the same area. When necessary, cooperation among subject committees from other coordination bodies may also take place. For example, cooperation between the subject committee for history (Coordination C2) and the subject committee for geography (Coordination C1) could occur; cooperation between the subject committee for nature and society (Coordination C2) and the subject committee for geography (Coordination C1) would also be possible.

Horizontal linkages will be particularly evident in class teaching.

The competent church and state institutions will consider the CNES for religious classes, as an optional subject in primary schools, separately.

Starting point for drafting the CNES

The starting point for drafting the CNES can be found in the existing curriculum, textbooks and teaching methods used to date. Those existing practices, which are in accordance with the objectives of the CNES, have been left as they are.

Bearing in mind that every change may disrupt the interlinked process of teaching, changes have been made only when necessary. Another reason for caution is that change requires teachers to provide additional effort, stimulation and activity by obtaining professional and methodological training and preparing for practical implementation.

CNES and the Catalogue of Knowledge, Skills and Abilities

At the outset of the work on the CNES in 2004, a set of teaching topics arranged by subject was compiled and entitled the *Catalogue of Knowledge, Skills and Abilities*. However, from the very start, the subject committees covered a greater area than just the creation of this Catalogue. The word *catalogue* was used in accordance with certain earlier developmental documents, i.e. documents by the Institute of Education of the Republic of Croatia; the *Declaration on Knowledge and Application of Knowledge* written by the *Croatian Academy of Sciences and Arts* (2003); and the legal norms, i.e. the *Textbook Act* (2001).

The original objective was to decrease the amount of teaching content, as well as creating methodological procedures for experimental and research learning and teaching that led to the drafting of the CNES, a new term in Croatian educational theory and practice, thereby transcending the framework of the traditional curriculum.

The boards established under the competent Ministry, which included 268 associates, have served successfully, efficiently and with high quality results. This has allowed the ambitious requirements contained in the Croatian National Educational Standard (CNES) to be met.

Meanwhile, the preparation of the new Primary Schools Act created a new legal framework for introducing the CNES. Thus, by expanding the *Catalogue*, it developed into the CNES. In the process, the standard international name was adopted, the "National Educational Standard."

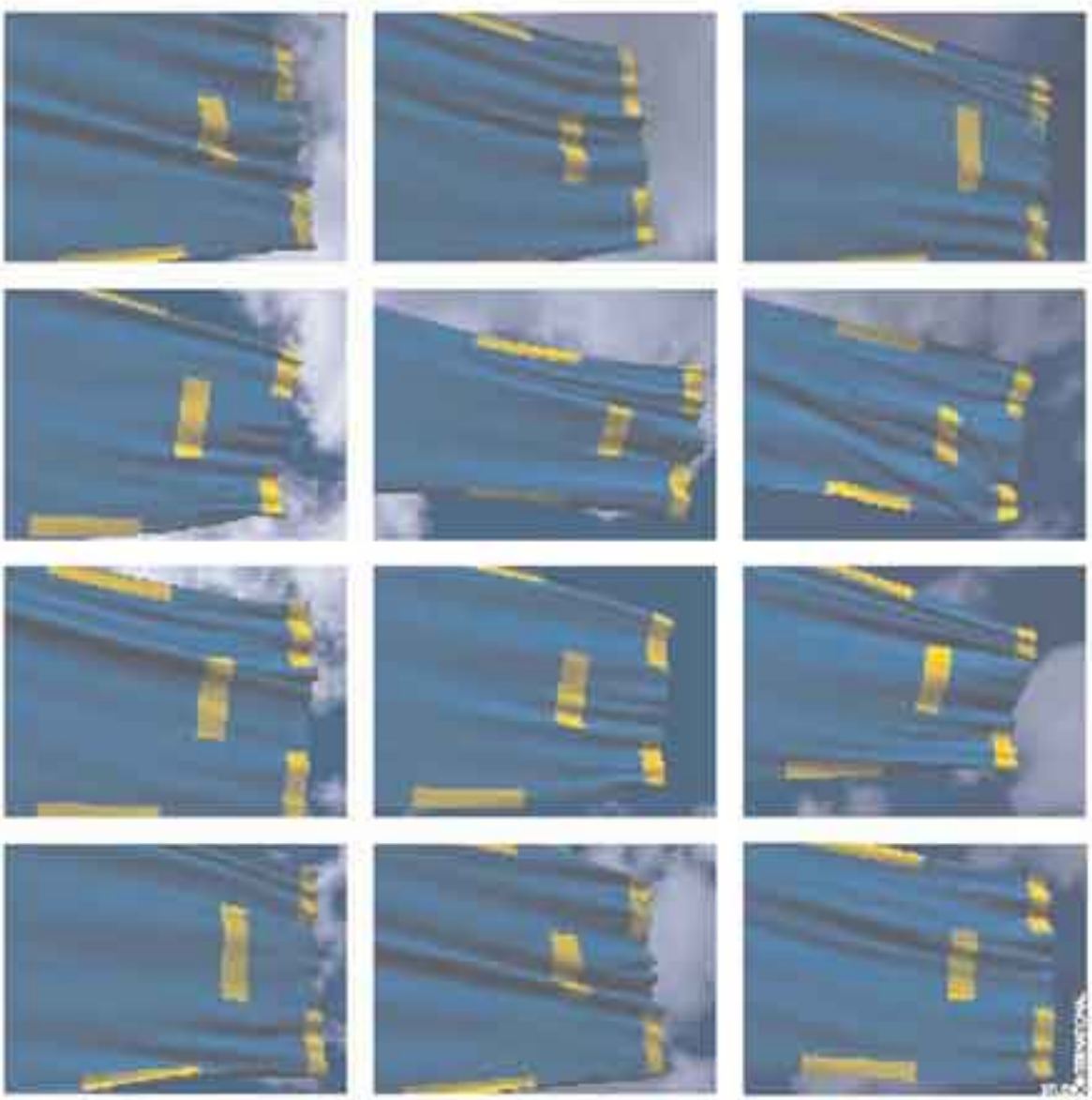
Public discussion and preparations for the CNES

Preparations for the CNES have been going on since early 2004, and the actual drafting began on April 19th of that same year. The CNES teaching topics covering physics, chemistry, biology and nature were published on September 17, 2004. From early December 2004 until the end of April 2005, a working version of all CNES subjects was posted on the Ministry website, www.mzos.hr. Through this website, everybody was invited to discuss, comment and make suggestions on the draft.

The discussions mostly involved teachers, including teachers from the expert-based county councils and individual teachers. Parents, through parents' councils at schools, and the pupils themselves also participated in these discussions.

Public debate on the Internet

During the public debate on the Internet, the Ministry received emails containing more than a thousand objections, including suggestions from the heads of the expert county councils, school boards, parents' councils, school principals' organizations, professional organizations, teachers, school principals, parents, pupils and other experts and citizens. All criticism was delivered to the competent subject committees, which considered the feedback thoroughly and used it in preparing the final version of the text. The boards cooperated especially with those who had sent particularly useful suggestions.



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Professional debate on the working version of the CNES by expert county-based councils

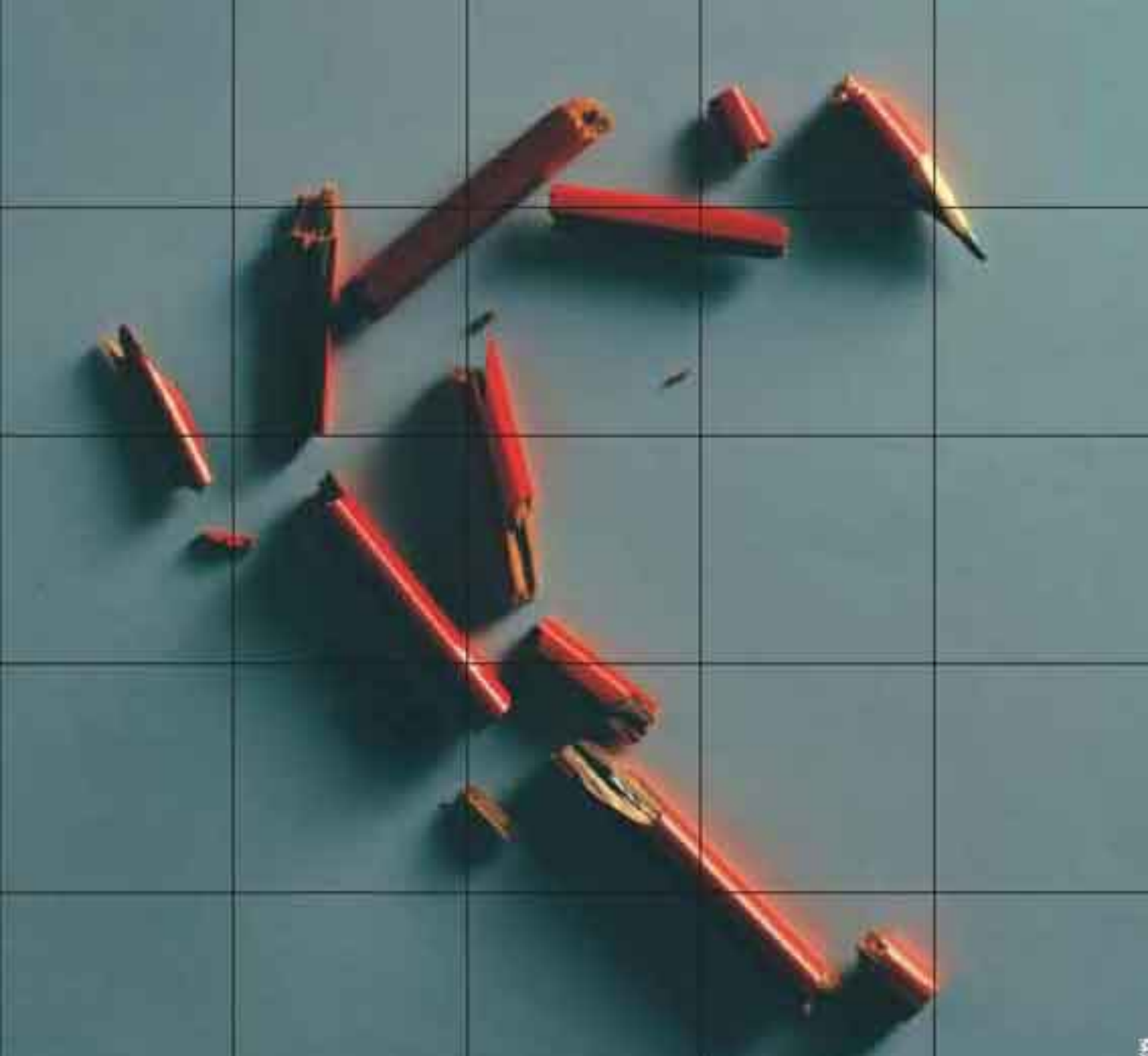
The Ministry's primary associates in shaping the public debate on the CNES, and in the process of improving the quality and implementation of the CNES, are the expert county-based councils. These councils are organized according to subject, and are composed of all the teachers in a particular county. The expert county-based councils held a large number of debates and workshops on the CNES topics. These debates dealt particularly with adjusting the CNES to the age and abilities of the pupils. After the expert county-based councils concluded their debates, the representatives of the corresponding boards took part in a final debate on the working version of the CNES. During this final debate, the head of each expert county council submitted a report to the Ministry and the corresponding subject committee for the CNES.

Members of the boards, coordination bodies and committees took part in the debate along with the heads of the expert county-based councils that had made objections. All called attention to certain problems and suggested possible solutions. Further activities related to the CNES will involve the participation of the heads of the expert county-based councils, and they are expected to have a key role in the resulting work on implementing the CNES in the school system.

Cooperation between parents and schools regarding the CNES

By following their educational objectives, schools and educational authorities in developed European countries give parents the possibility to cooperate in planning the educational process. This requires an active initiative and cooperation between schools and parents, with a clear definition of the role of parents, teachers and pupils within the cooperative framework.

Parents have a mutual objective in the creation of a high quality learning environment and the educational development of all pupils. Parents act in cooperation with the educational, social and healthcare institutions at the national and local levels. In accordance with European aspirations, the CNES in Croatia, and the curriculum derived from it, allow for *parent boards* to be involved in a more systematic and efficient manner both at the school and county levels.



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V. How to Implement the CNES?

Professional training and continuing education of teachers in implementing the CNES

Systematic professional training and the continuous education of teachers play a crucial role in the improvement of the quality of teaching and the successful implementation of the CNES and the curriculum derived from it. In this process, an emphasis is placed on the improvement of professional knowledge and new teaching materials, methods and technologies.

The Ministry, the Institute of Education, teacher-practitioners, teacher-training faculties, teacher education academies, teacher training schools, scientific and cultural institutions, and eminent scientists and experts should jointly prepare and organize the professional training of teachers. Such

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training in important as the progress expected in schools is above all a methodological and professional issue. Systematic professional training of teachers contains two significant characteristics:

1) Knowing and understanding the scientific and theoretical basis of a discipline as well as its practical application within a subject. If a teacher does not fully understand the conceptual scientific basis of the subject, he/she cannot teach it successfully. Insufficient knowledge of a particular profession cannot be compensated for by intensive methodological and pedagogical-psychological knowledge. For example, a good mathematics teacher has to master the scientific and technical basis of mathematics as well as its practical applications.
2) Training for the practical application of methodological, pedagogical and psychological knowledge. Teachers must become well acquainted with the complex educational objectives and tasks and gain practical teaching skills in order to apply them successfully. Systematic

professional training of teachers constantly enhances their skills. An emphasis is placed on the organization of methodological workshops that will provide good practice in all parts of education (the application of contemporary work methods, teaching methods, new teaching materials and their correlation to other teaching materials and teaching subjects, information and communication technologies in teaching, etc.). Increased professional training leading to a better understanding of the scientific and conceptual basis of a subject, as well as the necessary methodological, pedagogical and psychological knowledge, will take place in combination with preparations for the implementation of the CNES. It is planned for all teachers to pass professional training by the end of 2007.

Organizational forms of professional teacher development

The Ministry and the Institute of Education are responsible for professional teacher development for the purpose of implementing the CNES. A cascading model of professional training consisting of three steps is to be applied for the implementation of the CNES.

The *first step* is to define the action plan and program and to organize and prepare experts who are to provide professional training to teacher-instructors according to a unified program. Expert teams for the additional training of teacher-instructors will be formed by the Ministry and the Institute of Education. These teams will be composed of eminent teachers, professors and scientists from universities (teacher-training faculties, teacher education academies and teacher-training schools) and institutes, advisors to the Institute of Education and employers of the county and municipal education offices. Members of the expert teams will be primarily composed of members of the board for drafting the CNES, eminent teachers and subject-specific teaching experts as well as advisors to the Institute of Education whose task will be to organize meetings and workshops according to particular teaching subjects. Apart from the expert subject-specific teams for particular teaching subjects and areas, another expert team for the training of school principals, expert assistants, and members of the school boards and parents' councils will be formed.

As a *second step*, expert teams will provide professional training to some 500 teacher-instructors who are the heads of the expert county- based councils, teacher-mentors and advisers as well as prominent teachers. In order to cover all primary schools in the Republic of Croatia, teacher-instructors will be chosen on the basis of their professional abilities and will be vested with the authority to work in a particular number of schools.

In the *third step*, the trained teacher-instructors will implement a single action plan of the CNES implementation program by applying various forms of professional training to teachers in the field. The task of the experts, primarily the advisors to the Institute of Education, is to monitor and assess the work of teacher-instructors in order to ensure coverage of all primary schools and compliance with the predetermined indicators of the quality of training provided to teachers. The steps in the preparation and professional training of teachers for the implementation of the CNES require:

- On-going expert pedagogical help provided by teacher-instructors during instruction;
- Several one-day meetings, including workshops and seminars, for teachers organized by counties;
- Several day meetings with workshops and seminars for a greater number of teachers at the state level.

The topics of these meetings will be related to particular professional issues. Professional institutions, the Institute of Education and other institutions will organize the professional meetings.

The professional meetings will consist of plenary and break-out sessions, primarily in the form of workshops. The major topics of the professional meetings will be related to teaching practices.

Training teacher-instructors for implementing the CNES

Teacher-instructors will have a significant role in introducing the CNES to schools. They will be experienced teachers, primarily heads of the expert county-based councils, teacher-mentors and teacher-advisors as well as prominent younger teachers. About 500 heads of the expert county-based councils and members of the subject committees for the CNES will be gradually trained to become teacher-instructors. They will therefore become actively involved in school practice. Professional training of the first groups of teacher-instructors is scheduled to begin during 2005.

Other teacher-instructors will be professionally trained during 2006 and 2007. Teacher-instructors will spend the greater part of their working hours teaching at their schools, while the other part of their working hours will be spent providing expert pedagogical assistance to other teachers in their counties. Their work will be conducted in cooperation with the Ministry and the Institute of Education. We should point out that in certain European countries the transfer of power of professional pedagogical assistance from a centralized institutional level to the local level has proven to be very successful. The number of persons employed at central educational institutions in these countries has been reduced several times, while certain special rights and obligations have been transferred from the state to the local level. In Croatia, this would mean the transfer of certain activities to the level of the expert county-based councils.

Teaching licences

The introduction of a teaching licence has been under consideration for quite some time. Different indicators may be set as criteria for granting such a licence. For example, potential indicators include: the success of the pupils as gauged by external assessment, professional training, expert publications, results achieved by working with gifted pupils, results achieved by working with pupils with special needs, participation and presentation at expert meetings, heading expert county-based councils, being a teacher-tutor, writing expert reviews of textbooks, participation in activities of the board at the competent Ministry, active participation in professional societies, receiving acknowledgements and awards, and so on. Of course, this issue requires public discussion when it is proposed.

Training expert associates

Well-trained expert associates may provide significant support to teachers in their work at school. Expert associate training is planned for the time period 2005-2008.

Training school principals

School principals play a significant role in the practical introduction of the CNES into schools.

The first stage of training school principals is to instruct 5 percent of all primary school principals in the Republic of Croatia during 2005. Most principals will come from those primary schools at which the CNES is to be experimentally introduced. More intensive training, which will cover all primary school principals in Croatia, shall be provided during 2006 and 2007.

Training social partners

In order to encourage the active partnership of all people involved in the process of improving the quality of education, up to 50 percent of all social partners (members of school boards, parents' councils, pupils' councils and employees of county offices and state administrations) should be trained during 2006. This training will be provided through short seminars and workshops with the

objective of introducing CNES implementation and the National Curriculum. This type of training is to be constantly provided until the final implementation of the new curriculum.

Experimental introduction of the CNES into schools

The CNES will be experimentally implemented ("pilot project") during the 2005/2006 school year in 5 percent of all primary schools from all counties in the Republic of Croatia. The competent Ministry shall choose the 5 percent of all primary schools that are to take part in the experimental introduction of the CNES. Selection will occur after schools respond to a public invitation via the Internet. One of the criteria of the selection process will be that the selected schools are representative of different environments. Schools should be located in large as well as small cities and villages, on islands and in areas of special state care. Attempts will also be made to introduce the CNES into schools in which teachers have cooperated on the boards for drafting the CNES or into schools where heads of the expert county-based councils work as they are already familiar with the methodology of the CNES.

The results gained from assessing the experimental introduction of the CNES will be used in preparing the final introduction of the CNES.

Adopting the CNES for primary schools

A proposed final draft of the CNES for a particular subject is drafted by the competent subject committee and is then submitted to the superior coordination authority. After analyzing and adopting each subject CNES, the coordination submits it to the CNES Board. The final decision on the adoption of the CNES is made by the competent Minister, and this decision will be published on the Ministry website at www.mzos.hr along with other relevant publications.

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VI. CNES and Teaching Topics

Teaching topics in the CNES

The CNES for each particular teaching subject contains precisely designed teaching topics for each class. Each topic is a meaningful and logical unit. The number of topics for each subject depends upon the number of lessons and the specifics of the subject itself. For example, each natural sciences subject should be covered by 70 lessons per year according to the curriculum and should be organized into 20 mandatory and approximately 5 optional topics. The teacher may use one, two or three lessons to cover one topic, depending on the topic's complexity, the previous knowledge of pupils, the regional characteristics of the area in which the school is situated as well as the level at

which a particular topic is to be covered.

The number of topics in social science and humanity subjects, such as the Croatian language, is less than stated above. Due to the specific quality of the subject, each particular topic covers a larger meaningful unit.

Several related topics may be joined into one broad teaching unit.

Contents of a teaching topic

The title of a topic reflects the contents of the topic.
In the natural sciences, mathematics and technical sciences, each topic is organized according to the following components:

1) Key concepts

Two to five key words are listed for each topic so that the pupil can master them adequately and comprehensively. In this way, key words become and remain permanent and applicable knowledge.

2) Necessary prior basic knowledge

Prior basic knowledge, terms and facts that the pupil was already taught, are necessary for successfully handling the new topic outlined. The fact that the pupil has previously learned a certain lesson does not guarantee that he/she has mastered it. If a teacher notices, by talking to the pupils, that they lack the necessary prior knowledge, the teacher will briefly revise the contents before taking up a new topic. In this way, emphasis is put on stronger orientation towards a comprehensive (cumulative) knowledge.

The unburdening achieved by the CNES and the freedom the teacher has in determining the dynamics of a particular topic should leave enough time for revisions before new material is developed and the emphasis on the comprehensiveness and applicability of knowledge becomes accepted.

3) Suggestions for methodological processing of teaching topics

Contemporary classes require the application of various methods and formats of teaching. As part of the process much attention is paid to:

- Methods of practical work such as a hands-on approach that requires pupil activity, develops independence, and at the same time helps pupils master many skills and gain high-quality knowledge;
- Methods of demonstration, like audio-visual presentations, that appeal to the sensory experiences of the students (models, pictures, movies, practical work, experiments). These methods may be applied in different places (the classroom and school area, schoolyard, school garden, museum, and during school trips, etc.).

This component outlines one or more methodological procedures that indicate the need for experimental and research learning and teaching through hands-on instruction. One or more recommendations are also outlined in this determinant, but they are not obligatory. The teacher has the freedom to choose and apply any methodological teaching model that he/she finds effective and adequately addresses the developmental abilities, interests and needs of the pupils. The teaching model should also suit the inclinations, methodological knowledge and creativity of the teacher. The aforementioned recommendations, apart from serving as an orientation to the process of teaching, also serve to remind teachers that teaching practices based primarily on writing or lecturing are not desirable.

This approach teaches pupils to:
- Learn efficiently and think critically;
- Obtain information and then critically analyze, evaluate and use it;
- Think independently and act in accordance with one's own thoughts.

This component and the two following ones suggest to teachers how to approach teaching topics, although the teacher himself/herself chooses a particular teaching strategy.

The specific illustration used in this component is a basic example of a teaching topic. It plays the role of a particular illustrative example through which new material is acquired.

4) Additional illustrations

Apart from the basic illustration, the basic content of a teaching topic may be supported by additional specific illustrations that will enhance the pupil's comprehension and consequently increase his/her abilities to apply the acquired knowledge.

Certain suggestions for additional illustrations may be given, although the teacher has the freedom to choose either the suggested illustration or another similar illustration.

5) Examples of correlation to other subjects

Some teaching topics allow for the inter-connection of content covered by several subjects. These linkages should be used in order to give pupils better insight into the totality of the content, instead of presenting them as "extracted" parts of individual subjects. Such illustrations, in connecting the teaching matter and the teaching subjects, can also be covered on a simplified informational level. Examples of such linkages might encourage students to ponder the connections between topics, and could also represent an important contribution to the development of interdisciplinary work, an increasingly important trend in the 21st century. In addition to these horizontal inter-relations (connections between different teaching subjects in each grade), vertical inter-relations should also be introduced (connections between similar teaching matter in different grades).

6) Content that needs to be corrected or eliminated

The current curriculum is overloaded with encyclopaedic information; therefore teachers should be told which content and materials they may reduce. Furthermore, certain textbooks and teaching guides contain incorrect information. Such errors should be clearly noted, with an indication whether or not they should be corrected or eliminated. This determinant also indicates if the lesson content or instructional method would be inappropriate for the pupils' age group.

This determinant is applicable only during the transitional period until a new generation of textbooks, written in accordance with the CNES, is introduced.

New textbooks should not contain incorrect, inappropriate and extraneous information.

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7) New professional terminology introduced to a topic

This determinant deals with the new terminology that pupils encounter for the first time while working on a specific topic. One teaching topic may contain up to eight new terms.

Some new terms and key concepts may overlap, since new terms can be derived from the key concept, and some terms can extend or elaborate on the key concept. In order to ensure the pupils will not be overburdened, teachers should not introduce new terms to mandatory teaching topics that are not included on the list of recommended terms.

8) Numeric data that the pupil needs to memorize

This determinant is also aimed at unburdening the pupil. Pupils are often currently required to memorize encyclopaedic numeric data. Therefore, as one of the measures aimed at unburdening pupils, each CNES teaching topic expressly indicates the numeric data pupils are required to memorize.

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Some teaching topics do not require any numeric data to be memorized. While working on a lesson the teacher may use additional numeric data for illustrative purposes, but he/she should not require pupils to memorize them.

9) Educational achievements

This is a very important determinant as it contains objectives related to the teaching topic. It covers the basic knowledge, skills and competencies that pupils must acquire. These factors will be assessed within the framework of topical educational achievements. By organizing instruction in such a way that it respects the pupil's needs and preferences, this encourages his/her active role, and allows the student the possibility of influencing the content, the methods of learning and the learning pace. In this way, the pupil becomes unburdened and gains a sense of responsibility for his/her own education. This determinant sets the lowest required competency level for pupils. The educational standard is set according to the assessment of the pupils' achievements and the work of teachers and schools. In this way, this determinant ensures a teaching framework that will meet the expected educational objectives.

10) Newly added content

This determinant relates to important content that has not been included in the teaching process to date, but has become particularly important with respect to the educational needs of young people and modern scientific and technological developments.

11) Optional content for gifted pupils

Within the framework of mandatory teaching topics, optional content may be proposed for gifted pupils and for those showing more interest in the topics within a specific subject. In textbooks such content is marked "for the curious," or "for those who want to learn more." This type of content can be used in workshops, for independent study, for pupil projects, and for class presentations prepared by pupils or groups of pupils. The pupils themselves may propose content that they are interested in. This type of content is presented in the CNES in the form of advice to teachers, and also as a guideline for writing textbooks. Optional content may be expanded if teachers and pupils so desire, but it is not graded. However, its adoption and application will be carefully monitored. Pupils that stand out by using the optional content should be encouraged, praised and rewarded.

12) Proposals for working with pupils with special educational needs

Each teaching topic includes suggestions for working with pupils with special educational needs or with developmental difficulties.

These pupils, included in regular classes with other pupils, are a diverse group consisting of children with motor or sensory impairments, reduced cognitive abilities and behavioural problems.

The models used in the developed European countries should be applied here. For example, in England, children with special educational needs are included in regular classes. However, specially trained teachers work with them individually based on their abilities in specific parts of the educational process.

The implementation of differentiated teaching for pupils with reduced cognitive abilities is also taken into consideration. Many students who cannot successfully master specific sections of the curriculum, especially those sections that require abstract thinking, require a differentiated approach. Special education teachers, in cooperation with relevant subject boards, prepare this component for all teaching subjects. It should be considered as an example and guide to teachers in their daily work with pupils with special educational needs.

13) Socialization and educational objectives and content

A school's mission is not only to provide and develop knowledge, skills and abilities, but also to provide values, opinions and habits leading to overall personal development. School not only provides learning and teaching objectives, but also implements general educational objectives.

The educational objectives of school are:

- Promotion of general values;
- Development of personal responsibility for one's health;
- Development of self-respect and the respect of others;
- Respect for life;
- Promotion of tolerance and respect for diversity;
- Promotion of gender equality;
- Promotion of the value of work;
- Development of an entrepreneurial spirit;
- Development of the ability for teamwork;
- Promotion of respect for the family;
- Promotion of love and pride in one's native country and homeland;
- Preservation and promotion of cultural heritage as a part of one's national and cultural identity;
- Respect for the spiritual values of different cultures and civilizations;
- Learning about one's own religion as well as other religions and their differences as part of the

spiritual heritage of the modern world,
- Development of ecological awareness;
- Development of the ability to form opinions, think, observe and act independently;
- Development of the conscious appreciation of one's own opinion and the need to respect the opinions of others;
- Promotion of the perception of what is beautiful and the spiritual dimension of existence;
- Development of the perception of personal and social responsibility;
- Development of solidarity with the weak and needy;
- Development of the abilities and gifts of every person in accordance with his/her nature;
- Development of the ability for social engagement, and for direct and responsible participation in a democratic society.

The idea is that appropriate socialization and educational content should be incorporated into the CNES teaching topics in all subjects. This content need not be included in every teaching topic, but only where such content is justified and purposeful. A special working group, in cooperation with subject committees, has prepared proposals for the socialization content. Proposals related to the socialization and educational content have been included in all teaching subjects: social sciences, humanities, natural sciences, mathematics, technical sciences, art and health and physical education. This pragmatic determinant also gave rise to certain misunderstandings. A comment critical of this approach states: "There is no legitimacy in prescribing that the school should have a general education function, and especially not upon which values it should be based...." Furthermore, it is stated: "The complexity of curricula which precisely define inter-relationships, time, procedures, relations, the role of parents and numerous other issues can best be observed in the issue of the general education function of the school."

In her reply to this criticism, an experienced teacher and member of the CNES board wrote: "For decades, our teachers, while waiting for 'curriculum construction,' have been educating the Croatian youth daily, and with courageous dedication, love, conscience, morality, knowledge and creativity."

Examples of educational objectives

In regard to the teaching topic "Water in our country" (Science - 2nd grade), the objectives are:
- To develop ecological awareness;
- To promote appreciation of nature and natural beauty;
- To promote the preservation and protection of water, i.e., saving water resources and protecting water from pollution;
- To develop artistic inclinations inspired by water, i.e. listening to water (the sound of waves and rain). To foster artistic expression of the experience of water by taking photographs of water (streams, rivers, sea, rain).

An appropriate activity is to celebrate *World Water Day* on March 22.

CNES supports the development of scholastic pluralism

Scholastic pluralism regarding schools' founders, teaching content and teaching methods is guaranteed and has been implemented in Croatia.

Any school can be pluralistic in the sense that it can independently develop different methods for effectively achieving educational objectives, thus providing all pupils with an opportunity to develop their abilities and interests. In accordance with global trends, teachers have more freedom in selecting teaching methods, and this also represents a step toward the development of educational

pluralism. The government must establish minimum educational standards, since schools and their founders must guarantee a set level of educational quality for pupils.

Alternative schools may work according to their own approved curricula by using alternative teaching methods.

CNES supports the possibility of effectively teaching all pupils

Within its framework, the CNES ensures that the needs of underachieving or overachieving pupils or groups of pupils are satisfied. The planned content and instructional approaches are such that all pupils may directly participate in the teaching process. Teachers face a wide range of special educational needs of the pupils, especially regarding students with learning difficulties. Therefore, specific approaches that will contribute to their successful inclusion and participation in the teaching process are required. Realistic and achievable objectives should be set and an environment created in which all pupils feel safe, respected, important and useful.

Illustrative examples in class

In order to improve the teaching process, the CNES teaching topics include what are known as illustrative examples, which vividly present the content of the teaching unit to the pupil. Illustrative examples are important for a better understanding of the teaching content and significantly contribute to its long-term memorization.

The selection and development of an appropriate illustrative example may depend on the actual situation, i.e., the pupils' previous knowledge, observations of pupils during the teaching process, and characteristics of the social environment and the available resources.

The general framework and focus of illustrative examples will include the following aspects:

- The investigative aspect, in which pupils question the nature of things, covering both general and specific investigation;
- The problem solving aspect, in which pupils try to find answers to practical problems, requires the application of knowledge in new situations;
- The ability to make decisions.

Each of these aspects represents a possible starting point for entering into the field of investigative learning.

Specific methods for encouraging pupils to investigate, develop and use ideas can be successfully modelled by means of illustrative examples.

Class focus in lower grades of primary school

In the first four grades of primary school the emphasis of the teaching process should be on:

- Basic literacy (reading comprehension, written and oral expression),
- Basic mathematical knowledge (principal mathematical operations); and
- General education.

This orientation is clearly stressed by the EU member states. In England, for example, the emphasis is placed on literacy and math.

For the children in this age group, these two areas are the basis for the external assessment of their knowledge.

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VII. The National Curriculum and the CNES

The word curriculum itself (from Latin for curriculum) refers all participants in the educational process to:

- *What* is learned and *why*,
- *How* it is learned,
- *When* it is learned, and
- *Where* it is learned.

The curriculum also includes the educational needs of the school and the community as well as an assessment of the educational results.

Recent global research has shown that both curriculum experts and school teachers have continuously overestimated pupils' abilities, and have been setting unrealistically high goals for them. These unrealistically high demands can discourage pupils and jeopardize teaching objectives. Generally, the National Educational Standard and the National Curriculum partly overlap, but are also partly complementary (*Development of National Educational Standard*, Bundesministerium für Bildung und Forschung, Berlin, 2004).

It should be emphasized that the notion of a significant overlap of the National Educational Standard with the National Curriculum does not mean a reduced curriculum, as it might appear at first glance. In fact, due to these ties, the CNES serves as a basis for drafting the National Curriculum and overlaps with it by as much as 70 to 80 percent. Consequently, the National Curriculum will be derived from the CNES.

The role of the CNES in drafting the National Curriculum

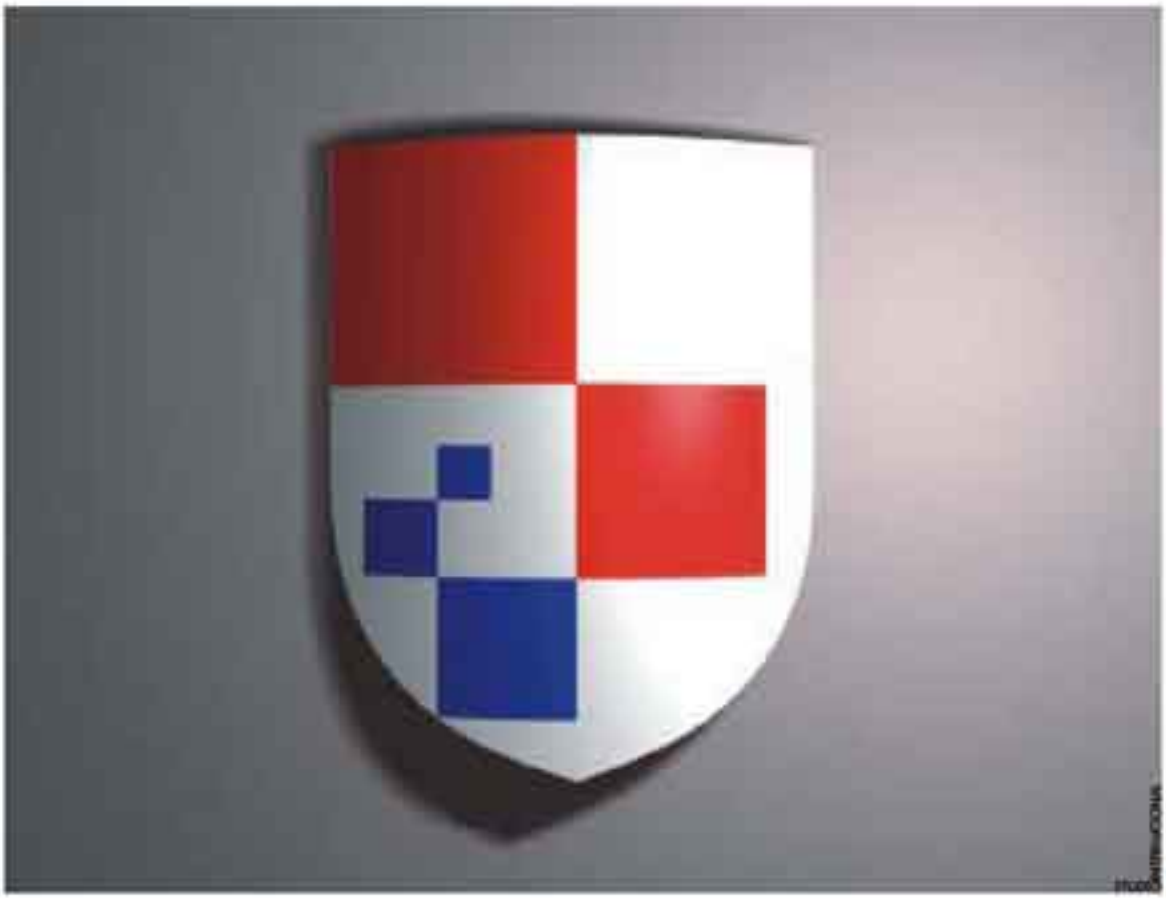
According to studies conducted in the European Union countries, the National Educational Standard can be of significant assistance in the preparation of a high-quality National Curriculum.

For example, the CNES:

- *Underlines the specific qualities of educational subjects*. The CNES relates to the specific teaching content and clearly describes the basic principles of the subject;
- *Focuses on the essential aspects* (core principles) of every teaching topic. By doing so, it avoids the comprehensive approach of the present traditional curricula (both in Croatia and abroad). In this case, the burden on pupils was not sufficiently defined. In this sense, the CNES serves as a guideline for teachers;
- *Sets minimum standards*, thus giving the teacher the freedom to shape and supplement the core principles without overburdening pupils with unimportant information;
- *Underlines the importance of comprehensive* (cumulative) *knowledge*. This relates to systematic integrated learning that unites the knowledge of a specific lesson that the pupil has acquired during his years of schooling. The principal focus is not to acquire information that will later be forgotten, but to develop general skills in fundamental fields that can be used and referenced over a long period of time. This means that the CNES leans towards a comprehensive approach. In this case, the teaching content and the instruction are inter-connected, systematically interlocked, and are used repeatedly in order for the pupil to memorize and use them on a long-term basis. We start with the knowledge that the learning process is divided into individual loosely connected segments. This is one of the major problems of the current teaching process;
- *Sets minimum requirements* for all pupils. At the same time, the CNES may also set additional, higher objectives for elective content intended for gifted and more interested pupils;
- *Contains different elements* by which competency levels can be divided into various levels of complexity, including above and below the minimum standard. For class quality to develop as a whole, it is essential that gifted children be presented with challenges above and beyond the minimal criteria;
- *Emphasizes the need for comprehension*. The National Educational Standard is formulated in a clear, concise and comprehensible way. In order for the CNES to lead to improvement over the traditional curriculum, the CNES must be clearer and easier to understand;
- *Underlines the problem of feasibility*. Pupils need to be capable of satisfying the minimal criteria of the CNES through moderate effort on their part. The CNES presents realistic objectives which can be accomplished by the current material and personnel.

Deriving the National Curriculum from the CNES

After adopting the CNES, the Minister will appoint a National Council for the Curriculum by drawing staff from the CNES coordination bodies and committees, as well as other experts. Also, the Minister will appoint an International Advisory Board, including renowned foreign experts. Subject committees and coordination bodies of the CNES will continue their work as the Subject Committee for the National Curriculum. The National Council will synchronize the work of the subject committees, which will work on deriving the National Curriculum from the CNES. The majority of curriculum content has already been addressed in the subject topics of the CNES. The subject committees will also use national curricula of European Union member states (particularly curricula from Slovenia, England, Finland, Germany and Sweden which have been partly translated into Croatian) by incorporating the experiences that are applicable to our circumstances. The subject



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topics of the CNES are revised so that its sections already compose the building blocks of the curriculum, such as:
- Educational content;
- Key concepts;
- Decreasing subject material and adapting it to the age of the pupils;
- New professional concepts;
- Numeric data that the pupil needs to memorize;
- Required prior basic knowledge;
- Proposed teaching methods;
- Interdisciplinary content in various subjects;
- Expected learning and teaching results;
- Minimal criteria that all pupils must meet (minimal standards of knowledge, abilities and skills);
- Optional content for gifted children and interested children;
- Proposals for working with children with special educational needs;
- General educational goals related to the subject.

Comparison of the CNES with the Slovenian curriculum

In comparison with the Slovenian curriculum, which has been used as a reference document, the following still remains to be precisely defined:
- Preparatory objectives and tasks;
- Proposed teaching methods;
- Proposals for the use of computers in class;

- Proposals for evaluating educational accomplishments, so that good quality knowledge stands behind good grades.

Unlike the Slovenian national curriculum, the CNES leaves the teacher with greater freedom to determine the number of hours to be spent on each individual topic and in selecting the illustrative examples and elective content.
The CNES is, in fact, directed at a local and individual curriculum.

The additional guidelines of the CNES enable a broader framework than the Slovenian national curriculum allows for. For example:
- Comprehensive knowledge (thoroughness of attained and new knowledge);
- Greater selection of comparative illustrative examples, thereby providing more room for teacher creativity;
- Proposal for optional content for working with gifted children within the framework of the mandatory and optional topics;
- Orientation for working with pupils with special educational needs;
- Proposal for general education objectives related to individual topics in all subjects.

Work plan for the curriculum

In relation to the general strategy framework of the traditional curriculum, the development of the Croatian National Curriculum will be significantly easier and faster, as the highly developed Croatian National Educational Standard precedes it.

The public debate and evaluation of the National Curriculum will be similar to that of the CNES. As such, the expert county-based councils and teachers will play a valuable role. For the curriculum to be developed, continuously monitored, evaluated and improved, the necessary sources as well as cooperation with various participants and partners in the educational process must be ensured. In that way, the National Curriculum will be a dynamic structure, which will evolve and provide answers to the changing development challenges and demands of the economy and society.

The National Primary School Curriculum is scheduled to be drafted, based upon the CNES, by the end of the 2005/2006 school year.

Discussions on the Curriculum by Expert County-Based Councils

Discussions on the CNES, which to date have been held in the expert county-based councils, have pointed out the basic characteristics of the curriculum derived from the CNES. As such, the subject-based curricula are already under careful consideration.

Expert county-based councils are planned to hold discussions and workshops on the drafting and implementation of subject-based curricula in early 2006, as a continuation of the earlier discussions and workshops concerning the CNES. During the discussions, coordination meetings are planned at the school, county and regional levels, particularly concerning the local curricula and subjects in which regional specialties such as biology, geography, and history can be included.

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VIII. Monitoring and Evaluating the Quality of Education - a Necessary Condition for Achieving the Goals of the CNES

Monitoring and evaluation - clear indicators of the quality of education

All participants in the educational process are working to improve the quality and success of the schools. For that reason, it is especially important to have a capable teaching staff, a useful and achievable curriculum, an educational process directed towards pupils and an objective evaluation of the pupils' achievements. A clear evaluation process in the educational system is the only way to gauge student progress. The current internal or school-based evaluation is subjective, due mainly to the absence of national evaluation standards for learning and achievement. The evaluation rules are determined by Regulations (Regulations on Monitoring Methods and Pupil Evaluation in Primary and Secondary Schools, Official Gazette 92/95). The evaluation scale ranges from 1 to 5. Methods of evaluating knowledge and skills are oral and written exams. The evaluation instruments are compiled by the teachers or are found in manuals prepared by various authors. External evaluation of pupil achievements aimed at monitoring and evaluating the quality of the school system does not exist, nor does external examination of pupils at the end of a grade level. Final exams at the conclusion of a grade level are held only at secondary school (secondary schools, trade and art schools). Evaluation of knowledge is done internally by the school organization, so evaluations differ from school to school. Such reviews are formed by the same teachers that teach and conduct the internal evaluations during the school year. The results of these exams do not allow for the comparison of educational quality among schools, specifically at a national level.

For this reason, it is important to create a new national system of internal and external evaluation. Based on its creation, we should begin training teachers for the new approach to educational evaluation of pupil achievement. This is important for improving learning and for establishing national education standards, as well as for monitoring and evaluating the quality of the school system and individual parts of the system.

Evaluation in developed countries at a school and national level

In developed countries, the educational evaluation of pupil achievement is supported by an evaluation conducted periodically (every 2-3 years) at a national level in order to monitor the achievement of national educational standards. In that way, the Ministry gains insight into pupil achievement, specifically regarding the efficiency of school evaluation. National evaluation is carried out at individual levels of education (which would correspond to our evaluation after the fourth and eighth grades of primary school and at the second year of secondary school). This review is conducted based on small representative pupil samples to gauge the specific and limited development of achieved skills and abilities (in the area of the Croatian language, foreign languages, mathematics and natural sciences), in order to analyze the influence of individual variables on the success of pupils. National evaluation, such as the final graduation exam, and specifically the external evaluation of pupils, is carried out in standardized conditions, so that all pupils write the same tests at the same time throughout the country. This testing has several results:

- The selection of pupils for enrolment in higher education;
- A certificate is presented following the evaluation process as evidence of the completion of an important level of education.

Indicators of quality

Monitoring and evaluation of the quality of the school system is a complicated process that includes the regular compilation of information about educational changes, the comparison of this information with accessible educational indicators (indicators and standards), the assessment of the condition and the resulting steps taken for the systematic improvement of the school system. The basis of the European Report on the Quality of School Education uses four groups of indicators with a total of 16 indicators for evaluating the school system.

Indicators of pupil achievement

1. Mathematics
2. Native language
3. Natural Sciences
4. Information and communication sciences
5. Foreign languages
6. Learn to learn
7. Civic training

Indicators of success and transition

8. Indicator of transition to a higher grade
9. Indicator of completion of secondary school
10. Participation in tertiary education

Indicators of monitoring education

11. Managing school education
12. Parent participation

Indicator of sources and structure

13. Teacher education and training
14. Number of children in nursery school
15. Number of pupils in relation to the number of computers
16. Cost of education per pupil

Parts of the evaluation systems (school evaluation, national evaluation, national testing) are effective only if they operate completely and are mutually complementary. The implementation of the entire system of evaluation in training and education implies:

- Establishing a school evaluation with a uniform approach and methodology (standards, expert material);
- Implementation of national evaluation and national testing; and
- Monitoring and evaluating the quality of the school system on the basis of indicators (European Indicators).

The objective of the CNES is to improve the quality of education in Croatian primary schools. Therefore, it is important that, during the implementation of the CNES, an adequate system of monitoring and evaluation of pupil achievement develops into normal school practice. Namely, the CNES becomes the basis for the development of the entire evaluation system.

External evaluation

External evaluation will be prepared and implemented by the National Centre for External Evaluation for each grade and each subject. The instruments for external evaluation will not be based on the simple reproduction of course content, and as such, teachers will be able to test their own educational results and test their place on the scale of excellence.

The results of external evaluation are the foundation for:

- Informing all educational participants of any imbalance between the success of different schools;
- Monitoring CNES in individual subjects and generating periodic information on pupil success;
- Identification of the influence of individual factors during the teaching process on pupil achievement in order to improve the educational system;
- Encouraging responsibility related to the efficiency of spending financial resources in the school system;
- Improving public knowledge about the consciousness and the importance of education; and
- Encouraging the public to cooperate critically and initiate changes in schooling.

Self-evaluation

Each school will conduct self-evaluations of the results of its work. The schools will use the external evaluation results in the process of self-evaluation.

External evaluation and self-evaluation of educational results will have a significant effect on the objectivity of the overall evaluation. This will decrease the pressure that parents and pupils put on teachers and stimulate pupils to learn more actively. The results of the external evaluation will also display the quality of the teacher and the school, thereby serving as a basis for the implementation of

a rewards system for excellence. School evaluation of pupil achievements should be an integral part of the teaching process, and should not only occur at the end of the process. During evaluations, the teacher and pupil receive information on effective improvements and can immediately take measures to improve learning.

The evaluation of pupil achievements needs to be based on national standards of learning evaluation in accordance with the CNES. Evaluation is determined for the level of the school cycle, grade and subject. Apart from the CNES, it is also necessary to create national standards for evaluation in schools. These standards must contain:

- What the pupils must know and do in order to prove that they have attained the predetermined achievements (knowledge, skills, abilities);
- Which methods and instruments need to be used in order to evaluate individual achievements;
- How the evaluation is conducted; and
- What content is recommended for evaluation.

The standards of school evaluation need to be integrated into all teaching areas.

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IX. Joint Framework for Assessing Progress in Teaching Foreign Languages and Pupil self-evaluation

		A1	A2	B1	B2	C1	C2
UNDERSTANDING	Listening	I can recognise familiar words and very basic phrases concerning myself, my family and immediate concrete surroundings when people speak slowly and clearly.	I can understand phrases and the highest frequency vocabulary related to areas of most immediate personal relevance (e.g. very basic personal and family information, shopping, local area, employment).I can catch the main point in short, clear, simple messages and announcements.	I can understand the main points of clear standard speech on familiar matters regularly encountered in work, school, leisure, etc. I can understand the main point of many radio or TV programmes on current affairs or topics of personal or professional interest when the delivery is relatively slow and clear.	I can understand extended speech and lectures and follow even complex lines of argument provided the topic is reasonably familiar. I can understand most TV news and current affairs programmes. I can understand the majority of films in standard dialect.	I can understand extended speech even when it is not clearly structured and when relationships are only implied and not signalled explicitly. I ca understand television programmes and films without too much effort.	I have no difficulties in understanding any kind of spoken language, whether live or broadcast, even when delivered at fast native speed, provided I have some time to get familiar with the accent.
	Reading	I can understand familiar names, words and very simple sentences, for example on notices and posters or in catalogues.	I can read very short, simple texts. I can find specific, predictable information in simple everyday material such as advertisements, prospectuses, menus and timetables and I can understand short simple personal letters.	I can understand texts that consist mainly of high frequency everyday or job-related language. I can understand the description of events, feelings and wishes in personal letters.	I can read articles and reports with contemporary problems in which the writers adopt particular attitudes or viewpoints. I can understand contemporary literary prose.	I can understand long and complex factual and literary texts, appreciating distinctions of style. I can understand specialised articles and longer technical instructions, even when they do not relate to my field.	I can read with ease virtually all forms of the written language, including abstract, structurally or linguistically complex texts such as manuals, specialised articles and literary works.

		A1	A2	B1	B2	C1	C2
SPEAKING	Spoken Interaction	I can interact in a simple way provided the other person is prepared to repeat or rephrase things at a slower rate of speech and help me formulate what I'm trying to say. I can ask and answer simple questions n areas of immediate need or on very familiar topics.	I can communicate in simple and routine tasks requiring a simple and direct exchange of information on familiar topics and activities. I can handle very short social exchanges, even though I can't usually understand enough to keep the conversation going myself.	I can deal with most situations likely to arise whilst travelling in an area where the language is spoken. I can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life (e.g. family, hobbies, work, travel and current events).	I can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible. I can take an active part in discussion in familiar contexts, accounting for and sustaining my views.	I can express myself fluently and spontaneously without much obvious searching for expressions. I can use language flexibly and effectively for social and professional purposes. I can formulate ideas and opinions with precision and relate my contribution skilfully to those of other speakers.	I can take part effortlessly in any conversation or discussion and have a good familiarity with idiomatic expressions and colloquialisms. I can express myself fluently and convey finer shades of meaning precisely. If I do have a problem I can backtrack and restructure around the difficulty so smoothly that other people are hardly aware of it.
	Spoken Production	I can use simple phrases and sentences to describe where I live and people I know.	I can use a series of phrases and sentences to describe in simple terms my family and other people, living conditions, my educational background and my present or most recent job.	I can connect phrases in a simple way in order to describe experiences and events, my dreams, hopes and ambitions. I can briefly give reasons and explanations for opinions and plans. I can narrate a story or relate the plot of a book or film and describe my reactions.	I can present clear, detailed descriptions on a wide range of subjects related to my field of interest. I can explain a viewpoint on a topical issue giving the advantages and disadvantages of various options.	I can present clear, detailed descriptions of complex subjects integrating sub-themes, developing particular points and rounding off with an appropriate conclusion.	I can present a clear, smoothly flowing description or argument in a style appropriate to the context and with an effective logical structure which helps the recipient to notice and remember significant points.

		A1	A2	B1	B2	C1	C2
WRITING	Writing	I can write a short, simple postcard, for example sending holiday greetings. I can fill in forms with personal details, for example entering my name, nationality and address on a hotel registration form.	I can write short, simple notes and messages relating to matters in areas of immediate need. I can write a very simple personal letter, for example Thanking someone for something.	I can write a simple connected text on topics which are familiar or of personal interest. I can write personal letters describing experiences and impressions.	I can write clear, detailed text on a wide range of subjects related to my interests. .I can write an essay or report, passing on information or giving reasons in support of or against a particular point of view. I can write letters highlighting the personal significance of events and experiences.	I can express myself in clear well-structured text, expressing points of view at some length. I can write about complex subjects in a letter, an essay or a report, underlining what I consider to be the salient issue. I can select style appropriate to the reader in mind.	I can write clear, smoothly flowing text in an appropriate style. I can write complex letters, reports or articles which present a case with an effective logical structure which helps the recipient to notice and remember significant points. I can write summaries and reviews of professional or literary works.

(Source: Council of Europe website:
http://culture2.coe.int/portfolio/inc.asp?L=E&M=$/208-1-0-1/main_pages/../documents_intro/common_framework.html)

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X. Development and Implementation of the CNES

Implementation of the CNES and the curriculum in the 2006/2007 school year

Following the experimental implementation of the CNES in 5 percent of schools in the 2005/2006 school year, and following the introduction of the legislative framework, the implementation of the CNES in all primary schools is planned for the 2006/2007 school year.

A pragmatic approach to the National Curriculum makes a quick and effective solution possible

In the early stages of the realization of this project, certain experts expressed their opinion of the need for a multi-year theoretical study prior to drafting the National Curriculum. This would imply that over the next four to five years the implementation of practical measures for improving the quality of education in schools could not begin, and only theoretical studies would be conducted for the future drafting of the National Curriculum.

Contrary to this, the pragmatic approach to drafting the CNES, which relies strongly on the practical class experience of teachers, has provided a framework that, in consultation with the existing standards and curricula in European Union member states (i.e., from Slovenia, England and Sweden), allows for the National Curriculum to be attained more quickly and successfully. This approach is based on the stance that additional years of developing theoretical constructions and the continued postponement of the implementation of practical improvements in schools are not required, and that changes need to be implemented pragmatically and without delay, using domestic and foreign experience.

The drafting of the CNES is a key step in that direction.

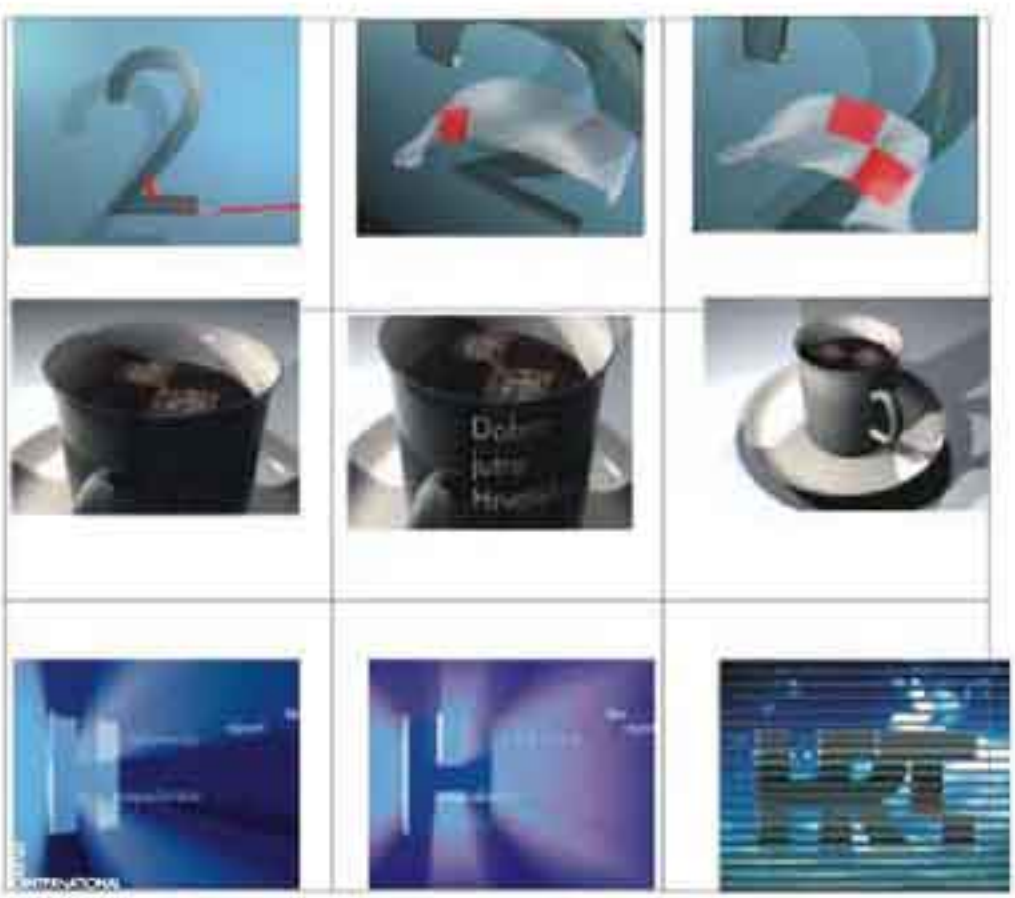
XI. We Have a Framework to Systematically Improve Education

Finally, we need to emphasize that some still believe the general guidelines for education should be developed for several more years, and the implementation of concrete measures in schools should be put off for a later time. That is why it is important to emphasize once again, as has been explained in this Guide, that there are clear and definite arguments against postponing concrete improvements in quality in primary schools:

- *We know what kind of schools we want!*
- *We have clear education objectives!*
- *We have the CNES!*
- *Through the CNES, we unburden the pupil and allow for a more creative education and a greater capacity for problem solving and enterprise!*

In order to preserve our national identity, it is of the utmost importance that we draft the Croatian National Educational Standard before Croatia joins the European Union!

The implementation of changes in education is a constant and dynamic process. Such an approach gives us the opportunity to make continuous constructive changes and improvements, placing the pupil in the center of our focus, but without excessively radical and stressful measures. The CNES opens the process of improving the quality of education, without resorting to the usual all-encompassing changes "from above," and makes room for the initiative and creativity of practicing teachers and a broader circle of scientists and experts in the field of individual subjects, as well as their influence on the development of the educational system.



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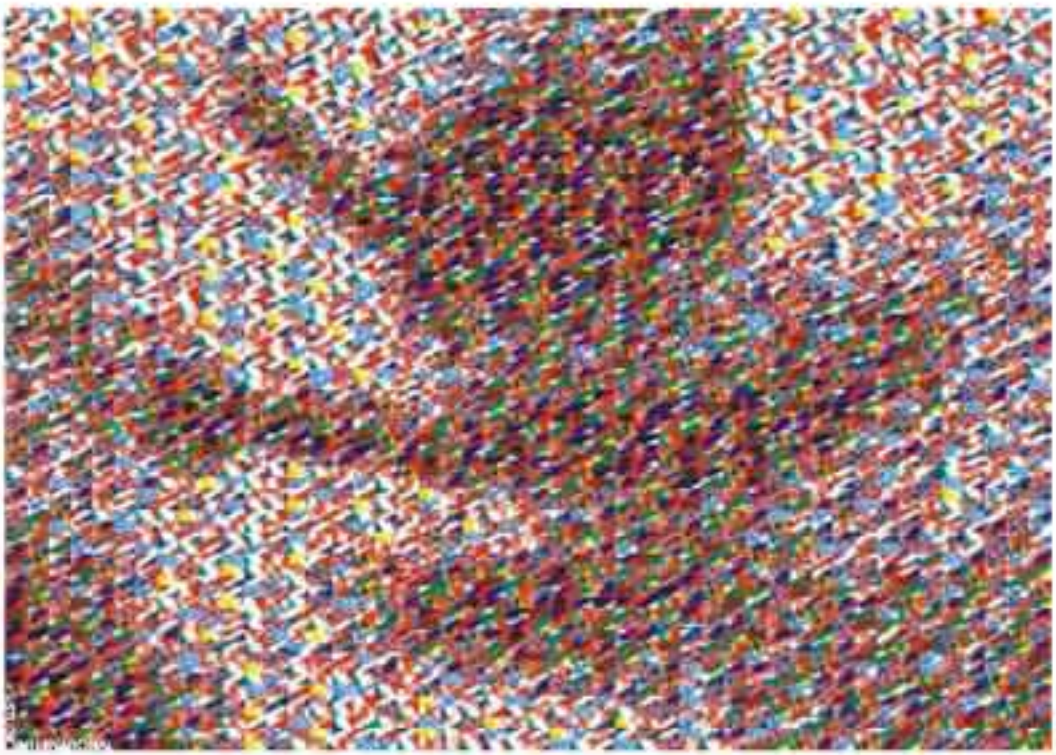

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Education Sector Development Plan

"This presentation emphasizes that the present document is still in the developmental phase and is open to a continuous process of improving the system through constant dialogue of all involved and interested parties. The plan does not represent a reform of the educational system, but rather an improvement of the existing system. It was emphasized through the discussion that members of the Council support the work of the Ministry of Science, Education and Sports in the implementation of changes to the educational system of Croatia at all levels, which is in line with the "55 Recommendations to Increase the Competitiveness of Croatia." An emphasis was put on the objective of the plan, which is to improve (both quantitatively and qualitatively) the educational structure of the Croatian population, an achievement that will lead to the increasing competitiveness of individuals in the labour market, thus increasing the competitiveness of Croatian society as a whole.

These changes in the process of education need to be accompanied by increased financial resources, and the adaptations should stem from a good and active dialogue between all key participants, as evidenced in this discussion. The Council members have in particular emphasized that due to the speed at which globalization is proceeding, and due to Croatia's current position on the list of global competitiveness, a move forward in terms of quality of education in Croatia is required, which means that we need to take these planned changes and make them a reality as soon as possible."

Excerpt from the Minutes of the Session
of The National Competitiveness Council
held 25 April 2005 on the presentation
of "Education Sector Development Plan 2005-2010"
of the Ministry of Science, Education and Sports

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Participants in Drafting the CNES

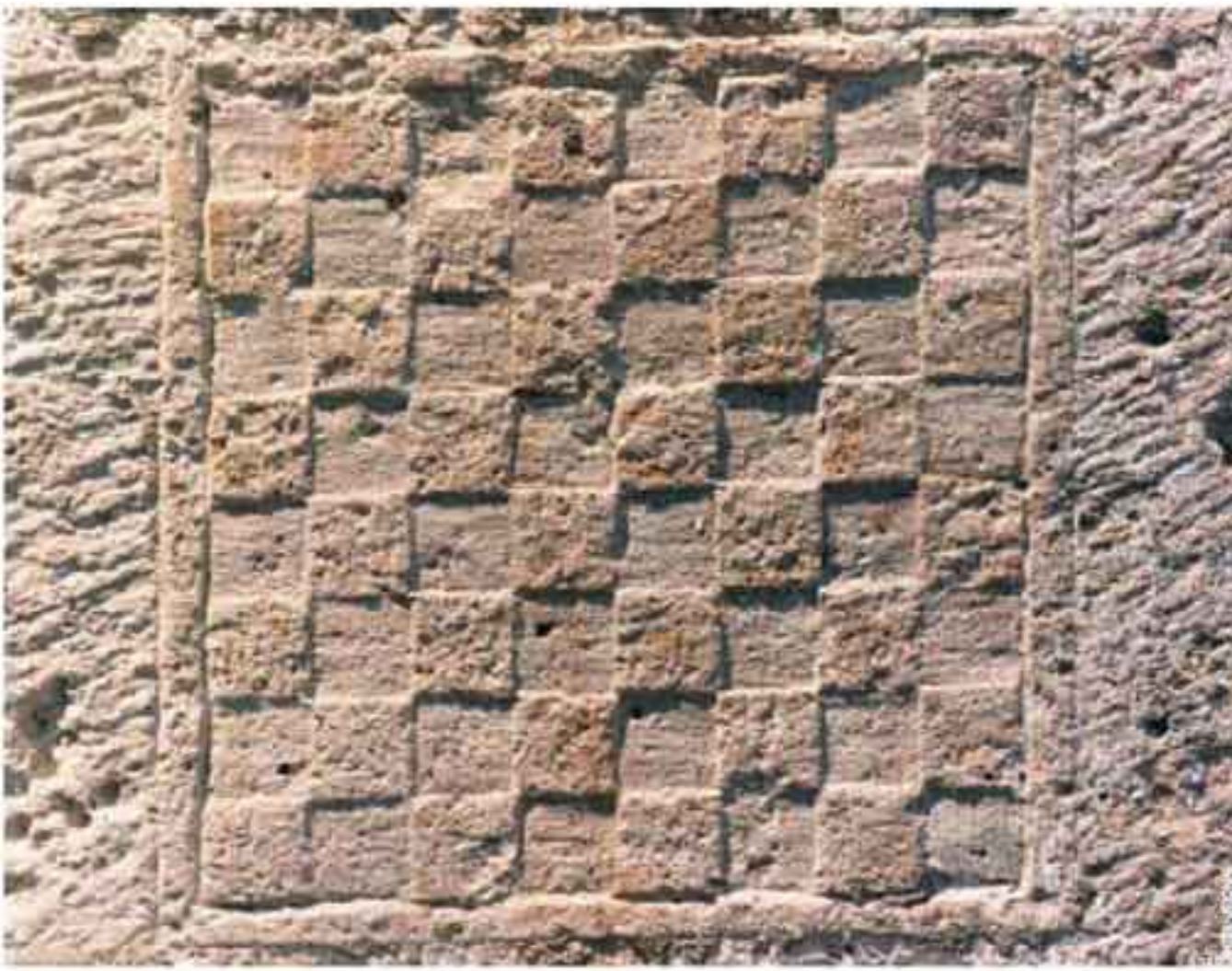
Coordination Board for drafting the CNES:

Primorac Dragan, M.D., Ph.D., Associate Professor, Minister, Ministry of Science, Education and Sports, Zagreb
Paar Vladimir, Academician, Croatian Academy of Arts and Sciences, Zagreb
Šetić Nevio, Ph.D., State Secretary, Ministry of Science, Education and Sports, Zagreb
Marković Nenad, Professor, Assistant Minister, Ministry of Science, Education and Sports, Zagreb
Milčić Tina, B.A., Administrative Secretary to the Board for Drafting the CNES, Zagreb

Subject coordination groups and committees:

Agičić Damir, Ph.D., B.A., Faculty of Philosophy, Zagreb
Ambruš Kiš Ružica, Professor, Institute for Education, Zagreb
Andraka Marija, B.A., Teacher Education Academy, Zagreb
Arambašić Branka, B.Ed., Sokolovac Primary School, Sokolovac
Arefijev Josip, B.A., S. Kolar Primary School, Hercegovac
Babić Magdalena, B.Sc., Vrbani Primary School, Zagreb
Babić Stjepan, Academician, Croatian Academy of Arts and Sciences, Zagreb
Bakran Lesar Tanja, B.A., Tin Ujević Primary School, Zagreb
Baličević Marija, B.A., Franjo Krežma Primary School, Osijek
Barović Zdenka, B.Ed., Marjan Primary School, Split
Bartičević Jadranka, B.A., 'Juraj Bonači' Center, Split
Bartolić Gordan, B.A., II. Čakovec Primary School, Čakovec
Bastić Marijana, B.A., Rudeš Primary School, Zagreb
Beg Nikola, B.A., Ban J. Jelačić Secondary School, Zaprešić
Bilić Anđela, B.A., Ludbreg Primary School, Ludbreg
Bilić Štefan Milica, B.A., I. Dugave Primary School, Zagreb,
Bilić-Prcić Branka, B.Ed., A. B. Šimić Primary School, Zagreb
Blaznik Vesna, B.A., J. J. Strossmayer Primary School, Zagreb
Blažinović-Kljajo Ankica, B.A., Brestje Primary School, Sesvete
Bobaš Milka, B.Ed., I. Merz Primary School, Zagreb
Bobinski Vesna, B.Ed., S. S. Kranjčević Primary School, Zagreb
Bošnjak Vladimira, B.A., Stenjevec Primary School, Zagreb
Brana Josip, Ph.D., Associate Professor, Faculty of Philosophy, Osijek
Bratanić Marija, Ph.D., Professor, Teacher Education Academy, Zagreb
Bratić Slavko, B.A., Ivan Perkovac Primary School, Šenkovec
Brezec Sandra, B.Ed., Bistra Primary School, Bistranska Poljanica
Bučar Matija, B.A., Teacher Education Academy, Petrinja
Budin Leo, Academic, Croatian Academy of Arts and Sciences, Zagreb
Bukovac Ilana, B.A., Open University, Samobor
Bule Ruža, B.A., Malešnica Primary School, Zagreb

Bulić-Jakuš Floriana, Ph.D., Professor, Faculty of Medicine, Zagreb
Buljan Flander Gordana, Ph.D., Polyclinic for the Protection of Children of the City of Zagreb
Bunjački Ladislava, B.Ed., S. S. Kranjčević Primary School, Zagreb
Burjan Josip, B.A., Croatian Association of Music and Dance Teachers, Zagreb
Butorac Željka, B.A., M. Držić Primary School, Zagreb
Cambi Nenad, Academician, Croatian Academy of Arts and Sciences, Zagreb
Caput-Jogunica Romana, Ph.D., Associate Professor, Faculty of Agronomy, Zagreb
Ceglec Mirko, B.A., Plokite Primary School, Split
Crkvenčić Ankica, B.A., Teacher Education Academy, Zagreb
Cvitaš Tomislav, Ph.D., Professor, Department of Chemistry, Faculty of Science, Zagreb
Čatić Igor, Ph.D., Professor, Faculty of Mechanical Engineering and Shipbuilding, Zagreb
Čolović-Rodik Željka, B.A., II. Varaždin Primary School, Varaždin
Čović Damir, B.A., Turnić Primary School, Rijeka
Črpić Gordan, M.Sc., Center for the Promotion of Social Studies of the Church, Croatian Bishop's Conference, Zagreb
Čudina Obradović Mira, Ph.D., Professor, Teacher Education Academy, Zagreb
Čukelj Zdenka, B.A., I. Luka Primary School, Sesvete
Čavar Jozo, M.Sc., Mladost Primary School, Zagreb
Damjanović Stjepan, Academician, Croatian Academy of Arts and Science, Zagreb
Devernay Ivana, B.A., Matija Gubec Primary School, Zagreb
Dominik Zdravko, B.A., Ante Starčević Primary School, Zagreb
Dragić Anto, B.A., Economic and Trade School, Čakovec
Drobina Ivan, B.Ed., J. J. Strossmayer Primary School, Đurđenovac
Dukat Anđelka, B.A., Classical Secondary School, Zagreb
Dukić Ivan, B.A., J. J. Strossmayer Primary School, Zagreb
Džapo Jasminka, B.A., Vladimir Nazor Primary School, Zagreb
Dželalija Mile, Ph.D., Professor, Faculty of Science and Socialization Studies, Split
Urić Ivan, B.A., Gradište Primary School, Gradište
Erdelja Krešimir, B.A., Rudeš Primary School, Zagreb
Fabijanić Suzana, M.D., Public Health Institute of Sisak County, Sisak
Findak Vladimir, Ph.D., Professor, Faculty of Kinesiology, Zagreb
Franić Davorka, B.A., XVI. Secondary School, Zagreb
Frey Škrinjar Jasmina, Ph.D., Professor, Faculty of Education-rehabilitation, Zagreb
Fulgosi Hrvoje, Ph.D., Associate Professor, Institute 'Ruđer Bošković', Zagreb
Furnić Anica, B.A., F. K. Frankopan Primary School, Osijek
Furlan Zdravko, B.A., Otok Primary School, Zagreb
Gamulin Stjepan, Academician, Croatian Academy of Arts and Sciences, Zagreb
Glavan Fredi, B.A., R. K. Jeretov Primary School, Opatija
Gospodarić Danica, B.A., Samobor Primary School, Samobor
Grabovac S. Berislava, B.A., Sisters of Mercy Women's General Secondary School, Zagreb
Grgevčić Josip, B.A., Teacher Training School, Čakovec
Grgić Branka, B.A., Rapska Primary School, Zagreb
Gruden Vladimir, Ph.D, Professor, KBC Zagreb, Rebro and Faculty of Medicine, Zagreb
Gusić Ivica, Ph.D., Associate Professor, Department of Mathematics, Faculty of Science, Zagreb
Gusić Jelena, B.A., XV. Secondary School, Zagreb
Gušić Ivan, Academician, Croatian Academy of Arts and Sciences, Zagreb
Hirši Lajla, B.A., Jabukovac Primary School, Zagreb
Horvat Tomislav, B.A., Josip Račić Primary School, Zagreb
Horvat Vatroslav, M.Sc., Teacher Education Academy, Zagreb
Horvatić Snježana, B.A., Bogumil Toni Primary School, Samobor
Hudolin Tamara, B.A., S. S. Kranjčević Primary School, Zagreb
Husanović Pejnović Dragica, M.Sc., Teacher Training School, Gospić
Ivančić Đurđica, M.Sc., CZOO Gornje Prekrižje, Zagreb
Jakopović Željko, B.A., Croatian Institute of Education, Zagreb
Jakovina Tvrtko, Ph.D., Associate Professor, Faculty of Philosophy, Zagreb
Jalušić Anđelka, B.A., Rudeš Primary School, Zagreb
Jambor Ljilјana, B.A., August Cesarec Primary School, Zagreb
Janeš Martina, B.Ed., Stjepan Basariček Primary School, Ivanić Grad
Jardas Jasminka, B.Ed., Pehlin Primary School, Rijeka
Jecić Stjepan, Academician, Croatian Academy of Arts and Sciences, Zagreb
Jelačić Agnes, B.A., Gripe Primary School, Split
Jelaković Božica, B.A., XV. Secondary School, Zagreb
Jelaska Zrinka, Ph.D., Associate Professor, Faculty of Philosophy, Zagreb
Jelić Slavica, B.A., Slava Raškaj Centre for Education, Zagreb
Jerbić Zorc Gorjana, Ph.D., Department of Physics, Faculty of Science, Zagreb
Ježić Mislav, Academician, Croatian Academy of Arts and Sciences, Zagreb
Judaš Nenad, Ph.D., Department of Chemistry, Faculty of Science, Zagreb
Jurko Nela, B.A., Faculty of Philosophy, Zagreb
Kamenar Boris, Academician, Croatian Academy of Arts and Science, Zagreb
Katušić Sonja, B.A., Classical Secondary School, Zagreb
Klaić Mladen, B.A., Brestje Primary School, Sesvete
Klinger Ljilјana, B.A., Ante Starčević Primary School, Zagreb



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Kljaić Ljiljana, B.A., Grigor Vitez Primary School, Zagreb
Knlewald Ines, B.A., A. Harambašić Primary School, Zagreb
Kocijan Đurđa, B.A., Petar Zrinski Primary School, Zagreb
Kolić-Vehovec Svjetlana, Ph.D., Faculty of Philosophy, Rijeka
Konjevoda Silvana, B.A., Primary School Centre, Rijeka
Koren Snježana, B.A., Faculty of Philosophy, Zagreb
Kovač Dugandžić Koraljka, B.A., Šestine Primary School, Zagreb
Kovačić Mara, M.Sc., Goljak Center for Socialization and Education, Zagreb
Kožarić Ivan, Academician, Croatian Academy of Arts and Science, Zagreb
Krsnik Rasol Marijana, Ph.D., Professor, Department of Biology, Faculty of Science, Zagreb
Krstić Lukač Maja, B.A., School of Applied Art and Design, Zagreb
Krznar Vedrana, B.Ed., Maruševac Primary School, Zagreb
Kuhar Vlatka, B.A., VII. Secondary School, Zagreb
Kuliš Marijana, B.A., Nikola Hribar Primary School, Velika Gorica
Kulušić Đurđa, B.A., Croatian Institute of Education, Zagreb
Kuntić Melita, B.A., S.S. Kranjčević Primary School, Zagreb
Kurnik Zdravko, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Kvasina Oliver, B.A., Fran Franković Primary School, Rijeka
Lapaine Miljenko, Ph.D., Professor, Faculty of Geodesy, Zagreb
Latinčić Dubravka, B.A., Dugo Selo Primary School, Dugo Selo
Lenac Zdravko, Ph.D., Professor, Faculty of Philosophy, Rijeka
Leniček Stanislav, B.A., XV. Secondary School, Zagreb
Lepej Dubravko, B.A., Matko Laginja Primary School, Zagreb
Lovrić Anđa, B.A., XI. Secondary School, Zagreb
Lovrić Slađena, B.A., F. K. Frankopan Primary School, Zagreb
Ljubičić Ante, Ph.D., Professor, 'Ruđer Bošković' Institute, Zagreb
Ljubić Zoran, B.A., Spinut Primary School, Split

Madunić Margita, B.A., Žitnjak Primary School, Zagreb
Majetić Luka, M.Sc., Faculty of Philosophy, Rijeka
Maksić Zvonimir, Ph.D., Professor, Institute 'Ruđer Bošković', Zagreb
Maleš Dubravka, Ph.D., Professor, Faculty of Philosophy, Zagreb
Marčec Franjo, B.A., I. Varaždin Primary School, Varaždin
Marđešić Silbe, Academician, Croatian Academy of Arts and Sciences, Zagreb
Marić Marčelo, B.A., Petar Studenac Primary School, Kanfanar
Markotić Ante, Ph.D., Professor, Faculty of Metallurgy, Sisak
Marković Adalbert, B.A., Music Academy, Zagreb
Marković Marinković Mirjana, B.A., A. G. Matoš Primary School, Zagreb
Marović Željko, Ph.D., Associate Professor, Art Academy, University of Split, Split
Martinić-Jerčić Zdravka, B.A., Archbishop's Classical Secondary School, Zagreb
Martinis Olgica, M.Sc., IV. Secondary School, Zagreb
Mataja Željko, B.Sc. Phys., Special advisor to the President of the Republic of Croatia for Sport, Zagreb
Matanović Julijana, Ph.D., Associate Professor, Faculty of Philosophy, Zagreb
Matijević Vrsaljko Ljubica, L.L.B., National Children's Ombudsman, Zagreb
Matković Dubravka, B.A., S. S. Kranjčević Primary School, Zagreb
Matok Dragica, B.A., Vinko Bek Center for Education, Zagreb
Matolek Veselić Gordana, B.A., Luka Primary School, Sesvete
Medvešek Milena, B.A., Trnsko Primary School, Zagreb
Mijan Jelena, B.A., R. Katalinić-Jeretov Primary School, Opatija
Milić Mirjana, B.A., Bijaći Primary School, Kaštel Novi
Milotić Branka, M.Sc., Faculty of Philosophy, Rijeka
Miljković Dubravka, Ph.D., Croatian Studies, Zagreb
Mirošević Ivo, B.A., Zagreb
Mladinić Petar, B.A., V. Secondary School, Zagreb
Moguš Jela, B.A., A. Mihanović Primary School, Osijek
Moguš Milan, Academician, Croatian Academy of Arts and Sciences, Zagreb
Musa Ivica, D.I., M.A., Jesuit Faculty of Philosophy, Zagreb
Nagy Biserka, Ph.D., Professor, Department of Biology, Faculty of Science, Zagreb
Neljak Boris, Ph.D., Associate Professor, Faculty of Kinesiology, Zagreb
Neuhold Gordana, B.A., Vladimir Nazor Primary School, Zagreb
Nevžala Božidar, B.A., Ante Kovačić Primary School, Zagreb
Nikpalj Jurakić Nataša, M.Sc., Croatian Institute of Education, Zagreb
Nimac Elvira, B.A., Ante Starčević Primary School, Zagreb
Ništ Marina, B.A., Croatian Institute of Education, Osijek
Novačić Zlatko, B.A., Kustošija Primary School, Zagreb
Novak Dubravka, B.A., A. G. Matoš Primary School, Zagreb,
Novoselac Ana, B.A., A. G. Matoš Primary School, Zagreb
Opašić Renata, B.Ed., S.S. Kranjčević Primary School, Zagreb
P. Goss Vladimir, Ph.D., Professor, University of Rijeka
Pastuović Nikola, Ph.D., Professor, Teacher Education Academy, Zagreb
Paun Milan, B.A., Susedgrad Primary School, Zagreb
Pavličević-Franić Dunja, Ph.D., Professor, Teacher Education Academy, Zagreb
Pažin Pero, B.A., 'Vinko Bek' Center for Education, Zagreb
Pečarić Josip, Academician, Croatian Academy of Arts and Sciences, Zagreb
Peričić-Fialla Alis, B.Ed., Stanovi Primary School, Zadar
Perišić Mirjana, B.A., D. Kušlan Primary School, Zagreb
Perišić Stipe, B.A., Sports Secondary School, Zagreb
Petravić Ana, Ph.D., Associate Professor, Teacher Education Academy, Zagreb
Petrović Nada, B.A., IV. Secondary School, Zagreb
Pleša Krešimir, M.Sc., Croatian Institute of Education, Zagreb
Popović Stanko, Academician, Croatian Academy of Arts and Sciences, Zagreb
Prelovšek Peroš Sonja, B.A., V. Nazor Primary School, Pazin
Previšić Vlatko, Ph.D., Professor, Faculty of Philosophy, Zagreb
Primc Mirko, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Protulipac Snježana, B.A., Švarč Primary School, Karlovac
Puljak Lucija, M.Sc., Pučišće Primary School, Brač
Purgarić Milivoj, B.Ed., IV. Varaždin Primary School, Varaždin
Pusić Eugen, Academician, Croatian Academy of Arts and Sciences, Zagreb
Rac Marinić Kragić Ela, B.A., V. Secondary School, Zagreb
Radanović Ines, Ph.D., Associate Professor, Department of Biology, Faculty of Science, Zagreb
Radinčić Vesna, B.A., Ferdo Livadić Music School, Samobor
Radovančević Jadranka, B.A., A. Mihanović Primary School, Osijek
Raguž Nevenka, B.A., Žuti Brijeg Primary School, Zagreb
Rakić Vini, M.Sc., Coordinator of the World Bank development plan, Zagreb
Rančić-Kufrin Melita, B.A., Izidor Kršnjavi Primary School, Zagreb
Rasol Ronald, B.A., Faust Vrančić Machinery and Technical School, Zagreb
Raukar Tomislav, Academician, Croatian Academy of Arts and Sciences, Zagreb
Razum Ružica, Ph.D., Associate Professor, Catholic Faculty of Theology, Zagreb
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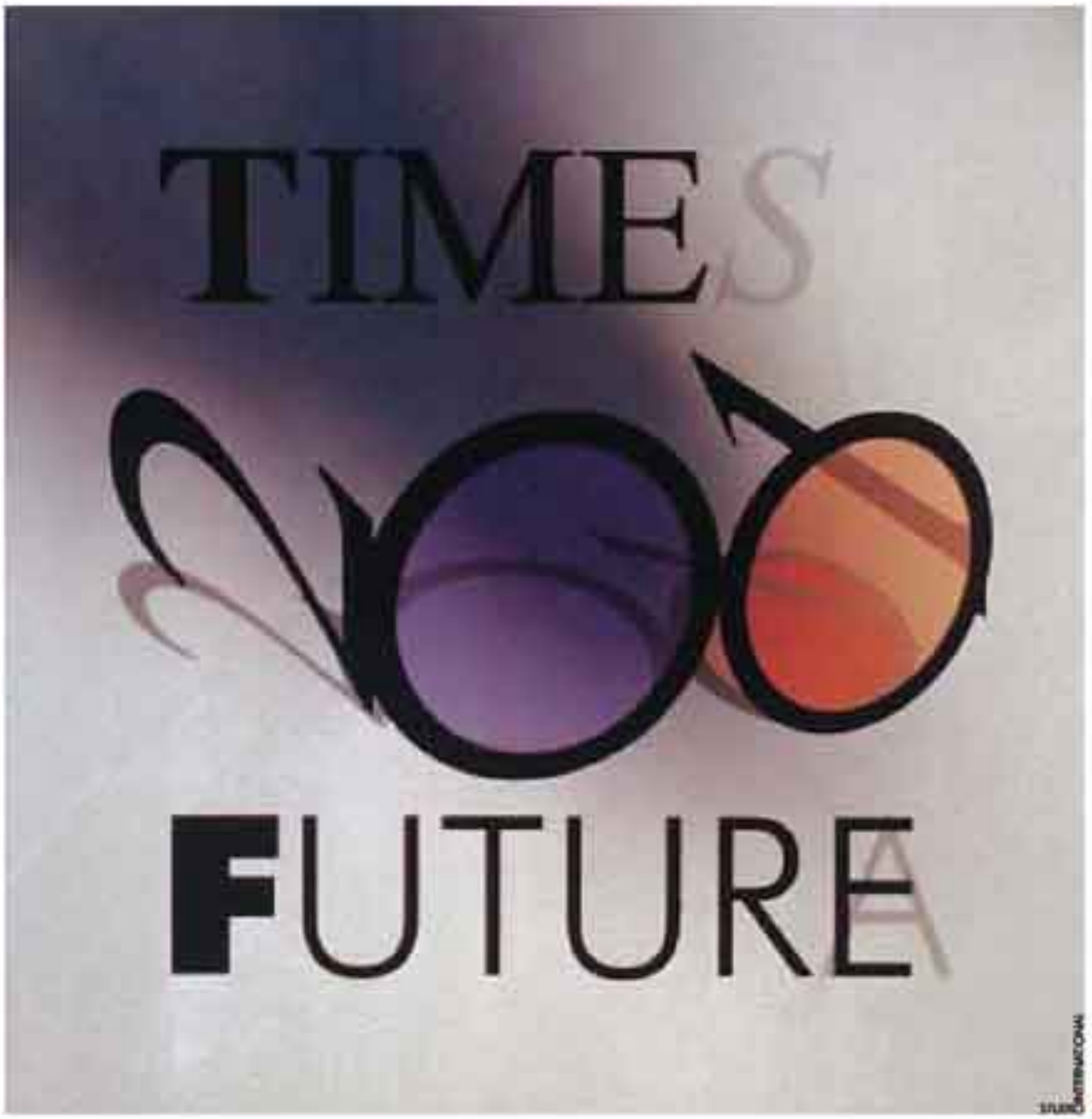

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Rebro and Faculty of Medicine, Zagreb
Rubčić Antun, Ph.D., Professor, Department of Physics, Faculty of Science, Zagreb
Rumora Ksenija, B.A., Franjo Krežma Primary School, Osijek
Ružić Edita, M.Sc., Ministry of Science, Education and Sports, Zagreb
Sabolović Marina, B.A., I. Luka Primary School, Sesvete
Salaj-Krašovec Dijana, B.A., Izidor Kršnjavi Primary School, Zagreb
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Sarapa Nikola, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Selem Petar, Ph.D., Professor, Faculty of Philosophy, Zagreb
Sikirica Milan, Ph.D., Professor, Department of Chemistry, Faculty of Science, Zagreb
Sinožić Danica, B.A., F. Franković Primary School, Rijeka
Sironić Bonefačić Nives, Ph.D., Professor, Faculty of Philosophy, Zagreb
Skenderović-Kelečić Dubravka, B.A., Bukovac Primary School, Zagreb
Stančić Nikša, Academician, Croatian Academy of Arts and Sciences, Zagreb
Stanec Zdenkica, B.A., Goljak Center for Socialization and Education, Zagreb
Stankov Slavomir, Ph.D., Professor, Faculty of Science and Socialization, Split
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Strabić Jadranka, B.A., Rudeš Primary School, Zagreb
Strčić Petar, Academician, Croatian Academy of Arts and Sciences, Zagreb
Strelec-Jugec Blaženka, B.A., August Šenoa Primary School, Zagreb

Sučević Mirjana, B.Ed., Josip Račić Primary School, Zagreb
Šanjek Franjo, Academician, Croatian Academy of Arts and Sciences, Zagreb
Šćukanec Karmen, B.A., Dr. Vinko Žganec Primary School, Zagreb
Škorić Pepa, B.A., Malešnica Primary School, Zagreb
Šore Sandra, B.Ed., Lučac Primary School, Split
Štemberger Anton, B.A., Center for Social Work, Rijeka
Štimac Daniel, B.A., Malešnica Primary School, Zagreb
Štranjgar Snježana, B.A., Secondary School Karlovac, Karlovac
Šubić Dubravka, B.A., Croatian Institute of Education, Zagreb
Šuljić Šime, B.A., Secondary School and Professional School, Pazin
Šutej Miroslav, Academician, Croatian Academy of Arts and Sciences, Zagreb
Tanay Emil - Robert, M.A., Professor, Academy of Fine Arts, Zagreb
Tersoglav Zlatica, B.A., Juraj Habdelić Primary School, Velika Gorica
Težak Dubravka, Ph.D., Professor, Teacher Education Academy, Zagreb
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Tomljanović Antica, B.A., Brestje Primary School, Sesvete
Tonšetić Jasna, B.A., August Šenoa Primary School, Zagreb
Topić Jasenka, Ph.D., Professor, Department of Biology, Faculty of Science, Zagreb
Trstenjak-Planinčić Jasna, B.A., Petar Zrinski Primary School, Zagreb
Turković Vera, Ph.D., Professor, Academy of Fine Arts, Zagreb
Turner Juraj, B.A., Ministry of Science, Education and Sports, Zagreb
Udovičić Božo, Academician, Croatian Academy of Arts and Sciences, Zagreb
Utković Milan, B.A., Bartol Kašić Primary School, Zadar
Vajdić Dubravka, B.A., Nad lipom Primary School, Zagreb
Valjak Marija, B.A., Polyclinic for Hearing and Speech Rehabilitation, Zagreb
Vampula Boris, M.Sc., M. Gubec Primary School, Zagreb
Vančik Hrvoj, Ph.D., Professor, Department of Chemistry, Faculty of Science, Zagreb
Varošanec Sanja, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Veljan Darko, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Vican Dijana, Ph.D., Associate Professor, University of Zadar, Zadar
Visinko Karol, Ph.D., Professor, Faculty of Philosophy, Rijeka
Vladić Stanko, B.A., Braća Seljan Primary School, Karlovac
Vlaho Đurđa, B.A., A. G. Matoš Secondary School, Samobor
Vodvarka Ana, B.A., J. A. Komenski Primary School, Daruvar
Vorkapić Božena, B.A., XVI. Secondary School, Zagreb
Vrbanec Tomislav, B.A., Orehovica Primary School, Orehovica
Vrhovec Yvonne, Ph.D., Professor, Faculty of Philosophy, Zagreb
Vrkljan Petar, B.A., XVIII. Secondary School, Zagreb
Vujnović Vladis, Ph.D., Professor, Department of Geophysics, Faculty of Science, Zagreb
Vukasović Domagoj, B.A., Marin Držić Primary School, Zagreb
Vukasović Šimo, B.A., Hugo Badalić Primary School, Slavonski Brod
Vukelić Alan, B.A., Petrinja Secondary School, Petrinja
Zadražil Lela, B.A., Ivan Gundulić Primary School, Zagreb
Zajec Vlasta, B.A., M. Držić Primary School, Zagreb
Žic Fuchs Milena, Ph.D., Professor, Faculty of Philosophy, Zagreb
Žulj Renata, B.A., J. J. Strossmayer Primary School, Zagreb

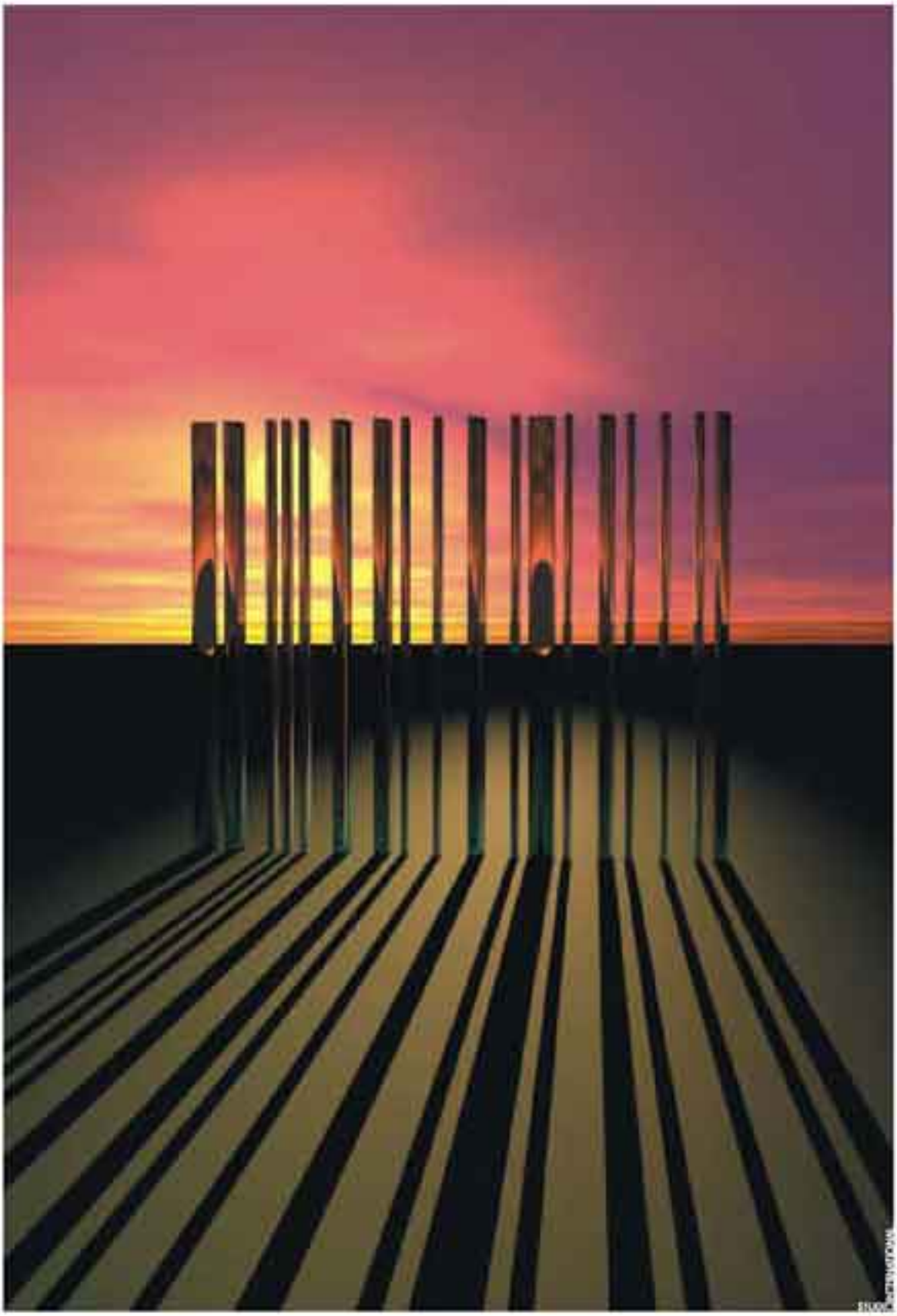
Participants in the Group Evaluating the CNES:

Androlić Darko, Ph.D., Associate Professor, Department of Physics, Faculty of Science, Zagreb
Arambašić Branka, B.Ed., Sokolovac Primary School, Sokolovac
Arežina Jakica, B.A., Jure Kaštelan Primary School, Zagreb
Atanasov Plijek Diana, B.A., Teacher Education Academy, Zagreb
Attias-Melman Gordana, B.A., J. J. Strossmayer Primary School, Zagreb
Babić-Oberman Mira, Ph.D., Professor, Faculty of Education-Rehabilitation, Zagreb
Babin Josip, Ph.D., Associate Professor, Teacher Training School, Split
Bacalja Robert, Ph.D., Professor, University of Zadar, Zadar
Bačić Marcel, Professor, Academy of Fine Arts, Zagreb
Balentović Slavica, B.A., Teacher Training School, Gospić
Basar Ivan, M.Sc., Karlovac
Basletić Marlo, Ph.D., Department of Physics, Faculty of Science, Zagreb
Benčić Darko, B.A., Jabukovac Primary School, Zagreb
Benčić Tea, Ph.D., Associate Professor, Teacher Training School, Petrinja
Bežen Ante, Ph.D., Professor, Teacher Education Academy, Zagreb
Binijevac-Matičić Jelena, B.A., Otok Primary School, Zagreb
Blažeka Đuro, Ph.D., Teacher Training School, Čakovec
Blažević Nevenka, Ph.D., Associate Professor, Faculty of Philosophy, Rijeka
Blaži Draženka, Ph.D., Associate Professor, Faculty of Education-Rehabilitation, Zagreb
Bogavčić Ivan, Ph.D., Associate Professor, Faculty of Philosophy, Zagreb

Bogdanić Spomenka, B.A., Croatian Studies, Zagreb
Boranić Đurđica, B.Ed., Julije Klović Primary School, Zagreb
Boras Damir, Ph.D., Professor, Faculty of Philosophy, Zagreb
Bošković Ivan, B.A., Teacher Training School, Split
Brala Marija, Ph.D., Associate Professor, Faculty of Philosophy, Rijeka
Brant Slobodan, Ph.D., Professor, Department of Physics, Faculty of Science, Zagreb
Brückler Franka Miriam, Ph.D., Department of Mathematics, Faculty of Science, Zagreb
Budak Neven, Ph.D., Professor, Faculty of Philosophy, Zagreb
Budinski Vesna, B.Ed., I. G. Kovačić Primary School, Zagreb
Bukvić Višnja, M.Sc., Don Mihovil Pavlinić Primary School, Metković
Dukić Davor, Ph.D., Professor, Faculty of Philosophy, Zagreb
Duran Mirjana, B.A., Teacher Training School, Osijek
Đođ Ivan, B.A., Donja Dubrava Primary School, Donja Dubrava
Filipčić Anita, Ph.D., Associate Professor, Department of Geography, Faculty of Science, Zagreb
Franjković Petra, B.A., Linigra Primary School, Zagreb
Fürst-Bjeliš Borna, Ph.D., Professor, Department of Geography, Faculty of Science, Zagreb
Glamuzina Martin, Ph.D., Professor, Department of Geography, Faculty of Science, Zagreb
Glasnović Antun, Ph.D., Professor, Faculty of Chemical Engineering and Technology, Zagreb
Goldstain Ivo, Ph.D., Professor, Faculty of Philosophy, Zagreb
Habdija Ivan, Ph.D., Professor, Department of Biology, Faculty of Science, Zagreb

24

Bunjevac Matičić Jelena, Otok Primary School, Zagreb
Busatto Jadranka, B.A., Lučac Primary School, Split
Cirimotić Josip, B.A., Marija Jurić Zagorka Primary School, Zagreb
Crnčić-Brajković Marija, B.A., Teacher Training School, Pula
Čikeš Marino, B.A., Bakar Primary School, Bakar
Čović Damir, B.A., Turnić Primary School, Rijeka
Damić-Bohač Darija, M.Sc., Faculty of Philosophy, Zagreb
Divizić Kata, B.A., Lapad Primary School, Dubrovnik
Dobrota Snježana, B.A., Teacher Training School, Split
Domović Vlatka, Ph.D., Teacher Education Academy, Zagreb
Hadžiomerović Marina, B.A., Medvedgrad Primary School, Zagreb
Häusler Maja, Ph.D., Professor, Faculty of Philosophy, Zagreb
Holenda Karmen, B.A., VI. Varaždin Primary School, Varaždin
Horvat Olga, B.A., Otokar Keršovani Primary School, Zagreb
Horvatić Sanja, B.A., August Šenoa Primary School, Zagreb
Hranjec Stjepan, Ph.D., Professor, Teacher Training School, Čakovec
Hraste Mladen, M.Sc., Teacher Training School, Split



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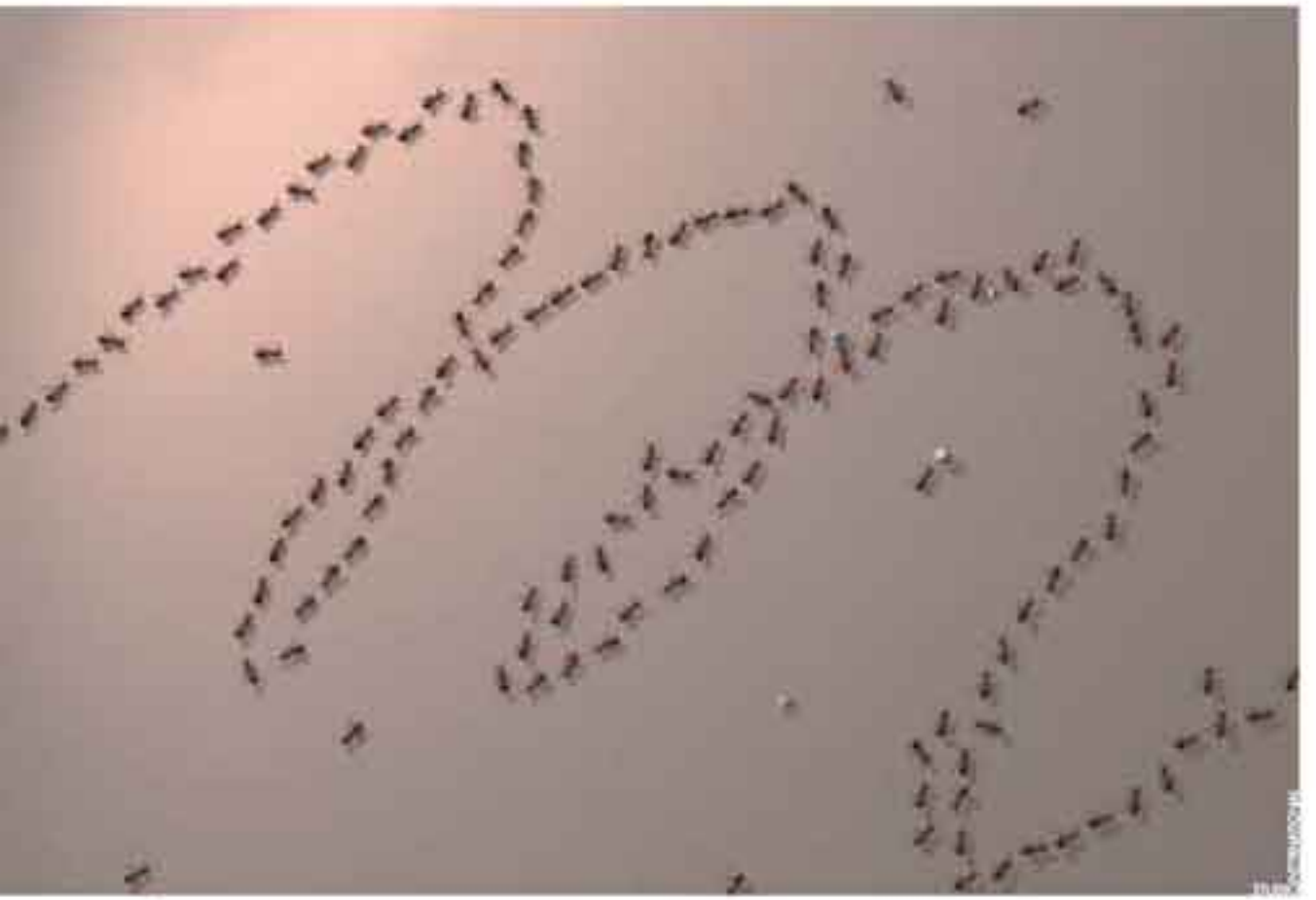
Huzjak Miroslav, B.A., Teacher Education Academy, Zagreb
Igrić Ljiljana, Ph.D., Professor, Faculty of Education-Rehabilitation, Zagreb
Ilić Ljiljana, M.Sc., Teacher Training School, Gospić
Jakopec Vjekoslav, Bogumil Toni Primary School, Samobor
Jaković-Turalija Ines, Ph.D., Associate Professor, Faculty of Education-Rehabilitation, Zagreb
Jakupila Daniel, B.A., Cvjetno naselje Primary School, Zagreb
Jašić Dražen, Ph.D., Associate Professor, Teacher Training School, Split
Jugo Superina Danijela, B.A., Fran Franjković Primary School, Rijeka
Jukić Igor, Ph.D., Associate Professor, Faculty of Kinesiology, Zagreb
Jukić Jerko, B.Sc., Common Technical Culture, Osijek
Jurčević Ivan, Ph.D., Associate Professor, Faculty of Philosophy, Osijek
Jurčević Josip, Ph.D., Croatian Studies, Zagreb
Jurić Vladimir, Ph.D., Professor, Faculty of Philosophy, Zagreb
Kallay Nikola, Ph.D., Professor, Department of Chemistry, Faculty of Science, Zagreb
Kamber Tina, B.A., Izidor Kršnjavi Primary School, Zagreb
Kolenić Ljiljana, Ph.D., Professor, Faculty of Philosophy, Osijek
Korica Petar, M.Sc., University of Zadar, Zadar
Kos Paliska Vera, B.A., Teacher Training School, Pula
Kostović-Vranješ Vesna, Ph.D., Teacher Training School, Split
Kovačević Darko, B.A., I. G. Kovačić Primary School, Zagreb
Kreković Mile, M.Sc., Gospić College, Gospić
Kresnik Damir, M.Sc., Čeminac Primary School, Čeminac
Kršek-Šibenik Andriana, B.A., Sesvetski Kraljevec Primary School, Sesvetski Kraljevec
Kuščević Dubravka, M.Sc., Teacher Training School, Split
Labaš Drago, B.Sc., Common Technical Culture, Varaždin
Lagumdžija Nada, M.Sc., Teacher Training School, Osijek
Lasić-Lazić Jadranka, Ph.D., Professor, Faculty of Philosophy, Zagreb
Lešaja Vlasta, B.A., Pantovčak Primary School, Zagreb
Ljubičić Maja, B.A., A. Harambašić Primary School, Zagreb
Ljubković Joško, B.A., University of Zadar, Zadar
Magaš Damir, Ph.D., Professor, Department of Geography, Faculty of Science, Zagreb
Majstorović Draženka, B.A., Vrbani Primary School, Zagreb
Malenica-Stazić Gordana, B.A., J. J. Strossmayer Primary School, Zagreb
Malić Zvonimir, B.A., Donja Dubrava Primary School, Donja Dubrava
Malinar Boris Josip, Zagreb
Malinar Smiljka, Ph.D., Professor, Faculty of Philosophy, Zagreb
Manger Robert, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Markovac Josip, Ph.D., Professor, Teacher Education Academy, Zagreb
Markučić Damir, Ph.D., Professor, Faculty of Mechanical Engineering and Shipbuilding, Zagreb
Marušić Patricija, B.A., Jordanovac Primary School, Zagreb
Matas Mate, Ph.D., Professor, Teacher Training School, Petrinja
Mateljan Vladimir, Ph.D., Professor, Faculty of Philosophy, Zagreb
Mati Ida, B.A., Šestine Primary School, Zagreb
Matić Tomislav, Ph.D., Faculty of Science and Socialization, Split
Matijević Davorka, B.A., Malešnica Primary School, Zagreb
Matulec Ljiljana, M.Sc., Vladimir Nazor Primary School, Virovitica
Metelko Marina, B.A., Matija Gubec Primary School, Zagreb
Mihaljević Djigunović Jelena, Ph.D., Professor, Faculty of Philosophy, Zagreb
Mišurac Zorica Irena, B.A., Teacher Training School, Split
Mornar Vedran, Ph.D., Professor, Faculty of Computer Science, Zagreb
Mrkić Željko, Ph.D., Faculty of Science and Socialization, Split
Mrkonjić Ivan, M.Sc., Teacher Education Academy, Zagreb
Muradbegović Alda, M.Sc., Teacher Training School, Pula
Nemet Jajić Jadranka, M.Sc., Teacher Training School, Split
Nikčević Milković Anela, B.A., Teacher Training School, Gospić
Nižić Ivo, B.A., University of Zadar, Zadar
Novaković Darko, Ph.D., Professor, Faculty of Philosophy, Zagreb
Novosel Ivanka, B.A., Teacher Training School, Petrinja
Obad Marija, M.Sc., University of Zadar, Zadar
Orlić Nada, Ph.D., Associate Professor, Faculty of Philosophy, Rijeka
Ostojić Jasenka, Ph.D., Associate Professor, Music Academy, Zagreb
Ovčar Stjepan, Ph.D., Teacher Training School, Čakovec
Palć Ratko, M.Sc., Teacher Training School, Split
Pandžić Vlado, Ph.D., Professor, Faculty of Philosophy, Zagreb
Pavelić Krešimir, Ph.D., Professor, Institute 'Ruđer Bošković', Zagreb
Pavičić Vicko, Ph.D., Professor, Zagreb
Pavin Nenad, Ph.D., Associate Professor, Department of Physics, Faculty of Science, Zagreb
Pavleković Margita, Ph.D., Associate Professor, Teacher Training School, Osijek
Pavlica Mirjana, Ph.D., Professor, Department of Biology, Faculty of Science, Zagreb
Pavlić Kornelija, B.A., Classical Secondary School, Zagreb
Peršić Irene, B.A., Teacher Training School, Pula
Peršun-Rešković Jasna, B.A., Otok Primary School, Zagreb



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Petrušić-Hlucky Irena, B.A., A. G. Matoš Primary School, Zagreb
Planinić Mirko, Ph.D., Associate Professor, Department of Physics, Faculty of Science, Zagreb
Pribanić Ljubica, Ph.D., Associate Professor, Faculty of Education-Rehabilitation, Zagreb
Prodanović - Trlin Sanja, B.A., Pehlin Primary School, Rijeka
Prskalo Ivan, Ph.D., Associate Professor, Teacher Training School, Petrinja
Razlog-Grlica Jasna, M.Sc., Ivana Brlić Mažuranić Primary School, Virovitica
Riman Marija, Ph.D., Associate Professor, Teacher Training School, Rijeka
Roknić Andreja, B.A., Faculty of Philosophy, Rijeka
Roksandić Drago, Ph.D., Professor, Faculty of Philosophy, Zagreb
Rosić Marko, Ph.D., Associate Professor, Faculty of Science and Socialization, Split
Rukavina Sanja, Ph.D., Associate Professor, Faculty of Philosophy, Rijeka
Rupčić Stjepan, B.A., Teacher Training School, Petrinja
Sekušak-Galešev Snježana, M.Sc., Faculty of Education-Rehabilitation, Zagreb
Seletković Krešo, Ph.D., Associate Professor, Music Academy, Zagreb
Sertić Hrvoje, Ph.D., Faculty of Kineslology, Zagreb
Sluganović Ivanka, B.Sc., I. Technical School 'Nikola Tesla', Zagreb
Stanić Ivica, B.A., Marjan Primary School, Split
Stanin Tatjana, M.Sc., Teacher Training School, Gospić
Stepinac Ariana, B.A., Classical Secondary School, Zagreb
Svedrec Renata, B.A., Otok Primary School, Zagreb
Šikić Zvonimir, Ph.D., Professor, Faculty of Computer Science, Zagreb
Šobat Ana, B.A., Petar Zrinski Primary School, Zagreb
Tafra Branka, Ph.D., Croatian Studies, Zagreb
Tišma Igor, B.A., Jabukovac Primary School, Zagreb
Tomac Nikola, Ph.D., Associate Prof., Faculty of Philosophy, Rijeka
Tomašević Dančević Mirjana, B.A., Potočnica-kindergarden, Zagreb
Tomić-Ferić Ivanka, B.A., Teacher Training School, Split
Tomić-Pisarović Srđanka, Ph.D., Professor, Department of Chemistry, Faculty of Science, Zagreb
Tonejc Antun, Ph.D., Professor, Department of Physics, Faculty of Science, Zagreb
Uglešić Nikica, Ph.D., Professor, Faculty of Science and Socialization, Split
Ungar Šime, Ph.D., Professor, Department of Mathematics, Faculty of Science, Zagreb
Urek Sanja, B.Ed., I.G. Kovačić Primary School, Zagreb
Varga Marijan, B.A., Retkovec Primary School, Zagreb

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