**Hrvatsko nacionalno natjecanje u implementaciji dobrih praksi
u osnovnim i srednjim školama 2015**

THE NAME OF THE PROJECT:

**NANOTECHNOLOGY AND NANOCOMPUTERS**

*The good teaching practice*

***Target groups:*** students

***The planned number of students****:* 12

***Educational level:*** 7th Grade, Primary school

***Age of students:*** 13 – 14

***Duration of the implementation:*** 04-30-2015, 14:00 – 06-12-2015, 15:30

***Technical requirements:*** PC, projector, mobile phones, Internet, video player, web tools (Glogster), web services (Edmodo, e-mail), a web-hosting service (Weebly, IBuildApp), online software for creating presentations (Prezi)

***The institution which is an example of good practice implemented:*** Elementary school Stobreč

***Connections with curricuulum:*** Math, Physics, Biology, Chemistry

***Connections with curricuulum of Primary School Stobrec:*** „Health, safety and environmental protection“

***Short Summary:*** Students discuss about computer technologies, introducing nanotechnology in the classroom, the meaning of the term "nano", linking the curriculum of mathematics, physics, biology and chemistry. Exploring in which areas of nanotechnology best developed, various nanomaterials that exist. Finding answers to the question of how nanomaterials act in medicine, cosmetics and environmental protection. Investigating as nanobots and what they do. Are they our present or future? They explore how nanomaterials act on the environment, affect whether our health and the health of the environment. The collected materials formed into websites, presentations, mobile applications and glog.

**Teaching units:**

* On April, 30 2015 - Revision of (Lesson: Web) - 59, 60 hours
* On May, 12 2015 - The structure of the Internet (treatment of teaching material, exercise) - 61, 62 hours
* On May, 14 2015 - Other Internet services (treatment of teaching material, exercise) - 63, 64 hours
* On May, 21 2015 - Other Internet Services (exercise and repetition) - 65, 66 hours
* On May, 28 2015 - Internet service providers (processing of teaching material); Connect to the Internet (processing of teaching material) - 67, 68 hours
* On June, 11 2015 - Revision of (Lesson: Internet, Web design); Justification achievements and concluding score - 69, 70 hours

***KEY WORDS:***

* Nano, will, nanotechnology, nanomaterials, nanobots, nanotvari, nano-medicine, public health, environmental protection, nanocosmetics, websites, mobile applications, interactive posters, Internet, Web tools, web services, online presentations

**The curriculum for primary schools:**

**•** Dating sites, text and background, insert graphic elements

• Index page, the text as a link, the image as a link

• Graphics and backgrounds, simple tables, formatted text

• The structure of an HTML document, HTML tags document (tag), simple HTML page description

• P mark, label A label IMG

• Planning structure of the page management structure, compilation and publication of the page

• Server, client, communication methods

• Remote file transfer (FTP)

• Internet access; hosting of website

• Types of modems, modem role

***EDUCATIONAL ACHIEVEMENTS:***

* use of new web tools and web services
* create an online web page and publish it (Weebly)
* create online mobile application, transfer it to a mobile device (IBuildApp)
* create an interactive online poster (Glogster)
* create an online presentation (Prezi)

**The curriculum for primary schools:**

• make a simple personal website

• insert a picture element in the page and turn it into a link to another page

• use the table as an element of the Web page

• interpret simple HTML page description

• be able to add parameters to the basic mark

• formulate the structure of the page

• be able to explain the methods of communication within the Internet

• describe the described internet services

• explain the role of the server

• explain the need for faster Internet connections in the future

**LEARNING OUTCOMES:**

Students will be able to:

- Appoint the initial and most important page on your site

- Describe what the web page

- Identify and know the meaning of abbreviations HTML

- Compare as a graphic (HTML) editors

- Define acronym WYSIWYG

- Describe with which we can connect the two sites

- Determine which image format to use when creating a web - page

- Describe the tag used to display the image in an HTML document

- Describe the tags for the title, the letters that are bold, underlined or italicized

- To become aware of how to create a new HTML document

- Describe which command creates a new link (link)

- Distinguish between tags <html>, <head>, <title>, <body>

- Explain why the tags have their final tag

- Explain the elements that make up the table

- Identify the structure of the Internet and the ways of communicating to him

- Explain the structure of the Internet, the role of the server

- Evaluate the quality of the content and process know Contents from the Internet

- Explain the modes of communication within the Internet

- Explain the protocols for communication

- Describe what is www (World Wide Web)

- Explain the structure of the Internet

- Explain the terms client and server

- Explain the role of the server and list server types

- Itemize and describe the various services of the Internet (forums, FTP, Forums, Chat,

 E-learning, E-mail)

- Distinguish the tools of Web 2.0 Web

- Distinguish between social networks and their advantages and disadvantages

- Develop your own interactive posters - Glogster

- Develop a web page using a website builder - Weebly

- Develop a mobile application - IbuildApp

- Create an account on a social network for students - Edmodo (create virtual classrooms)

- Use one of the basic services of the Internet - E-mail

- Use a tool for sharing videos - YouTube - find videos of nanotechnology and nanomaterials

 are appropriate, understandable and interesting students

- Publish your site on the Internet

- Explain the meaning FTP Service

- Explain the role of a modem

- Explain who are service providers (ISP)

- Explain the hosting of web - page

- Explain what does account (username, password, email address)

- Explain how to connect to the Internet

- Explain the word nano

- Explain what is nanotechnology, nanomaterials and nanoračunala

- Explain in what areas we find nanotechnology

- Explain the word and will vary from nano bits

- Comparing the nano and will

- Related nanotechnology with other subjects: biology, chemistry, physics, mathematics and

 everyday life

- Explain what the nanobots

- Explain the role of nanomaterials in medicine

- Explain the role of nanomaterials in cosmetics

- Explain the role of nanomaterials in nature conservation and environmental protection

- Use and develop the English language in the classroom and apply in everyday life