

CROATIAN CURRICULUM IN NUTRITION, FOOD SAFETY AND HEALTH IN

Introduction

The Croatian education curriculum ensures that children in different steps of education learn about health, nutrition and food safety according to their age. From the early stage in education, which is kindergarten (age 3 to 6), through first part of primary schooling - elementary school (age 6 to 10) and then in second part of primary schooling - middle school (age 11 to 14) learn about nutrition, food and its safety.

In preschool children are taught about food safety from the health aspect of personal hygiene, food habits, importance of servings –what they should include and how often children have to eat.

In primary schools, food and nutrition is taught mainly as a part of classroom teaching activities with different thematic areas “proper nutrition; physical activity and Personal hygiene”

In middle school, food safety and nutrition is taught through different subjects: “Physical education and sports, nature and biology”.

Curriculums

Every school in Croatia is obliged to follow “The national curriculum of health education for primary and secondary schools”. There are also national guidelines for human consumption for children in kindergartens and elementary schools which are more related to school kitchens.

Health Education

Aims and objectives

The purpose of health education is the successful development of children and youth to come of age in a healthy, happy, successful, self-confident and responsible person. The overall objective of health education, based on a holistic understanding of health, is to promote health, healthy lifestyles and their development through interdisciplinary work and the implementation of educational content within the compulsory and elective courses, school-based prevention programs, projects and facilities prepared for the implementation of the homeroom class.

Through different modules, children learn about healthy nutrition, personal hygiene, physical activity and mental health. These topics, especially for lower grades are most frequently thought through classroom meeting classes, but its contents stretches in all other grades of secondary school. Content that includes this module is to underline the importance of a healthy diet and acquire positive habits of personal hygiene. Due to increase overweight and obesity in children, it is essential to act preventively through all levels of education of children and youth. Further education through which children learn about healthy and balanced diet is trying to connect the availability of scientific information on foodstuffs referred to the recommended foods and the importance of conducting regular and moderate physical activity. According to World Health Organization (WHO), mental and social dimensions of health cannot be separated.

Grade	Health education (Healthy living) The curriculum for the implementation of health education and planned number of hours per module
Primary schooling - elementary school (age 6 to 10)	
1	10 (6)
2	11 (6)
3	11 (6)

4	12 (5)
Primary schooling - Middle school (age 11 to 14)	
5	12 (4)
6	12 (3)
7	12 (5)
8	12 (4)
High school (age 15 to 18)	
1	12 (4)
2	12 (4)
3	12 (3)
4	4 (2)

Example of developed health education program in kindergarden:

Content:	Objectives
Healthy nutrition Physical activity Personal hygiene Everyday healthy habits and health concerns Basic foodstuffs - shape, color, size, taste smell Hand hygiene Hygiene of teeth and oral cavity	Applied daily activities and habits for health improvement: daily rhythm, physical activity, sleep and rest, regular and proper meals, health and oral hygiene, hygiene and proper selection of clothing and footwear distinguish between basic foods in shape, size, taste, smell, define the concept of personal hygiene importance of hand washing at all circumstances / situations in life: before eating, after using the toilet, after any form of outdoor education, after school physical education brushing teeth after a meal

Facilities and Learning Outcomes	Expected outcomes	Key terms

Primary schooling - elementary school (age 6 to 10)		
1. grade		
Mental health school and I My environment and I	This is me / This is us Who am I / Who are we My school / My family Similarities and differences	Curriculum - Nature and Society
2. grade		
<u>Healthy nutrition</u> Meals - size, number and diversity of servings	define meal, adequate number of meals and snacks describe the consequences of irregular meals distinguish desirable from undesirable foods	Curriculum - Nature and Society
<u>Personal hygiene</u> Hygiene clothing	take responsibility for hygienic clothing	Curriculum - Nature and Society
3. grade		
<u>Healthy nutrition</u> Origin and food production The food pyramid of healthy eating for girls and boys aged 9-12 years	enumerate nutrients according to their origin and method of production separated from the food pyramid of healthy eating, the recommended foods and their quantity in everyday use compare foods from the daily diet with the recommended food pyramid in a healthy diet link individual recommended dietary foods with natural characteristics of native students link food pyramid healthy diet with regular physical activity	Curriculum - Nature and Society
<u>Personal hygiene</u> Body hygiene	describe the implementation of proper body hygiene enumerate the consequences of improper care of the body and the failure to implement hygiene	Curriculum - Nature and Society
4. grade		
<u>Healthy nutrition</u> The human body Regular physical activity, rest	describe the human body as a whole organ systems man/women as a biological and social being applied daily activities and habits to improve	Curriculum - Nature and Society

Everyday healthy habits and care for your health	health - daily rhythm of sleep and rest, diet (regular and irregular meals), physical activity; posture, posture while learning at school and at home, health and oral hygiene, hygiene and proper selection of clothing and footwear keep a food diary	
<u>Personal hygiene</u> The importance of personal cleanliness / hygiene	explain the importance of personal hygiene (health prevention from diseases / infectious diseases) enumerate infectious diseases transmitted by unclean hands (sneezing, coughing, touching) responsibly to relate to their own health	Curriculum - Nature and Society
Second part of primary schooling - middle school (age 11 to 14)		
5. grade		
<u>Healthy nutrition</u> Food sources in nature Growing crops for human consumption and origin of food production, products from the garden Breeding of domestic animals Create menus - proper nutrition	explain the origin of basic foods enumerate food sources in nature differ hunger from satiety indicate the importance of eating fish give an example of your own menu of healthy diet	Curriculum - Nature
<u>Personal hygiene</u> The man/women as a biological being (material of the human body) Puberty - changes and difficulties in maturation ELECTION TOPIC: Pets (and hygiene)	describe the basic structure of the human body explain the importance of personal hygiene indicate the changes that occur during puberty connect the need of increased hygiene during puberty with increased secretion of sweat glands and sebaceous discuss the importance of enhanced hygiene in girls during menstruation describe the procedures of proper body hygiene discuss the possible consequences of irregular dental hygiene and oral cavity connect regularly hygiene with pets (washing, cleaning the houses, removing parasites) veterinary checks and vaccinations (avian influenza, rabies ...) for the preservation of our health discuss the importance of choosing a pet (allergies)	Curriculum - Nature
<u>Physical activity</u>	To vary kinantropological characteristics, motor	Curriculum

<p>Kinanthropological features Motor skills and motor achievements Respect for and protection of your body using physical activities; physical activities that enhance or damage healthy growth and development Physical activity and gender differences The importance of regular physical exercise as an important factor in the regulation of body weight</p>	<p>skills and motor achievements distinguish between physical activities that improve human health to those that harm human health distinguish between changes of puberty between boys and girls and their effect on the physical abilities and give personal examples of these changes monitor changes in the body associated with personal growth and development under the influence of physical activity calculate body mass index (BMI)</p>	<p>- Physical Education</p>
<p>6. grade</p>		
<p><u>Healty nutrition</u> Compliance diet depending on the season and life community Medicinal herbs in the human diet Poisonous plants and Mushrooms Representation of marine and freshwater organisms in the human diet</p>	<p>create a menu of seasonal fruits and vegetables using locally grown and wild plants recognize the most famous medicinal plants and specify the ability to use in human nutrition identify poisonous plants in the environment explain the importance of distinguishing poisonous and non-poisonous mushrooms explore the representation of marine and freshwater organisms in the diet of your family and the families of friends to explain the importance of eating fish</p>	<p>Curriculum - Nature</p>
<p><u>Physical activity</u> Changes of kinanthropological characteristics under the influence of physical activities Safety of motoric movement</p>	<p>vary the required level of physiological load of the organism during physical activities for the purpose of effective change kinanthropological features describe and demonstrate how to help yourself and others during physical activities</p>	<p>Curriculum - Physical Education</p>
<p>Environment and health Hygiene in the living space and environment (school, home..)</p>	<p>link environmental disturbances/disorders with risks to human health maintaining hygiene in living spaces</p>	<p>Curriculum - Physical Education</p>

7. grade		
<p><u>Physical activity</u> The underlying principles of transformation processes</p>	<p>describe the underlying principles of transformation processes</p>	<p>Curriculum - Physical Education</p>
<p><u>Personal hygiene</u> Viruses and bacteria - pathogens / HIV Protozoans - parasitic protozoans Cnidarians - jellyfish, anemones Flatworm - flukes and tapeworms Roundworms - baby worm, Trichinella</p>	<p>connect the importance of vaccination with the inability of treating viral diseases distinguish disease-causing bacteria from beneficial bacteria describe spreading of viral and bacterial diseases explain procedures of applying basic protection measures and ways to prevent spreading of infectious diseases (Vograliks chain of infection) discuss how to protect themselves from infection parasitic protozoa (emphasize the obligation of visiting doctor before traveling to "exotic" parts) describe the procedures of assistance in the event of burns from cnidarians connect parasitic infection Flatworm with lack of maintenance of personal hygiene, hygiene of pets and domestic animals, and with non-regular veterinary checks of domestic animals with the meat used for human consumption connect infection parasitic nematodes with the absence of the application of sanitary protection measures (hand washing, fruits, vegetables, machine) and veterinary inspection of meat prior to its use</p>	<p>Curriculum - Biology</p>
8. grade		
<p><u>Healthy nutrition</u> Life cycle: birth, death and the different stages of human life Physical growth and development: daily rhythm, sleep, rest and stress, physical activity, healthy diet The human body: organs and organ systems Digestive system: structure and function Diseases of the digestive system</p>	<p>distinguish the stages of human development (from embryo to death), depending on stage of life emphasize the physical and mental changes in different stages of human development recognize changes in vital functions of your body assess the value of choosing a healthy lifestyle distinguish organs and tissues in the structure and function that they perform describe the interdependence and connectedness in organ systems distinguish the parts of the digestive system, the structure and function of individual parts list the most common diseases of the digestive system list the most common allergens and reactions that</p>	<p>Curriculum - Biology</p>

<p>Nutritional needs and problems in different circumstances: allergies and children Biologically important compounds in the human diet Chemical composition, properties and role of biologically important compounds Minerals and vitamins in human nutrition Food labeling Recommended foods in different meals for young people Daily intake of nutrients for young Preparation and storage of foodstuffs</p>	<p>occur with potential allergens consumption and their dangers for human health explain why the observance of diet and moderate physical activity are prerequisite for the maintenance of homeostasis specify biologically important compounds: carbohydrates, proteins, fats and oils differentiate between chemical and physical properties of biologically important compounds emphasize the importance of minerals and vitamins in the human diet explain the importance of maintaining constant conditions (homeostasis) in a healthy body - prosthetic substances (water, minerals ...) determine the possible daily rhythm respecting the proper time changes of daily activity and rest</p>	
<p><u>Personal hygiene</u> Structure and role of the sex organs Conception and development of the child before birth Responsible sexual behavior The bones and the connections between the bones The sense of sight; preserve eye health and vision; eye disease: inflammation of the lining of the eye, cataract The sense of hearing: protection when working with noise; occupations that threaten your hearing bloodstream; health of blood vessels and heart Protecting the body from disease; lymph; Body protective</p>	<p>explain the need for increased hygiene during menstruation explain the need for responsible behavior during pregnancy connect life style with proper bone structure (moderate exposure to solar radiation, proper nutrition) explain procedures to provide first aid for bone injuries (fracture, sprain, dislocation) explain the importance of correct seating and use of orthopedic insoles (eg. flat foot) describe procedures for the protection senses of sight (prevent exposure of eyes to the dust, smoke, wind, chemicals ...) explain the importance of hygiene for eyes (hand washing during the changing of artificial lenses describe procedures to protect the sense of hearing when working with noise and effects of frequent exposure to noise explain how pulse adjusts the activities of the organism explain why it is important to seek medical assistance in case of the frequent heart disturbances describe the importance of regular blood pressure measurement distinguish between innate and adaptive immunity explain the role of antibodies and their association</p>	<p>Curriculum - Biology</p>

<p>substances; AIDS Respiratory and voice; respiratory health; influenza, tonsillitis, pneumonia, tuberculosis, lung cancer The system of organs for excretion, the skin; health of the kidneys and the skin; skin pigment, sweat glands and sebaceous glands, protective role of skin, regulation of body temperature, acne</p>	<p>with leukocytes recognize allergens as substances that cause allergies connect infecting with HIV virus with a loss of immunity explain the need to protect the respiratory tract from dust, gases (wearing protective equipment) explain the harmful effects of smoking on the respiratory organs and the vocal cords explain the importance of breathing through the nose, protection of hoarseness and vocal cord damage (straining the vocal cords) explain the harmful effects of excessive exposure to the sun and skin cancer development connect healthy looking skin with maintaining personal hygiene</p>	
<p><u>Physical activity</u> Dosage, distribution and load control Exercise injuries in physical activities and first aid</p>	<p>describe the underlying principles of load regulation at exercise How to provide simple first aid in injuries during physical exercise</p>	<p>Curriculum - Physical Education</p>

This issue can be investigated with interdisciplinary extensions in the course of Chemistry, History, Geography, Politics and Social Education, Home Economics, Religious etc.