KINDERGARTEN CURRICULUM

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# INTRODUCTION

*The Kindergarten Curriculum* is a national document essentially derived from analyses, proposals and solutions that provided a conceptual basis for the pre-school education system in kindergartens (*White Paper on Education in the Republic of Slovenia, 1995; The Kindergarten Act; Šolska zakonodaja I (School Legislation I, 1966).* It also draws from the principles and goals set for overhauling the content of the entire education system *(Izhodišča kurikularne prenove (Curriculum Reform Starting Points),* National Curriculum Council, 1996)*.* The document follows the tradition of Slovenian kindergartens, bringing in new theoretical perspectives on early childhood and, on their basis, proposes different solutions and approaches, thus complementing, changing and upgrading the work achieved by kindergartens so far.

*The Kindergarten Curriculum* has been created for full-day programmes, but it also provides an appropriate professional basis for the implementation of other programmes, such as half-day and shorter programmes, education and care families, pre-school education at home. It takes into consideration the specifics introduced through various programmes in terms of organising life and work as well as in terms of the choice of objectives, activities and possible approaches and methods.

*The Kindergarten Curriculum* embraces the fundamental principles and goals of pre-school education and follows the latest research findings indicating that children understand and view the world as a whole, that they develop and learn in active interaction with their social and physical environment, and that they interact with their peers and adults in kindergartens to develop their own social skills and individuality.

The term "curriculum", rather than the term "programme", has been introduced for education in kindergartens because it is conceptually broader and more comprehensive than the concept of a "programme". It also shifts the focus from the content to the education process itself, i.e. to the entire range of interactions and learning experiences for children in kindergartens. The curriculum includes several conditions meant to enable the implementation of the written curriculum objectives and identifies barriers to their realisation, also covering a wide scope of the hidden curriculum.

*The Kindergarten Curriculum* presents the pre-school education goals and their derived principles, fundamental knowledge about the child's development and pre-school learning. It also outlines global goals and a derived set of objectives in respective fields (for the sake of better transparency and professional clarity). The suggested content and activities proposed for individual fields are inter-connected and placed into the context of the children's every-day life in a kindergarten. Some of the cross-curricular activities, such as moral development, concern for health, safety, traffic education, etc., run a common thread throughout all fields and comprise a way of life and work in kindergartens. The suggested content and activities (designed separately for the first and the second age-group of children) provide possible alternatives and methods for achieving the objectives (to be selected by a pre-school teacher), allowing pre-school teachers the autonomy to use their professional judgment and decide what, when and how.

Along with the written *Kindergarten Curriculum*, which serves as expert groundwork for work in kindergartens, implementation in practice or the so-called *implementing curriculum* is of equal importance for achieving the appropriate level of quality in pre-school education. The practical implementation of the written curriculum objectives (the implementing curriculum) – in terms of its viability, social aspect, topicality, the choice of various working methods, and modalities that are based on fundamental knowledge about children's development and the understanding of principles conducive to the achievement of *Kindergarten Curriculum* objectives – contributes significantly to a broader understanding of pre-school education, its connection to the family, other levels of education and professional institutions, and the local community.

The *Kindergarten Curriculum* is a national document, intended for pre-school teachers and their assistants, headmasters, education counsellors; it is a document that, together with professional literature and handbooks for pre-school teachers, enables professional planning, ensures the quality of pre-school education, further develops and evolves in terms of the implementing curriculum, and takes into consideration the direct responses of children in class, the organisation of life there, and the integration of kindergartens into the broader environment.

In enforcing the principle of equal opportunities for all children and respecting diversity among children, equal conditions for the optimal development of every child are ensured, while taking into account children's individual differences in development and learning. This also implies the ensuring of broader and flexible, yet nonetheless professional conditions for permanent and temporary integration of pre-school children with special needs in kindergarten classes. Annex to the *Kindergarten Curriculum* will provide for appropriate adjustments to the implementation of the curriculum for children with special needs.

The role of kindergartens in linguistically and ethnically mixed areas is to create a suitable platform for the bilingual development of members of both national minorities and the majority nation. To this end the curriculum provides other content to develop knowledge about the culture and cultural heritage of the two nations living in a specific area as well as appropriate educational and didactic principles designed within the models of bilingual education and teaching.

The Roma population is a special group worth mentioning even though it is not considered an autochthonous minority in Slovenia. As regards this group it is important to follow the principle of two cultures cohabiting in an interactive way rather than separately. This means that we should primarily identify and select those methods and approaches that will primarily lead to socialisation. Special attention should be paid to children whose native language is not Slovenian. They should be given the possibility to make up for the gap in their knowledge of Slovenian.

# KINDERGARTEN CURRICULUM GOALS

* to create a more open and flexible curriculum applicable to various pre-school education programmes;
* to provide richer and more diversified content in all fields of pre-school education activities in kindergartens;
* to provide more balanced content in various fields and activities of pre-school education in kindergartens, which also enables that a more in-depth approach is employed in some fields;
* to allow for individuality, choice and difference in pre-school education – as opposed to the group routine;
* to create conditions for a better expression and awareness raising of group differences (non-discrimination with regard to gender, social and cultural origins, world view, ethnic affiliation, mental or physical constitution);
* to take into better account and to respect the privacy and intimacy of children;
* to improve the quality of personal interactions among children and relationships among children and adults in kindergartens;
* to reconceptualise and reorganise time in kindergartens;
* to reconceptualise and reorganise premises and the equipment in kindergartens;
* to ensure the greater autonomy and professional responsibility of kindergartens and their professional workers;
* to increase the role of evaluation (critical analysis) in the planning of life and work in kindergartens;
* to improve communication and cooperation with parents.

# 2. THE PRINCIPLES CONDUCIVE TO THE ACHIEVEMENT OF *KINDERGARTEN CURRICULUM* OBJECTIVES

## 2.1 The Principles of democracy and pluralism

* various programmes;
* various theoretical approaches and models;
* various methods of working with pre-school children in kindergartens;
* a broad variety of content and activities;
* flexibility in the organisation of life and work in kindergartens in terms of space and time.

## 2.2 The Principles of openness of the curriculum, autonomy and professional responsibility of kindergartens and pre-school professional staff

– A pre-school curriculum should be flexible enough to take into account various specifics of the environment, children and parents, to enable the autonomy of a kindergarten and other professional workers in kindergartens, as well as to enable adjustments to various changes; it should also be appropriately structured so as to provide a quality basis for highly professional work;

Pre-school teachers and their assistants should be provided a wide choice in terms of content, activities and methods to be applied within an individual field of pre-school activity;

* Kindergartens and preschool teachers should be given the possibility to complement the education process with additional activities, content and methods according to their own judgment, which is to be in line with the national core curriculum.

## 2.3 The principle of equal opportunities for all and diversity awareness among children, as well as the principle of multiculturalism

* providing equivalent conditions for the optimal development of each and every child;
* taking into account the characteristics of the age bracket;
* taking into account individual differences in children's development and learning;
* professional and flexible provision of conditions to enable permanent or temporary inclusion of pre-school children with special needs in the life and work of regular classes in kindergartens;
* taking into account group differences (with regard to gender, social and cultural origins, world view, etc.) and creating conditions for their expression;
* taking into account the principle of the diversity of children and multiculturalism in terms of the selection of content, activities, and materials, which are to enable children to gain experience and knowledge about the diversity of the world (objects, people, cultures).

## 2.4 The principle of the right of choice and the right to be different

* pre-school education programmes allowing choice for parents;
* activity planning in terms of organisation of time and venue, which allows for children to choose among various activities and content in accordance with their wishes, interests, capabilities and mood; in this context, it is of major importance that they are able to choose among alternative activities and content rather than between participation and non-participation, activity and inactivity, "guided activity" and free play.

## 2.5 The principle of respecting privacy and intimacy

* organisation of venue and time, allowing children to break away from the group routine or to express their individuality through various activities;
* communication that allows children (and their parents) not to talk, draw, or sing about something they wish to keep to themselves;
* with respect to a child's body, the principle enables children not to display those body parts that they do not wish to show (e.g. changing clothes, at the rest room, etc.).

## 2.6 The principle of balance

* between the developmental characteristics of the child and the curriculum;
* between different aspects of the child's physical and intellectual development and individual activity fields in kindergartens;
* The principle of balance is to be complemented with the principles of the right of choice and the right to be different; the curriculum and pre-school teachers are to ensure the activities in all fields of pre-school education and encourage the development of all aspects of the child's personality, while actively fostering and increasing the scope of freedom of choice and individuality, and the possibility of the in-depth development of a particular aspect or field;
* between the rational approach of science itself and the approach of the history of science and epistemology, between universalism and relativism of an individual science, which should convey to children basic concepts, ideas and experiences through the prism of development and history, and thus systematically develop sensitivity to problems and awareness of various possible answers.

## 2.7 The principle of the professional justification of the curriculum

* in terms of specific characteristics of pre-school children's development and learning as well as in terms of the difference between two age groups (1-3 years and 3-6 years);
* in terms of new scientific knowledge defining individual fields of activity fields at kindergartens;
* in a broader perspective of knowledge from educational sciences and cultural studies;
* in terms of comparing pre-school curricula in general or by individual curriculum elements or by individual curriculum documents (in particular comparisons with the curricula of countries in the realm of western democracy, etc.).

## 2.8 The principle of conditions for the introduction of a new curriculum

* permanent professional training of all managerial staff and all professional staff in kindergartens;
* all conditions required for its implementation are to be accurately stated and described in the planning of a new kindergarten curriculum;
* all necessary conditions are to be created prior to introducing the new kindergarten curriculum, some immediately and others gradually;
* all necessary conditions are to be created (staff, facilities and equipment, etc.) for the inclusion of children with special needs in various pre-school programmes;
* systematic monitoring, analysing and planning of the conditions for education in kindergartens (at the level of local community, kindergarten and the class).

## 2.9 The principle of horizontal alignment

* linking activities from various fields of pre-school education and also different aspects of the child's development and learning, since developmental aspects of pre-school children are, as a rule, interdependent and interrelated;
* the selection of content, methods of work and techniques for pre-school children, which take into consideration the specific characteristics of a pre-school child and, to the greatest extent possible, enable the interconnection of various fields of pre-school activities.

## 2.10 The principle of vertical alignment or continuity

* between the family and the pre-school;
* between the first and the second age group, which are not absolutely divisible and which complement each other throughout the entire pre-school period;
* from pre-school to basic school education; however, it is of particular importance that kindergartens should not become school-like, but they should rather preserve the basic specifics of teaching in that period.

## 2.11 The principle of working with parents

* parents should be provided access to sources of written and oral information concerning the programmes offered by the kindergarten;
* parents have the right to a continuous exchange of current information and to discuss any issues with the pre-school teacher or assistant teacher, and the counselling service;
* parents have the right to their children’s gradual introduction into the programmes offered by the kindergarten;
* parents have the right to participate in planning the life and work in a kindergarten and classes, and to participate actively in educational activities in agreement with pre-school teachers but with due respect for the professional autonomy of the kindergarten;
* it is necessary in relations with parents to have respect for the private life of families, their culture, identity, language, world views, values, convictions, positions, customs and habits, and to consistently respect their right to the privacy and protection of their personal data;
* parents should be continuously informed and systematically briefed on their rights and responsibilities.

## 2.12 The principle of cooperation with the environment

* taking into account the diversity and possibilities to use the natural and socio-cultural learning resources nearest to the pre-school environment;
* taking into account the natural and socio-cultural specifics of the environments from which children come.

## 2.13 The principle of teamwork planning and implementation of pre-school education and professional training

* at the level of professional staff within the class, between classes and within the kindergarten;
* at the level of kindergartens;
* at the level of kindergartens through educational, professional and other institutions.

## 2.14 The principle of critical evaluation

* in terms of day-to-day interpersonal interactions in the class;
* in terms of planning individual fields of pre-school activities, content and methods of work, daily routine in the class, ensuring the conditions necessary for the implementation of pre-school education, monitoring the development of individual children and class groups;
* in terms of the rights and responsibilities of parents;
* at the level of kindergartens;
* at the level of local community, the founder of a kindergarten.

## 2.15 The principle of the development-process approach

* The general (mental and physical) development of a child while drawing on knowledge from specific sciences has been placed at the forefront of preschool education;
* At the level of pre-school education each science aims to convey some basic experiences (knowledge) concerning its most applicable and useful ideas or concepts;
* The aim of learning in the preschool period is the process of learning itself; it is not about the production of correct or incorrect answers but to encourage the child’s own (symbolic, imaginary and imaginative) strategies of perceiving, understanding, expressing, thinking, etc., which are characteristic of the child's age-development period.

## 2.16 The principle of active learning and providing opportunities for verbalisation and other means of expression

* ongoing concern for the continuous provision of a comfortable and challenging learning environment conducive to the planned and unplanned guidance of a preschool teacher and to the child's own initiatives;
* pre-school education focuses on the development of the child's sensitivity and the awareness of problems;
* the same as the provision of rational answers or solutions from a particular science, it is important to encourage children to use and to become accustomed to the use of various strategies and tools when looking for answers;
* allowing and encouraging children’s verbalisation and other ways of communication, while taking into account their individual needs and interests, and their right to privacy;
* allowing and encouraging the use of language in various functions.

# 3. CHILDREN IN KINDERGARTEN

Pre-school curricula are derived from various theoretical foundations and are associated with various conceptions and images of childhood. However, exclusive interest in the interpretation of individual concepts is unrealistic as well as theoretically and practically unjustified. Finally, studies that compare the influence of various types of curriculum on the development of the child's individual abilities, or on the development of the child's abilities in different age groups, reveal that there is no unequivocal relation between the type of curriculum and the development of capabilities. The key issue of pre-school education in early childhood is to find an efficient match between the curriculum and the child’s characteristics.

## 3.1 The development and learning in the pre-school period

Knowledge regarding children's development forms an important framework for the creation of a pre-school education concept, since experts involved in the drafting of the pre-school curriculum are keen on finding replies to questions, such as: "Do we recognise a child in the curriculum?” and “Can we see the child as an active and competent individual who is growing up, developing and learning?", and, of course, the next question, "What should our understanding of the child's development be based on? Is there a single profession, theory or its derived direction or school, which can help us to explain equally well the development of all psychical processes and their integration in the basic principles of pre-school education?"

The answer is “no”. Yet, various theoretical frameworks allow us to identify some general laws related to the child's development as well as certain general principles of pre-school education.

*Some general characteristics of children's development:*

* A child's development progresses through a series of successive stages that are characterised by quantitative and qualitative changes (e.g. in the development of thinking, intuitive stage follows the sensorimotor stage; the stage of understanding interpersonal relations follows the stage of self-understanding, etc.);
* All psychological processes (emotion, speech, thinking, social cognition, etc.) develop in all development stages of a child;
* Individual fields of development are intertwined, since various psychological functions are parallelly connected and interrelated (e.g. children perceive, experience and get to know themselves and the world around them, various relations at emotional, intuitive, social and cognitive levels);
* The child's development goes through several critical periods, when the child is most receptive to learning and developing particular skills with the least amount of effort;
* There are large individual differences in children's development, in particular in the first few years of their life; however, the diversity of children remains within the developmental norms;

- The child's development (in the narrow sense) is constantly connected to learning and teaching, which is mainly reflected in the relationship between a child's level of actual and potential development.

*Common pre-school education principles include the following:*

* Pre-school education should be seen as an important stage for pre-school children (each developmental stage must be "utilized" as it is) rather than merely as their preparation for the next phase of education and learning;
* The implementation of pre-school curriculum should embrace the correlation of various fields of activities and correlation with the daily routine;
* Education in pre-schools should build on children's abilities and lead children to experience new situations and to obtain new experiences and knowledge by facing them with reasonable challenges that involve active learning; it should enable children to express themselves and experience their emotions, while fostering their strong emotional and social involvement;
* Pre-school education is based on direct activities using objects and on obtaining first-hand experiences with people and objects, on reflection about activities, on forming initial generalisations, on internal motivation, on solving concrete problems and on gaining social experience;
* Child's play is the activity that in the most natural way combines the basic principles of preschool education and that, when defined broadly enough in terms of exceeding its involvement in the so-called academic or developmental approach in preschool education, is understood as a means for the child to develop and learn in early period.

And why does play take such an important place in the pre-school curriculum? Child's play is an activity performed for the sake of itself, an activity that changes the child’s relation to reality, one that is intrinsically motivated, free, open, and pleasant for the child. Irrespective of the type of a child's play (e.g. functional play, fantasy or symbolic play, fantasy play, and social play), the play, as a rule, sets a place that is defined as the relationship between a child's level of actual and potential development. The manner and content of the play provide the setting within which we can identify various fields of curriculum, e.g. learning about yourself in the play in front of a mirror and in a "dialogue" with yourself; developing and learning the language while pretending in a symbolic play in which the activity of 'Let's Pretend' is given its meaning and message particularly through the usage of language; developing the concept of numbers in the fantasy play 'Shoe Store'; social learning while involved in a role playing setting ("family", "hairdresser"), or rhymes, games with rules; creative presentation by imitation and speaking various languages and their integration; gaining experience in games with water, sand, gravel, creating a playground in the sand, which all require that children transform and combine materials into objects and things that they need for playing, make arrangements between play-mates, and eventually conduct the fantasy game itself. In a nutshell: play sees several fields of the curriculum interweave and combine in children’s activities, which for the developmental stage and the method of learning in this age period is reasonable and professionally justified.

However, in the context of the kindergarten curriculum play is not seen as an activity that will by itself lead to the implementation of the various written objectives of pre-school education. To this end it is necessary to identify and define basic elements of the curriculum (e.g. the degree of openness and/or structuring of the curriculum and its influence on the presence and quality of the play), know how to connect them with the basic elements of high-quality pre-school education at kindergarten, which, of course, may be recognised in the written objectives of educational work, methods and forms, but nevertheless remain in the background of the underlying theories – psychological, educational, philosophical, sociological, anthropological, cultural – and various approaches to their interpretation.

## 3.2 Rest and sleep, eating, and other everyday activities as elements of the curriculum

In addition to the goals and content set out in the curriculum, equally important for kindergartens are daily preschool activities, communication and interaction with and among children, the use of praise and criticism, and rules to control time and space,. These are the activities in which a hidden curriculum may have the strongest effect. The hidden curriculum covers many elements of educational influence on children, which are nowhere defined although they are in many cases more effective in their indirect form if compared to direct educational activities set out in the written curriculum.

The democratization of the curriculum at kindergarten, which is based on the respect for human rights, comes from a systematic loosening and removal of barriers which are related to the hidden curriculum and should be sought not only in the content and activities of pre-school education in the kindergarten but also in other elements of the curriculum. It also requires a systematic loosening and removal of the barriers that condition the hidden curriculum. As a result it is necessary in the planning and implementation of the curriculum:

* to take into account group differences (with regard to gender, social and cultural origins, world view, etc.) and create conditions for their expression;
* to take into account the diversity of children and multiculturalism in terms of the selection of content, activities, and materials, which are to enable children to gain experience and knowledge of the diversity of the world (objects, people, cultures);
* to respect the specifics of the environment, children and parents;
* to provide activities for children in the whole group, in small groups, and on an individual level;
* to appropriately complement and combine various types of activities, either planned or spontaneous activities, group or individual activities, activities in various fields of education in pre-schools, as well as activities that involve a greater depth in certain fields.

The right of choice and the right to be different should be understood in terms of activity planning as options allowing for children to choose among various activities and content in accordance with their wishes, interests, capabilities and moods – in this context, it is of major importance that they are able to choose among alternative activities and content rather than between participation and non-participation, activity and inactivity, "guided activity" and free play – but in terms of organising time and space these rights should also be understood as options allowing for children to break away from the group routine or to express their individuality in various activities. This implies that the right to choice need to be respected and taken into account when organising rest and sleep, feeding and other needs.

Meals in kindergartens should take place as calmly as possible, without undue wait, preparation or haste during the meals. The choice and the option for the children to serve themselves should be allowed during meals. Competition and the unnecessary comparison of children should be avoided during meals. Families’ specific habits, e.g. vegetarian meals, should be taken into account.

Rest and sleep should no longer be mandatory, nor should be their time too strictly defined; organisation of the rest period should depend on individual needs, on the organisation of particularly tiring activities, walks, visits to various institutions, trips, etc. A transition from these activities or from lunch to rest should be gradual and should take place calmly and without undue haste in cleaning up or preparing the cots.

The daily routine should be organised so as to reduce as much as possible the time spent waiting, cleaning up, or doing nothing.

## 3.3 Interpersonal relationships among children, between children and adults in kindergartens, social learning

The positive behaviour of adults in kindergartens fully encourages and reassures children; the respect and politeness in their communication and behaviour set an example. Pre-school teachers, their assistants, or other adults who are allowed to participate in the education process are constantly around children, interacting with them in small or large groups or individually; in their interactions with children adults should play a guiding rather than directive role, providing a model of pleasant and friendly communication. The important elements of interaction among children as well as between children and adults include inter alia the frequency of adults' positive responses (such as smiling, body contact, and speaking at the child's eye level); responses to children's questions or requests; encouraging children to ask questions, to talk, to participate, to share their experiences, ideas and feelings; attentively and respectfully listening to them; giving positive instructions and guidance encouraging children to achieve the desired behaviour, redirecting them to more acceptable activities and behaviour, solving conflicts in a socially acceptable manner, giving consistent and very clear instructions rather than criticism, punishment and humiliations in general); encouraging children's independence (in view of the child's age). All this contributes to a supportive social climate within the class or group, providing a balance between participation and competition in terms of social learning.

Kindergartens should allow sufficient time for conversation, explanations, descriptions, storytelling, drama, and role-play. It is essential for children and their emotional, social and cognitive development that they develop linguistic competence, i.e. the capability of creating and understanding texts in various speech situations and for various needs. However, linguistic competence is much more than only the child's ability to communicate with the environment, as it is interwoven with play, art, and thought. In this way, children learn to communicate their experiences, emotions, and behaviours in a variety of manners; they learn to understand how other people convey and present their own experiences; they learn to respond with respectful and polite communication. language is developed in its full context when children have a reason and the opportunity to communicate their ideas, views, thoughts, and feelings, as well as when they have a need to behave in a certain way. When pre-school teachers and children visit theatres, exhibitions, markets, stores, etc., they participate in various speech situations and communicate with various people who use different types of speech (language registers). As a result, children learn that in various speech situations and settings (in view of the time and place of interactions, participants and their welfare, topic of the interaction, etc.) different social registers of communication are to be used. The most important thing when deciding on the use of social register is to create a positive emotional and social climate.

## 3.4 Space as an element of curriculum

Organisation of space and time is an essential element of the pre-school curriculum, with emphasis on the right to choice. In this context, the following important principles are observed:

* to organise a healthy, safe and pleasant space (internal premises and external areas);
- to ensure privacy and intimacy;
* to create a flexible and stimulating environment (a playroom should arranged appropriately to the age of the children and to the activities that take place in the playroom).

The organisation of space should be flexible to such an extent that it offers possibilities for organising activities for either the entire group or smaller groups, bearing in mind that we must set up a place ("house", "castle", "secret hideout", "tent") where a child can withdraw for some time.

It is recommended that each playroom be equipped with various partitioning boards, improvised partitioning walls or stands, low cabinets, shelves to divide the space into several smaller units, corners, and hideouts, which can be created or removed in view of the activities and which are, as a rule, co-created with children.

It is also recommended that there be permanent corners organised in the playroom, where children can at all times find various toys, props and other unstructured playing material (e.g. mirrors, boxes, fabrics, clothes that make great role-play additions, various substances), books (for various fields of activities), pictures (artistic paintings, photos, illustrations), sculpture products – all these materials should be easily accessible to children and kept within their reach (e.g. in open cabinets, on shelves). In corners with water, gravel, sand, and other materials where children transform and combine materials, there should be protective clothes at hand.

The pre-school playrooms and corridors should be used to display products and artwork designed and completed by children, showcasing their individuality and creativity. Occasionally, but at regular time intervals, pre-schools can set up galleries.

In order to be consistent with the principles of openness or flexibility and choice, the size and the type of the environment are of great relevance, as well as the arrangements of indoor and outdoor spaces, the access to outdoor spaces, and the number and diversity of indoor spaces all significantly contribute to the quality of the children's life in pre-schools.

## 3.5 Working with parents

Cooperation between kindergartens and parents is an important aspect of the quality of pre-school education since such cooperation substantially contributes to family and institutional education in terms of relevant complementarity.

The division of responsibilities and various competences is essential to establishing an effective relationship between kindergartens and parents. Institutions should provide parents with services but should not interfere with their private sphere. Kindergartens should respect the culture, identity, language, world views, values, beliefs, habits and customs of parents who, in turn, should not overstep their boundaries in joint decision-making and should therefore not interfere with the professional expertise of institutions.

Parents have the right to participate in planning the life and work of a kindergarten and classes, as well as to actively participate in educational activities in agreement with pre-school teachers. At the same time parents are to respect the professional autonomy of the kindergarten; Upon arriving at a kindergarten in the morning or afternoon, parents have the right to stay for a while in the playroom and participate in various activities in agreement with the pre-school teacher – and the adults in the kindergarten are expected to be willing to act accordingly.

It is particularly important that parents have the right to gradually introduce their child into the kindergarten and to have the possibility to arrange for the most acceptable way in which their child is to be introduced into the pre-school.

A brochure containing basic data should be available to parents at all times in accordance with the law and relevant rules. Notice boards outside the playrooms should provide constant information concerning ongoing activities and how daily life at the kindergarten is organised.

# 4. THE FIELDS OF ACTIVITY AT KINDERGARTEN

*The Kindergarten Curriculum* includes activities that are divided into the following specific fields: movement, language, art, society, nature, mathematics.

The objectives defined for individual fields of activities provide preschool professionals with a framework for selecting content and activities. In terms of implementing the curriculum, the content and activities offered are in various ways linked, upgraded, and supplemented by teachers who find professional assistance in manuals providing examples of work didactically and methodically explained, showing all the important stages of the educational work, such as planning, the educational work itself, observation, and evaluation.

## 4.1 MOVEMENT

The needs for movement and play are basic children's needs. Body movement usually depends on the perception of ambience, space, time, and oneself. As children learn to control the movements of their arms, legs and torso, they gradually begin to experience joy, safety, and comfort; they feel well and gain their self-esteem and self-confidence.

A child's motor development is at the forefront, particularly in the first years of life, and this is guided from natural and simple forms of movement (crawling, creeping, walking, running, etc.) to compound and complex sports activities. Through games preschool children gain various experiences of movement, which brings them joy and satisfaction.

Positive incentives are fundamental motivational methods when working with youngsters. Kindergartens should provide and encourage various indoor and outdoor activities for children to learn about and develop their motor abilities and master some physical concepts. Children also develop intellectual skills through movement, and play and movement have an important role in social and emotional development. With elementary physical games that provide a basis for athletic games, children gradually learn the sense and the importance of compliance with the rules of a game, thus improving their social skills.

As to movement, the curriculum should be adapted to different needs, interests, and abilities of children, so to support optimally their development and health.

**4.1.1 Global goals**

* Providing and encouraging physical activities for children;
* Children become aware of their body, experience joy in movement;
* Children learn about their motor abilities;
* Children develop their motor abilities;
* Children develop confidence in their own bodies and motor abilities;
* Children learn basic physical concepts;
* Children gradually become familiar with and conquer the basic elements of various athletic categories;
* Children learn about the importance of cooperation and respect for and consideration of diversity.

**4.1.2 Objectives**

* Children develop coordinated movements (coordination of the whole body movement, arms, legs), balance;
* link movement with the elements of time, rhythm and space;
* develop finger skills or the so called fine motorics;
* develop strength, precision, speed and flexibility, endurance;
* achieve a relaxed and natural expression of movement (walking, running, jumping, hopping, skipping, rolling, climbing, crawling etc.);
* develop basic physical concepts: an awareness of space (and the direction of body movement); the way (in which the body moves), various positions and relations between the body parts, between objects and people, between people;
* learn about and engage in various elementary physical games;
* learn basic motor movement skills with a ball;
* encourage children to find their own way of solving motor skill problems;
* freely move through the water and to master the basic elements of swimming;
* acquire bicycle riding and roller skating skills;
* learn about winter activities; learn basic elements of folk dance and other dance games;
* introduce children to rule-governed games;
* learn about the importance of cooperation within play groups, about helping each other and about sportsmanship;
* become familiar with various sports requisites and equipment, their names and uses;
* learn about basic principles of personal hygiene;
* learn about clothes and shoes that are appropriate for physical activities;
* learn about elementary games and sports categories specific for our and other cultural environments of the present and past;
* learn about the role of nature and a clean environment in conjunction with the movement in nature;
* become familiar with basic safety measures that are necessary for conducting physical activities and
* raise concern about the children's own safety and the safety of others.

**4.1.3 Examples of activities for children aged 1 to 3 years**

Children

* have a natural way of moving (walking, running, crawling, climbing, throwing, jumping, hopping, rolling, etc.; indoors and outdoors; over various surfaces; under, over, through various equipment and tools; with various parts of their bodies; into different directions; with different speed; using various props);
* take part in play activities in which they use various objects (sticks, balls, strings, pieces of cloth, etc.) and substances (water, sand, gravel, etc.), and games with arms, hands, fingers, legs, feet (kneading, stringing together, threading, sifting, etc.)
* create and maintain balance in place and in motion (standing on one leg; walking along a straight line, a rope, a low gym bench; maintaining balance on various equipment using a springboard, big ball, etc.; swinging, rocking, spinning round, etc.);
* play various elementary games (tag, hide-and-seek, merrymaking, group run, etc.; with our without props);
* mimic animals, objects, ideas; perform creative movements through music; play simple music games, etc.;
* perform activities in rhythm with arms and legs, using various props, accompanied with music, etc.;
* play various games learning basic skills of ball handling (ball playing, carrying, rolling, throwing, shooting, kicking, throwing and catching balloons, balls – of different sizes, weights, shapes, materials, colours, etc.);
* ride on various children’s vehicles without pedals and on tricycles or bicycles with additional wheels;
* play by the water and with water (various games with or without props – using small-size pools, floating objects, etc.);
* play and move in the snow (various snow games with or without props);
* take a walk in nature (walks in the immediate vicinity);
* take part in relaxation activities.

**4.1.4 Examples of activities for children aged 3 to 6 years**

Children

* have a natural way of movement (walking, running, crawling, climbing, hanging, throwing, jumping, hopping, rolling, etc.; indoors and outdoors; over various surfaces; under, over, through various equipment and tools; with various parts of their bodies; into different directions; with different speeds; using various props;
* play with various objects (small balls, strings, etc.) and substances (water, sand, gravel) that enable movements with fingers, hands, arms, legs and feet (kneading, pouring or sifting from one container to another, touching, threading), etc.;
* participate in activities to create and maintain balance in place and in motion (standing on one leg; walking along a straight line or rope; walking on benches of different heights and widths; maintaining balance on various equipment – balance boards, plates, stilts, etc., climbing the frames; swinging, rocking, spinning round, etc.);
* overcome obstacles by climbing under or over, skipping, carrying various objects (balls, sticks, cubes, etc.);
* perform various complex gymnastic exercises (with or without props, individually or in pairs; with music, counting, etc.);
* take part in various elementary and other games (with or without props; playing tag, hide-and-seek; group running, relay games, games for balance, precision and quick reaction, etc.);
* mimic animals, objects, ideas; perform creative movements through music; perform simple folk dancing games and games using movement and voice, rhythmic and singing games; play simple music and social games, etc.;
* perform various activities in rhythm with arms and legs, using various props, accompanied with music, etc.;
* play various games learning basic skills of ball and balloon handling (ball and balloon playing, carrying, rolling, dribbling, handling, throwing, shooting, kicking; throwing and catching balloons, balls – of different sizes, weights, shapes, materials, colours, etc.); with different parts of the body in place and in motion; with or without props;
* play by the water and in chest-level water (various games with water; games to become accustomed to water; with or without props); in preferred swimming technique;
* ride on various children vehicles: tricycles, scooters, bicycles (in favourable and difficult conditions);
* take part in various games on surfaces covered with asphalt or ice (roller skating, roller blading, skating, walking; sliding and stopping; along the wall, alone, with help, between and under obstacles, and performing various games, on courses and tracks);
* play and move in the snow and with the snow, with or without props;
* take a walk outside (walks in the immediate vicinity or distant surroundings, orientation tours, excursions – walking effort should exceed the daily load);
* take part in relaxation activities.

The examples of activities depend on the geographical position of pre-schools. In the areas where snow falls in winter, pre-school activities in the snow and in ice will prevail over pre-school activities in areas lacking such natural features. The same fact applies to kindergartens located in areas where games in the water and swimming activities may be organised.

**4.1.5 The role of adults**

The majority of children enjoy physical movement and are happy to take part in spontaneous and guided activities. Their participation in such games is further encouraged by an enjoyable and trusting atmosphere in which children can choose, research and discover original solutions to tasks and in which they can accept the mistakes and failed attempts as part of natural and often joyful and playful learning. This is an atmosphere in which adults play with children and learn unless the type of activity necessarily requires the adult to assume a supervisory role.

Pre-school teachers and their assistants provide children with appropriate challenges and a relaxing atmosphere where children can be active without fear of failure or rejection.

While conducting various activities, teachers motivate, encourage, guide, re-direct and correct children, providing advice, assistance, and demonstrations; they take part in children's games and learn along with the children.

They carefully observe and monitor children's motor development. It is essential that the activities be planned on the basis of thorough knowledge and understanding of children's development and their needs. Children are successful only when their personal characteristics are taken into account given that success is relative to the child's own interests and capabilities. Teachers assist children in becoming aware of their progress and experiencing it as success irrespective of the results achieved by their peers.

The way in which teachers communicate their observations and expectations to children is also important. Children's efforts, attempts and solutions should be taken into serious and objective consideration. Children's endeavours are to be commended.

Special attention should be devoted to children who are extremely physically gifted and to those who are less physically adept. Teachers guide children in developing their talent and encourage and support those who are less gifted.

They equally encourage girls and boys to participate and test their performance in various physical activities.

They discuss with children how they experience their success or failure and why competition matters, and they also teach them about good sportsmanship. Such conversations may entail real stories about famous athletes, current events in the world of sports, etc.

The activities in this field are related to other fields (language, nature, society, art, mathematics). Teachers encourage children to notice and talk about the changes in their bodies after intense physical activities (the shortness of breath, heartbeat, sweating, blushing, thirst, fatigue, etc.), why these changes occur and what they mean for health. They instil basic principles of personal hygiene and make sure that children practice good hygiene after exercise. They often give directions using terms such as *quickly, slowly, moderately, in a straight or jagged line, in a zig-zag line, backward or forward, upward or downward, on, in, through, behind, to the right, to the left, near, far away, long, stretched, shrunken*, etc. – since such terms and concepts are easier understood and mastered when linked with movement. Conversations, visits to museums and exhibitions, books, video recordings, etc., help children learn about various athletic categories in a domestic and foreign environment from the past to the present.

Teachers use various organisational methods (obstacle courses, work at stations, work with additional tasks, relay games, etc.), forms of work (individual work, pair work, small or large group work, collective or combined work), and different standardised and improvised props. Activities should be organised in such a way as to encourage children to be physically active as much as possible. Those children who do not want to participate should be inspired and motivated or offered alternative interesting activities. Teachers and children together prepare or put away the sports equipment and props.

The activities should vary in terms of content, duration, space and the role of adults. The time of the activity should be determined beforehand (on particular days) and adjustable (taking into account the children's moods and wishes, weather conditions and other circumstances. Children should be provided daily opportunities to participate in a range of physical activities.

Teachers should encourage the cooperation among children, parents and kindergartens. Working with parents may be organised within the framework of various activities in the pre-school, e.g. a trip, an orientation trip, a sports morning/afternoon, etc.

Teachers are responsible for the safety of children in all activities and situations. They acclimate children to pay attention to their own safety during activities and on playgrounds, and through the use of props raise their awareness about the importance of safety and about taking personal responsibility to keep themselves safe.

## 4.2 LANGUAGE

Language activities in the pre-school period – the most important period for speech development – includes a wide area of cooperation and communication with adults and children, helping children to become familiar with the written language and (through experience) to learn about national and world literature – their own and foreign culture. During this period children learn to talk about their experiences, feelings, and thoughts and they come to understand what other people are trying to communicate. Language activities are associated with all linguistic levels: the phonological, morphological, syntactic, semantic, and pragmatic, whereas language development is naturally incorporated into all fields of activity. The development of preliminary writing and reading skills is important particularly for children aged 3 years and over.

Children learn a language by listening to everyday conversations and from the narration of literary texts, by listening to the out-loud reading of adults, storytelling, describing, using the language in fantasy games and dramatic performances, inventing stories and songs, by being individually engaged in various social games, fairy-tales, counting games, nursery rhymes, jokes, riddles, word games, etc., which have survived through generations as common property.

Simple texts that are associated with everyday life – e.g. short messages, a record of the child's comments on their drawings, favourite food recipes, etc. – form an essential part of language activities.

In this context, growing familiar with a book as the vessel for writing, along with an early introduction to the use of books in general, is equally important. In a broader sense this means that children are introduced to written culture as a key component of the democratisation of society.

Children should be given an opportunity to become properly acquainted with linguistic research results, and have explained to them the differences between social varieties or registers of the language (literary: spoken), languages, language groups, etc. A pre-school should provide children whose native language is not Slovenian with a good basis for collective bilingualism in the ethnically mixed areas of the Obala and Prekmurje regions as well as a basis for individual bilingualism (which can mainly be seen in respecting the parents' and children's decision to learn the first language – non-national language, the second language – national language – and in encouraging to learn both languages) in other areas in Slovenia.

The basic goal, which defines global goals, is t*he understanding of the language as the foundation of one's own identity*.

**4.2.1 Global goals**

* Language as the object of the game;
* Being aware of the existence of one's own and other languages and other cultures;
* Listening, understanding and experiencing the language;
* Experiencing and learning about basic literary works for children;
* Language development in terms of a moral-ethical dimension;
* Stimulating creativity;
* Developing non-verbal communications skills;
* Encouraging language skills (articulation, vocabulary, texts, communication, etc.);
* Learning about the symbols of written language;
* Perceiving the status of the Slovenian language as the national language.

**4.2.2 Objectives**

* In their everyday communication, children listen to language and are included in communications processes with other children and adults (non-verbal and verbal communication, cultural communication, communications styles, politeness).
* Everyday communication develops children’s ability to distinguish (identify) between a dialect/colloquial language and the structures of literary spoken language.
* Children express themselves by means of gestures and movements*.*
* Children develop the ability to respond to non-verbal expression of wishes and suggestions of others.
* Children develop the language skills in various functions and positions during everyday activities and in various social situations.
* While listening to and telling the stories and other literary works, children develop the capacity for an imaginative use of language; they learn about moral-ethical dimensions; they identify themselves with literary figures and experience literary activity.
* Children recognize, enjoy and take pleasure in nonsensical stories, rhymes, various sound and word games, jokes and experience the sounds and rhythm.
* Children develop language at all linguistic levels (from the phonetic and morphological levels to syntax and semantic levels).
* Children experience and learn about the verbal communication as the source of delight, comfort and problem solving.
* Children develop pre-reading and pre-writing abilities and skills.
* Children develop abilities of cognitive and emotional participation in the literary world.
* Children listen to a variety of literary genres and learn about their differences and similarities.
* Children become familiar with the word, a book as the source of information.
* While reading, they experience pleasure, joy, fun; they link the aesthetic and physical pleasure and develop a positive attitude towards literature.
* Children develop the ability to co-create imaginary world and experience a literary world (in particular the image of a literary figure and the activity's space).
* Children learn to narrate independently.
* Children develop the ability to use the language to support thinking while creating pre-conceptual structures (number, quantity, weight, space, time) and in interpersonal relationships.
* Children creatively express themselves through language.

**4.2.3 Examples of activities for children aged 1 to 3 years**

Children

* through everyday communication in kindergartens, become familiar with various social registers of the Slovenian language;
* through everyday communication witness various situations in which the Slovenian language is a given in all official and non-official speech situations;
* listen to fairy-tales, stories, riddles, songs and narrations – tailored to their age;
* take part in finger games, action games (etc. the action song "Biba leze, biba gre"), "bibarije" songs, simple group or individual dances, merrymaking games;
* communicate with children and adults through eye contact and movements;
* play with sounds;
* create first multi-word sentences, create new words and sentence samples, respond to calls, begin conversation on their own when they feel like it, introduce their topics, ask questions and answer to them;
* communicate with children in the group;
* play word games;
* become familiar with books, both literature and handbooks;
* listen to simple stories and talk with adults about the items used in paintings and in the environment;
* tell and sing the riddles, counting games, rhymes, short song and stories in which parts of the text repeat, or stories that they concocted in their imagination or they repeat;
* are active in solving problems encountered in the process of language communication;
* through books and other forms of the press that are available at all times to play with or "read", become familiar with the role of symbols and written language;
* test the forms of verbal communication that are new to them;
* experience the rhythm of words, music and songs.

**4.2.4 Examples of activities for children aged 3 to 6 years**

Children

* in everyday communication witness various situations in which the Slovenian language is used as the national language; at the same time they receive information that in other areas other languages also exist;
* listen to fairy tales, stories, riddles, songs. They experience the content through various media (audio and video), visit theatre plays (stage plays or puppet shows), watch films or cartoons, or visit general libraries;
* distinguish between various language registers that are appropriate for specific speech situations (standard spoken language, dialect) and their functions in everyday life;
* witness in everyday communication the use of standard language, expanded to a larger number of speech situations;
* learn in everyday communication about the differences between the standard language and their dialect in specific situations occurring through communication;
* perform activities in which according to their own wishes they imitate and play characters, animals, objects;
* take part in various speech situations, start a conversation, introduce new topics, enjoy and play with words and structures, ask questions, negotiate;
* take part in the communication in small groups or in pairs, and in the communication with adults and children;
* listen to an adult or a child, listen to audio files, or play video files containing various literary genres, including contemporary children's culture;
* tell stories independently, summarise them and invent their own;
* independently create books, comics;
* take part in various social and didactic games that encourage vocabulary building, summarising and inventing stories (etc. magic cards);
* while listening and narrating, experience the rhythm of words, music and songs.
* play with sounds and letters;
* become familiar with the written language and its role;
* learn that spoken words may also be written down and re-read;
* use various types of symbols with which they express their thoughts.

**4.2.5 The role of adults**

Adults who work with children tell and read children age-appropriate tales, stories, riddles, and songs; they organise puppet shows and enable that children already in this age period come into contact with the standard language (spoken or colloquial) and learn about literary genres of language through dialect and colloquial language.

They should carefully observe children and be able to recognise a child's non-verbal style, including the use of sign language (deaf, mute, and deaf-and-mute children use differently devised system of non-verbal communication than those who can hear or talk).

They should be able to demonstrate their own body language and in a way that is specific to the situation establish an interaction with children by using non-verbal means of communication; they should also be able to identify possible misunderstandings in non-verbal communication and bear in mind different cultural styles of non-verbal communication (taking into consideration the social

environment in which a child has grown up).

They talk with children without using baby talk and encourage them while introducing communication.

They show their appreciation for verbal communication.

They listen attentively to the communication among children and seek to expand and deepen the topics that children themselves have started to talk about.

They seize the opportunity for an in-depth conversation with children.

They discuss the experiences and people that children meet at home and at kindergarten, and offer them the possibility to participate in the dialogue.

They provide children with opportunities to listen to various forms of communication among the grown-ups, etc. negotiation, discussion, planning.

They are familiar with the development of children and adapt their expectations to the child's language abilities.

They respect various ways that children interact with the environment and encourage children to express their feelings first by using non-verbal means and in the second phase with a combination of verbal and non-verbal means of communication.

When encouraging language skills, they use as many various books as possible from different fields

 (non-artistic texts), fairy-tales, stories, songs and games.

They encourage children when they make their first attempts at verbalisation and repeat and expand upon the child's statements.

They adapt to children as regards the choice of topic of conversation.

They encourage children to suggest topics regarding activities and spoken communication.

They tell and read fairy-tales, riddles, stories, and songs and stage puppet shows.

They enable children to play with books, look at cartoons.

They encourage the intimacy of small groups during storytelling or reading; reading and listening to stories and songs is an enjoyable and interactive activity for both children and pre-school teachers or their assistants.

They encourage children to discuss and debate what has been read.

They use printed material and letters in the everyday context (etc. food recipes).

They provide opportunities for children to be creative with language.

They allow them to create their own books, comics.

They provide opportunities for children to learn about the symbols in the world of adults, e.g. traffic lights, street signs.

They encourage children during play and develop their verbal communication, through which children develop the concepts of space and time, and colour; by setting an example, they focus the children's attention on difference between quantity degree terms: *more* and *less,* *a lot* and *a little,* and other antonyms *(sweet – sour/bitter, dirty – clean, beautiful – ugly, good – bad, happy – sad, young/new – old, heavy – easy, etc.)* and between terms of space and time *(in – on – under, up – down, ahead – at the back, between, in front of, long – short, high –low, etc.).*

The children's names are written on things belonging to them (e.g. on hangers in the cloakroom, folding beds, towels in the bathroom) and made by them. Besides the names, there are attached symbols or photographs that children may recognise.

Adults enable children to have access to the age-appropriate sources, handbooks, lexicons, dictionaries.

## 4.3. THE ARTS

The arts enable children to fulfil their creative potentials, which are shown through a child's playful research activity and while learning about the world, which for them is an inexhaustible source of inspiration, motivation and content in all activity fields.

Children are inventive and creative in all activity fields, however, in art some specific features stand out.

Art is the medium through which children invent and create works while discovering language constructions, articulating the content and inventing or creating a picture, song, game, dance or object. Such works express the human characteristic sense of artistic order and beauty, because of which they surpass other regular, functional, technical products. Because of this children's activity in the arts can be considered as the artistic activity of children producing children's art works. Such works are created when children are allowed the freedom to work and when they are expected to be direct, different and original. These are the outstanding features of children's art that should be nurtured and appreciated and that also qualify as criteria for the evaluation of their artistic works. Children's art and artistic taste are highly personal in nature and are always observed, understood and assessed in the context of the child's specific development and living environment. Children’s creative abilities can vary and differ in various artistic media.

Aesthetic experience, which is highly emotional and intuitive perception of something, is expressed by children in terms of art and defined through aesthetic terms such as beautiful, funny, ugly, etc. This also reflects the child's innate sense of artistic order and a developed sense for beauty influenced by the social and cultural environment.

Children communicate and express themselves by means of art and, hence, develop their abilities to use symbols and, through drawing and painting, dance, or music, create something entirely different or unique.

Through art they can communicate their most intimate feelings and emotional content, exhaustively describe or present an event or object, focus on aesthetic aspects, express their ethical judgment about a person or event, or experiment with artistic language. In doing so they gradually and through small manageable steps experience complex areas of the real world and learn about themselves as independent designers of symbols and creators and about their works as meaningful and durable products. Their works contribute to the shaping of the environment and make them realize that their role in the community is meaningful, which builds and raises their self-confidence.

The integrity of experiencing and creating makes artistic experiences an important factor in a child’s balanced development and mental health.

**4.3.1 Global goals**

* To experience, learn about and enjoy in art;
* to develop aesthetic perception and artistic visualisation;
* to learn about individual forms of art;
* to develop expression and communication with art;
* to develop creativity and specific artistic abilities.

**4.3.2 Objectives**

* To foster curiosity and enthusiasm for art activities, art and diversity;
* to encourage experience, expression and joy of the beauty;
* to experience art as part of social and cultural life;
* to experience and learn about artistic works;
* to develop artistic visualisation and imagination through imagination and creation;
* to nurture and develop individual creative potentials in experiencing, imagining, expressing, communicating phases and enforcing in the art field;
* to detect and nurture specific artistic abilities and gifts; to develop images concerning space and time, visual and audio images, body images and concepts about art and communication;
* to develop a sense of themselves and others; to nurture, encourage and develop sensuous being by giving greater attention to feeling the body, touching, observing and listening to oneself and the selected sources of the environment;
* to nurture and encourage a rich and varied response to the inner and outer world; to develop the ability of artistic expression of sensuous, emotional, cognitive, aesthetic perceptions and value judgments; to experience and learn about the communication concerning fine art, music, dance, drama, films and TV;
* to experience and learn about artistic languages and their expressive properties;
* to develop the ability to express the same experiences in various artistic languages of dance, drama, fine arts, music, film, etc. to use and develop skills;
* to learn about and explore and experiment with artistic means (*body, voice, materials, objects, instruments, techniques and technologies*) and their expressive properties; to encourage general creativity when preparing, organising and using means and space.

**4.3.3 Examples of activities for all art forms**

**4.3.3.1 Activities for children aged 1 to 6 years**

Children

* observe, comment, compare, define and express the beauty in nature and urban environment, useful objects, technical and artistic products, special and everyday events, etc.;
* express, through artistic means, their feelings, emotions and thoughts in their own way and in the language that suits them;
* express themselves spontaneously or select the contents, motives, means and time of their expression;
* translate the experience of one art genre to other forms of art (etc. *dance in clay, music in drawing, puppets with dancing*);
* take part in creative processes at various stages: planning, designing and implementing an idea, delegating and accepting work and talking about the work, process, experience;
* take part in several media group projects, participate in their dancing, drama, fine art, design or music segments;
* observe and recognise particularities of persons, things, phenomena and works of art, which they then present in games, drawings, photographs, music, dancing;
* transform a part of or the entire object, space, dance;
* search for, discover or invent contents, purpose and functioning of familiar or unknown objects, events and artistic works;
* compare works of art and their characteristics (etc. *two shapes presented in one drawing, two songs, puppets and actors, drawings and photographs, movement and statute; object and statute; dance and drawing and music*);
* interpret signs, symbols, events, works, objects, etc. from life and art;
* "read", recognise, invent and use signs and symbols;
* cooperate, attend performances, concerts, exhibitions in kindergartens and in authentic environments;
* perform in public and for the camera;
* meet creators, performers; become familiar with the phase of creating a work of art in a kindergarten or in the authentic environment;
* view works of art in kindergartens, museums, galleries, theatres, cinemas, libraries, etc.;
* view artwork from various and different cultures;
* view folk art and other crafts;
* play the themes of various artistic professions;
* creatively participate in the children festive year, calendar and life special events.

**4.3.4 Examples of activities by individual art forms**

**4.3.4.1 Examples of activities for children aged 1 to 3 years**

**Examples of fine arts and design activities**

Children

* play, handle, touch and observe toys, persons, objects, photographs, illustrations, books, events;
* draw with soft pencils, chalks, charcoal, fingers, etc.
* paint with fingers, palms, sponges, very broad brushes, etc.
* do printmaking with their palms, sponges, crumpled paper, etc.
* knead, shaping dough, clay, plasticine, sand, etc.;
* assemble and disassemble blocks, little pots, etc.;
* play, handle, observe, draw, paint and obtain experience with simple lines, dimensional and voluminous shapes; intense pure colours; a large light versus dark contrast; significant differences in the size and structure of surfaces;
* freely play, get dirty, invent, research natural, artificial and artistic materials, toys and other items;
* spontaneously draw, paint, shape, etc.;
* draw, paint after an intensive sensuous, motor or emotional experience;
* do printmaking of their hands, objects, simple stamps in the snow, clay, on paper, etc.;
* observe grownups and take part in the making of masks, puppets, greeting cards, gifts, in decorating the space, etc.

**Examples of musical activities**

Children

* experience music, recreate, produce, express themselves and communicate through singing, playing, listening to music and inventing music;
* rhythmically express folk and children's counting rhymes and jokes;
* accompany their singing and rhythmic chanting with various musical instruments or movements;
* listen, imitate and distinguish sounds from nature and the environment;
* listen to performances and recordings of the selected pieces of musical literature
* sing children's, folk and art songs in the pitch range of their voice;
* perform rhythmic patterns by clapping, stamping their feet, snapping their fingers, tapping, etc. and playing small instruments;
* spontaneously create rhythmic-melodic patterns;
* experience and observe the playing and singing of adults and older children;
* listen to the music fairy tales and take part in them.

**Examples of dance activities**

Children

* make up their own movement, movement sequences and body postures;
* move and dance with their whole body, explore the possibilities for movement in various parts of the body, combine simultaneous and consecutive movement;
* move and dance with their whole body, explore the possibilities of movement in various parts of the body, combine simultaneous and consecutive movement;
* feel the difference between moving and standing still, between non-locomotion *(bending down, stretching, turning, swaying on the spot)* and locomotion *(crawling, climbing, walking, running, jumping)*;
* try movement with different bodily orientations (rising, falling, closing, opening, advancing, retreating), large or small amplitude, high and low horizontal levels;
* experience and observe the teacher or a guest dance.

**Examples of audio-visual activities:**

Children

* observe and comment kaleidoscopes, selected photos, children films, TV-programmes, video projections and respond through their drawings;
* observe and interact with adults in taking photos and video recording.

**Examples of drama activities**

Children

* play and imitate animals, people;
* play simple and fun motion, rhythmic or verbal games;
* take part in games with other children and pre-school teachers;
* use objects in such a way that they represent other objects;
* animate puppets, toys, or other objects;
* play by using simple aids, elements of the costume and scenes;
* take part in performances and celebrations;
* attend simple puppet performances in kindergartens.

**4.3.4.2 Examples of activities for children aged 3 to 6 years**

**Examples of fine arts and design activities**

Children

* play, imagine, design, create, express themselves, communicate through drawings, graphics, images, collages, plastics, constructions, objects, space;
* observe the visual characteristics, such as *shapes, colours, lightness, directions, spatial and size relationships*, of many and different beings, natural or created or artistic objects, things, works, events, processes;
* touch, caress, knead, squash surfaces, materials and forms;
* draw, model, cut, assemble, design also detailed forms, details, patterns, etc.;
* use various techniques of drawing, painting, printing, gluing, designing, modelling, forming, and many and various artistic, natural or art materials;
* observe the world and create two and three-dimensional artistic compositions using various shapes, various shading contrasts, basic and mixed colours and in various ways in which that which is listed repeats *(large/small, upright/sidewise/horizontal, below/to the left/in the centre, together/ apart, more/less, dense/rare, full/hollow, thin/thick, rounded/angular, soft/hard, smooth/rough/hairy, heavy/light, static/dynamic, alike/similar/different*);
* depict the same themes and motifs in two and three dimensions;
* depict the same themes and motifs in drawings and paintings with clay and other different materials;
* picture, choose and design puppets, costume elements, and scenes for dance, drama and audio-visual activities;
* design decorative and useful things.

**Examples of musical activities**

Children

* play, create, listen, picture and express themselves and communicate through music;
* rhythmically express folk and children's counting rhymes and jokes;
* accompany rhythmic expression with various musical instruments and movements;
* listen, imitate and depict sounds from nature and the environment;
* listen to performances and recordings of the selected pieces of music literature;
* sing children's, folk and art songs in the pitch range of their voice;
* perform rhythmic and melodic patterns by clapping, stamping their feet and playing small rhythmic and melodic instruments;
* listen, perform and remember rhythmic and melodic units;
* explore vocal characteristics of the voice and instruments;
* look for and create simple audio devices and instruments and play them;
* play, listen, perform, invent sounds and music, and discover and learn about the characteristics of the sound: intensity, duration, colour and tone height;
* participate in music didactic games;
* invent, improvise shorter or longer music motifs, melodies, songs;
* take part in and independently chooses among the selected materials of musical pieces for performing and listening, as well as among different forms;
* identify, distinguish, classify examples of music genres (merrymaking, festive music, lullabies, instrumental music; calm/merrry, etc.);
* listen to, choose, picture, perform music fairy tales, dance and drama presentations and videos on sound and music equipment.

**Examples of dance activities**

Children

* communicate, create and express themselves through movement and dancing;
* improve control and awareness of body parts and the whole body in various forms of movement and stillness;
* differentiate between focused movement and relaxation;
* play and practice coordination and balance;
* observe, dance and understand the elements of stillness and movement in one place or in various floor and spatial patterns, at various tempos, rhythms and varying degrees of tension, and connect these elements into short or long, more or less independent dances;
* perceive the relation of one body part to another, the relation between the body and the floor or an object, and the relation between dancers in a pair and in a group;
* create short dances for drama performances and videos.

**Examples of drama activities**

Children

* play, identify with and imitate animals and people, and relations between them, with the use of voice, body, room/space, a puppet, an object, a costume or a mask;
* describe an object, a situation, or the environment by using a gesture, sound or word;
* use objects in a way that they represent other objects;
* imagine and perform an animation with various kinds of puppets and objects;
* take part in games with others;
* take part in games consisting of several scenes;
* "read" drawings or photographs and create stories;
* invent stories or songs that are performed by children;
* express themselves, observe the verbal speech *(monologue, dialogue, chorus)*, body language *(movement, gesture, facial expression)*, the language of the development in the space *(a person directed towards another person or away from another person or object)*, the language of temporal events *(the dynamics of the actual developments in the game or scene and the organisation of time in which the story unfolds, e.g. a week or a year - limited time of performance)*;
* watch performances, use and distinguish theatre means *(a scene element, a scene object, a costume, a lightening, a sound, a mask, a puppet);*
* experience, perform, picture various tensions in drama developments;
* picture and direct the development of the scene or entire performance.

**Examples of audio-visual media activities**

Children

* observe different photos, pictures from magazines and books, posters; watch and listen to selected film and video projections, CDs, and TV-programmes; record using cameras, video-cameras, tape recorders; distinguish between the recording and playing of moving and static images and sounds;
* learn about visual, aural and temporal elements of static, moving and changing images and their relationships;
* take photos and record friends and the happening in kindergartens during their daily routine and at special events;
* observe, recognise, comment photos and details;
* compare photos with various persons, objects, places;
* "read" photographs and create stories;
* cut photos and collate new scenes *(create new content and artistic compositions)*, complement them with drawings and printed illustrations and details and use them to create a scenario in the form of a comic;
* on TV or at the cinema watch animation, feature documentary films and films that are recorded by themselves or their parents, teachers, etc.;
* reconstruct the movie through their drawings in the form of a comic; talk about the contents, main heroes, the scenes, and about how the story builds and unfolds;
* use multi-media CD-ROMs through appropriate plays and education programmes;
* learn about various genres of TV-programmes (children's programme, daily news, artistic programmes, contact programmes, sports broadcasts, commercials, etc.).

**4.3.5 The role of adults**

In terms of the arts, pre-school teachers, their assistants and other adults that participate in the pre-school education programme take into consideration *the principles of children's development and characteristics of children in various fields of art,* which are revealed by individual childrenin an individual way. All children's activities are planned and designed within the same framework.

*Artistic activities* are conducted in a manner that will allow children to look for and explore by themselves, to research and find the answer or solution to conceptual, organisational or physical tasks or problems, while providing them with the support and recognition of adults even for modest or disappointing progress. Adults should not evaluate, comment on, or criticise children's work; nor do they ever encourage children to create schematic, likeable, regular, customised shapes, nor do they praise them excessively. Adults are interested in the children's aesthetic judgment; however, they do not interfere with such judgment. They are aware that the process of creating something is more important for children than the result itself.

Adults should closely *observe* children's reactions when they encounter, art as well as the reactions of their peers and other adults – which provides a basis for their flexible and resourceful planning of further experiences for children. In this context, they should be constantly aware of their expectations, motivations and conduct and should not interfere with the child's natural course of development by giving them too demanding tasks or by having premature or otherwise unjustified expectations.

Adults should create a rich and diverse environment of music, art, dance and theatre with various incentives allowing children to perceive themselves and others, their surroundings, and the arts themselves. The sources should be diverse, entertaining, interesting, and surprising and should nurture children's desire for creativity and action. The aesthetic and artistic environment of good quality co-shapes children's development of aesthetic appreciation and personal taste.

Adults should create a *friendly atmosphere* of mutual trust, thereby encouraging children to open up and fulfil their desire to express themselves. Children who are safe and free develop and implement their creative and developmental potentials in their own unique way. Adults expect children to be creative and, therefore, they should foster their creativity at various levels in terms of content, imagination, design and the acceptance of music, image, play, and dance. They should support them in their own individual choice of a priority area in the arts, in their initiatives, in their creative and bold ideas, curiosity, originality and humour. Adults should recognise both child-specific potentials and limitations, which children reveal through artistic activities, while encouraging and developing children's artistic talents and, where appropriate, advising further education.

*Artistic/aesthetic experience* is understood as direct perception through the senses, where experiences and forms are not perceived in a logical, biological or ethical sense, but as pleasure offering a deeper fulfilment. In order to maximize a child's sensitive experience and creation of a work of art, greater focus is to be placed on the child's perception and the ensuing sensibility; consequently, adults should draw the attention of children to attentive listening, observing, and touching, which will increase a child's sensibility and awareness of aesthetic experience and of the richness of various contacts with the world.

Besides the sensitive experience and perception, the *conception and presentation* of a work of art is also based on rich images. Adults should foster the development of children's music, fine art and dancing performances by providing a rich and varied learning environment of music, fine art, dance, and through artistic activities. At the same time, they should allow children to build images about individual artistic branches, about art as a whole, and about expression and communication, as well as to enrich and enhance their perceptions about the world, life, culture, and about the relationship with the community and the world.

Children should also be allowed to *express* through art their *intimate world and communicate* with the world spontaneously, directly and individually.

Non-verbal communication is of particular importance when the child's vocabulary is still limited, and also for expressing content that is difficult to convey with words or that is very intimate/secret. It is therefore necessary to enable and encourage children to experience and express emotional content, as well as its value and aesthetic experience. Such personal confessions manifest the differences between individuals – their reactions, perceptions and experiencing of the inner and outer world. In the area of arts, adults should expect and appreciate the differences in terms of content, artistic design and personal artistic creations. Consequently, when children learn about and create art, adults should encourage and nurture children's search, recognition, exposure to and acceptance of diversity; they should awaken children's curiosity and encourage them to experience the joy of diversity.

*Artistic expression* enables individuals to present a wide range of content that may be perceived, explained, understood or experienced by another individual. The use and understanding, the "writing" and "reading" of artistic expression are starting points that art may function and be accepted and the foundation for communication with art. Artistic expression can convey even very personal sensory and emotional content so that we can relive them in a direct way. And this brings us to the creation of paintings, songs, films, performances.

To develop basic language skills it is imperative for children to undergo personal sensory, emotional and cognitive experiences because only experience allows children to use artistic expression when summarising and conveying various content. Only in this way can children build a solid relationship between a specific meaning and the form that articulates the meaning. Adults should be aware that only intensive and meaningfully structured experience enables children to form and shape them into an intelligible message.

Therefore, they should provide children with opportunities to engage in a variety of experiences with simple, clearly structured works of art, and to create such works by using the limited and selected language elements, e.g. using two primary colours, only angular shapes, extremely slow movements, extremely loud and quiet speech, high and low pitch tones, etc.

The content that artists or children picture and shape in their thoughts only become accessible to one's own and others' eyes, ears, and hands, through the use of various media, e.g. voice, violin, coloured chalk, body, camera, screen, etc.

Adults should enable children to learn about many and diverse media in all fields of art and to make their own choice of them in accordance with their beliefs and objectives. Adults should also provide children with opportunities to discover *expressive characteristics and possibilities of individual media* in such a way that they become familiar with high-quality works of art and that they have appropriate experience to express concrete content. This means that children are offered appropriate means, e.g. for a drawing the idea of *"soft lines"* they *caress the air* and demonstrate this through a drawing *with charcoal or a very soft pencil*.

Children should be enabled to *experience all artistic forms*,as well asart as a whole. Adults also enable children to act as creators, listeners and spectators; children's experience should be planned so as to allow that the artistic activity or work in one artistic genre becomes a topic or inspiration for another artistic genre, e.g. painting or drawing after listening to music; forming the human body’s posture in clay and imitating the posture in the dance movement, or vice versa.

Art activities are an important and encouraging *part of learning in other fields*. As part of art activities, adults link content from nature, society, mathematics, language and physical activities.

## 4.4 SOCIETY

As human beings we form part of the social environment in which we grows, live and work. If children are to interact with that environment, influence it and subsequently also actively change it, they must grow familiar with their social surroundings (people’s everyday and family lives, working environment and professions, cultural and public life, etc.) and acquire insight into society at large. Children become familiar with their hometown and their ancestors’ way of life, and gradually learn about historical changes in general society and around the world.

Integration into the broader environment also involves integration into the culture that we are a part of. Apart from their integration into their own culture and national tradition, it is necessary that already at an early stage children learn about other cultures and civilisations (lifestyles, traditions, celebrations, etc.), which provides them with a basis for education on mutual tolerance and respect for diversity.

In addition, there is also a learning culture that encourages children to learn from each other. This kind of learning includes songs, rhymes and counting rhymes, jokes, riddles, word play, fairy tales, etc., which have been passed on from generation to generation and play an important role in everyday life, work and pre-school activities.

Because of the exposure to commercial effects and fashion trends, we must encourage older children to act critically and acknowledge their individuality (by having conversations about dressing, toys, music, cultural stereotypes and other trends). It is especially important for children to develop criticality towards the myriad commercials they are bombarded with on a daily basis.

At kindergartens children should be provided with concrete experiences related to the exercise of fundamental human rights and democratic principles, and the experience of being valued as individuals with respect for their privacy. At the same time their everyday life, work and pre-school activities should help them develop a sense of security and belonging based on the idea of equality and non-discrimination (in terms of sex, social and cultural origin, religion, body type, etc.). Consequently, children should learn the basic rules of behaviour and communication that are derived from the concept of our individual freedom provided we do not restrict the freedom of others. They should also be given ample opportunities to develop a critical attitude, and to make personal decisions and autonomous judgements.

It is important to create a democratic atmosphere in pre-schools, which will stimulate positive group processes and block negative ones. Activities are to be designed in such a way that they encourage children to work together but do not lead to a group routine, forced adaptation or an infringement of the individual's autonomy. Children need to learn to make choices at an early age (regarding their everyday lives, work and other pre-school activities) and to take part in planning, decision-making and sharing the responsibility for decisions taken jointly.

Everyday life in pre-schools, daily routine, rituals, events, timetable, etc. should allow a child to develop a sense of belonging, create a pleasant atmosphere, and facilitate the formation of a bond between pre-school and family life.

Social problems are not neutral when it comes to values, because in this case we can also encounter ethical dilemmas related to the strength of distribution, conflicts of interest, injustices in our society and around the world, and man’s attitude towards life and death (violence, wars, destructiveness, poverty, etc.).

Kindergartens aim to let children know people’s coexistence takes comprehensive effort and that sometimes the situation is so critical that people are forced to part.

**4.4.1 Global goals**

* To experience pre-school as an environment providing children with equal opportunities for participation in activities and in everyday life, regardless of gender, physical and mental state, nationality, cultural background, religion, etc.;
* to learn about oneself and others; to develop basic life habits and learn about the differences between our and other cultures as well as among different social groups;
* to become familiar with the immediate and wider social and cultural environment and to learn about intercultural and other differences;
* to enhance sensitivity regarding ethical diversity; to form a basis for the perception of historical changes; to learn about the fact that people and the environment, as well as society and culture, are changing;
* to provide opportunities to learn about different cultures and traditions; to educate about a safe and healthy way of life.

**4.4.2 Objectives**

* Children gain practical experiences in establishing democratic principles on which modern society is based.
* Children learn that people have to help each other and cooperate in order for society to function and ensure survival, well-being and comfort.
* Children obtain practical experiences in accepting diversity (in terms of sex, national and cultural background, religion, physical and mental state etc.).
* Children are provided opportunities to break loose from the gender inequality stereotypes.
* Children learn that both adults and children are an important part of society.
* Children are provided opportunities to develop abilities for and find ways of establishing, maintaining and enjoying friendly relations with one or more children (including problem solving, negotiating, understanding and accepting different point of views, behaviours and feelings of others, role changing, politeness in interpersonal communication, etc.).
* Children become familiar with a group and pre-school rules; they also help create such rules based on their understanding of why they are necessary and what consequences may result from the violation of adopted rules on acceptable behaviour, i.e. behaviour which does not infringe the rights of others.
* Children learn about diversity within various contexts and obtain practical experiences about understanding the same thing, event, phenomenon, etc. from a different point of view and by finding different solutions and answers.
* Children are given opportunities to critically evaluate commercial effects, fashion trends, etc., and to become familiar with the possibilities of critical thinking.
* Children are given an opportunity to recognise and find out more about physical similarities and differences between people and about equality of all.
* Children learn about society structure, become familiar with different functions of a surrounding social environment, professions, working and cultural environments etc., learn about different holidays and customs.
* Children become gradually acquainted with wider society and culture. Children gradually learn about different types of families and family communities.
* Children develop an interest and satisfaction through discovering the outside world. Children learn about environment characteristics that are important for the local community, e. g. a river or a mountain that is located nearby, a regional museum, archaeological diggings. Later on, they also discover the characteristics of a wider environment.
* Children understand the concept of time and how fast the time and history change.
* Children become familiar with different means of communication, the transmission of information (mail, telephone, radio television etc.) and a computer-based communication.
* Children form good but not rigid eating habits and develop sociability, which is connected with eating.
* Children learn about a safe behaviour and how to live and act safe in different kinds of environments: at home in traffic, at pre-school, during their free time and play, sports and other social activities.

**4.4.3 Examples of activities for children aged 1 to 3 years**

Children

* grow in self-awareness, personal identity and self-respect through everyday activities; they take part in activities through which they become more self-aware (by naming body parts, looking in the mirror, listening to their own recorded voice, responding to their name and learning the names of other group members, expressing and recognising their own feelings, etc.);
* take part in short group activities like singing, listening to storytelling, merrymaking and physical games, etc.;
* get to know playrooms, the pre-school, and the surrounding area, and obtain outside world experience;
* observe how grownups do different kinds of chores and then imitate them;
* become familiar with the buildings located near their pre-school (stores, libraries, galleries, farms, etc.);
* take part in conversations about what has already happened and what is still going to happen;
* talk with adults about their family members and the events that occurred at home if they wish to do so or if they start such conversations on their own;
* learn about various lifestyles, family and social lives in different cultures and social groups;
* get to know and talk about items that belong to them or others (toys, items of clothing, books, etc.);
* play with younger and older children and, if possible, also with children with special needs or children with a different nationality, etc.;
* obtain real experience through role-playing that explores gender differences (switching roles in gender-specific games and activities that involve housework, taking care of children, acting out different professions, etc.);
* are given an opportunity to learn about the differences among people.

**4.4.4 Examples of activities for children aged 3 to 6 years**

Children

* become familiar with their hometown and learn how people lived and acted there in the past;
* learn about the important elements of a local community through stories, visitors, excursions, books etc.,
* talk about their home, family and experiences if they wish to do so or if they start the conversation on their own;
* have an opportunity to learn about different types of families;
* become familiar with library, theatre, opera, gallery, museum, church, store, school, hospital, post office, fire and police departments; they learn about the agriculture, livestock farming, production processes, communications, plumbing systems, public utilities, etc.;
* learn about different professions and social functions;
* have an opportunity to co-shape and make decisions, and take responsibility for jointly taken decisions;
* become familiar with rule-based group games;
* have an opportunity to understand rules and social conventions (e.g. whose turn it is, how to share things, etc.);
* take part in shaping the rules for new group games;
* are given an opportunity to gain complex social skills (establishing a contact with others, respecting their needs, beliefs and values; understanding feelings of others in various contexts, etc.);
* are given an opportunity to grow in self-respect and confidence regarding their own body;
* are given an opportunity to gain real experience through role-playing that explores gender differences (switching roles in gender-specific games and activities that involve housework, taking care of children, acting out different professions, etc.);
* have an opportunity to take part in conversations about politics and ethics (injustices and conflicts in our society and around the world – war, violence, hunger, economy, social power distribution, people from the margins of society, etc.), which are held with the participation of parents or with the parents’ knowledge;
* have an opportunity to take part in conversations about questioning one's own existence, about life, death, life cycles, etc.;
* have an opportunity to participate in conversations about prejudices, stereotypes, fashion trends, commercials, etc.;
* put themselves in the position of others as a result of contacts with peers coming from other places and countries, or by reading books, watching television, etc.;
* learn about different geographical and cultural environments;
* learn about different historical periods;
* are given an opportunity to reminisce about the past and to plan and predict the future;
* are given an opportunity to predict different kinds of outcomes of a certain event when the context has been changed;
* participate in planning and preparing different kinds of festivities (while respecting intercultural differences),
* learn skills that are related to body care, safety (how to react when in danger and in the event of accidents), traffic safety (how to cross the street, recognise threatening traffic situations, respect safety regulations, avoid traffic accidents, etc.), most common children’s diseases, etc.

**4.4.5 The role of adults**

Pre-schools should enable children to learn about their own boundaries and about the limits of acceptable behaviour based on the principle of not limiting others; children should see the pre-school as an environment in which they are recognised as individuals and be enabled to develop a sense of cooperation. Teachers, teacher assistants, and other adults who are involved in the pre-school education process should make it possible for children to critically accept the rules and actively engage in changing them; children should participate in creating a culture of coexistence in diversity and heterogeneity. This is associated with the development of a critical approach to knowledge in general and the provision of basis for dealing with ideological and other pressures, commercial influences, fashion trends, etc.

It is necessary to ensure that children experience pre-school as an environment in which they can be included in activities and everyday life regardless of their gender, physical and mental state, nationality, cultural origin, religion, etc., as well as an environment where they feel safe to develop their gender identity.

Adults are to ensure that pre-schools and children’s families are interconnected, and that there is a flow of information between children and their families; in the early stages of a child's development they should encourage family members to participate in group activities. They should be familiar with the cultures of the children in their group and respect the orientation of the children's families. They should memorise important facts about children, e.g. the names of family members.

They should organise permanent activities about which children are informed beforehand e.g. feeding, playing games, listening to music, etc. Carrying out a routine must be pleasant and give children a chance to socialise, build friendships, interact with each other and receive attention. They can use activity breaks to establish contact with books or written culture as an important factor of societal democratisation, as well as a means of enabling individual’s autonomy. They encourage the development of children’s skills into self-care, forming a good self-opinion and self-respect.

We must be aware and accept that children are attached to certain people and have their favourite toys and things.

Adults give children age-appropriate responsibility.

They educate children about sexism, racism or nationalism, and do not allow any stereotypical comments or actions. They accept differences among people without exaggeration and, when observing a particular child, avoid making direct comparisons. They avoid using sexist language.

In pre-school, a clear distinction should be made as to what are common items that can be shared versus personal belongings. Space should be organised in such a way that children can participate in activities or can seek some privacy if they wish to do so. The pre-school environment should be filled with personal photographs, names of people, popular music, artwork, etc.

Playrooms are to be properly equipped for social life and different kinds of games. Books, periodicals, photographs, male and female baby dolls of all races, and items connected with everyday routines should always be available in playrooms. Reading corners are equipped with books explaining the differences between people, intercultural differences, and historical changes.

Pre-school activities should create opportunities for socialisation and celebration. Pre-schools should not be isolated from the environment, children and their world of experience, nor should they encourage activities that highlight differences because of which a child would not feel equal. Consequently, pre-schools should organise their own activities marking only those holidays that are in principle common to all children (e.g. national holidays). Traditional religious holidays (Christmas, Easter, etc.) should be celebrated only through activities that are acceptable to all children.

## 4.5 SCIENCE

Science is a special area aimed at developing children’s competences for their active integration into their surrounding physical and social environment, as well as for creating a healthy a safe living environment and habits. The emphasis is on gaining experience with living beings and natural phenomena, and on promoting a sense of joy for discovering and investigating. The area gradually develops natural science concepts, natural science thinking, reasoning, problem-deducing and problem-solving skills, formulating hypotheses, classifying, finding and summarising the main point and meaning, as well as forming concepts. These processes occur in children unconsciously; however, they are also the basic scientific methods used in natural sciences.

Children learn about animals, plants, objects and phenomena that occur around them. They learn about living beings and how to respect them, enjoy being around them and take interest in their living conditions. They learn about the natural environment and focus on being actively involved in preserving it. They develop perception skills and how to connect events that occur in space and time. They learn about the scope, diversity and beauty of nature so that contact with it becomes a normal part of their lives. They integrate their image of nature into their everyday lives and care about the things in their environment. They like and care for plants and animals in their environment and look forward to seeing them, exhibiting concern and consideration towards them.

In the kindergarten and outside of it children actively study phenomena that interest them. This investigation is fun and exciting and opens the door to new and interesting problems. They subject substances and objects to mixing, heating, cooling, cutting, moistening, dissolving, bending, illuminating, etc. to learn about how they change. They learn about changes that occur in nature and in people’s lives depending on the season. By observing phenomena around them, thinking about them and handling living beings, objects and substances, children develop a sense for nature and learn about the properties of substances and objects. Through play they discover the intended purpose and usefulness of things and learn how they work. They focus on the movement of a thing and observe when and how it moves or does not move. At the most basic level children can perceive energy as something we need for things to move, run, happen or change.

Through natural science activities children also learn that not everything can be understood and not all questions can be answered (the limits of human cognition).

Children discover and learn about their body, its properties and the functions of the parts of the body, and also master ways to maintain a sense of well-being.

**4.5.1 Global goals**

* To experience and learn about animate and inanimate nature in all its diversity, connectedness, constant changing and aesthetic dimensions;
* to develop a sympathetic, respectful and responsible attitude towards animate and inanimate nature;
* to learn about their bodies, the life cycle, and a healthy and safe lifestyle;
* to learn about substances, physical space, time, sound and light;
* to learn about technical objects and develop skills in technique and technology;
* to promote various approaches to learning about nature.

**4.5.2 Objectives**

* Children discover, learn about and compare living and non-living nature.
* Children discover, learn about and compare living beings, their habitats and themselves as one of them.
* Children learn about themselves, their body and its parts and functions, learn about and perceive bodily similarities and differences between people and the equality of all people.
* Children learn that living beings communicate among themselves. Children learn what they and other living beings need for life, preservation and for the strengthening of their health.
* Children discover that living beings give something to and take something from their environment. Children discover, learn and compare the changes that occur in life, to themselves, to other living beings and in non-living nature.
* Children learn that living beings reproduce, live and die.
* Children discover and learn that there are differences among offspring, but they are similar to their parents and to each other. Children learn about how a baby is made, how a baby grows inside its mother, how it is born and how it grows. Children discover and learn that the lives of living beings depend on other living beings and non-living nature. Children gain experience on how they themselves and other people have an effect on nature and how they can actively contribute to the protection and preservation of the natural environment.
* Children learn that living beings, objects and substances in their imaginary world can have properties that they do not have in nature.
* Children learn that the environment and they themselves influence their health. Children learn that eating various healthy foods, doing physical exercises and taking sufficient rest all help to maintain their health.
* Children learn about nutrition and obtain good habits of a healthy and balanced diet. Children learn how they can protect themselves against injury, disease and harmful substances. Children learn how to care for their bodies.
* Children discover and learn about phenomena occurring in the sky and learn about the weather events.
* Children form an age-appropriate idea about Planet Earth.
* Children learn that arranging a space and the placement of objects serve a certain purpose.
* Children learn about various types of movement in terms of duration and speed. Children develop an idea about when something happened and the sequence of events.
* Children experience time as the duration of an activity and learn about measuring time.
* Children learn about the effects of movement and what movement maintains.
* Children learn about the movement of objects in the air, in water, and on land.
* Children learn about the properties of objects.
* Children discover and learn about the properties of water and other liquids, sand and other substances, as well as mixtures, and compare them among each other.
* Children discover and learn how substances mix and how their properties change as a result. Children discover and learn about water in its various forms and learn about liquids evaporating, snow and ice melting, and water freezing.
* Children learn to tell the difference between beverages and drinking water and other liquids. Children learn about the properties of air.
* Children discover and learn about the properties of sound, how it is made and how it travels.
* Children discover and learn about the properties of light: how it travels and reflects, about shadows, colours and the source of light.
* Children recognise and use technical objects and processes, learn about their purpose and significance, and demonstrate their functioning through play.
* Children practice performing technical tasks and develop their technical creativity.
* Children develop an idea about how waste is created and the significance and methods of processing waste.
* Children learn about the work process and develop an appropriate attitude towards work and organisational skills.
* Children learn about the various means of gathering, storing and transferring information.

**4.5.3 Examples of activities for children aged 1 to 3 years**

Children

* live in nature and experience it in various environments, times of the day and year, weather conditions;
* experience nature and talk about their perceptions of it;
* use all their senses to perceive living beings (taking into account the safety of the children and the living being) and talk about the living beings, what they are like, how and where they live, how they move, what sounds they make, what their offspring are like, how they feed, etc.;
* mimic the sounds and movements of living beings, objects, toys, machines, etc.;
* play with various objects of animal, plant and non-living origin (e.g. leather, stones, shells, wood), and with various substances (e.g. sand, water) and phenomena (e.g. wind, light, shadows);
* listen to stories about nature;
* talk about what they like and what not, and what they can do to feel good (e.g. drink when they are thirsty, dress when they are cold, etc.);
* get used to caring for their bodies (wash their hands, wipe their nose, brush their teeth, etc.);
* taste a variety of food and talk about it;
* pour liquids and particulate substances into various containers;
* play with water (throw objects into the water, let the objects dry), snow and ice;
* play with water wheels and little boats;
* play with plastic materials (e.g. plasticine, clay), shape rigid (e.g. wire, plasticine, clay, etc.) and elastic materials (e.g. elastic);
* observe changes occurring in the sky and other weather phenomena;
* participate in arranging a space;
* play (builds and takes apart) with building sets, objects;
* move about: swings, climbs, jumps, runs, crawls, kicks, goes down a slide, etc.;
* move objects by rolling, pulling, pushing, etc.;
* play with toys that are powered;
* carry out sequential activities in everyday routine tasks (e.g. they wash their hands and then go eat, they put on their pyjamas and go to bed);
* play in a sandpit, use toys to play in a sandpit;
* play with paper airplanes, blow bubbles, watch birds, butterflies and airplanes, etc.;
* play with objects that make noise (e.g. tin cans, boxes, elastic bands);
* play with mirrors and their own shadow;
* play with technical objects (e.g. clock, bell, etc.) and use various tools (e.g. hammer, shovel, etc.).

**4.5.4 Examples of activities for children aged 3 to 6 years**

Children

* look for, observe, compare, study, and care for plants and animals in the environment they live in, on farms, in greenhouses, the zoo, etc.;
* visit the zoo, park, farm, fields, garden, forest, etc.;
* observe living beings with the help of magnifying glasses (e.g. handheld magnifying glass, stereo microscope) and talk about what they could see through a more powerful lens;
* observe plants and animals on farms and in greenhouses, change the conditions and anticipate, guess and predict the consequences;
* find information about living beings in various media (picture books, books, films, etc.);
* observe the young of various animals and compare them to their parents and each other;
* collect materials, substances and objects to compare and sort them and create collections, etc.;
* observe themselves and compare themselves to their peers and to animals;
* listen to stories, fairy tales and other written records about nature from various nations and cultures;
* artistically depict plants, animals, animals and their young, as well as mimic their calls, movement, and behaviour;
* observe babies, animal young, pictures, picture books, films, etc. about babies, young animals, the development and birth of babies and young animals, and participate in a conversation about their conception, growth, birth and care;
* care for their bodies;
* observe their own body during activities to see how it works (etc. during snack time they can observe how their eyes, nose, feet and hands help to find food and carry it to their mouths);
* experience each individual sense (e.g. listen, smell, determine the direction of the wind) and learn about it within the scope of the entire body (e.g. senses warn them of dangers, while muscles help them get out of danger);
* observe, listen, tell, demonstrate and mimic what others are doing;
* talk about what they know how to or can do, how they learnt something, etc.;
* observe, describe and mimic the various movements of people, animals, plants, objects in view of the type and speed of movement, start and end of movement (e.g. jump on a trampoline, swing on a swing, fall off a chair, swim, determine the start and finish in a run, listen to fast and slow music, etc.);
* determine what movement causes and maintains (e.g. a car needs fuel, a toy car is powered by a spring, humans need food, a water wheel is powered by a stream of water, etc.);
* play with magnets;
* observe changes over a long period of time (e.g. observing themselves, trees, the park, plants growing, animal young, children);
* compare lengths of time (what takes a long time and what goes by quickly, expecting birthdays, etc.) and determine and predict sequences of events (e.g. in everyday activities, chronologically arranging pictures of an event, re-telling a story);
* play with clocks, learn about the various types of clocks (e.g. water clocks, hourglasses) and measure the time short activities take (e.g. how long it takes to tie their shoes);
* observe the sky, phenomena in the sky (the sun, moon, stars, rainbows), describe them and participate in conversations about them, look for information from various sources;
* participate in the design and arrangement of a space (e.g. doll house, tent, corner), arranges toys, books, rock collections, leaves, etc.;
* play with building sets, toys that can be assembled and disassembled;
* make things out of dough, plasticine, and clay, weave baskets, paper braids, make a mosaic, etc.;
* learn about various materials and compare them (e.g. leather, wood, stone, metal, plastic);
* learn how materials and their properties can change (e.g. bread);
* investigate the origins of various material and objects, such as fur, leather, wood, stones, metal, plastic, bread, stuffed toys, etc.;
* play with elastic, twist wire, etc., to learn more about these properties (e.g. elasticity, plasticity, rigidity, etc.);
* play with technical objects (e.g. bell, telephone);
* use various materials and tools;
* play with water in its various forms (rain, puddles, snow, ice, streams, lakes, ponds, etc.) and compare it;
* measure liquids in non-standard units (cups, spoons, etc.), compare the volume of containers (into which container does more liquid fit);
* pour and mix various liquids, prepare drinks (e.g. fruit syrup and water);
* mix liquids (e.g. water and colouring, fruit syrup and water, water and oil);
* make water wheels and little boats, play with streams of water, dams, pumps, etc.;
* dry various substances and objects (fruit, drawings, laundry, dry themselves at the beach), learn about where the water goes;
* observe and talk about the weather, keep track and make a record of the weather for a short time period (see the connection between rain and clouds, rain and animal behaviour, observe water running in gutters, where puddles form, what we do);
* play with sand, make fingerprints, little streams and models, sift, sow, pour, use containers and toys to play with the sand, make shapes using sand and water;
* play with the air, use pinwheels, fans, planes, various seeds, kites, balloons, bubbles, mobiles, and learn about the properties that enable movement in (through) the air;
* test how sound is made and how it travels with shaking, hitting, plucking, etc., various materials (etc. wood, metal, water, plastic), make simple instruments;
* play with light phenomena, identify light sources, observe how light spreads and reflects (e.g. plays with mirrors, torches, shadows), observe the rainbow, oil puddles, transparent objects, coloured light;
* participate in waste separation and recycling (packaging uses) or processing (making paper), and talk about the effects of the accumulation of waste on the environment and health.

**4.5.5 The role of adults**

Young children take on the attitudes of their teachers, parents and other adults regarding nature and investigation. When adults investigate, ask questions, want to find out something new, they share their feelings with their children, react to these moods and interests, and, in doing so, also transfer their enthusiasm to their children. Through activities related to natural, children learn about thinking strategies and research. Teachers or assistants give children enough time and create opportunities for them to develop a sense of the properties of nature with all their senses by testing them themselves. They give the children the possibilities and encouragement to ask questions about what they see and let them learn to find the answer by observing, studying, experimenting, describing and explaining. They describe the children’s activities and, in doing so, make the children aware of them. They enable children to first observe things they are interested in, and then guide them and encourage them by creating situations where they themselves can determine and solve a problem. They respect their way of thinking and work methods, and get them into the habit of describing their experiences. They do not label the children’s answers as right or wrong. “Wrong” answers can act as starting points for organising new experiences, which lead to a more complete understanding. They should avoid dogmatic views as findings in natural sciences constantly change and are amended. The handy library and research corner has tools that enable children to work independently. Various natural science materials are always available here, so that the children’s interest in a natural science topic can be utilised by utilising their personal motivation to learn. Where possible, the children should learn about nature directly at various times of the day and in various weather conditions. Special events should also be taken advantage of: rainbows, clouds, the moon in the sky, a snail in the playground, the leaves falling in autumn, etc.

These things provide children with an opportunity to bring in living beings and objects from nature, to observe them and look after them, as well as put them back into their natural setting. The research corner or window sills allow children to permanently care for animals and plants. Leading by example, teachers teach children to treat living beings safely and respectfully – both for the children and the living being!

They encourage the children to describe the characteristics of objects and living beings. They first describe objects that have clearly defined characteristics, and then move on to describing objects in nature, stones, pine cones, leaves and the like. They direct the children’s attention to the prominent characteristics of substances and objects in the environment, and to animals and plants that are characteristic of a specific environment (fish in water, butterflies in the sky, stick-insects on plants, earthworms in the soil, etc.). Especially in the second period, children are encouraged to compare, organise and classify substances, objects and living beings according to characteristics, and to discover the simple connections between plants, animals and the environment. When organising, classifying and comparing, they encourage children to use their own criteria and comment on their choices. They help children distinguish the imaginary world from the real one.

They teach children that they can determine the properties of substances, objects and living beings by using tests, and encourage them to use all their senses when making observations. When carrying out research, they direct the children’s attention to the fact that movement requires that they do something and that the movement also causes something. When carrying out activities such as pouring from one container to another or filling a container, they direct the children’s attention to the fact that substances adapt to the shape of the container and that they take up space. When reshaping substances, they direct the children’s attention to those objects’ properties that change and those that stay the same. They use building sets to introduce the children to the concept of components, bringing attention to the differences between a part and a whole. By pouring and filling children learn about the properties of liquids. By preparing drinks children get to know simple instructions and how to measure using non-standard units. By drying things children learn that there is water in the objects that are being dried. By experimenting with air children are taughtthat there is air in all spaces, even very small ones. By experimenting with sound children’s attention is directed to how sound is created and how it propagates. Activities using light are carried out using various light sources. They observe and compare shadows and areas with more and less shade (snow melting, various living beings, how it feels in the shade and in the sun, etc.). They investigate how light is reflected. They can use various types of soil or sand to learn about mixing coloured substances. When studying the needs of living beings, the children’s attention is directed towards providing various possibilities and the animal’s choice of food, living space, humidity, warmth, etc., or the appearance of plants in various light conditions, types of soil, watering needs, etc.

They connect activities where children learn about their space, time, movement, to the field of mathematics. They provide children with situations where they describe the space from various perspectives. Children also develop a sense of space through their own movement. They allow children to arrange their own corner or small area and decorate it as they wish. It is not necessary for such a space to actually have a function, only for the objects in it to be connected in a reasonable way. Children should describe the objects, their position and use. Children learn that how we perceive time is relative. Teachers or assistants initiate conversations about the various activities that children find dull or interesting (waiting and playing). Children’s attention is directed towards the chronological sequence of events. Picture books or comics are good for arranging the sequence of events, or for telling stories in the wrong chronological sequence, etc. They use the concepts of *yesterday, before, later, after* and so on.

By carrying out activities related to natural sciences, children also learn about themselves, their bodies and their capabilities. Teachers and their assistants direct the children’s attention towards the differences between people; they teach children to accept these differences.

These activities teach children to have an active concern for their health and protect themselves against injuries. When using their sense of taste, the danger of consuming poisonous substances is emphasised. They connect their experiences with small, barely visible and invisible beings to start thinking about health, as well as hand and dental hygiene, while also taking care not to develop an unhealthy fear of these beings.

## 4.6 MATHEMATICS

In their everyday life children encounter mathematics very early as they have an overview of their toys, clothes and everyday objects, which they count, measure, compare, classify, group, display with symbols, name and “count”, describe and talk about them.

This includes a wide variety of pre-school activities which, during games or daily activities, encourage children to acquire experience, skills and knowledge of what is large and what is small, what is more and what is less, how things are different and how they are similar, what is a whole and what is a part, what shapes things are, what is inside and what is outside, what is now, before and after, what are symbols, etc.

Acquired experience and knowledge make children recognise that some tasks and everyday problems may be solved more effectively if they use “mathematical” strategies of thinking. They are happy when they find a solution and for that reason, as a rule, they continue to look for new situations that constantly pose a challenge for testing their problem solving and confirming their methods and ways of thinking.

**4.6.1 Global goals**

* To learn about mathematics in everyday life;
* to develop a mathematical way of expression;
* to develop mathematical thinking;
* to develop mathematical skills;
* to experience mathematics as a pleasant experience.

**4.6.2 Objectives**

* Children use names for numbers.
* From naming individual objects children gradually move to counting and differentiating between numbers and numerals.
	+ Children acknowledge one-to-one correspondence and practise it.
	+ Children develop mental operations which are the basis for addition and subtraction.
* Children use symbols with which they record events and describe situations.
* Children learn about graphical representations, which they make and read.
* Children learn about the relationship between cause and effect.
* Children become familiar with the probability of events and use expressions to describe it.
* Children look for, perceive and use a variety of possible solutions.
* Children check if the obtained solution is reasonable.
* Children learn about symmetry, geometric bodies and shapes. Children learn about space and its boundaries, the exterior and interior.
* Children use expressions to describe the position of objects (on, in, before, under, behind, at the front of, at the back of, above, beneath, left, right, etc.) and learn orientation in space.
* Children classify and sort.
* Children learn about the differences in measuring and counting as well as various common properties of materials and objects which are measured and individual objects which are counted.
* Children become familiar with the strategies of measuring length, surface and volume with scales and units.

**4.6.3 Examples of activities for children aged 1 to 3 years**

Children

* count just for fun, when they pronounce “one two three four” or “one three seven” as one word, when they jump or sing songs;
* play and make rhythmic instruments as well as play games in which they recognise the rhythm and repeat it;
* observe where numbers appear (on toys, house numbers, etc.) and play with the telephone;
* name objects in a unordered group with random, but with different names; with the help of an adult, point to individual objects in a set and name them (a frog, a fish, a cube, another cube, etc.);
* name and move one object by one in a set; count similar objects during a walk (trees, park benches, flower petals); count things that are few and things that are many;
* count ordered things (steps, fence boards, stairs when walking on them) and disordered objects (clouds, water drops, flowers in the meadow and persons in the paintings); with the help of an adult, point to and count objects that cannot be held (in pictures, in unreachable places, on houses, on people);
* imitate counting with fingers when they are with adults and other children and play with finger shadows;
* divide a group of objects into two or more equal-sized groups while observing the size of the created groups and what remained of them;
* as often as possible classify in general and according to one-to-one correspondence (handing toys to children, setting the table for lunch);
* play “one for me, one for you” games with an adult;
* choose a symbol for themselves and their things (a symbol on the cabinet, on the shelf with their bedtime toy);
* observe the use of symbols and participate in conversations about the meaning of symbols (e.g. road signs, signs in the kindergarten, in the car, on clothing, on packaging);
* observe and experience the sequence of events, talk about their interconnection and learn about expressions for *first, then, before, after, afterwards* and *finally*;
* talk and explain what happened first as a cause and what happened as a consequence;
* play games with an adult to answer their questions starting with *why*;
* have the opportunity to hear an adult use words, such as never, almost, maybe, probably, etc.;
* predict the result (whether they will see a puddle during a walk, whether the water in the pond will be cold or not; they answer the questions and predict what happens after);
* gain experience about what is true or false in a given circumstance and what is always true (“Water is wet. You are right.”); try to deny the statements;
* predict the end result of stories or observed events (e.g. when they see the construction work on the road);
* are encouraged to find an appropriate aid to carry out what they want (for example, an object long enough to get hold of things from beneath the cupboard);
* gain experience in the sequence of performing small tasks in order to perform the whole task (e.g. the sequence of getting dressed for a walk – a sweater, a coat; socks, shoes; finding all the puzzle pieces and turning them to the right side before assembling them into a picture);
* observe, create and repeat patterns on clothes, toys, everyday objects, paintings, photographs (wall decorations, mosaics, labyrinths, Greek patterns, fortress walls), in speech, music, movement, animals, plants and inanimate nature;
* assemble a whole from individual parts and play with shape sorter toys and puzzles, appropriate for their development;
* use expressions to describe the geometric and physical properties and positions (colours, shapes (e.g. round, flat, pointy), surfaces (e.g. soft, wet), sizes (e.g. big, small), under, over, left, right);
* play with materials such as sand, water, clay and snow; pour water and sand into different sized cups; mould clay; fill models and pails;
* experience geometric properties of objects with different senses and in comparison with their opposites;
* play with geometric bodies and shapes (cube, sphere, pyramid, triangle, square, circle, line, dot, etc.); look for shapes in nature; name, make and draw them;
* play with two-dimensional (tiles) and three-dimensional objects of different colours and geometric shapes, as well as with hollow and solid objects;
* observe symmetry in objects and nature; make symmetrical images; fold a sheet of paper and impress a wet symmetrical image on the other half of the paper; observe what happens to objects when twisting, rotating and looking at them in a mirror;
* explore their playroom and the entire pre-school building, its garden and fence, boxes in which they can crawl, underpasses and tunnels, and talk about where they saw something;
* put themselves in various positions and observe the surroundings from a high slide, a slope or a hill, and when lying under a bed or a closet; have at their disposal a large mirror in which they can observe their entire body; dance in a box and in the open; walk along a marked path and in a snow maze;
* observe what is outside and what is inside, put things in and out of boxes with lids, hide things and look for them, compare things by their exterior and content: the same cups with different contents (different colours in the same cups, different candy in the same bags) and different exteriors with the same contents (various forms of carton for the same type of milk);
* when moving around the kindergarten, learn the concept of left and right and about simple orientation in the room;
* learn the concepts of left and right, above and beneath, behind and at the front of on their bodies;
* store toys in cases, boxes, bags, baskets, etc. (a Lego bricks case, a box for wooden blocks, a dolls basket, a shelf for cars);
* sort objects into small and large groups according to various characteristics (e.g. by colour, material from which they are made, shape of plant leaves);
* form groups and collect things; observe groups of objects and notice that the groups are of different or the same size;
* arrange objects (e.g. spoons, tokens, balls, buttons) in patterns and sort them according to the decreasing or increasing characteristic (by size);
* use expressions to compare objects by their geometric properties (many, few, more, less, equal, larger, smaller, heavier, etc.);
* play with scales, measuring cups and ropes and have at their disposal a variety of measuring instruments (shovels, spoons, sewing metres, various scales, different sized cups, clear containers, etc.);
* fill the cups and, with help, count how many shovelfuls fit into one pot; observe the quantity of water in their cup compared to the water in other children’s cups.

**4.6.4 Examples of activities for children aged 3 to 6 years**

Children

* play and make rhythmic instruments as well as play games in which they recognise the rhythm and repeat it
* with the same number of drum strikes or some other action (movements, jumps) as the game leader;
* name objects in an unordered group with random, but different names; point to individual objects in a set and name them (a frog, a fish, a cube, another cube, etc.);
* name and move one object by one in a set; count similar objects during a walk (trees, park benches, flower petals); count things that are few and things that are many;
* count backwards; count in a row two or three numbers loudly and then two or three numbers quietly; learn counting rhymes;
* play with a calculator and other objects that display numbers (telephone, digital scales, digital thermometers, toy cash registers); discover the numbers on the screen and name them; gain experience in the meaning and writing of the number zero;
* choose an object (e.g. the third or the fifth one) and some objects (e.g. three or five) and compare the results of these actions;
* observe the date and the day on the calendar and play with the calendar;
* count objects in a group after having divided a large group; count the small groups in a large group (three spruce trees among other trees, roses in a bouquet);
* count a number of things that are out of their reach while using other tools (e.g. when counting windows in the neighbouring house, they pile up small cubes or pebbles);
* count ordered things (e.g., steps, fence boards, stairs when walking on them) and unordered objects (e.g. clouds, water drops, flowers in the meadow, objects and persons in the paintings); with the help of an adult point to and count objects that cannot be held (in pictures, in unreachable places, on houses, on people);
* imitate counting with fingers when they are with adults or other children; play with shadow puppets; count with fingers in their own way; add and subtract (they choose one finger as a starting number and gradually add another number by pointing to other fingers);
* divide a group of objects into two or more equal-sized groups while observing the size of the created groups and what remained of them;
* as often as possible classify in general and according to one-to-one correspondences; discover that one-to-one correspondence is necessary and is not always an end in itself (handing toys to children, setting the table for lunch, sticking symbols on children’s hangers);
* sort things in lines one after the other, in pairs, in triples, etc.; make a series of pairs from a long series of things;
* divide the groups of objects and materials (including water, clay and sand) by themselves, put materials and objects together (dough) and play with toys that can be assembled and disassembled;
* count objects and people by subtracting and adding. Children have the possibilities to memorise the number of objects in one group and continue counting in the other group (in the first box, there are three cubes, children memorise the number three and continue counting in the other box, starting with four, five), they help themselves by finger-counting;
* play board games that involve counting (ludo, dominoes, snakes and ladders, board games in which they throw the dice and move back and forth according to the instructions on the board);
* add and subtract when answering simple questions about the daily tasks. Children talk to an adult about the number of the missing things (e.g. if there are four plates on the table, how many there are missing so that they can all eat);
* talk to their peers about their collections, how many objects they already have and how many more or fewer objects the peer has;
* choose a symbol for themselves and their things (a symbol on the cabinet, on the shelf with their bedtime toy);
* observe the use of symbols and participate in conversations about the meaning of symbols (e.g. road signs, signs in the pre-school, in the car, on clothing, on packaging);
* using symbols, mark the order of peers for playing with a particularly popular toy etc.;
* during a walk, use symbols to mark how many cars and bicycles passed by, which friends were in the kindergarten that day, how many children wear shorts and how many trousers, etc.;
* participate in making displays (e.g. by sticking the symbol in the right place);
* observe an event, mark their observations with symbols and present their chart or otherwise recorded results to others (e.g. weather, victories in board games);
* talk and explain what happened first as a cause and what happened as a consequence;
* play games with an adult to answer their questions starting with *why*;
* gain experience about the use of words *never, almost, maybe, probably*, etc. in everyday situations;
* predict the result (whether there are enough spoons on the table, whether they will see a puddle during the walk, because it rained at night, whether the water in the pond will be cold or not);
* gain experience about what is true or false in a given circumstance and what is always true (Water is wet. You are right.); try to deny the statements;
* talk about what happened several times and what is likely to happen the next day according to the observations; predict the end result of stories or observed events (e.g. when they see the construction work on the road);
* assemble a whole from individual parts (puzzles);
* have the opportunity to notice that sometimes there are a number of possible solutions to the same problem. They notice that they can avoid the obstacles to reach a goal in several ways and that they can perform the entire task in various sequences of small tasks (first they cut and then fold or vice versa);
* plan the desired activity (considering the sequence of events), perform it and think about everything that they have done;
* explain their plan, course of work and result to others;
* keep a record of intermediate solutions for their own needs when performing the activity. For example, when counting cars, they mark how many of them are red; they get accustomed to predicting the result before calculating, measuring or counting;
* think whether the results were reasonable (a sense of the size and units) and get accustomed with thinking in advance regarding the expected result;
* observe and experience the sequence of events, talk about their interconnection and learn about expressions for *first, then, before, after, afterwards and finally*;
* observe, copy, create and repeat the patterns on clothes, toys, everyday objects, paintings, photographs of architectural landmarks (Arabic ornaments, Gothic buildings, mosaics, labyrinths, Greek patterns, fortress walls), in speech, music, movement, animals, plants and inanimate nature;
* use expressions to describe geometric and physical properties and position (colours, shapes (e.g., round, flat, pointy), surfaces (e.g., soft, wet), sizes (e.g., big, small), above, beneath, left, right, etc.);
* play with materials, such as sand, water, clay and snow; pour water and sand into different sized cups; mould clay; fill models and pails;
* experience geometric properties of objects with different senses and in comparison with their opposites;
* play with geometric bodies and shapes (cube, sphere, pyramid, triangle, square, circle, line, dot, etc.); look for shapes in nature; name, make and draw them with tools and freehand;
* play with two-dimensional (tiles) and three-dimensional objects of different colours and geometric shapes, as well as with hollow and solid objects;
* observe the symmetry in objects and nature; make symmetrical images and models; copy the half of the image symmetrically to the other side; observe what happens to objects when twisting, rotating and looking them in a mirror;
* use expressions for geometric concepts, such as inclined, slanted, curved, edge and corner, and the names of the geometric bodies used in everyday conversation;
* explore their playroom and the entire pre-school building, its garden and fence, boxes in which they can crawl, underpasses and tunnels, and talk about where they saw something;
* put themselves in various positions and observe the surroundings from the high slide, slope, hill, when hanging upside down on a bar, when lying under a bed or a closet, and draw what they have seen; they have at their disposal a large mirror in which they can observe their entire body; dance in a box and in the open; walk along a marked path and in a snow maze; children observe what is outside and what is inside, put things in and out of boxes with lids, hide things and look for them, compare things by their exterior and content: the same cups with different contents (different colours in the same cups, different candy in the same bags) and different exteriors with the same contents (various forms of carton for the same type of milk);
* learn the concept of left and right and the simple orientation in space;
* observe where other buildings are located in relation to the kindergarten; draw plans according to their ideas and templates and by memory; make models of the buildings and the surroundings; play with maps;
* play instruction games in which they have to think in advance where to send a peer to make them reach an imaginary goal (forward, left, to the right behind the bench); talk about the arranging or grouping criteria (by appearance or content);
* store toys in cases, boxes, bags, baskets, etc. (a Lego bricks case, a box for wooden blocks, a dolls basket, a shelf for cars);
* sort objects into small and large groups according to different characteristics (e.g. by colour, material from which they are made, shape of plant leaves);
* form groups and collect things. Children observe groups of objects and notice that the groups are of different or the same size;
* arrange objects (e.g. spoons, tokens, balls, buttons) according to a decreasing or increasing characteristic (e.g. by size);
* use expressions for comparing objects by their geometric properties (many, few, more, less, equally many, larger, smaller, equally large, heavier, etc.);
* measure with handy things (steps, hands, pinches, sticks, cups and spoons) and play with scales (from scales and thermometers to rulers);
* choose a unit and measure with it using different scales, different sized cups, clear containers, rulers, sewing metres, etc.;
* play pretend shop and marketplace, cook using a recipe, play “the stealing land” game, play with money;
* measure as many objects as possible with simple measures (steps, sticks, jumps, fingers, spans) and compare the obtained results with peers’ measurements. Children record measurements with graphic displays (e.g. they count over how many tiles a peer can jump and then draw each child’s result on a poster).

**4.6.5 The role of adults**

Teachers, assistants and other adults have a very important role in mathematical activities. They build connections between mathematics and children’s everyday life in the kindergarten and at home. They observe children’s development and decide upon the level of difficulty of activities that are offered to an individual child. They observe children at play in order to help them extend their mathematical knowledge in the most appropriate moment (according to children’s development and interest). They must dedicate plenty of time to talking to children. They may casually use mathematical expressions in conversation and describe the possible way of solving the problem, count, etc. Children’s skills, including the use of more or less standard “mathematical” tools, methods and procedures, may be developed even in connection with the activities concerning other fields. All activities, presented as examples, are just work ideas but they must be offered to children as an option and in the form of activities that allow dynamic adjustment of a task’s difficulty to the individual child.

Children must feel good during mathematical activities and enjoy doing them as well as experience a feeling of success when finding solutions. Consequently, it is important that adults accept children’s mistakes as an opportunity for their improvement. They should give children an opportunity to realise that their solution or reflection is incorrect and they should create a situation in which children come to the right solution (e.g. by repeating the experiment or observing what led to the wrong conclusion). They familiarise children with procedures of verifying the solution and the criteria for determining whether the solution is reasonable.

Children are encouraged to deal with demanding mathematical challenges that need to be divided among them into individual parts. Adults help to predict the division of the task into individual parts in various ways. When dividing the task into smaller parts, they help children keep the goal in sight and also help them recognise the significance of the last act of assembling the partial solutions into a whole.

Children are encouraged and offered even activities that require several experiment repetitions, such as dropping different cubes down an incline; on the other hand, adults repeat the presentation or individual steps of the game and they also repeat the conversation as long as children are interested and cheerful. Furthermore, it is important that children are encouraged to finish the task and experience their success.

Children are not taught the names of geometric shapes and bodies and other mathematical expressions in an isolated activity. Concepts are introduced according to children’s interest and development. Examples are to be found in nature and everyday objects. Adults provide children with the opportunity to hold objects and learn about them in games before naming them. Children are allowed to play safely with various materials and with the least additional warnings and prohibitions.

When counting, adults should be aware that children do not acquire the concept of numbers merely by counting. Although children are able to count far from one, it is possible that, when counting, they do not even know how to point to the counted objects. If children always make the same mistakes when reciting numbers/counting, adults accept them and do not correct their mistakes during this period, but give them more opportunities in which they can listen to the correct counting of others.

The optimal way of helping children with counting is when adults count various things as often as possible, use numbers in their questions to children, take the advantage of everyday tasks where counting is necessary (when preparing the table, tidying the toys or leaving for a walk); furthermore, adults mention number patterns as often as possible in everyday conversations with younger children when taking care of or playing with them, and with older children during daily routine, playing, walking, exercising and singing. It is necessary to pronounce all the numbers even if there is more than one and counting is not intended for children. When counting with younger children, it is useful to count with fingers so that children can see and repeat. When children run out of fingers because they count several things, they may be shown ways in which they can help themselves with other tools.

It is necessary to observe whether children count all the objects and whether they count them only once; furthermore, adults must help them notice that they made a mistake and discover where (e.g. by marking the counted object). Adults help children pronouncing multi-digit numbers if they notice that children enjoy doing it; in general, adults encourage counting as a game and also as an activity in which the result is important. It is useful that, at the end, the person counting always tells how many objects have been counted (one, two, three... three spoons), and encourages children to do the same.

One-to-one correspondence brings children closer to understanding the concept of numbers. Adults encourage children to arrange objects in a way that they attach to, add to, place under, etc. each object exactly one other object from the other group. They observe with children that at the end the objects of one or the other group run out or the number of objects in both groups is equal. One-to-one correspondence may be used in various difficulty levels and it is appropriate for the youngest children at the level of manual dexterity and classification, and for older children at the level of understanding, observation and talking about group sizes.

Another important task is to observe when children use adding, subtracting, or use the results of these operations informally in conversation, and to offer help if they ask for it. Teachers and their assistants, as well as parents, should use as often as possible the terms *a little, a lot, more than, less than, add, take away, divide,* including with references to numbers (three more, two less), and encourage children to use such terms. Counting with fingers is an important contribution to developing the preconditions for successful addition and subtraction. Children use division and multiplication when dividing into groups, distributing separate objects among their peers, collecting objects (each child gets three, they count them objects after they put them together).

Adults see to it that all children in a group have the opportunity to observe and design on their own tables and graphical representations associated with everyday things and nature contemplation, by counting and using numbers (e.g. every day children should, for example, stick the weather symbol for that day onto the weather table, symbols of the current activity, symbols for a song, stories, walk, blocks). They discuss symbols with children and help them find and read information in graphic presentations. In everyday life, the field of symbols is linked in particular with traffic education (traffic signs).

Children learn through experience that there are causes and consequences and how they are interconnected. Adults talk with children about what happened first as a cause and what happened next as a consequence. To start with, the events that children have witnessed or that happened in a short time interval are particularly suitable for this purpose (a child stumbled and then fell; asked for a toy and got it; looked up a book and found a picture of a horse).

Kindergartens should provide an environment for children to explore. Children should visit individual rooms in the kindergarten and spend enough time there to explore, and climb, and touch everything in the room. Where possible, adults should take photos of details in a playroom and during walks – from different viewing angles – and discuss the photos with children. Safety should be ensured particularly with respect to younger children, while not restricting the children's desire to explore the space.

Children should also become familiar with other buildings and architectural achievements (e.g. bridges, lifts, underpasses, high-rise multi-purpose buildings). They should view such structures in person, in pictures and in models. Their attention should be drawn to a connection with art.

Adults should encourage children to identify a repeating pattern in as many situations and things as possible. At the same time they should observe to identify to what level of complexity individual children themselves group, classify and sort things at play, and then tailor the complexity of activities to the individual child. When determining a small set of objects in a larger group, adults should distinguish different degrees of difficulty, which is graded as follows:

* objects with special added property (yellow blocks among all blocks);
* objects with a different name among other objects with a common name (apples among fruit);
* objects with a different name among other objects with a common name (apple trees among other trees).

The above division is related to the development of a child's ability to generalise and deduce from a general to a particular instance.

In this context, not only the act of division itself is important here, but also the result. Adults should draw the children's attention to the importance of the result.

Adults in a kindergarten should conduct all the measurements connected with their everyday routine so that the children can see and participate. They encourage children to measure everyday objects by using convenient measurement tools. They use the same object for the purpose of both a game of measurement and counting (e.g. measuring the seat of a chair, counting the chairs in the room and the cups of sand needed to fill up a bucket, pouring sand in the measuring cup).

They always respond with joy and enthusiasm to a child's successful solution to the problem. A child should be commended for every increment of progress. Adults should ensure that all children receive about the same amount of praise, though not necessarily all for success in the same field. It is important for adults to build children's trust by accepting progress children have achieved and take it into consideration when the next opportunity presents itself.

Building connections with parents and exchanging information about the child's progress and abilities for better assessment of what children are able to do and what interests them is crucial for providing a stimulating environment for mathematical activities.

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