

Fields of applications of warm sand and nature environment aesthetics. Regularity of new age



Mg. paed.

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Today, during the age of climate change and the growth of consciousness, a person must be able to process a large amount of dynamically changing information, adapt, make decisions and act.

Not everyone manages to adapt to these challenges in time and at an appropriate quality. Objectively, the number of illnesses initiated by anxiety, overload and similar factors is increasing. The time of the COVID-19 restrictions, the war in Ukraine and economic instability have taken their toll on people's emotional saturation. It is easier for an adult with a mature consciousness to adapt to changes but it is more challenging for children. During the process of child's physical development and emotional maturation are rapid changes significantly reduce their sense of security and create additional emotional stress factors.

The recent pandemic restrictions gave everyone the opportunity to learn for themselves that, by being in nature, it is possible to regain physical and emotional strength and regenerating the body natural potential. Many studies confirm that the natural environment and physical activities can have a beneficial effect on the regeneration processes of the body and nervous system. *E.g.*, such researches as the one concluded in Japan (*by Song C., Ikei H., Miyazaki Y., Int J Environ Res Public Health, 2016*) confirm that being in nature and natural impulses provided by it led to a state of physiological relaxation. The self-regulation of hormones is favourably affected, nervous system and blood circulation are improved, blood glucose level decreases and the strengthening of immune cells is supported, as well as other actions of the body's maintenance systems.

Idea based in experience

Human desire to find peace and harmony in nature is organically determined and naturally occurring but still undiscovered regularities and patterns seem miraculous and incomprehensible. Situation with development of the idea of the aesthetics of the natural environment was going same way as outcome of randomness of rows and the unexpected results of creative processes.

It should be noted that at that time, thirty years ago, the rates of environmental pollution, social environment "activities" and information "multiplication" were just beginning to increase. The idea arose not by compiling it from information obtained elsewhere but rather by experiencing specific situations in practice, searching for and justifying successful results in science-based research.

The method of aesthetics of the natural environment was created during changes, observing processes in nature, specific changes in child's perception, respecting increase of amount of information provided by screens, as well as taking into account the latest research in geology, quantum physics, neurology and epigenetics. Theoretical basis of the idea is based on scientific knowledge and research data collected over a quarter of a century. Every thesis revealed in this article is based on experience and research data analysis.

Many studies confirm that the natural environment and movements can have a beneficial effect on the regeneration processes of the body and nervous system.



Alternative that brings about true joy

Along with the *Natural movement pattern and shape games*, *Coloured sand games* and *Coloured grain games*, Warm sand exercises are one of the basic areas of natural environment aesthetics.

Since 1993, the field of aesthetics of the natural environment has gradually discovered wide possibilities of the aesthetic beauty of the natural environment and the methodical application of natural materials in educational and corrective processes. In the very beginning activity took place within the framework of arranging natural materials, then (from 1995 onwards) discovering of methodical aspects of sand painting and coloured sand creative works took place. The first significant discovery was initiated by the fact that in all lectures, classes and seminars where we worked with coloured sand, the smiles of children, students and future specialists were seen and recorded as we were learn from research of professor and American psychologist Paul Ekman, it was possible to conclude that the basic condition of a natural smile is the emotion of joy, which is associated with the formation and functioning of certain accompanying neurotransmitters in the brain.

A smile confirms the presence of a child's positive emotions. A certain contribution to the improvement of the theoretical basis of the methodology was provided by the guest lectures of Hans Henrik Knoop (year 1998), professor of the Royal University of Denmark. His work revealing the importance of preserving the regularity of brain activity and child's curiosity. Professor also explained the meaningfulness and essence of the author's original method of blowing out coloured sand.

Professionally accurate application of this methodological technique has provided and continues to provide support in solving emotional and cognitive disorders of adults and children and restoring joy in their life. The presence of curiosity and the joy of discovery is similarly noted and recorded when children work with coloured grains (methodically based and justified and structured work since 1998). According to the methodology of natural environmental aesthetics, while working with grain material, special importance is given to ethical aspects, because the basic task and real value of grain is the provision of life for the body when it is eaten (it is especially relevant now, when people are suffering from hunger in many countries of the world). Therefore, when working with a child, the principles of frugality, sufficiency (there is a range of exercises where only one seed is used), reuse, and other principles are carefully observed and taught. The guidelines of the methodology respect the peculiarities of the structure and life cycle of grain as a unique natural material. Grain manifests its potential in nature by germinating (in the spring when the weather is cool and wet) and producing a new fully matured crop in the fall. Therefore, in accordance with the order defined and set by the nature and in accordance with the principles of the Natural Environmental Aesthetics methodology, grains (and any other plant material) are not heated or stimulated in any other way during their use in exercises. More than 20 years of experience indicated that effect of grain methodical application can be reached only in the natural expression of the grain. In order for the grain material to become a tool in the hands of a specialist, it is cleaned and specially prepared. While working with grains principles of sustainability, nature protection, safety and hygiene rules shall be carefully observed and followed.

The aesthetic processes of the natural environment provide an opportunity to adapt the "software" mechanisms established in the human body during thousands of years to the reality and requirements of the actual moment

Changes and self-adjustment

It is characteristic for nature to adapt to various changes. It could be called a survival mechanism rooted in nature and human evolution, which is still a potential resource – especially relevant in today's challenging situation. The "interplay" of changes and adaptation is based on the self-regulation mechanisms inherent in the organism, study of which has made it possible to understand the structure of the corrective and therapeutic effects of the Natural Environment Aesthetics methodology. The aesthetic processes of the natural environment provide an opportunity

to adapt the "software" mechanisms established in the human body for thousands of years to the reality and requirements of the actual moment. By professionally applied solutions to support self-regulation processes of child's, teenagers, adults and seniors, the Natural Environment Aesthetics specialist promotes the individual growth of the personality.



Creation and evolution of the method

This article is devoted to the presentation of the essence of Warm Sand classes however, without revealing the processes of creation of the methodology of natural environment aesthetics, the succession, regularities and patterns of the field of Warm sand methodology will not be clearly understood.

While working as a lecturer in the Latvian University, Faculty of Pedagogy and Psychology (hereinafter referred to as LU PPF), conducting lectures and leading several dozens of student studies from 1993 to 2007, developing the master's thesis (*under the management of Dr. paed. Oskars Zids [Oskars Zīds]*) and while studying for a Ph. D (*under the management of prof. Raimonds Ernšteins [Raimonds Ernšteins]*), a certain individual conclusion is continuously and always being confirmed. Namely, the truth that a purposeful, methodically organized interaction with natural materials, a structured approach to the process of learning about nature, aesthetic understanding in connection with practical creative activity, is a good tool for personal development and growth at any age.

Important data at the beginning of the research was provided by the implementation of the study course "Social rehabilitation – work with natural materials" developed by the LU PPF in 1995 (until 2007), which confirmed the advantages and relevance of the methodology based on the cyclical order of Nature in achieving professional goals: in child's anxiety situations, learning difficulties, social interaction problems, coping with losses and similar situations. Early in the 21st century, thanks to insights and the latest research on the creative process by *Dr. psych. Mara Vidnere [Māra Vidnere]* and the *Prof. emeritus Aina Ozoliņa-Nucho [Aina Ozoliņa-Nucho]* of the Maryland University and the therapeutic effect of such process, the results obtained in creative lessons with natural materials (coloured sand, grains, etc.) were explained.

I am grateful for important explanations in the field of psychology to *Prof. Gunta Ancane [Gunta Ancāne]*, *prof. Sandra Sebre [Sandra Sebre]*, *assoc. Prof. Kristīne Martinsone [Kristīne Martinsone]* and the art therapy instructor/lecturer *Aleksandrs Kopitins [Aleksandrs Kopitins]*. At the beginning of 2000s, the application of the methodological fields of natural environment aesthetics was approved by the associate professor of Nagoya University (Japan) Etsuo Yokoyama; whereas in 2012 the same was done by Taiwanese educational specialist *Worathat Bunkhot*.

Many explanations and justifications are found in the latest researches in quantum physics, neurology, epigenetics and other fields. Every thesis revealed in the article is based on the experience of hundreds of teachers, parents, Natural Environment Aesthetics specialists and the evaluation of research data. During the past 39 years (the author's teaching experience was started in 1984), engaging in various levels of educational and social integration processes and their evaluation. Author has had to face situations where it was not always possible to solve the disorders caused by long-term tension in child with known regular therapy techniques. Children with various behavioral disorders are increasingly coming to the attention of teachers and specialists (this includes children who are unable to curb their aggressive expressions, who have difficulty concentrating, communicating with peers, who are depressed or overexcited for a long time, children with screen addictions and the like), indicating the overload of the nervous system in the process of growth and maturation of child. These manifestations are especially characteristic for child's with functional, autistic spectrum, as well as other mental disorders associated with difficult understanding of cause-effect patterns, as well with children who have difficulty in understanding and forming speech and the like.

Sand is a unique natural material that can both accumulate heat and give it away without changing the chemical and physical properties – structural form of the sand grain itself

Equipment for well-being

The idea of the warm sand facility was born in 2005. First warm sand facility was installed in 2008.

The content framework and technological solutions of this equipment are based on the research conducted during the development of the Natural Environment Aesthetics methodology on the positive aspects of the use of sensory impulses of natural materials in emotional balancing, sustainability intention and professional application. In order to be able to ensure the therapeutic effects of the warm sand session, the operation of the hot sand equipment is based on three main components:



- certified equipment based on the laws and patterns of nature,
- certified specialist.
- methodology of natural environment aesthetics.

A warm sand exercise during Natural Environment Aesthetics class takes place in the warm sand device "WARMSSANDBOX®" – specially designed, safe, aesthetically arranged warm sand environment with defined boundaries. The warm sand exercise is organized in accordance with the theoretical and methodological principles of the aesthetics of the natural environment. "WARMSSANDBOX®" is an innovative technology and equipment patented in Latvia (patent No. 14477). Its safety is confirmed by the European Union conformity: - safety certificate (*Certificate of Conformity* No. ScD2011S22). The device envisages natural heating of the sand to an appropriate temperature, respecting nature of the natural material the way that therapeutic support can be provided, regardless of environmental temperature fluctuations. Sand is a unique natural material that can both accumulate heat and give it away without changing the chemical and physical properties – the structural form of the sand grain itself. Sand is a mineral made of silicon oxide SiO₂, which is formed deep in the earth under high heat and pressure. The structural properties thereof are the same in arctic and equatorial climate zones, therefore sand is accessible and "understandable" to every inhabitant of the world.

The device has won a bronze medal at the international exhibition "ARCHIMEDES 2013", as well as the recognition of Cambridge professor Alan Barrell.

Summer all year-round

Currently, 42 "WARMSSANDBOX®" warm sand devices have been installed in Latvia (37 sand boxes, 5 sand tables) and 160 certified warm sand specialists are entitled to work (a total of 217 specialists have completed the training) on them. It has been recorded that children attend warm sand classes in 11 Latvian cities according to doctor's prescription.

The 15-year long experience of the warm sand specialists shows that the impulses received in the classes are support and strengthening child's development and help to maintain the body's self-regulating processes. Classes support the work of doctors and other specialists, promoting the achievement of professional goals.

Comprehension of a holistic approach

An important development milestone in the approbation of the warm sand equipment and methodology is associated with the cooperation stage, where doctors indicated the presence of factors that have a beneficial effect on health. Doctors consulted specialists and entrusted the provision of "warm support measures" to their patients, as a result of which it was possible to significantly expand the scope of research over the years.

I appreciate the responsiveness of the medical staff with deep gratitude. It played a significant and decisive role in the development of the idea. Already from 2003 to 2004, at the Baltezers rehabilitation centre, working with children who have bronchial diseases, with the permission of *dr. Vallija Lomasa [Vallija Lomaša]*, *dr. Lidija Baraduska [Lidija Baraduška]* and *dr. Andzelma Liepina [Andzelma Liepiņa]*, coloured sand was used in the classes and exercises. Despite the children's serious diagnoses, no allergic or negative reactions were detected after the classes with coloured sand and other natural materials. Confirmation of experience mentioned above was also obtained when starting work with the Warm Sand equipment, working with children suffering from atopic dermatitis, allergies, arthritis.

While providing support in the mentioned situations, the intensity Neurosurgeon *dr. med. Aksels Ribens [Aksels Ribens]* in 2018, of the exercises and classes, methodological techniques are when familiarising himself with hot sand exercises in the strictly coordinated with the doctors treating the children. When the "WARMSANDBOX®" device, praised the results they achieved first model was created in 2008, its working principles were and the wide possibilities of the methodology. He concluded the praised by the doctors *dr. Arturs Teresko [Artūrs Tereško]*, *dr. Vita* following: "The main thing for people is to get the message about Rubene [*Vita Rubene*]. The fact that *dr. Teresko [Tereško]*, a blessed thing for their children, which raises children and, referring to the request of the specialists of the "Embassy of above all, does not cause harm, which in medicine is as Nature" studio, created "Children's tea" with a special taste and important as achieving good goals. Here, the term composition, should be specifically emphasised here. This tea NNH (Number needed to harm) shall be mentioned – number of made it possible to make the prescribed liquid intake after the people have to be caused harm before to achieve an positive class more acceptable to the children. The fine pulse quality of a effect."

A new stage of cooperation started in 2020, when general practitioner *dr. Jana Borisova – Litvinova [Jana Borisova – Litvinova]* presented the participants of the conference of specialists in natural environment aesthetics with the neurological aspects of the mechanism of the effects of warm sand impulses and their effects on different areas of the brain (Brodmann's fields). She especially emphasized activity of the sensory and motor cortex in receiving sensory impulses from the sand and performing "movement algorithm" exercises.

Despite the children's serious diagnoses, no allergic or negative reactions were detected after the classes with coloured sand and other natural materials.



Since 2013, the general practitioner *dr. Anda Elste [Anda Elste]*, recording the initial diagnosis of the small patients and evaluating the results at the end of the cycle of warm sand classes, made sure of the effectiveness of warm sand classes in solving certain problems. The role of tension reduction, balancing of emotions in the prevention of various functional disorders was especially emphasized. When speaking at the 2017 conference, *dr. Elste [Elste]* shared the mentioned experience with future and existing warm sand specialists.

The belief in the importance of the idea was strengthened by *dr. Dana Misina [Dana Misina]*, who helped bring clarity to the medical regularities and patterns of the human body as a whole, and the children neurologists *dr. Vizma Meiksane [Vizma Meikšāne]* and *dr. Liga Valge [Liga Valģe]*, whose findings made it possible to gain confidence in the importance of the therapeutic aspects of the impulses provided by the warm sand in strengthening the nervous system.

Externally very similar

A child's playing in the sand in natural environment and in a "WARMSANDBOX®" device looks very similar at the first moment, however, if in nature it is a process led by the child himself, then the warm sand class is only outwardly similar to playing in nature. "WARMSANDBOX®" classes is led by certified specialist under the guidance of methodical conditions, within certain time limits and playing process receive a professionally conscious and purposeful direction. Preserving the recognition of the sand material and the atmosphere of comprehensibility child is offered exercises of certain "algorithms of movements" in the class. They provide gentle "natural" impulses, helping to get rid of accumulated tension in the body, increasing emotional well-being, promoting a sense of peace and relaxation, as well as by improving children's communication skills and allowing them to experience their feelings and the survival and overcoming of internal conflicts in an easy way.

High-quality (purified and processed) sand is provided for the operation of the warm sand equipment, creating an environment favourable for cell regeneration

Most up-to-date data

In February 2023, the methodical council of the "Association of Natural Environmental Aesthetics Studies" surveyed (questioned) the warm sand specialists. 45 out of 160 currently practicing warm sand specialists gave answers about the nature of children's health problems during the period of restrictions of COVID-19.

In the period from 2020 to 2022, the surveyed specialists provided support to a total of 4,791 children. The results of the survey shows that in most cases children attended the warm sand classes in order to regain their emotional balance, to deal with concentration and language development disorders, as well as to get support in reducing tension, promote their communication skills and be able to regulate their boundaries.

In total, 36 specialists emphasize that warm sand classes/exercises are essential support in reducing disorders and restoring children's emotional balance after restrictions.

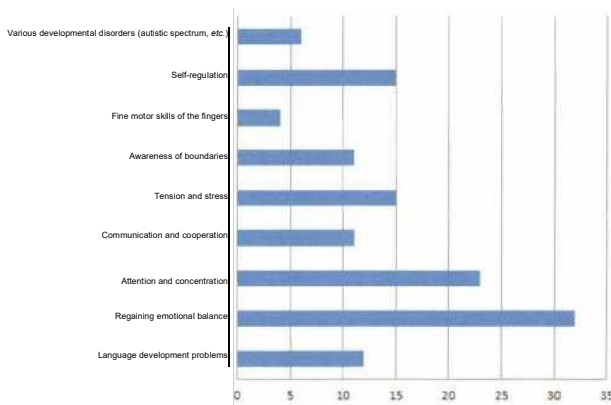


Figure No. 1 The most frequently identified focused features that warm sand specialists work with, 2019-2022 (study of the methodical council of the "Association of Natural Environment Aesthetics Studies", February 2023).

The following are quotes and the author's comments about the condition of children described by warm sand specialists and the difficulties solved during warm sand classes.

- *"As a result of the pandemic restrictions, the war in Ukraine and economic difficulties, the children have been split into two groups:*
 - *most of them have become emotionally unstable, with poor attention span indicators, often aggressive.*
 - *while other part of the children become apathetic, unmotivated, "limp", with a weak effort of will. Both of these groups have difficulty regulating their emotions, maintaining boundaries, and integrating into the learning process. Sand is a good tool for solving these difficulties."*
- * The variety of methodological techniques of natural environment aesthetics gives the opportunity to provide support to the child also in balancing combined and contradictory emotional states.
- *"Making children, especially at preschool age, take responsibility for situations that are not within their competence, creates additional tension and stressful conditions, which in parallel also affect mutual relationships in the family."*
- *"Different mental health characteristics are recorded more often in students and pupils."*
- * By reducing the body's physical and emotional tension, better results are recorded in the use of medications prescribed by doctors, in the use of other therapies and the like.
- *"Warm sand classes are in high demand; - the paediatricians recommends attending these exercises and classes. Even lines are formed."*
- *The mentioned situation with lines and queues is recorded in cities where close cooperation is practiced between certified warm sand specialists and doctors, physiotherapists, osteopaths and others.
- *"I conclude that more and more children are experiencing panic attacks, various types of fear and the like. The timing of the COVID-19 restrictions has coincided with the actualities of the war, which provokes anxiety in children. The older children ask if we will also have a war, the smaller ones express it by holding in and delaying their bowel movements. Such cases have been recorded for several children of our institution. The conclusions are unequivocal that warm sand classes help reduce anxiety, balance the emotional state, promote the body's self-organization processes."*
- *"During this period, we had to work not only with children, but also with adults*, because parents also needed emotional support – regaining mental balance."*

While working with the child, the parents also had to be helped emotionally. In our institution, the emotional health condition of three Ukrainian families with children also had to be improved – it was emotionally very difficult not only for the Ukrainians themselves, but also for us as class leaders (classes of a very "severe" nature). I also had to reduce the tension and stress among my colleagues, because it was necessary to release negative feelings and emotions during the COVID-19."*

Taking into account that the methodological techniques of natural environment aesthetics are related to the emotions of the "inner child" and actualize the arrangement of the archetypal structures of mother and child by K. G. Jung, the spectrum of professional competences of specialists allows to provide basic support also to colleagues and parents of children.

- *"During the restrictions, children who had emotional stress, anxiety, sleep disorders, restlessness, fear, agitation and also problems of addiction to smart devices attended the warm sand classes/exercises more often than usual. Liveliness is gone, and children are "frozen" in their emotions. Tension, stress, intensive use of screens*, playing age-inappropriate video games, watching inappropriate content mix the world of reality and virtuality, which is creating chaos and imbalance."*

Warm sand exercises and classes promote children's acquisition of emotional self-regulation skills and the strengthening thereof



The above-mentioned fact about the use of smart devices and the increase in the emotional and physical health problems of children related to it is confirmed by the "Baby and Smart Devices" survey conducted at the end of 2022 by the parents' organization "Moms and Dads" (author of the publication Inga Akmentina – Smildzina [Inga Akmentiņa – Smildziņa]). The results show that 75% of children under the age of two use electronic screen devices. Within the framework of the publication, the psychotherapist Sabine Berzina [Sabīne Bērziņa] comments the following: "When conducting the survey, I did not expect that screen devices are offered to children in Latvia so much, in different situations". However, Nikita Bezborodovs [Nikita Bezborodovs] reveals the essence of the question: "One learns what one trains. A child also learns what he trains."

Regulation of emotions is an extremely important skill for each of us: the ability to cope with anxiety, the ability to regulate behaviour. There are many disturbing situations in a child's life, and if a screen device is used as the main tool to solve this situation in all of them, then you should know that the child has not been given the opportunity to learn to deal with these situations." Current research and the professional practice of specialists confirm that the Warm Sands exercises and classes contribute to the acquisition and strengthening of children's emotional self-regulation skills.

Research shows that frequencies emitted by electrical devices in our homes and workplaces interfere with the body's ability to synchronize with the Earth's natural vibrations

Components of the natural secret

Operation of the warm sand device "WARMSSANDBOX®" is associated with the application of some well-known and science-based effects and some innovative, more than 30 years ago approved and justified concepts, matching them with 15 years of experience in the professional use of the equipment. The warm sand class combines a set of heat therapy, world-renowned sammotherapy and natural environment aesthetics methods. It ensures receiving the heat and sand touch effect in a light and universally available form.

Heat

Living in northern latitudes, where temperatures drop to -20 °C in the winter months and with only three warm summer months, the desire for light and warmth is characteristic. That's why we like to enjoy every warm summer day, sleep in the sun, swim, let the whole body "take up" as much natural heat as possible. The warmth of the sand in the device and the playfully reflected light of the sand grains are recognizable to the child and arouse natural curiosity. Touching the sand, immersing the hands in the warm mass of sand, is a natural cognitive activity initiated by the primitive brain, the observation of which helps specialist to understand the nature of the child's hand movements and the sensitive limits. All actions are voluntary, in the specialist's professional field coordinated with the child's capabilities, the spectrum of emotions expressed by him.

More than 15 years of experience have confirmed the method of sand heating chosen for the Hot Sand facility "WARMSSANDBOX®", based on natural principles, namely, using warm water flow. Heat conduction through water is characteristic of many natural processes. This type of heating is the most gentle for any organism, as it does not create an additional electromagnetic field load. The heating of the natural material – sand – with water and the natural movement of its flow ensure the preservation of the mass of sand in a natural frequency range similar to that found in nature. It has a beneficial effect on the body's self-regulation processes.

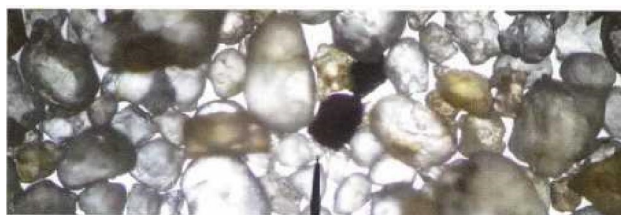
Power of the earth

Natural vibrations of the planet Earth take place at a frequency of 7.83 Hz. Everything living on earth, including humans, have adapted to this frequency, which is important for the normal functioning of the body. If the mentioned frequencies manifest themselves with disturbances, it changes the balanced recovery process of the body and affects health. When natural materials are heated in contact with a direct electric field, the quality of the material's natural impulses is deformed. Therefore, the impact on the human body (especially a small child) can be unpredictable. *"There are natural currents in the body, especially in the area of the heart, brain and nerves, which overlap with currents induced by external fields. This determines the possibility that the processes related to electrical processes in the body may be affected under the influence of strong radiation,"* explains electromechanical engineer Valdis Ziemelis [Valdis Ziemelis], docent of the Institute of Labour and Civil Protection of Riga Technical University. Research shows that frequencies emitted by electrical devices in our homes and workplaces (for instance, computers, mobile phones and others) interfere with the body's ability to synchronize with the Earth's natural vibrations. These disorders can negatively affect the body's immune system, nervous system, energy levels and sleep quality, as well as promote the release of stress hormones.

Sammotherapy

A large part of the operating principles of the Warm Sand device from a scientific point of view is based on the world-known self-therapy. It involves covering the body with hot sand and lying still for 10 to 30 minutes.

The healing effect is achieved by heating the body, sweating and improving blood circulation. It must be said that in Latvia at the beginning of the 20th century, similar procedures were included in the range of services of Jūrmala sanatoriums. In a 2013 study published by Gomes (Gomes C.S.F., *Geomaterials*, 2013, 3, 1-14) it has been mentioned that certain types of sand with pronounced specific properties are used in many parts of the world in therapeutic practice – self-therapy. Muscle and bone diseases are treated in sand baths. For these purposes, using sea sand provides support for reducing muscle tone and promotes the recovery of the body's movement apparatus.



Sand grain as a crystal

During the warm sand exercise (class), the touch of each grain of sand on the skin creates a micro-impulse. The sand table device contains 51 kilograms of sand. Therefore, millions of touch impulses are received during the class, which activate the somatosensory cortex of the brain and far-reaching activation of other areas of the brain, including the endocrine glands. They produce oxytocin (touch), serotonin (feel good) and other hormones.

By receiving the wide range of sensory impulses provided by the warm sand, the sensory receptors of the skin are stimulated, as well as nerve transmission pathways,

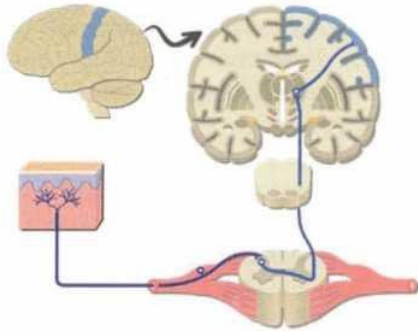


Figure No. 2 Impulse flow to the sensory cortex of the brain (www.getbodysmart.com).

spinal cord, medulla oblongata (also the dopamine-producing bundle), sensory cortex of the large hemispheres (1st, 2nd, 3rd Brodmann fields). This happens due to the fact that there is sand of a certain quality with an increased quartz composition in the volume of the device (equipment). All of the above is provided by silicon oxide (SiO₂) – the basic crystalline structure of quartz, which creates an appropriate angle of reflection of light and heat rays. It has a beneficial effect on the body's cells. In order to maintain the quality of the sand for a long time, the structure of the hot sand classes, safety rules and hygiene requirements are based on a strict procedure.

Presence of minerals

In order to maintain a healthy body, it must be provided not only with the necessary nutrients, but also with minerals. They determine human life processes and affect the state of health. Minerals can be taken in three different ways – by drinking, inhaling or absorbing through the skin. Mineral microchemical elements (oxygen, hydrogen, carbon, sulphur, phosphorus, calcium, magnesium, sodium, potassium, iron, silicon, zinc, selenium, copper, manganese and others) support human life and cell formation processes (Gomes C.S.F., *Geomaterials*, 2013, 3, 1-14). In the natural environment of human life, minerals and chemical elements coexist, therefore interaction with them is inevitable. Under certain conditions, a lack of minerals can be a factor in the development of diseases. High-quality (purified and processed) sand is provided for the operation of the hot sand equipment, creating an environment favourable for cell regeneration. Thus, in addition to the above-mentioned beneficial aspects of exposure, the human body (child and specialist) naturally absorbs minerals in the body while working in the sand and performing exercises.

Movement exercises as methodical innovation

In the framework of the aesthetics of the natural environment, the "movement" algorithm exercises have been methodically developed and approved over more than 30 years. Compared to classical self-therapy, during the warm sand class, the child, according to his individual characteristics (age, height, preparation, special needs and other conditions) and in accordance with the professional goals set by the specialist, performs movement exercises that enhance the positive aspects of the effect of the device "WARMSSANDBOX®".

Performing movement exercises in a warm sand environment with wide-spectrum pulses ensures the activation of the motor cortex, which promotes the release of dopamine and other neurotransmitters.

Structured exercise

During the warm sand class, the child receives a complex of impulses that has a beneficial effect on the nervous system, balances neural and humoral regulation, thereby promoting the body's self-regulation abilities. While client being participated in the warm sand exercise held in the device "WARMSSANDBOX®": 1) receives quality heat and sensory impulses; 2) performing methodically defined movement exercises activates the nearby Brodmann fields; 3) motor cortex; 4) the comprehensible environment removes muscle tension and provides a relaxing effect, helping to balance emotions; 5) movement exercises and creative tasks improve the ability to concentrate, promote creativity; 6) certified specialist's professional management and observance of methodological procedures provide security, define boundaries and improve the communication experience. A certified specialist, within the framework of his basic profession, in accordance with his professional competences, can lead the exercise in the aesthetics of the natural environment at a certain level (developmental, educational, correctional, therapeutic). The individual class lasts for 45 minutes. Classes are held no more than once a week. The basic cycle consists of four classes. The cyclical arrangement foresees cycles of 4, 7 and 12 classes (exercises). After their conclusion, there is a break of up to three months. If necessary, the cycle of 7 or 12 classes is repeated.

Inner child of the specialist

Although it will sound unusual, but in order to be able to conduct hot sand classes with high quality certified specialists competencies must include the creativity and openness of his "inner child". Although the class/exercise is structured – a planned, prepared, guided and evaluated process aimed at achieving specific professional goals and defining boundaries, it is easier for a specialist who has perfected the above-mentioned skills to create an easy-to-understand and positive atmosphere of "play" for the small client.

Cumulative experience

At the beginning of 2020, the methodical council of the "Natural Environment Aesthetics Study Association" conducted an evaluation of the Natural Environment Aesthetics and Warm Sand classes for 2014-2019 year, where a significant part of the positive results fixed by the specialists was collected. In total, the evaluation recorded 11,002 cases where the classes of natural environment aesthetics and warm sand had a beneficial effect on the physical and emotional state of the child's health. The most extensive demand has been in the field of adaptation (896 children), where 748 children had different types of adaptation disorders in the learning environment. The second largest direction is support for children with physiological and physical development disorders (602 children). In this area, most (380 cases) were related with disorders of weak immunity and long-term illness.

In the field of physical development, a significant part is made up of children who seek support with the following problems – tension in different parts of the body (47), weak musculature of small fingers (31), enuresis (30), visual disturbances (18), muscle tone (17), bowel movements (15) and others. 431 children attended classes due to learning disabilities, of which 170 had concentration difficulties, and 161 – a lack of effort skills and patience skills. Emotional development disorders (384 children), psychiatric disorders (308 children) and language disorders (379 children) are equally important and important areas in the work of specialists. In the field of emotional development, the most common problem dealt with are tension (135), aggression (70), emotional instability (63). As the specialists themselves mention in the evaluations: *"Average, significant and stable improvements can be observed already after a cycle of four classes, the changes depend on the emotional atmosphere in the family. The warm sand together with the aesthetics of the natural environment significantly reduce the symptoms."*

In the collected data on mental disorders, the most significant part is made up of children with autism (72 children) and aggressiveness (53 children). In the case of autistic spectrum disorders, it was noticed that during 12 classes, eye contact begins to develop, the desire to cooperate and communication skills improve. Looking at the evaluation data in the field of language disorders, children with general language disorders (128 children; code 55) as well as speech disorders (81 children) are most often sent to classes. Specialists have recorded that, depending on the degree of disturbances, – from minimal to large, stable changes can be observed already after a cycle of four classes. No less important is the field of behavioural disorders, in which, after receiving support, 263 children with various disorders resulting from lack of cooperation and communication, emotional discomfort, lack of attention and skills were brought to classes. In the field of support, specialists have concluded the following: *"Warm sand classes are a long-term tool for supporting foster families and adopted children, as the classes develop feelings of compassion, the ability to better understand yourself and the people around you. Children began to show more positive emotions, their psycho-emotional state changed favourably. Children's individual communicative and organizational skills, the ability to work in a team, and cooperation abilities improved. Children were able to more easily overcome difficulties in establishing contacts with peers and adults."* In the field of rehabilitation, for 34 children support in reducing tension was provided. Analyzing the evaluation data in the field of physiotherapy (178 children), specialists have concluded that it is easier for the physiotherapist to work with the child after the sand class. For example, for children with movement restrictions (62 children), in some cases, after a cycle of four lessons, the improvements are minimal, but unconscious movements in immobile joints can be observed. Physiotherapist of "Saulite" pre-school educational institution Tatjana Rusmane [Tatjana Rušmane] concludes: *"When working with the child after the warm sand class, the child and his muscles are more relaxed, the movements in the hands are more harmonious, there is no more shaking."* Similar is the case with cerebral palsy disorders (51 children), where spasticity decreases, coordination improves and muscle tone decreases. In 2019, as part of a cross-border project, attending a cycle of four warm sand classes enabled an eight-year-old girl diagnosed with cerebral palsy to start walking.

We conclude that warm sand classes are an important support in improving the child's general physical and emotional health. The classes also provide support to adults (59 clients) – especially educators and correctional specialists in reducing the symptoms of professional burnout. More than 30 years of experience of specialists in natural environment aesthetics shows that a purposefully organized contact with nature and its materials gives a person the opportunity to find an application for his creative, physical, emotional, cognitive and spiritual health-promoting resources that maintain the overall health of the personality.

Aspects that will avoid unexpected surprises

In order to ensure the high quality of the warm sand class, as well as other aspects related to children's safety during classes, the holder of the idea, provider of qualifications, provider of continuing education and certification of warm sand specialists, namely - professional association "Association of Natural Environmental Aesthetics Studies" maintains a register of specialists and summarizes their experiences. Only a certified specialist with appropriate training can lead and is able to provide a full-fledged process of warm sand classes. The register of specialists is available on the website of "WARMSANDBOX®" warmsandbox.com/specialistiem/.

A tool for professionals

Warm sand classes are an effective support tool for professionals in various fields, providing support in children's physical and emotional self-regulation processes.

For teacher this provides opportunity to support compensation and correction of impairments in perception, cognition, and intellectual functioning. For a speech therapist successful and effective use of classes allows to prevent children's speech and language disorders.

The schedule of classes can help the psychologist to understand better needs of the child/client, to strengthen the child's emotional resilience, causality and learning of communication skills.

A social pedagogue can use hot sand classes to promote adaptation, integration and similar processes.

The collected data show that the warm sand is highly complementary in preventing emotional, learning, sleep, and behavioural disorders. As pointed out by dr. Vizma Meiksane [Vizma Meikšāne], classes are recommended for children with excessive sensitivity, communication difficulties, children with autistic spectrum disorders who are resistant to the touch of a specialist.

Maintain responsibility!

Taking care of children's safety and taking into account the growing popularity of the presented idea, the methodical council of the association "Association of Natural Environmental Aesthetics Studies" and the author of the idea Diana Timofejeva [Dīana Timofejeva] want to draw attention to the fact that in Latvia starts to appear equipment in which natural materials (sand, grain) are heated by current electric (which is contrary to the idea and studies of the aesthetics of the natural environment), and where practiced methodology uses only outwardly imitative features. If the person wants to receive the Natural Environment Aesthetics approach presented in this article we kindly ask to pay attention and insure that person who provides classes and equipment holds specialists and equipment certificates provided by "WARMSANDBOX®".