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Project "Development of the Innovation Center in Liepaja City" Project news

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September 29th, 2023

Science and Education Innovation Center publishes methodological materials in environmental management and digital production

Within the framework of the European Economic Area and Norway (EEA/N) financial instrument program project "Development of Innovation Center in Liepaja City" (hereinafter - the Project), Science and Education Innovation Center of the Liepaja Municipal Education Department (hereinafter - ZIIC) from September 2021 till 2023 developed and implemented lessons related to environmental management and digital production for Latvian students and teachers.

One of the goals of the Project has been to ensure the free availability and distribution of the developed educational programs without exclusivity and discrimination, therefore ZIIC has developed methodical materials that summarize what was implemented in the lessons and in the future the materials will be available digitally on the website www.ziic.liepaja.edu.lv.

3 (three) methodical materials have been developed for educational programs of students' interests:

- "Environmental management" content is suitable for students from 5 (five) to 10 (ten) years and is related to ant and bird research, botany, eco-technology, geography and water quality.
- The content of "Environmental Management II" is suitable for students from 11 to 18 years old and is related to human internal organs, biotechnology, zoology and the layers of the earth.
- "Digital Manufacturing" content is suitable for students aged 11 to 18 and contains information and instructions related to practical online project management, 2D and 3D computer-aided design and printed circuit board assembly.

The methodical materials of the developed educational programs of student interests can be useful for educators to use in the learning process both in their educational institution and, using the material and technical base of ZIIC, during free access.

On the other hand, 2 (two) methodological materials have been developed for the non-formal education programs of pedagogues:

- "Eco-technology for the improvement of the learning process", which includes content related to the processing of algae, the conditions for making insect houses, as well as other useful information and teaching methods for teachers of natural science subjects.
- "Digital production in education" differs from other materials in its format, the content is published on the online site "Miro" and it gathers information about the potential of using digital production equipment in education and explains the principles of operation of the equipment.

The partners involved in the Project have also played an important role in the content of the methodological materials of the informal education programs for teachers. So, for example, the program on ecotechnologies was developed in cooperation with the teaching staff of the Liepājas University, the information obtained on composite materials - making paper from algae is especially important. In turn, it became possible to structure the knowledge and skills of the foreign partner, the regional museum of Jaermuseet (Jærmuseet) in the methodological material, thanks to visits to ZIIC, during which these specialists conducted master classes both on the conditions for creating houses for living creatures and on vision experiments.

Methodological materials were developed within the project "Development of Innovation Center in Liepaja City" which is financed within the framework of the European Economic Area and Norwegian grant program "Research and Education". The total cost of this project is EUR 986,049, of which EUR 754,327.4 is cofinancing from Norwegian grants, EUR 133,116.6 is co-financing from the Latvian state budget, and EUR 98,605 is co-financing from the municipality of Liepaja.

Information prepared by:

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Photo: Laura Grundmane (2023)



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Augusts 31th, 2023

International Level Digital Production Laboratory "FabLab Liepāja" Will Be Opened on Saturday

On Saturday, September 2, the Science and Education Innovation Center of the Liepaja Municipal Education Department will open the digital production laboratory "FabLab Liepāja" at Klāva Ukstiņa Street 17/23, so from 13:00 tiil 16:00 everyone - preschool children, pupils, students, educators, entrepreneurs and In general, the inhabitants of the city are invited to get to know its material and technical base.

At the same time, several creative workshops will be provided in the outdoor environment in cooperation with such organizations as the Valmiera co-creation workshop DARE and the Latvian LEGO user group "LatLUG".

"The combination of words "FabLab" comes from the English language and means Fabrication Laboratory in Latvian, and this name was chosen not only because of its translation, but also because the purchased material and technical base and qualified human resources made it possible to apply for membership of the international foundation "The Fab Foundation" and now we have become a full-fledged partner in the global community, so it can be considered that a digital production environment that meets international standards is provided in Liepāja. Membership in the community is free and provides several benefits, such as discounts on licenses for certain computer-aided design software, and since the community represents more than 90 countries with an average of 1,500 FabLabs worldwide, there is not only the potential for future international projects and initiatives, but also on a daily basis receive assistance in specific matters." explains Kitija Kuduma, Acting Manager of the Science and Education Innovation Center.

"FabLab Liepāja" will be located at Klāva Ukstiņa street 17/23 - in the territory that the Liepāja municipality plans to develop in the future into a block of modern and successive educational institutions, so it is natural that the territory is gradually being cleaned and renovated. Currently, "FabLab Liepāja" is located in the canteen part of the building of the former educational institution - renovation works in an area of 100 square meters have been carried out for the financing of the municipality in the amount of less than 33,000 euros - the floor, wall and ceiling covering has been renewed, the electrical installation and lighting have been renewed, as well as a wired and wireless computer network has been installed. On the other hand, the material and technical base - digital production equipment, work tools, teaching aids and teaching materials purchased from the budget funds of the European Economic Area and Norway (EEA/N) financial instrument program "Research and education" project "Development of the innovation center in the city of Liepāja" - less than 121,000 euros.

"FabLab Liepāja" will have 16 multifunctional workstations related to digital production, which have also been partially moved from the Center's location at Autoru Street 4/6. Currently, the workstations installed in 100 square meters are:

- Assembly Workstation
- Microscope Workstation
- Electronics Workstation
- Vinyl Cutter Workstation
- Laser Cutter Workstation
- Woodworking Workstation
- Metalworking Workstation
- Electrical Work Station
- Composite Workstation
- Vacuum Forming Workstation
- Large Format CNC Milling Workstation
- Combined Technology Workstation
- Automated Embroidery Work Station
- Small Size 3-axis CNC Milling Workstation
- Sublimation and Heat Treatment Workstation
- PLA (polylactic acid) and SLA (stereolithography) Technology 3D Printer Workstation

"It is absolutely clear that this is only the beginning - already in the process of settling in, we are already identifying what can be improved in the future, besides, now the material and technical base will allow us to

manufacture more ourselves, and here is also the added value of the environment created by it - much wider opportunities to manufacture by ourselves what would otherwise be necessary to purchase on the supplier's market at higher prices," emphasises Kitija Kuduma, "we will work on finding the most viable solution so that in Liepāja this becomes an environment where amateurs and professionals meet."

"We will inform the wider public about the organization of work in the digital production laboratory "FabLab Liepāja" after the opening celebration - for now, we invite everyone to come on Saturday and get an idea of what the possibilities of the material and technical base are in general," invites Kitija Kuduma.

The purchase of digital production equipment, work tools, teaching aids and teaching materials of the digital production laboratory "FabLab Liepāja" is financed within the framework of the "Development of Innovation Center in the City of Liepaja" project of the European Economic Area and Norwegian grant program "Research and Education". The total cost of this project is EUR 986,049, of which EUR 754,327.4 is cofinancing from Norwegian grants, EUR 133,116.6 is co-financing from the Latvian state budget, and EUR 98,605 is co-financing from the municipality of Liepaja.

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July 31, 2023

The International Project "Development of the Innovation Center in Liepaja City" Reaches a Threeyear Reference Point

This year on July 26, three years have passed since the implementation of the European Economic Area and Norway (EEA/N) financial instrument program project "Development of the Innovation Center in Liepāja city" (hereafter – the Project) implemented by the Science and Education Innovation Center of the Liepaja Municipal Education Department. The total budget of the project is 986 049,00 euros, and as part of it, the Science and Education Innovation Center has developed new directions of activity, strengthened the capacity of human resources and significantly improved the material and technical base.

In 2020, the Project was launched with the aim of promoting the development of knowledge in the fields of STEM* and environmental sciences, which in the future has the potential to be realized in the students' career choices in one of the aforementioned fields. The timing of the start of the project "Development of the Innovation Center in Liepaja city" coincides with the end of the project "Creation of a Nature House on Zirgu Island", which was implemented by the municipality of Liepaja and whose goal was to provide the necessary infrastructure for the further development of the Science and Education Innovation Center.

"The interaction of the two projects vividly demonstrates the municipality's approach in foresight and succession," emphasizes Kitija Kuduma, Acting Manager of the Science and Education Innovation Center.

The most important achievements of the project:

- 7 (seven) lessons have been developed and implemented in the "Environmental Management" program:
 - o Bird Researcher
 - o Young Geographer
 - o Young Botanist
 - o Protected Natural Areas
 - o Quality of Water
 - o Young Eco-technologist
 - o Ant Researcher
- 4 (four) lessons have been developed and implemented in the "Environmental Management II" program:
 - o Human Internal Organs
 - o Biotechnology
 - o Exploration of Earth's Crust
 - o Zoology Under the Magnifying Glass

The implementation of the programs was started in 2021, and public application opportunities were announced every academic semester, which were used by students from such places in Latvia as Riga, Aizpute, Kabile, Mārupe parish and other places. 377 Latvian students decided to learn 11 lessons, of which 249 students in the age group from 5 to 18 years learned at least 80% of the programs content.

14 <u>interactive installations</u> have been developed and <u>learning materials</u> have been purchased for the amount of 18% of the entire Project budget.

The developed installations are not only an important teaching tool and material for the developed programs, but are also publicly available.

"The initial version of the project envisaged the creation of a space equipped with work tools and similar to the concept that is more widely known in the world as a Makerspace and which in Latvian would be called a co-creation space. However, since July 2021, 6 (six) months after I had studied in the "Fab Academy" program of the digital manufacturing laboratory Aalto FabLab under Aalto University, Finland, coordinated by the Massachusetts Institute of Technology Bit and Atom center (MIT's Center for Bits and Atoms), we changed the vision of how to specifically develop the direction of the Science and Education Innovation Center. We are now a digital manufacturing laboratory and aspire to become a full partner of the international foundation (The Fab Foundation)." informs Kitija Kuduma.

What has been done in the Digital Production Laboratory (formerly the Technology Co-creation Room) during the Project implementation:

- Developed and implemented 5 (five) lessons in the "Digital Production" program:
 - o Practical Project Management
 - o 2D computer-aided design
 - o 3D computer-aided design
 - o Assembly of the Printed Circuit Board (PCB)
 - o Equipment Demonstrations

206 Latvian students from such Latvian places as Ogre, Cīrava parish, Jelgava and other places decided to learn the program. At least 80% of the program content was learned by 164 students in the age group from 11 to 18 years.

- Multi-functional material and technical base of digital and traditional production was purchased for the amount of 12% of the entire Project budget:
 - o Vinyl Cutter Workstation
 - Laser Cutter Workstation
 - o Electronics Workstation
 - o Small Size 3-axis CNC Milling Workstation
 - o Metal Processing Station
 - o PLA (polylactic acid) and SLA (stereolithography) Technology 3D printer station
 - o Vacuum Forming Workstation
 - o Woodworking Workstation
 - o Electrical Workstation
 - o Microscope Workstation
 - o Assembly Workstation
 - o Combined Technology Workstation
 - o Composite Workstation
 - o Large-format CNC Milling Work Station
- Programs have been developed and implemented not only for students, but also for educators in eco-technologies and digital production. 55 Latvian educators have acquired them.

In general, all the results achieved by the Project are interwoven with cooperation with program partners (Research Council of Norway, Norwegian Agency for International Cooperation and Quality Improvement in Higher Education and Liechtenstein National Agency for International Education), project partners of the donor country (Tronheim Science Center and Jærmuseet Regional Museum Nærbø Traveling Science Center "Science circus") and the Latvian partners of the Project (University of Liepāja).

The project partner of the donor country has played an important role in the selection of the content of the lessons – 3 (three) experience exchange trips to the Jaermuseet (*Siftinga Jærmuseet*) regional museum in Norway gave confidence in the need to develop a specific, even nasty, but real process demonstrating lesson content, named "Human Internal Organs" and during which students dissect the organs of the digestive system. Of course, not of a human, but of an animal – a pig. The pig was chosen because its internal organs are similar to the human internal organs system in many ways.

Specialists of the regional museum of the donor country's project partner – Jaermuseet (*Stiftinga Jærmuseet*) have shared their knowledge and skills not only with the employees of the Science and Education Innovation Center, but also conducted 3 (three) master classes for Latvian educators. The second partner of the donor country project – the Trondheim Science Center, which is also located in Norway, has been useful in developing the content of interactive installations and engineering solutions, as well as in providing information on the role of design thinking in the operation of science centers.

On the other hand, the teaching staff of the Latvian partner – the University of Liepāja has played an important role in the content of the programs created for Latvian educators, especially regarding the possibilities of seaweed processing. However, the most important contribution of the Faculty of Humanities and Arts of the University of Liepāja and the Art Research Laboratory under its authority is the original digital content integrated into most of the interactive installations in the Nature House.

At the start of the project, a contract was concluded for the duration of its implementation for 3 (three) years and for its end date – July 26, 2023, but the program administrator, the Ministry of Education and Science and the program agency, the State Education Development Agency, have recognized the Project as an objectively justified need to be extended until April 30, 2024, in order to fully achieve the set tasks:

- 1. Creation of a "Natural Cognition Research Vessel" 15th Nature house interactive installation.
- 2. "Natural Cognition Research Vessel" opening event.
- 3. Provision of free access to "Natural Cognition Research Vessel".
- 4. Technology co-creation spaces Fab Lab opening event.

The project "Development of the innovation center in Liepaja city" is funded by the European Economic Area and the Norwegian grant program "Research and Education". Its total cost is EUR 986 049,00, of which EUR 754 327,40 is co-financing from Norwegian grants, EUR 133 116,60 is co-financing from the Latvian state budget, and EUR 98 605,00 is co-financing from the municipality of Liepaja.

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July 18, 2023

A new installation "Insect collections" is on display at the Nature House

At Science and Education Innovation Center (ZIIC) of the Liepāja Municipality Education Department a new installation "Insect collections" is opened in the Nature House, which was created within the framework of the project "Development of the Innovation Centre in Liepaja City" of the EEA/N grant program "Research and Education".

The creation of the insect collection in the Nature House began in September 2021, when entomology lessons led by Kristaps Vilks, a certified entomologist and lecturer at the Department of Zoology and Animal Ecology of the University of Latvia, took place in the ZIIC Nature House. These lessons began with learning the classifications of insects, identifying the orders and species of insects, up to the first steps in the practical creation of insect collections. Specialists prepared in this way created a new installation "Insect collection" during the implementation of the project.

It is no longer a secret to many that such living creatures as Australian weaver ants and Madagascar hissing cockroaches already live in the Nature House, but the newly created collection of insects gives an even wider understanding of the diversity of insects and their role in Latvian nature. For example, some of the collections are devoted to the classification and familiarization of the mouth organs of insects. In this way, you can see in one place how many different types of insect mouth organs there are and which insects, for example, are representatives of the rodent type mouth organs, which are suckers, but which lick with their mouth organs. Other collections consist of butterfly species of Zirgu Island.

"Although the installation can be considered successfully completed within the framework of the implemented project, it is planned to regularly supplement it with new insect findings," emphasizes Kitija Kuduma, Acting manager of the Center. On the other hand, the Center's environmental expert Sniedze Više adds: "Insects are invertebrates and they are all around us. Invertebrates make up 95% of the world's animals, which is why there is a desire to study the smallest ones in depth."

In the Nature House, several lessons about insects are already being implemented, such as <u>"Ant researcher"</u> or <u>"Zoology under a magnifying glass"</u>, where the collection of insects will be a great addition to the lesson process.

"Creating an insect collection is a very delicate, careful and time-consuming process, in which mistakes are also a significant part of the work. The process of building an insect collection requires precision, patience and curiosity. The big differences in the external structure and appearance of insects stimulate the desire to study and learn about their feeding characteristics, mutual relationships or adaptations to the surrounding environment," admits Sniedze Više, the main author of the installation.

The installation "Insect collections" was developed by the Project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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June 20, 2023

The Science and Education Innovation Center participated V World Congress of Latvian Scientists "Science for Latvia"

From June 27 to June 29, 2023, an important scientific event took place for the fifth time - the World Congress of Latvian Scientists "Science for Latvia" (hereinafter referred to as the congress), where members of the Latvian science ecosystem met - Latvian and diaspora scientists, young scientists, students, entrepreneurs, international and local cooperation partners, representatives of the government, state

administration and foreign representative offices. In the view of the Ministry of Education and Science, science centers in Latvia are also considered important members of the Latvian science ecosystem, which is why they were also approached to participate in the world-class event.

One of the science centers in Latvia - the Science and Education Innovation Center (ZIIC) of the Liepāja Municipality Education Department is located in Liepāja and specializes in four areas of activity. The center provides an opportunity to explore environmental sciences through biology, ecology and zoology-related classes, educational technologies through programmable devices and information technology tools. The direction of digital production is based on the operating principles of the international community Fab Lab, and as well there is a specialization in the direction of science theatre as a rare concept in Latvia and abroad - well-known natural science experiments in the world supplemented with the dimension of theatre art.

In addition, since 2020, the Center has also been implementing the project " Development of the Innovation Centre in Liepaja City " of the EEA/N grant program "Research and Education", as part of which 14 (fourteen) interactive installations in environmental sciences were created, and the material and technical base for the creation of a digital production laboratory was purchased and implemented several interest and non-formal education programs. The project is implemented in order to promote the development of such knowledge, which in the future could contribute to the students' career choice in one of the fields of STEM or environmental sciences.

On June 29, the Center invited not only every participant of the congress, but also the visitors of the National Library of Latvia to get an insight into how the results of digital production - small numerical computer program control (CNC) - equipment are created - printed circuit boards, compare hydraulics and pneumatics models and experience the underwater world in virtual reality, and gain conclusions about how household chemicals affect the water ecosystem.

The center has been significantly developed thanks to the participation within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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June 20, 2023

The Science and Education Innovation Center implemented the interest education program "Digital Production" in the Technology Co-Creation Space

From February 8 to May 26, the Science and Education Innovation Center (ZIIC) of the Liepāja Municipality Education Department implemented the interest education program "Digital production". Since 2022, the content of the program has been developed as part of the EEA/N project "Development of the Innovation Center in the Liepāja city", with the participation of cooperation partners from the University of Liepāja and the Jaermuseet (Jærmuseet) regional museum, with the aim of promoting the development of knowledge and students' career choice in one of the STEM or environmental fields of science.

Participation in the program was offered to all schools in Latvia, which were provided with transport compensation for travel to Liepāja with the financial support of the Project. In this semester, 206 students in the age group from 11 to 18 years applied for the program, of which 164 students completed all the lessons of the program. The program was learned by students from such Latvian cities as Ogre, Cīrava parish, Jelgava and also Liepāja.

The "Digital Manufacturing" program includes five lessons – "Project Management Principles and Practices", "2D Computer-Aided Design", "2D Computer-Aided Design", "Printed Circuit Board Assembly" and "Demonstrations of the Equipment". During the classes, the students got hands-on experience with various digital manufacturing equipment, such as a small CNC milling machine, a laser cutter and a vacuum forming machine, learned how to create digital designs in programs such as Tinkercad and Inkscape, and also learned soldering skills. It is the practical operation that has been the main emphasis in the implementation of the program. Promoting young people's ability to use digital production equipment will broaden their horizons, showing that choosing a career in STEM fields is a sustainable choice, considering the trends in the world and the demand for specialists both in Latvia and Europe.

Līga Bužere, the teacher of the 5th grade of the Ogre center elementary school, shared thoughts about her experience in the program: "It must be admitted that, when applying for the class, there was uncertainty as to whether the 5th grade students would understand STEM, cope with the tasks of the lessons, or whether it would not be too complicated for young people of this age. However, the well-thought-out program, interesting and well-planned lessons under the guidance of professionals convinced me that there was no reason to worry. The lessons were attractive, informative and based on practical activities. We definitely recommend such classes to every student, because it is an opportunity to learn about the operation of various devices (which is impossible to provide in a general education school), try them practically and make a useful and practical final product for yourself, thus gaining knowledge for everyday life, and possibly a direction for the future for choosing a career".

On the other hand, the 5th grade students of the Ogre center elementary school appreciated both the inspiring work of the pedagogues and the opportunity to work with modern equipment in modern space. Student feedback after learning the entire program: "I learned how to create my own website." "I now know how to solder better and more correctly." "I am happy for a self-designed and printed fabric bag." "I learned what STEM is and the knowledge will definitely be useful in the future." "I had a great time with my classmates and learned a lot of new things".

The students emphasized that if they had the opportunity, they would definitely like to attend such programs in the future, learning each of the lesson topics in more depth. During the implementation of the program, one of the basic tasks has been the continuous generation of ideas and the interdisciplinary linking of various subjects and topics, for example in the development of practical scientific research works. During the implementation of the program, the students came up with various ideas for the application of the learned technologies, for example:

- 1. A water bottle with a sensor that reminds you when it's time to drink water.
- 2. Indicator for the flowerpot to remind when it is time to water houseplants.
- 3. Animal feed dispenser.
- 4. Ice containers for making refreshing summer drinks.

5. Automated scoring system of goals for various sports.

In the academic year 2023/2024, the ZIIC Technology Co-creation Space will resume its work, giving students the opportunity to develop their skills in the world of digital production. We invite you to follow the latest information on the ZIIC website https://www.ziic.liepaja.edu.lv/.

The interest education program "Digital Production" has been developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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May 31, 2023

One of the most modern ships of the European scientific fleet "Aranda" will be open for visit in Liepaja

On June 15, the Finnish scientific ship "Aranda" will arrive in Liepaja, which is a full-fledged floating laboratory with a wide arsenal of data collection and sampling instruments and makes a significant contribution to the observation and monitoring of seas and oceans.

The Finnish Environmental Institute's marine research vessel "Aranda" with its team of scientists will moor in the Trade Canal opposite the Customs House, Vecaja ostmala 54, to introduce visitors to sea and ocean research and the Baltic Sea environment. The daily life of the ship is quite busy, making regular research voyages in the Baltic Sea, thus serving as an important platform for marine exploration.

In Liepaja, the 66-meter-long ship "Aranda" will be opened for public visits from 13.00 to 18.00, on the other hand, the time allocated for organized groups of students will be from 9.00 a.m. to 12.00 p.m. In addition to visiting the ship, anyone interested from 9:00 a.m. to 6:00 p.m., in the tent city set up opposite the Customs house, there will be an opportunity to participate in various thematic workshops and educational activities together with Institute of Hydroecology of Latvia, the University of Liepaja and the Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC) Co-creation Space "Nature House" specialists.

Built in 1989 and rebuilt in 2018, Aranda is a modern ice-class research vessel designed and built specifically for research in the Baltic Sea, but is also capable of operating in the Arctic and Antarctic seas. A team of almost 30 scientists works daily in Aranda's specially equipped, 270 square meter laboratories. The ship's kitchen, cabins and even a scientific library allow it to go on research voyages of up to two months. In the world, the use of specially equipped ships in research has already started in the second half of the 18th century. Modern research vessels are designed to serve as full-fledged research support platforms, given the demand for science-based information, the rapid development of technology and the growing need for new ocean observations. The visit of the scientific ship "Aranda" to Liepaja is organized by the Finnish Environmental Institute SYKE in cooperation with the Finnish Embassy in Latvia, the Liepaja City Municipality Administration, the Liepaja City Education Board, the University of Liepaja and the Latvian Institute of Hydroecology within the framework of the BALTICITIES international project.

Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC) equipment used in the implementation of the activities has been purchased within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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Communication about the opportunity for groups of students (aged 7-12 grades) to visit the ship

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

May 30, 2023

The Science and Education Innovation Center opens applications for free access to the Technology Co-creation Space

Application for free open access to Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC) Technology Co-creation Space has been announced for students aged 11 to 18, university students and teachers.

Free access will be available:

• On June 2 from 13.00 to 16.00

- On June 7 from 13.00 to 16.00
- On June 9 from 13.00 to 16.00
- On June 14 from 13.00 to 16.00
- On June 16 from 13.00 to 16.00

As the project "Development of Innovation Center in Liepaja city" enters it's final stage, we invite you to familiarize yourself with the material and technical base of the Technology Co-creation Space and the activities started in 2023 at Klāva Ukstiņa Street 17/23. The technology co-creation space is one of the places of activity of the Science and Education Innovation Center, which is mainly intended for learners and educators, but with the future perspective of providing full access to every resident of Liepāja for the purpose of acquiring modern knowledge and skills necessary for the labor market. The material and technical base of the technology co-creation space allows for the development of design thinking, engineering skills and individual project management.

During free access, you will be offered the opportunity to familiarize yourself with such workstations as a vinyl cutting station, a laser cutting station, an electronics station, a small 3-axis CNC milling station, a metalworking station, a PLA (polylactic acid) and SLA (stereolithography) technology 3D printer station, a vacuum forming station, a woodworking station, electrical engineering station, microscope station, CAD station, combined technology station and composite materials station.

During the free access, it will be possible to practically try out the operation at the stations, work on specific desire ant to develop owns idea.

To apply for free access:

- 1. Pre-registration is mandatory and possible electronically by filling out the reservation application form
- https://ziic.liepaja.edu.lv/aptauja/brivpiekluves-laiks/
- 2. Registration continues until all available times are filled.
- 3. The maximum number of participants for one-day free access is 15 (fifteen).
- 4. Applications will be considered in order of application and the Center's administration will contact the applicant to approve the application.

For questions, please contact the Center's administration by phone at 25 728 867 or by e-mail at ziic@liepaja.edu.lv

Free access to the Technology co-creation space is implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

May 25, 2023

The final interest education program of the program "Environmental Management II" was implemented in the co-creation space Nature House of the Science and Education Innovation Center

In the co-creation room Nature House of the Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC), the exposition was supplemented with interactive nature knowledge boxes.

From February 9 till May 12, the third and final interest education program "Environmental Management II" was implemented at the Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC). Since 2021, the content of the program's lessons has been implemented as part of the project Project "Development of Innovation Centre in Liepaja City", with the participation of cooperation partners from the University of Liepāaa and the Jaermuseet regional museum, with the aim of promoting knowledge development and students' career choice in one of the fields of STEM and environmental sciences.

Participation in the program was offered to all schools in Latvia, which were provided with transport compensation for travel to Liepaja with the financial support of the Project. In this semester of the academic year 2023, 134 students applied for the program, of which 95 students completed all the lessons of the program. The program was studied by students from such Latvian cities as Grobina, Riga, Marupe district, Aizpute, Tukuma district, Kabile and, of course, Liepaja.

The program "Environmental management II" consists of four lessons - "Human Internal Organs", "Biotechnology", "Exploration of the Earth's Crust" and "Zoology Under the Magnifying Glass". During the program, the students used the interactive installations and research equipment of the Nature House in order to learn about the diversity of natural processes in a practical experience, learn the field of natural sciences in depth and get an idea of the importance of human action and interaction in preserving the environment, as well as the importance of a sustainable lifestyle.

"Most of all we liked to catch and study water insects in Lake Liepaja, the experiment of creating a volcano and the opportunity to dissect the internal organs of pigs, and also the fact that we were able to work practically" Endijs, Klāvs and Rihards, 6th grade students of Salas primary school in Marupe region, share their impressions.

Various interactive methods were used in the program, such as, looking into the waters of Lake Liepaja through an aquascope and working practically with a scraper, students got to know the diversity of benthic organisms, which opened a wider perspective to the students about the diversity of the ecosystem of Lake Liepaja.

The lesson "Exploring the Earth's Crust" allows students to live through the ages, concluding about human choices that have affected the surrounding environment. The range of colours from pale yellow to almost

black – the colours of Latvian soils surprised not only students, but even teachers. On the other hand, the Nature House installation "Aquaponics system" allowed students to understand the interaction of fish, plants and bacteria, thereby learning the first steps in biotechnology.

"I remember very well the lesson about the digestive organ system, when the students were surprised that it was all real." Anita Vikmane, a teacher at the primary school in Sala, appreciate the cooperation with the company "Kurzemes gaļsaimnieks" and the offered opportunity for students to work with the dissection of internal organs of pigs.

ZIIC experts also share their thoughts on what they experienced in the program, stating that the methods used in the lessons, such as the process of processing a product such as cake in the digestive organ system and getting to know the organ system of pigs, have given students confidence in choosing a future profession, for example in medicine.

The implementation of the "Environmental Management" and "Environmental Management II" programs was started in 2021 and was implemented until the spring of 2023, a total of 352 students applied for the programs, of which 249 students in the age group of 5 to 18 completed 80% of the program.

The interest education programs were developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit <u>eeagrants.lv</u>

May 9, 2023

The exhibition of the Nature House is complemented by the installation "Zirgu Island"

In the co-creation room Nature House of the Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC), the exposition was supplemented with interactive nature knowledge boxes.

The installation "Zirgu Island" consists of two parts - creative cognitive boxes, where you can find the story of Island of Horses, which reveals both its natural, historical and cultural values, and the overall sound experience of the Nature House complements the learning process. The territory of Zirgu Island, especially in an educational context, serves as a good example of how a former landfill can be transformed into a place for recreation, walks and educational activities. However, the history of Zirgu Island began even before its transformation into a landfill. Its name already indicates the presence and importance of horses in this place, that is, once there were horse pastures here.

ZIIC experts have created fifteen creative knowledge boxes, which in their external structure resemble a fishing tackle box. Not only the external appearance shows this, but also its content, which indicates a connection with the water world in the form of play and cognition. A "frog" that jumps as if from a car tire or a toy "Buttons" - today these are often already forgotten toys, but someone would remember their childhood with a happy mood. Using the dexterity of your fingers, there's a chance to learn how to tie sturdy fisherman's knots or get to know the masterful maggot that builds its own home from whatever it finds in the depths of the water. That's just a fraction of what these boxes contain, and it's clear that their contents are sparking interest in STEM and environmental science fields for young and old alike.

The exhibition of the Nature House are not only intended to please visitors, but they are used as a teaching tool in the workshops organized by the Nature House, in the teaching of pedagogues and in the implementation of the lessons of interest education programs. In this way, the installations together with the licensed lessons complement the learning content of the school programs and make it interactive.

In cooperation with the sound recording studio "Dirty Deal Audio", a sound experience has been created especially for Nature House, which depicts the sound elements characteristic of the city of Liepāja and the local natural ecosystem. This audio experience in the lesson together with the Zirgu Island nature knowledge boxes helps to better experience the story of nature and fishing routes on the Zirgu Island.

The interactive exhibition are being developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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The project's final teacher training and workshops led by Norwegian experts were organised at the Science and Education Innovation Center

On April 18 and 19, in the Liepaja Municipal Education department Science and Education Innovation Centre (ZIIC), the third and final non-formal education training for pedagogues was organized, which was developed as part of the project "Development of the Innovation Center in Liepaja city", with the participation of cooperation partners from the University of Liepaja and the Jaermuseet regional museum with the aim of promoting knowledge development and students' career choice in one of the fields of STEM or environmental sciences.

The program "Ecotechnology for the improvement of the learning process" took place in the co-creation space Nature House, where Liepaja University's practical workshops where led by Dr. biol. leva Roze and natural science laboratory assistant Sintija Ozoliņa, as well as experts from the Jaermuseet regional museum. During the training, the teachers gained an insight into the importance of eco-technology in the future career choice of young people, as well as learned practical skills in outdoor research and the production of composite materials. In the workshops led by the Norwegian partners, ideas were presented on how, using simple resources, it is possible to learn optometry and vision science in an interdisciplinary way. Thanks to the cooperation with "Kurzemes Gaļsaimnieks" within the framework of the master class, cattle eye dissection was also performed, where the skills and knowledge about the structure and functions of the eye were improved under the guidance of Norwegian experts.

In the technology co-creation space in Klāva Ukstiņa Street 17/23, on the first day of the non-formal teacher program "Digital production in education", the main emphasis was placed on digital production equipment, their application and differences from traditional production. Educators participated in a demonstration led by Liepāja University expert Jupjin Rogier on the use of a laser cutter in the learning process and in a practical master class by ZIIC experts on making a printed circuit board using a computer numerically controlled milling machine (CNC). In addition, the participants also gained an insight into the principles of design thinking. At the end of program, Maija Demitera, an expert from the University of Liepāja, gave an educational lecture "Scientific research work in high school", emphasizing practical research work and management at the high school level. The second day was followed by master classes in mechanics and electronics, where the Norwegians educated the teachers in an exciting way about the possibilities of integrating raw materials available at home in the educational content, making a car with a propeller and other exciting demonstrations related to mechanics.

On the third day of the Norwegian partners' visit, we went together to Liepāja 8th secondary school, where, together with Norwegian experts, master classes were organized for 6th - 8th grade students in creating paper rockets, so that they could then try them out in the school yard using a specially created rocket launch device, which operation is based on air pressure.

Non-formal education training programs and workshops for teachers are being developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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April 4, 2023

The content of the educational programs is developed in cooperation with the Jaermuseet regional museum in Norway

Continuing cooperation with Norwegian partners in the implementation of the project "Development of the Innovation Center in Liepaja City", employees of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department went on an experience exchange and knowledge improvement experience to the Science Farm and Science Factory in Norway from March 20 to 22.

This was the third and final visit to the cooperation partner - Jaermuseet regional museum, with the purpose to participate in classes organized and led by Norwegian cooperation partners for students on topics relevant to the Nature House and Technology Co-creation Space, with aim to participate in workshops to improve both interest education and content of non-formal education programs for teachers.

The employees who work in the ZIIC Nature House on a daily basis, together with the students of the Jæren region, participated in the two-day thematic master classes organized by the Science Farm as part of the STEM Talent Academy on the topic dedicated to chemistry. Under the guidance of the Norwegian partners, skills and practical knowledge were gained in the application of various creative methods, such as how to use well-known games such as "Bingo" and "Ship Battles" to learn about the periodic table of chemical elements and how to use simple foods and the solid form of carbon dioxide, which known as dry ice, would create fascinating experiments, thus educating about the reactions of substances and the processes of changing the aggregate states of substances. The experience gained is useful for supplementing and improving the content of the offered educational programs of interest in the Nature House.

The educational technology work specialist of the technology co-creation space had the opportunity to participate in the master classes of the technology department of the Science Factory, where students were taught such lessons as "Printing shirts" and "The art of artificial intelligence". The shirt printing master class used a printing technique where a negative projection of the image was created using specialized ink on manholes found on the streets, which were then used as a form of paint overlay. The artificial intelligence art class implemented a visualization method using designs generated by artificial intelligence.

The opportunity to get acquainted with methodical solutions for documentation and room arrangement was valuable. Namely, in the Science Factory co-creation space (Makerspace), the documentation of one's experience is carried out using video material, which is published on a platform freely available to the public. Lessons were learned about the layout of the premises and the logic of the instrumentation. All the obtained and documented ideas will be usefully used when setting up a technology co-creation space, which will be

located at Klāva Ukstiņa street 17/23, Liepāja, which in the future is intended as a place of activity of ZIIC with specialization in educational technologies and digital production equipment.

Gaining experience and learning ended at Bogafjell school, where cooperation partners demonstrated a science show to students and held master classes in programming and car modelling. The experience gained is considered useful, as it has been seen both how programming elements are integrated into formal education in the Norwegian education system, and how cooperation with the regional science center proceeds.

The experience exchange trip is being implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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March 20, 2023

Teachers are Invited to Apply for Non-formal Education Programs at the Science and Education Innovation Center

The Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department announces applications for the free informal education programs for teachers of different directions, which will be implemented this year on April 18 with the opportunity to participate in workshops led by Norwegian experts on April 19.

In cooperation with Liepāja University and Jaermuseet regional museum experts, two pedagogic training programs have been developed in the ZIIC co-creation space Dabas māja, Zirgu sala 2, and technology co-creation space, Klāva Ukstiņa Street 17/23 within the project "Development of Innovation Center in Liepāja City". Educators from all over Latvia are invited to apply for educational and practical courses to improve their professional activities, which are based on the fields of STEM (science, technology, engineering and mathematics) and environmental sciences.

In the Nature House from from 9.30 to 16.30 the program **"Eco-technology for the improvement of the learning process"** will be implemented. It is suitable for teachers who work with 7-12th graders on a daily basis. The part of the lecture will be implemented by ZIIC experts, Liepāja University lecturer Dr. biol. leva

Roze and natural sciences laboratory assistant Sintija Ozoliņa. Eco-technological approaches, with the help of which to diversify the learning process, will be examined in teacher training. Educators will have the opportunity to:

- make a product, a plant pot, using sustainable alternative composite materials such as algae;
- learn the eco-printing technique using vegetable dyes. The addition of the workshop will be Dr. biol. leva Roze spreading a theoretical presentation about the plant;
- practically learn the elements of outdoor research using various field, including water research tools.

On the other hand, in the technology co-creation space, Klāva Ukstiņa street 17/23, from The program "Digital production in education" will be implemented from 9:00 a.m. to 6:00 p.m. The program is suitable for educators who work with 7-12 graders on a daily basis. Educators will have the opportunity to:

- find out what are the main differences between traditional and digital production equipment and tools, and, through practical operation, get an idea of the principles of creating a printed circuit board with a small computer numerical control (CNC) milling machine, as well as learn the basics of electronics, including soldering:
- gain insight into design thinking and conclude how to use it in the learning process;
- to get an idea of the operating principles of the digital production equipment laser cutter which will be demonstrated by Liepāja University expert Rogier Jupin;
- gain an insight into the conduct of scientific research work under the guidance of Maija Demitera, a researcher and PhD student at the Art Research Laboratory (MPLab) of the University of Liepāja.

Everyone can attend the workshops conducted by the experts of the project partner Jaermuseet regional museum on April 19 at 9.00 (workshops will be held in English). Educators are provided with lunch and the opportunity to apply for reimbursement of transport compensation. We invite you to familiarize yourself with the transport compensation regulations here. Application is open from 20.03.2023. until 31.03.2023. or until 30 applications are received (whichever comes first).

To apply, you need to fill out the electronic form - https://ej.uz/registrejies-2023. ZIIC administration will contact the participants whose reservation will be confirmed. In case the reserved seats become available, re-application will be announced.

Non-formal education training programs or teachers are being developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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March 15, 2023

The Science and Education Innovation Center implements the interest education program "Digital Production" in the Technology Co-Creation Space

On February 16, the interest education program "Digital Production" was launched, which was developed at the Science and Education Innovation Center (ZIIC) of the Liepāja Municipality Education Department. Application for learning the program was opened for educational institutions from all over Latvia from grades 5 till 12 for participation in the program, which is implemented from February till May, both online and in person. 190 students from Latvian cities such as Ogre, Cīrava parish, Jelgava and Liepāja applied for the program.

The "Digital Manufacturing" program includes five lessons – "Project Management Principles and Practices", "2D Computer-Aided Design", "3D Computer-Aided Design", "Printed Circuit Board Assembly" and "Demonstrations of the Equipment". Online "Practical Project Management" and face-to-face "2D Computer Aided Design" classes were held. The aim of the program, as well as the project, is to promote the development of knowledge and the students' career choice in STEM fields. Promoting young people's ability to use digital production equipment expands their horizons and the future of opportunities, showing that choosing a career in one of the STEM fields is a sustainable choice, taking into account the trends in the world and the demand for specialists in both Latvia and Europe.

In the "Project Management Principles and Practices" lesson, students have the opportunity to familiarize themselves with the principles of creating a personalized website. Everyone must individually create both the design and content of their website, which goes hand in hand with the activities of the following lessons, thus students also learn documentation skills. At the end of the program, the website will serve both as a summary of the skills learned and as a tool to be further developed as a portfolio of interests, which can be useful for inclusion in one's curriculum vitae (CV) and to give the student's future employer an idea of the student's skills in the field of information technology.

On the other hand, in the lesson "2D Computer-Aided Design", students learn the logic and technological techniques of 2D design development. Namely, students project their imagination in a digital program, from which the design is cut out by computer on a specialized coating film. Then, using the functionality of the heat press, it is transferred to a cotton bag, which everyone gets in their possession. Further activities in 2D computer-aided design included laser cutting technologies, which demonstrate to students a different technique of digital fabrication, both in the context of the machine's operational functionality and in the development of multi-layer designs.

The interest education program "Digital Production" has been developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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March 13, 2023

Opening of the installations "Exploration of the underwater world" and "Kaleidoscope" in the co-creation space of the Science and Education Innovation Center Nature House

In the week of Liepāja's 398th birthday, two new installations will enter the Nature House - "Exploration of the Underwater World" and "Kaleidoscope". Exploring the underwater world with the help of virtual reality allows visitors to look into Lake Liepāja. On the other hand, in the second installation, visitors are able to see nature scenes typical to the Latvian environment in four seasons, which, thanks to the specificity of the Kaleidoscope with several reflective surfaces, create a fragmentary visual experience.

In the Nature House, since 2020, as part of the implementation of the project "Development of the Innovation Center in Liepaja City", active work has been going on in the development of the content of environmental awareness raising installations in cooperation with the specialists of the Art Research Laboratory of the Faculty of Humanities and Arts of the University of Liepāja. The result of the collaboration can be viewed in such installations as "Bird development", which depicts the development of a bird in an egg with the help of a holographic method, "Nature and biodiversity" in the "Liepiņa" section, which is home to 2D animated and interactive insects, and "Aquaponics system", which demonstrates the irrigation of plants with organic nutrients.

"In the implementation of the project, active cooperation was formed with the employees of the Liepaja Municipal Education department involved in the project, who were highly motivated and provided valuable advice on various natural phenomena and animal anatomy and behavioral peculiarities, so that we, artists, could develop not only visually interesting, but also educational and realistic content for Natural House installations. As an art teacher and mother, I am pleased to work in a project that complements the educational ecosystem of Liepāja with exciting opportunities for children, especially in the field of nature and technology, which cannot be learned only from books while sitting on a school bench. In the installations, with digital technology tools, we depict those processes in nature, which are unarmed and often remain unnoticed by humans," reveals Anna Priedola, head of the Art Research Laboratory of the University of Liepāja, project coordinator at the University of Liepāja.

During the development of the installation "Exploration of the Underwater World", cooperation with the University of Liepāja has been going on for two years. Unique content has been created that depicts the synergy of the Liepāja lake ecosystem and its inhabitants. The installation has both an educational significance and it includes game-specific elements that encourage students motivation to get to know the environment of Lake Liepāja. Virtual reality specialists Patriks Borža and Kaspars Lēvalds developed five playgrounds, multimedia design specialist Uldis Hasners created 3D visual environments corresponding to the ecosystem of Lake Liepāja, while Krista Dinter created compositions and underwater sound recordings.

"When creating a soundscape for the underwater world of Liepāja Lake, I used both my imagination, imagining what it would be like to feel like a perch and swim underwater, meeting the animals living in

the lake, and authentic sounds recorded in Liepāja Lake with a hydrophone. When you go out into nature with a sound recorder, you can feel like a discoverer - with the help of technology, a new perspective opens up, because you can hear the tiniest sounds, in addition, it is possible to listen in unusual places and environments, finding out what is going on under the surface of the water" says the assistant professor of the University of Liepāja, sound artist Krista Dinter.

The content for the installation "Kaleidoscope" was created by Liepāja University lecturer and audiovisual art specialist Pēteris Riekstiņš in cooperation with the Nature House team, developing the audiovisual content that demonstrates natural landscapes corresponding to the nature of Latvia, which change according to the seasons.

"The developers of the project had a clear vision of the most significant scenes and processes of changes of the seasons of the year in Latvian nature, which they successfully managed to depict in a video installation. In developing the content of the installation, I also involved the most motivated students of the bachelor's study program "New media art", thus providing an insight into the specifics of creating installations for permanent, wide-audience educational centers, not only temporary art exhibitions," emphasizes Pēteris Riekstiņš.

The installations are of great importance in the process of implementing the lessons of the interest education programs "Environmental Management" and "Environmental Management II" realized in the Nature House. During the lessons, students get to know the interactive installations and students have possibility to develop an interest in studying natural processes, thereby promoting the development of these skills and a common understanding of the importance of the environment.

Nature House exposition has been developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

January 16, 2023

The Science and Education Innovation Center Invites Educational institutions to Apply for the Interest Education Program "Digital Production"

On January 16, the Science and Education Innovation Center (ZIIC) of the Liepāja Municipality Education Department announces the application for the interest education program "Digital Production". Educational institutions from all over Latvia are invited to apply 5-12. grade students in

the program, which will be implemented from February to May both online and in the Technology Cocreation place, Klāva Ukstiņa Street 17/23, Liepāja.

With the funds of the project "Development of the Innovation Centre in Liepaja City", the Science and Education Innovation Center has purchased digital production equipment. The interest education program "Digital Production", licensed at the beginning of 2023, aims to increase the interest of 11-18-year-old students' career choices in STEM fields, providing knowledge and skills in using digital manufacturing equipment and developing practical projects. With the support of the Liepāja city Municipality, a room suitable for production at Klāva Ukstiņa Street 17/23 has been adapted.

The "Digital Manufacturing" program includes five lessons - "Project Management Principles and Practices", "2D Computer-Aided Design", "3D Computer-Aided Design", "Printed Circuit Board Assembly" and "Demonstrations of the Equipment". In addition to practical experience with a variety of digital manufacturing equipment, such as large and small CNC milling machines, laser cutters and vacuum forming machines, students will also have the opportunity to learn digital design using programs such as Tinker Cad and Inkscape, and also learn soldering and electronics. The practical activity is the main emphasis in the implementation of the interest education program. Participants will be encouraged to develop such important digital, creative, collaborative and entrepreneurship skills. Promoting young people's ability to use digital production equipment will broaden their horizons, showing that choosing a career in the STEM field is a sustainable choice, considering the trends in the world and the demand for specialists both in Latvia and Europe. The program was created in close cooperation with Liepāja University and expert Rogier Jupin.

The duration of the "Project Management Principles and Practices" class is 120 minutes or 2 hours, while the duration of the other classes is 240 minutes or 4 hours, they are free of charge. To complete the program, students must attend all included lessons.

Reimbursement of transport costs is provided to educational institutions. Additional information on the transport compensation regulations is available on the <u>ZIIC website</u>.

Information to apply for classes:

- The application for the program is only available electronically on the ZIIC website, by filling
 in the reservation form.
- Registration takes place 16.01.2023.-27.01.2023, or until 10 applications have been received (whichever comes first).
- The ZIIC administration will contact applicants whose application has been approved

Additional information available by phone +371 25 728 867 or e-mail ziic@liepaja.edu.lv.

The interest education program "Digital Production" is being implemented within the project "Development of the Innovation Centre in Liepāja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is cofinancing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepāja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

January 9, 2023

Educational Institutions Are Invited to Apply for the Interest Education Program "Environmental Management II"

On January 9, the co-creation place Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipality Education Department announces an application to educational institutions for the acquisition of the interest education program "Environmental Management II", which is developed for 11-18-year-old students.

Since the implementation of the project "Development of the Innovation Centre in Liepaja City" is moving towards the final stage, for the last time educational institutions from all over Latvia are invited to apply 5-12 grade students to participate in the interest education program, which is implemented in the ZIIC co-creation place "Nature House". The program "Environmental Management II" includes four innovative lessons - "Human Internal Organs", "Biotechnology", "Exploration of Earth's Crust" and "Zoology under the Magnifying Glass".

In the interactive lessons, which will take place in February, March, April and May, students, using the installations and equipment of the Nature House, will get to know the natural sciences, study the diversity of natural processes, understand the need to protect the environment, and also, by conducting theoretical and practical research, get an idea of an ecological lifestyle importance in today's world.

Each lesson lasts 60 minutes, it is free of charge, and the class is divided in half during the lessons. To complete the program, students must attend all included lessons.

Reimbursement of transport costs is provided to educational institutions. Additional information on the transport compensation regulations is available on the ZIIC website.

Information to apply for classes:

- The application for the program is only available electronically on the ZIIC website, by filling in the reservation form.
- Registration takes place 9.01.2023.-20.01.2023, or until 10 applications have been received (whichever comes first).
- The ZIIC administration will contact applicants whose application has been approved

Additional information available by phone + 37126644834 or e-mail dabasmaja@liepaja.edu.lv .

The interest education program "Environmental Management II" is being implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

December 20, 2022

Visit the Science and Education Innovation Center During the School Winter Holidays

During the winter school holidays, between December 28 and January 6, anyone interested are invited to visit The Nature House and the Technology co-creation place of the Science and Education Innovation Center of the Liepaja Municipal Education Department.

The visit to the House of Nature is free of charge, and in case of a large flow of people, you may have to wait in line. Group visits, where the number of participants is more than 10, it is necessary to apply in advance by phone no. 25728867 or electronically dabasmaja@liepaja.edu.lv.

Visiting times in the Nature House:

- December 28, Wednesday, 10.00–16.00
- December 29, Thursday, 14.00–16.00
- January 2, Monday, 10.00–16.00
- January 5, Thursday, 10.00–16.00
- January 6, Friday, 10.00–16.00

On the other hand, in the Technology co-creation space, Autoru Street 4/6, families with children are invited to try out robots, get to know the laws of physics and engineering, and spend time together meaningfully while working practically.

A visit to Autoru Street costs EUR 5.00 for a family, and EUR 3.00 for individual visitors (including VAT).

Visiting times in the Technology Co-creation place:

- December 28, Wednesday, 9.00–16.00
- December 29, Thursday, 14.00–16.00
- December 30, Friday, 9.00–13.00
- January 2, Monday, 9.00–17.00
- January 3, Tuesday, 9.00–16.00
- January 4, Wednesday, 9.00–16.00
- January 5, Thursday, 9.00–16.00
- January 6, Friday, 9.00–15.00

The exposition of the Nature House is being developed by the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway

grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

October 21, 2022

Visit the Nature House During the School's Autumn Holidays

With the arrival of autumn, many people are exploring changes in nature brought by this glorious time of the year. The co-creation place Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department invites anyone interested to visit it during the autumn school holidays, from October 24 to 28, and see both existing and new nature knowledge installations free of charge.

From August 2020, the Nature House has been actively working on the development of the content of environmental installations and the creation of the installations themselves. A significant part of them have already been developed and from the beginning of 2022 are actively used in the process of implementing the lessons of the interest education programs "Environmental Management" and "Environmental Management II". During the lessons, getting to know the interactive installations, the students become interested in the study of natural processes, thus promoting the development of these skills and a common understanding of environmental conservation.

During the autumn school holidays, visitors are invited to get to know the fascinating side of nature's diversity and become nature explorers. When entering the Nature House, everyone has the opportunity to remember the laws of physics and look at the changing natural processes and even themselves in the diverse kaleidoscope of mirrors. As well as being surrounded by natural creatures in the installation "Nature and Biological Diversity", returning through the world of sound to the production process of the company "Liepājas metalurgs" and having another exciting experience.

Along with autumnal moods, two more installations entered the Nature House - "Wind station" and "Typical inhabitants of the nature reserve "Liepājas ezers"". The wind station gives visitors the opportunity to "ventilate" in the taste of Liepāja and send your picture to e-mail. On the other hand, in the second installation, a large-format map of Lake Liepāja can be explored, and through augmented reality it is possible to revive and get to know some of the typical inhabitants of the nature reserve "Lake Liepāja".

Visiting times:

• October 24, Monday, 10.00 - 18.00

- October 25, Tuesday, 10.00 17.00
- October 27, Thursday, 10.00 17.00
- October 28, Friday, 10.00 16.00

The visit is free of charge. It is necessary to apply group visits in advance by phone no. 25728867 or electronically dabasmaja@liepaja.edu.lv.

The exposition of The Nature House is being developed by the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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October 20, 2022

Teachers study STEM and environmental science non-formal education programs at the Science and Education Innovation Center

On October 18 and 19, the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department implemented the second informal training for teachers, developed within the project "Development of Innovation Center in Liepaja City".

This is already the second teacher training organized in both ZIIC co-creation places and developed in cooperation with partners from Liepaja University and Jaermuseet regional museum to promote knowledge development and students' career choice in the field of STEM and environmental sciences.

In the Nature house, teachers got acquainted with the importance of ecotechnology in the program "Ecotechnology for Improving the Learning Process", where Dr. biol. Ieva Roze and natural sciences laboratory assistant Sintija Ozoliņa shared their knowledge on making composite materials from non-traditional materials, while ZIIC experts provided practical knowledge on the use of field research tools.

On the other hand, in the Technology co-creation space, Autoru Street 4/6, in the program "Digital Production in Education" 7.-12. grade teachers studied the use of digital production equipment and the differences from traditional production, supplementing their knowledge with the basic principles of design thinking accompanied by ZIIC experts. Rogier Jupjin, expert from Liepaja University introduced a laser cutter

in the master class, and the participants learned the possibilities of involving digital production equipment in the learning process.

On October 19, the project partners from the Jaermuseet regional museum shared their experience on the implementation of classes for students of different age groups in Norway, and also led practical workshops in both ZIIC co-creation places. In the Technology co-creation room, the educators created an electronic machine, the creation of which requires only a few materials available to everyone and a small motor that works with the help of a battery. A hydraulic excavator was also created, in which the principle of hydraulics was realized with water syringes and tubes. At the same time, in the Nature House, teachers and Liepaja University students, together with experts from the Jaermuseet regional museum, got to know the importance of wind energy in the past and the development of wind generators today. The participants researched, designed and searched for the best solutions for more efficient wind power generation using the wind generator modeling equipment. In addition, windmills and kites were made, which can be integrated into the lessons of the younger students.

Non-formal education training programs or teachers are being developed by the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is cofinancing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

September 19, 2022

Teachers are Invited to Apply for Non-formal Education Programs

The Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department announces the application for free non-formal teacher education programs, which will be implemented on October 18, with the opportunity to participate in workshops led by Norwegian experts on October 19.

This will be the second training in the co-creation places of the Science and Education Innovation Center, in which teachers from all over Latvia are invited to participate. The non-formal education programs for teachers have been developed within the project "Development of the Innovation Center in Liepaja City", in cooperation with partners from Liepaja University and the Jaermuseet Regional Museum. Programs are based in the field of STEM (Science, Technology, Engineering and Mathematics) and Environmental Sciences.

The program "Ecotechnology for Improving the Learning Process" will be implemented in the Nature House for 7.-12. grade teachers. Lectures will be read by ZIIC experts, Dr.biol. leva Roze and Sintija Ozoliņa,

Laboratory Assistant in Natural Sciences. Teachers will have the opportunity to learn eco-technological approaches, with the help of which they can diversify the learning process, as well as to work practically and make sustainable, alternative materials. Studies in Nature House will take place from 9.30 to 16.30.

On the other hand, the program "Digital Production in Education" will be implemented in the Technology cocreation place for 7.-12. grade teachers. Within the program, educators will gain an insight into the elements of design thinking that can be used in the digital production process. At the same time, digital production equipment and their application will be introduced, which will be complemented by a practical workshop on the basics of digital design development led by Liepaja University expert Rogier Jupin. In addition, Uldis Žaimis, the experienced director of the Institute of Science and Innovative Technologies, will lecture on conducting scientific research works, implementing a technology-enriched learning process. Teacher training in the Technology co-creation room, Autoru Street 4/6 will take place from 9.00. to 18.00.

Each participant has the opportunity to attend the workshops conducted by the experts of the project partner Jaermuseet Regional Museum on October 19 at 9.00 (workshops will be held in English). Teachers are provided with lunch and the opportunity to apply for a refund of transport compensation. Please read the transport compensation regulations here: https://saite.lv/xRS. The application is open from 19.09.2022. until 30.09.2022, or until 30 applications are received (whichever comes first).

To apply for training, it is necessary to fill in the electronic form on the ZIIC website: https://saite.lv/uEa. ZIIC administration will contact the participants whose booking will be confirmed. In case the reserved places become available, a re-application will be announced.

Non-formal education training programs or teachers are being developed by the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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For more information about Norway Financial mechanism and its program, please visit <u>eeagrants.lv</u>

August 29, 2022

Educational Institutions Are Invited to Apply for the Interest Education Program "Environmental Management"

Co-creation place Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipality Education Department announces an application to educational institutions for the acquisition

of the interest education program "Environmental Management", which is developed for preschool and pupils age group 5-10 years.

In September, October, November and December, students from all over Latvia have the opportunity to study the "Environmental Management" program, which consists of seven innovative lessons - "Ant Researcher", "Protected Natural Areas", "Water Quality", "Young Botanist", "New ecotechnologist", "Bird researcher" and "Young geographer". Installations and interactive methods of the co-creation space "Nature House" will be used in the lessons, creating an understanding of life, the ecosystem, processes occurring in nature, studying them both practically and theoretically.

The interest education program is designed to develop students' understanding and deepen their interest in the environment, natural sciences, which include ecology and environmental science. By learning the lessons in an interactive way, you will be taught a gentle attitude towards any living organism and understand their importance in creating a full-fledged and healthy ecosystem. Learners will get to know such fields as hydrobiology, entomology, eco-technology, botany, ornithology, geography and environmental protection, protected natural areas, anatomy and geology.

Each lesson is 40 minutes long, free of charge, and the class is split in half during the lessons. Classes will take place in accordance with epidemiological regulations and their number is limited. In order to complete the program, the student must attend all included classes, taking two classes in one visit.

Reimbursement of transport costs is provided to educational institutions. Additional information on the transport compensation regulations is available on the ZIIC website.

Information to apply for classes:

- The application for the program is only available electronically on the ZIIC website, by filling in the reservation form and attaching all supporting documents.
- Registration takes place from 29.08.22. 09.09.22, or until 10 applications have been received (whichever comes first).
- ZIIC administration will contact applicants whose application has been approved.

Additional information available by phone + 37126644834 or e-mail dabasmaja@liepaja.edu.lv.

Interest education program "Environmental Management" is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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August 19, 2022

The Science and Education Innovation Center Implements Teacher Training

On August 16 and 17, the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department, organized informal educational training for teachers, developed in the project "Development of the Innovation Center in Liepaja city", with the participation of cooperation partners from Liepaja University and Jaermuseet regional museum.

In the Nature House, the training of the program "Ecotechnology for the improvement of the learning process" was organized in cooperation with Liepaja University's experts - Dr. biol. leva Roze and natural science laboratory assistant Sintija Ozoliņa, but practical workshops were led by experts from the Jaermuseet regional museum. During the training, teachers gained an insight into the importance of ecotechnology in the future career choice of young people, as well as learned practical skills in outdoor research, using digital tools in the learning process and making composite materials from non-traditional materials. On the other hand, in the workshops led by the Norwegian partners, ideas were presented on how, using simple resources, it is possible to involve young people and encourage them to take part in environmental conservation.

In the Technology co-creation place, Autoru Street 4/6, on the first day of the teachers' informal training "Digital production in education", the main emphasis was placed on digital production equipment, their application and differences from traditional production. Educators participated in a master class led by Liepaja University expert Rogier Jupjin, where they learned the capabilities of the laser cutter and saw it in action. The knowledge gained in the master class was also applied practically by performing an educational task to see how the equipment can be used in the learning process. In addition, the participants gained an insight into the basic principles of design thinking by working practically with a creative task. At the end, the expert of Liepaja University, Uldis Žaimis, gave an educational lecture "Scientific research work in high school", emphasizing practical research work in the high school stage.

On the second day of training, in the workshops conducted by Norwegian experts, a traffic light was developed with increasing complexity using the Micro:bit microcontroller. First, the participants programmed the operation of one light emitting diode, then all three of the traffic lights - red, yellow and green. Then, as a task of increased difficulty, it was to create a prototype of a traffic light stand from cardboard and program the operation of the LEDs according to how a traffic light works in a real environment. Finally, the most difficult task of the workshop can be considered the transition to the traffic light stand, which was developed using the laser cutting technique, and to solder light emitting diodes and resistors in the places provided by the electronic circuit.

In the Science and Education Innovation Center, informal learning programs for teachers are designed to promote knowledge development and students' career choices in the field of STEM and environmental sciences.

The teacher training is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

May 24, 2022

Teachers are Invited to Apply for Non-formal Education Programs

The Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department announces the application for free non-formal teacher education programs, which will be implemented on 16 August, with the opportunity to participate in workshops led by Norwegian experts on 17 August.

In cooperation with experts from Liepaja University and the Jaermuseet Regional Museum, two teacher training programs have been developed in the ZIIC co-creation place Nature House, Zirgu sala 2, and Technology co-creation room, Autoru Street 4/6, within the project "Development of Innovation Center in Liepaja City". Teachers from all over Latvia are invited to apply for participation in exciting studies based on STEM (science, technology, engineering and mathematics) and environmental sciences.

The program "Ecotechnology for Improving the Learning Process" has been developed in the Nature House for 7.-12. grade teachers. Lectures will be given by ZIIC experts, Dr.biol. leva Roze and Sintija Ozoliņa, Laboratory Assistant in Natural Sciences. As part of the program, participants will gain an insight into the eco-technological approach to learning and the development of sustainable materials. Studies in Nature House will take place from 9.30 to 16.30.

On the other hand, the program "Digital Production in Education" will be implemented in the Technology co-creation place for 7.-12. grade teachers. Within the framework of the program, the basics of digital design development, as well as the principles of operation of digital production equipment will be mastered. The knowledge and skills acquired through learning can be useful both in the implementation of technology-enhanced learning and in the development of learning tools. Teacher training in the technology co-creation room, Autoru Street 4/6 will take place from 9.00. to 18.00.

Each participant has the opportunity to attend the workshops conducted by the experts of the project partner Jaermuseet Regional Museum on August 17 at 9.00 (workshops will be held in English). Teachers are provided with lunch and the opportunity to apply for a refund of transport compensation. Please read the transport compensation regulations here: https://ej.uz/pedmnolikums. The application is open from 24.05.2022. until 06.06.2022, or until 40 applications are received (whichever comes first).

To apply for training, it is necessary to fill in the electronic form on the ZIIC website: https://ej.uz/pedmacibas. ZIIC administration will contact the participants whose booking will be confirmed. In case the reserved places become available, a re-application will be announced in July.

Non-formal education training programs or teachers are being developed by the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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May 17, 2022

The Science and Education Innovation Center Approbates Non-formal Education Programs for Teachers

On May 16, on the online platform ZOOM, the team of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department approbated the first non-formal teacher education programs for Norwegian partners and teachers from the Jaermuseet Regional Museum.

Within the framework of the project "Development of the Innovation Centre in Liepaja City", non-formal teacher education programs are being developed both in the Technology co-creation place at Autoru Street 4/6 and in the Nature House. The approbation of the programs in both co-creation spaces is a succession of experience exchange trips to Norway. The training developed by ZIIC is important for pedagogues to motivate today's young people to pursue a career in STEM and environmental sciences, as well as to develop a greener, more sustainable worldview.

In cooperation with experts from Liepaja University, teachers' training program on digital production in education has been developed in the Technology co-creation space. Within two hours, the Norwegian partners from the Jaermuseet Regional Museum got acquainted with the Fab Lab concept planned by ZIIC and how the technologies contained in it can be used in the educational process, emphasizing not only the principle of operation, but also the real application in the context of educational content. The obtained analysis and feedback allow to improve the content of the training so that the programs already implemented in August would be of high quality and with added value.

On the other hand, non-formal education program for teachers "Ecotechnology for the Improvement of the Environmental Science Teaching Process" has been developed in the Nature House and it includes various methods for the ecotechnological teaching approach. In addition, Sintija Ozolina, a laboratory assistant and lecturer at Liepaja University, inspired teachers with demonstrations of algae processing. Teacher training will provide an opportunity to work and produce a variety of alternative materials.

The project "Development of the Innovation Centre in Liepaja City" is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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April 12, 2022

Experts from the Science and Education Innovation Center in Norway Learn Design Thinking

On Friday, April 8, in Trondheim, Norway, the second part of the training on design thinking organized by the partners of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department, led by representatives of Norway's leading product development company "Inventas", was completed. Four ZIIC employees received a diploma in design thinking.

Experts from the Trondheim Science Center have been creating interactive, educational and sometimes challenging exhibits for more than 20 years. However, these specialists also point out that it is necessary to be able to keep up with both the rapid development of technology and create new methods of educating the visitors of the science center. For one it will be interactivity, for others it will be a play of light or sound, but for another it will be a difficult task that will stimulate enthusiasm and desire to learn about STEM and environmental sciences.

During the first training in Trondheim, ZIIC experts learned practical methods to get to know and understand the target audience of the science center and their wishes when visiting the center, but this time the skills in creating prototypes of installations, defining goals and testing were also improved. The prototypes created during the training were also tested by the students of the international school, which provided an opportunity to analyze more clearly what was done in order to achieve the desired result.

The lectures led by Trondheim specialists explained both the interactivity of the installations and the interaction with the visitor, as well as an insight into the importance of team work, how to form a working group so that the set goals are achieved as productively as possible. Within the framework of the project "Development of the Innovation Center in Liepaja City", 15 interactive installations are being developed in the Nature House, therefore the knowledge gained in the inspiring and practical training will be used in the development of the exhibition.

The experience exchange trip is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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April 4, 2022

The Content of the Curricula of the Science and Education Innovation Center is Being Developed in Collaboration with the Jaermuseet Regional Museum

Continuing cooperation with Norwegian partners in the implementation of the project "Development of the Innovation Center in Liepaja City", employees of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department went on an experience exchange and knowledge improvement trip to the Science Farm and Science Factory in Norway.

The aim of the visit was to participate in classes organized by Norwegian partners for students on topics relevant to the Nature House and the co-creation place for technologies, as well as in different workshops to improve the content of both interest education and non-formal teacher education programs.

The team of the Nature House took part in the Science Farm's activities, where lessons on alternative energy sources, biogas production, everyday chemistry and animals or wildlife were observed and analyzed. The gained experience allows to look at the learning process from a different point of view and to see new methods for improving the already developed interest education programs in Liepaja. The long-term experience of the Norwegian partners provided valuable insights and inspiration for the development of innovative classes in both ZIIC co-creation places.

On the other hand, the team of the Technology co-creation place not only observed technology and programming lessons for Norwegian 7th grade students, but also gained insight into the science center's cooperation with the University of Stavanger, the university's pedagogy students in various technology laboratories. A unique experience was gained by getting involved in testing new educational programs and technological solutions, with the aim of improving the lessons already developed. The team of the Liepaja Science and innovation center, together with the staff of the Jaermuseet Regional Museum, created a robot that can recognize the things programmed for it, such as a specific object, sound or image. The acquired skills will be used in the implementation of classes to promote the development of Latvian students' knowledge and career choices in the fields of STEM and environmental sciences.

The experience exchange trip is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information: Liepaja Municipal Education Department Science and Education Innovation Centre (ZIIC) Project "Development of the Innovation Centre in Liepaja City" manager



February 28, 2022

Debate Master Class "Social Science" Has Taken Place

On February 24, a discussion master class on the topic "Social Science" was organized through the Zoom platform by the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department in cooperation with the Association "Debate Center".

The aim of the master class was to give debaters and their coaches from all over Latvia an insight into what social science is, to supplement their knowledge in the debate by learning various questioning and questioning techniques, and to create possible debate resolutions on the topic.

Two specialists were attracted to the master class - Ilze Priedniece, a representative of the Latvian Fund of Nature, who also works as a coordinator and project manager of the nature observation portal dabasdati.lv, as well as a debater with extensive experience, Kristofers Kalniņš - Liberis, a student of law and diplomacy at the Riga Graduate School of Law.

In total, almost 60 participants from various cities in Latvia participated in the class. Some of them were from Liepaja, Iecava, Daugavpils, Cesis, Bauska, Jelgava and Riga. Possible debate resolutions on the topic "Social Science" created during the practical workshop will be processed and then used in the debate tournaments organized by the Association "Debate Center".

The project "Development of the Innovation Centre in Liepaja City" is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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Educational Institutions Are Invited to Apply for the Interest Education Program "Environmental Management II"

On February 7, the co-creation place Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipality Education Department announces an application to educational institutions for the acquisition of the interest education program "Environmental Management II", which is developed for 11-18-year-old students.

The program combines natural sciences, which also include ecology and environmental science. It introduces knowledge about natural processes, their correlation, living and non-living nature. "Environmental Management II" is developed to stimulate students' interest in STEM and to provide an in-depth understanding of the need to protect the environment, the importance of an ecological lifestyle, and the vital role of science, education and research in building a successful and healthy society and interspecies communication. One of the main tasks is to develop understanding and interest in hydrobiology, entomology, ecotechnology, botany, ornithology, geography and environmental protection, protected areas, anatomy and geology.

In March, April and May, students will have the opportunity to take part in the "Environmental Management II" program, which consists of four innovative lessons 'Human Internal Organs', 'Biotechnology', 'Exploration of Earth's Crust' and 'Zoology under the Magnifying Glass'. In order to create an understanding of life, ecosystems and processes taking place in nature, studying them both practically and theoretically, installations and interactive methods will be used in the learning process. Each lesson lasts 60 minutes, is free of charge, and the class is divided in half during the lessons. Classes will follow epidemiological rules and the number of sessions is limited. To complete the program, students must attend all included lessons.

Reimbursement of transport costs is provided to educational institutions. Additional information on the transport compensation regulations is available on the ZIIC website.

Information to apply for classes:

- The application for the program is only available electronically on the <u>ZIIC website</u>, by filling in the reservation form and attaching all supporting documents.
- Registration takes place from 7.02.22. 18.02.22, or until 20 applications have been received (whichever comes first).
- The ZIIC administration will contact applicants whose application has been approved

Additional information available by phone + 37126644834 or e-mail dabasmaja@liepaja.edu.lv.

The interest education program "Environmental Management II" is being implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State

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February 1, 2022

The Science and Education Innovation Center Launches New Website

On Tuesday, February 1, the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department announces the launch of its new website ziic.liepaja.edu.lv. The main task of the website is to promote the openness and accessibility of the Center, as well as to provide all necessary information to visitors.

ZIIC was opened in 2019 at Autoru Street 4/6, while in 2020 the environmental and nature education co-creation place "Nature House" joined the Center. Since then, ZIIC's offering has expanded many times over, which has also created a need for a website that brings together a wide range of offerings in both ZIIC locations. The task of the website is to create the impression that the Nature House and Center at 4/6 Autoru Street is a unified whole - the Science and Education Innovation Center.

The content of the website is structured based on the Centre's main target audiences, in two main sections of the website – for educational institutions and for visitors. The section "For educational institutions" includes an offer for students and teachers that can be used within the learning process in order to diversify learning opportunities and forms. However, in the section "Visitors", those who want to use the offer of Autoru Street and the Nature House individually or together with their families will find all necessary information.

The design and functionality of the website is based on the unified visual identity and principles of Liepaja city. The company "Bright" Ltd. got the opportunity to develop a website within the procurement procedure.

This website has been developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

The Exposition of the Nature House is Complemented by the First Outdoor Installations

On Monday, December 27, at 14:00pm two outdoor installations "Liepajas Metalurgs" and "Insect House" will be exhibited at the Nature House of the Liepaja Municipal Education Department Science and Education Innovation Center (ZIIC). The installations were created within the Norwegian (EEA) project "Development of the Innovation Centre in Liepaja City".

"Liepajas Metalurgs" installation is only a part of the whole installation. The rest of it will be exhibited inside the Nature House. This outdoor installation was created by the artist Reinis Kuncitis, using the spare parts of the former "Liepajas Metalurgs" factory for the second time. The installation is designed so that during the warmer season, visitors can operate it interactively by using water flow. The main goal of the installation is to provide information about the industrial part of Liepaja and the role of industry in the development of the city, especially emphasizing the interaction of the city and industrial activities with the environment, air and the local lake ecosystem.

The second outdoor installation "Insect House" has been created by the experts of the Nature House, considering the advice of entomologists on the necessary environmental conditions for creating effective insect houses, as well as based on successful and less successful examples of insect houses elsewhere in Latvia. Natural materials were used in the construction of the house, a large part of which was obtained here even on Horse Island. An insect house is an artificial ecosystem designed to provide suitable living conditions for insects and to allow people to learn more about their secret lives. The house is as a place for insects to house their larvae, feed and shelter. If insects, such as lone bees, find the house appropriate, visitors will be able to see that the reed ends in the house are "corked" with a white mass, behind which will be the bee larvae.

Both installations are not only intended to delight visitors, but will be used for demonstrations in workshops organized by the Nature House, for teacher education and for the implementation of interest education programs. Thus, installations together with licensed lessons complement the curriculum of school curricula and make it interactive. The aim of the lessons is to stimulate students' interest in STEM and environmental sciences, as well as to motivate them to choose a career in environmental and other natural sciences.

The project "Development of the Innovation Centre in Liepaja City" is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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The employees of the Science and Education Innovation Center supplement their knowledge in creating exhibitions

From 7 to 10 December, the employees of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education department went to the Trondheim Science Center (Vitensenteret) in Norway to learn the principles of design thinking in the development of science center exhibit together with the team of Daugavpils science center.

During two very active and creative days, the understanding of the basic principles of design thinking and how to use these principles in creating an exhibition, installations and exhibits based on the user experience was gained.

The design solutions company Inventus, the third leading company in the field in Norway, has led every science center employee to feel the "skin" of the user and understand what the intended result should be. The most interesting part of the process was the development and testing of a prototype of the planned exhibit. The analysis carried out after this stage helped to improve the idea in order to refine it.

In addition to the training, there was an exchange of experience with the employees of the Trondheim Science Center on the development of educational programs, the organization of work and the management of the centre's visit to the project, as well as the attraction of financial resources.

The experience exchange trip is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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For more information about Norway Financial mechanism and its program, please visit <u>eeagrants.lv</u>

December 16, 2021

The License is Granted to the Interest Education Program "Environmental Management II"

On December 7, the interest education program "Environmental Management II" for students in the age group 11- 18 years obtained a license. The program has been developed within the Norwegian (EEA / N) grant project "Development of the Innovation Center in Liepaja City" by the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department.

Sniedze Vise, an environment expert, states: "This program is different from the previous one because the lessons are even more integrated and the methods are based on our partners' experience and knowledge from Jaermuseet Regional Museum and Liepaja University (the Faculty of Science and Engineering). It is very likely that some of them will be an innovation and a unique experience in Latvia. The main goal is to arouse students' interest in STEM and environmental sciences but the emphasis is on the ability of students to practice, study and learn in areas such as hydrobiology, entomology, eco-technology, geography, geology, anatomy, etc., thus combining theoretical knowledge with practice-based activities."

The program includes four different lessons - "Human Internal Organs", which is currently being tested online, while the lessons "Biotechnology", "Exploration of Earth's crust" and "Zoology Under the Magnifying Glass" will be available to students during year 2022. Each lesson is designed to be unique, interactive, with the involvement of technological elements. In order to attract students to the interdisciplinary field of science that studies natural systems and their interaction with the modern human environment, various installations in the Nature House will be used in the learning process.

The interest education program "Environmental Management II" is being developed within the project "Development of the Innovation Centre in Liepaja City" that is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit <u>eeagrants.lv</u>

November 23, 2021

Specialists of the Liepaja Municipal Education Department gain experience in Sweden

Last week, employees of the Liepaja Municipal Education Department and the Science and Education Innovation Centre (ZIIC) visited Sweden to attend the annual conference organized by the Nordic Science Centre Association and get acquainted with the Visualiseringscenter C in Norrkoping.

The Nordic Science Centre Association - NSCA was established in 1987. It brings together science centers in the Nordic and Baltic countries, promoting co-operation and the exchange of ideas. The aim of the association is to promote science by using the opportunities provided by technology, thus educating and creating the audience's interest and experience in various topics and directions. Currently, the Association is represented by 40 science centers and since 2020 the Association has also included ZIIC.

This year's conference focused on a number of important areas, including the role and challenges of science centers as science heralds, how to engage citizens, and how to promote and expand research by reducing stereotypes that science is not accessible and comprehensible to all. There was also a broader insight into the members of the Association - science centers, their specifics and the exhibitions offered, as well as current events this year. The experience will help to develop and implement the activities and expositions planned in the project "Development of the Innovation Center in Liepaja city".

The event took place at Norrkoping Visualiseringscenter C, which is currently the most technologically advanced science center in Northern Europe. One of the Centre's ideas is to use technology to get to know science and visualize it in a way that is engaging and exciting to a wider audience - to create quality and authentic content, to surprise, to make everyone think and to stimulate interest.

During the visit, it was possible to see how the visual content offered by the Center makes it easier to grasp even the most complex topics, such as anatomy or, for example, astronomy. Visitors have the opportunity to get an idea of the planets, explore space, discover history and physics, learn about the human body, learn about the film industry and its special effects, etc., thus gaining a digital experience combined with modern technology and the benefits of a 3D dome.

Visualiseringscenter C works closely with the municipality and the Science Park of Norrkoping, and with research teams at the Linköping University. The center's specialists work with the National Aeronautics and Space Administration (NASA) and the Hollywood film industry.

It is planned that in 2023 the annual conference of the Nordic Science Centre Association will be held in Denmark, and in a year - in Latvia, which will be one of the activities in the field of education on the way to Liepaja as the European Capital of Culture in 2027.

The experience exchange trip is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

November 15, 2021

Educational Institutions Invited to Apply for Online Lessons at the Nature House

On November 24th, the co-creation space of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department will start approbation of the second interest education

program (for 11-18-year-old students) "Environmental Management II" lesson "Human Internal Organs".

In November and December, students have the opportunity to participate in a lesson that will provide insight into the invisible part of the human body, revealing the uniqueness and showing it as one whole, in which several systems interact perfectly.

Lessons will take place from November 24 to December 17 on the online platform ZOOM. Each lesson lasts 60 minutes and is free of charge. In the lessons, each student must connect to the device (computer or tablet). Registration starts on November 15, and the number of classes is limited.

Information to apply for lessons:

- Fill in the application form: https://ej.uz/nodarbibaDM
- Your application has been registered after completing the form.

Additional information by phone 26644834 or e-mail dabasmaja@liepaja.edu.lv.

The lesson "Human Internal Organs" is being implemented within the framework of the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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October 28, 2021

Families are invited to participate in the creative competition "Ant's Journey"

The Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department and Cafe "Bernatu Dzintarins" invites families with a pupil from 3rd to 8th grade to participate in the creative competition "Ant's Journey". The competition will also include an online training session that will demonstrate different techniques for completing the competition task.

The competition requires the creation of a stop motion animation video with the family's idea of the ant's journey from Bernati to the Nature House. In order to stimulate ideas for the task of the competition, as well as to demonstrate the technical techniques, ZIIC invites all interested participants to an online session on Wednesday, November 10, at 18:00. During the lesson, everyone will be able to make sure that the task of the competition is exciting and easy to complete without specific technology skills. You can apply for the lesson here: www.ej.uz/stopkadrunodarbibu.

The idea for the competition came to the team of the Cafe "Bernatu Dzintarins". The head of the company Laura Otanke tells about the idea: "We call ourselves ants of "Bernati Dzintarins". This fits in with the activities of the Nature House - ant house and ant lesson - thus the idea of a joint initiative was born. "Bernatu Dzintarins" house is in the forest, so it is only natural for the company to be a friend of nature, which, among other things, especially supports the efforts and achievements of children and young people ".

Pupils, young people from Latvian educational institutions and their family members are invited to participate in the competition. The competition takes place from October 27 to November 22, during the time the team must apply and complete the competition task. Deadline for submission: November 22 at 17:00.

The task of the competition is to create a Stop-Motion animation about the ant's journey from Cafe "Bernatu Dzintarins" in Bernati to the Nature House. To photograph objects, people etc. in stop-motion image animation in different phases of motion; to create frames (photographs), which are combined by a video processing program. The final video has to be submitted as a competition work.

The winners will be announced in the following nominations:

- The most interesting story and video idea.
- The most creative performance.
- The most family-like ant's journey from Cafe "Bernatu Dzintarins" to the Nature House.

The winner of each nomination will receive a gift card worth 50 EUR and souvenirs from ants of "Bernati Dzintarins". All participants of the competition will be invited to the online lesson on ants at Nature House at a specified time.

Teams must apply and submit the competition entry (video) electronically here: <u>ej.uz/skudrascelojumu</u>. The application takes place at the same time as the submission of the completed task. The results will be announced on November 29 on the ZIIC Facebook page <u>facebook.com/LiepajaZIIC</u>. Regulations of the competition can be found here: https://ej.uz/skudram2.

The activity is implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

The team of the Science and Education Innovation Center gains experience in Norway

October 19th to the 21st, employees of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department visited Norway partners at the Jaermuseet Regional Museum to get acquainted with the activities of the science factory (Vitenfabrikken) and the science farm (Vitengarden).

ZIIC staff gained a wide range of insights and were able to see specific examples of how to organize non-formal education for students and teachers in STEM areas. It is a valuable experience that will help to develop and implement the activities planned in the project "Development of the Innovation Center in Liepaja city".

In the science factory it was demonstrated how to allow children, as well as adults, to learn about physics, mathematics, anatomy, astronomy, various mechanisms, history and local culture in a simple and at the same time playful way. The astronomical exhibition is really impressive - a planetarium, which allows everybody to get acquainted with human efforts to get to the moon, explore space and stars, even flying around them.

Experts from ZIIC got acquainted with the partners' co-creation premises and equipment available there, as a co-creation space is also being developed in Liepaja. In addition, it was useful to see the learning process in which Norwegian students are working with embroidery machines, programming patterns for embroidery on fabric.

On a science farm, technology works hand in hand with nature. Although the exhibition in this museum is almost 20 years old, it is constantly being modified and supplemented in order to provide children, young people and anyone interested with as much knowledge and understanding of nature as possible in an easily comprehensible way. Starting with the first tractors, continuing with the swamp, birds and wind, this is a farm where the same animals live as in Latvia - pigs, chickens, cows and also bees. The environment gives children the opportunity to feel like a veterinarian, get acquainted with the unique magic of wildlife, strengthen the knowledge of the life of ancestors and learn how biogas is produced. Besides, wind energy, as a renewable resource, is one of the learning topics.

In Jaermuseet regional museum the main emphasis is on learning by doing, through the acquisition of historical, cultural and folklore knowledge.

The experience exchange trip is being realized within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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September 28, 2021

Educational institutions invited to apply for outdoor lessons at the Nature House

In October, the co-creation space Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department offers educational institutions (with students in the age group of 5-10 years) to participate in approbation process of lessons in the interest education program. There is an opportunity to apply for three topics:

Bird Researcher

Birds are one of the most typical inhabitants of the lake, who are often both seen and heard on Horse Island near the House of Nature, because Lake Liepaja is an important place for birds to travel, shed feathers, nest and feed. During the lesson, children will study not only about the inventions and inspiration of birds, but also to listen to the voices of birds, observe birds by using optical tools and experience much more as a bird researcher.

Young Botanist

Botany is an extensive science of plants that we all encounter on a daily basis, for example, plants can be used in food, housing, clothing, dyes, medicine, and so on. During the lesson, participants get an idea of who a botanist is. Children have the opportunity to play the role of plant researchers, to study the structure of the plant, to look for differences in plants with the help of a magnifying glass and a microscope. Together they will look for an answer where plants take colors to color our natural world. The lesson is intended for children aged 5-7.

Protected nature territories

Some geographically defined areas are specially protected in order to preserve their natural diversity. The Nature House is also located in one of them - the nature reserve "Liepaja lake". In the lesson, children will get acquainted with the characteristic features of animals and plants living in nature, using different senses - sight, hearing, touch and smell. As well as during the walk they will learn about the geographical and historical significance of the Horse Island and Lake Liepaja.

Information to apply for lessons

- 1. Fill in the application form: https://ej.uz/DMoktobris
- 2. Your application has been registered after completing the form.

Participants have to dress according to the weather and suitable for outdoor activities. The beginning and the end of each lesson is at the Nature House.

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Lessons are implemented within the project "Development of Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

September 24, 2021

Information for the media

Specialists at the Nature House improve their professional skills

At the end of August and the beginning of September, Kristaps Vilks, a certified entomologist and lecturer at the Department of Zoology and Animal Ecology of the University of Latvia, visited the Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department to conduct entomology training for the Nature House specialists.

Kristaps Vilks has been giving lectures and practical classes at the University of Latvia for 19 years. The professional is working at the Nature Conservation Agency as an expert in species and habitats for 7 years, actively working at the Entomological Society of Latvia, processing entomological collections of the Latvian National Museum of Natural History, and complementing the entomological collections for the study process at the University of Latvia.

The lecturer led the professional development training for the specialists at the Nature House, in which the classification of insects, the basics of determining the order and species of insects, the types of entomological collections, and the practical creation of collections were mastered. The main goal of the training was to increase the skills of the Nature House team in creating collections, in order to later create one of the 15 installations - "Insects".

The installation will demonstrate real insect samples, promote understanding of nature diversity, the importance of environmental protection. It is planned to use the installation for the implementation of study content and Nature House lessons for pre-school, primary and secondary school students and pedagogues of educational institutions.

Entomological training and the establishment of insect collections are carried out in a way that respects nature and biodiversity - only one representative of the insect species is collected from the respective habitats, protected insect species are not harvested, insects are treated and plated according to generally accepted scientific, entomological collection principles.

The training and installation "Insects" are implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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September 23, 2021

Information for the media

The Science and Education Innovation Center implements teacher training in cooperation with Norwegian partner

On September 20th and 21st, the team of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Educational Department started teacher training, which is implemented within the project "Development of Innovation Center in Liepaja City".

Teacher training is led by project partners from the Jaermuseet Regional Museum. The activity is divided into two parts, where the first stage is completed online, but the second stage will be mastered in October, during a visit to Norway.

In the teaching process of pedagogues, innovative methods of teaching theory are mastered, experts' recommendations on the purchase of appropriate equipment and its application are listened to, as well as feedback and guidance for the improvement of the developed lessons are provided. In order to improve the lesson "Ant Researcher" presented in the approbation process, Justine Rusakova, the teacher of the Nature House, demonstrated the lesson to partners online, receiving positive feedback about the quality of the content, interactivity and used technologies.

However, experts from Jaermuseet demonstrated two environmental science classes online. For example, in the pig organ dissecting lesson students are studying the internal organs - the structure of the heart, lungs, tongue, larynx, trachea, veins and their functions. In the lesson about water quality students are taught to get to know ecosystem of the lake, find and study aquatic organisms, collect water samples, perform the analysis, as well as to draw conclusions together. In order to study the presence of acid rain or the impact of agriculture on the water, the pH level, the presence of ammonia, nitrites and phosphates are analyzed.

By listening the advice of Norwegian professionals and integrating innovative, engaging and diverse curriculum content into the learning process, the team of ZIIC plans to develop five educational programs for both students and educators to promote knowledge development and career choice in STEM and in environmental sciences.

The teacher training is implemented within the project "Development of Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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September 20, 2021

Information for the media

The event "Human Library" will take place at the Nature House

Saturday, September 25, at 14.00 Liepaja, Zirgu sala near the Nature House will host an event for young people the "Human Library". All the "books" involved are active, young people whose lives are directly or indirectly linked to the environment and nature.

The main goal of the event is to inform young people and other interested people about career opportunities in environmental sciences, to provide a deeper insight into various professions, as well as to give the participants of the event the opportunity to receive answers to their questions on various environmental topics.

Nowadays everybody knows the library where we go to select a book, read it, and then return it. However, often after reading a book, questions remain unanswered, discussions arise about what is read, or there is a desire to talk to the author of the book, so a great alternative to ordinary books is a library of living people, where a specialist in the field tells their story and experience.

In the "Human Library", visitors will be able to read four books:

- 1. Elina Medne "From frogs and snails to Hydroelectric Power Plant and you";
- 2. Nora Sudmale "Compost cultural worker":
- 3. Marcis Veits "ZeroPauna":
- 4. Kristers Krafts "From Mountains to Physics".

After the event, everyone is invited to stay in informal conversations with "books". Due to the fact that the event will take place outdoors, blankets and warm tea will be provided, but we invite you to dress according to the weather.

To participate in the event "Human Library" it is necessary to fill in the application form https://ej.uz/dzivabiblioteka_dm.

Due to restrictions, participation in the event is only possible with a Covid-19 certificate.

The event is implemented within the project "Development of the Innovation Centre in Liepaja City" that is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

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August 2, 2021 Information for the media

Outdoor classes at the Nature House will continue in August

Also in August the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department continues summer outdoor lessons for children aged 5 to 10. Lessons will take place on weekdays at the Nature house, Horse Island. It is possible to apply for lessons from August 3. The number of places is limited.

In August, children will have the opportunity to participate in the lesson "Young Botanist", during which they will get an idea of what a botanist is. Children will be able to play the role of plant researchers, study the structure of the plant, be attentive and look for differences in plants with the help of a magnifying glass and a microscope. Together we will look for an answer where plants take colors to color our natural world.

Lesson schedule:

- Wednesday (for children from 8 to 10 years old):
 - 14:00 14:40 "Young Botanist";
- Thursday (for children from 8 to 10 years old with parents):
 - 14:00 14:40 "Young Botanist";
- Friday (for children from 5 to 7 years old with parents):
 - 14:00 14:40 "Young Botanist";

Information to apply for lessons:

- Fill in the application form: https://ej.uz/dmaugusts
- Your application has been registered after completing the form.

Participants have to dress according to the weather and suitable for outdoor activities. The beginning and end of each lesson is at the Nature House.

Additional information about applying by phone +37126644834 or e-mail dabasmaja@liepaja.edu.lv

The project "Development of the Innovation Centre in Liepaja City" is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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June 30, 2021 Information for the media

Outdoor classes at the Nature House will continue in July

In July, the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department continues summer outdoor lessons for children aged 5 to 10. Lessons will take place on weekdays at the Nature house, Horse Island. It is possible to apply for July classes from June 30. The number of places is limited.

In July, children will have the opportunity to participate in the lessons "Bird Researcher" and "Young Geographer", during which they will go on an expedition around the Horse Island. In the "Bird Researcher" lesson, children will look into the world of birds, watch them, hear their voices and learn why a bird does not stay wet after a water bath? In addition, in the lesson "Young Geographer" there will be an opportunity to learn skills in orienting the environment and get acquainted with the work of a cartographer.

Lesson schedule:

- Wednesday (for children from 8 to 10 years old):
 - 14:00 14:40 "Bird Researcher";
 - o 15:00 15:40 "Young Geographer".
- Thursday (for children from 8 to 10 years old with parents):

 - o 15:00 − 15:40 "Young Geographer".
- Friday (for children from 5 to 7 years old with parents):
 - 14:00 14:40 "Bird Researcher";
 - o 15:00 15:40 "Young Geographer".

Information to apply for lessons:

- Fill in the application form: https://ej.uz/dmjulijs;
- Receive an e-mail confirmation of the reservation of a place in the lesson.

Participants have to dress according to the weather and suitable for outdoor activities. The beginning and end of each lesson is at the Nature House.

Additional information about applying by phone +37126644834 or e-mail dabasmaja@liepaja.edu.lv

The project "Development of the Innovation Centre in Liepaja City" is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

Laura Grundmane, Liepaja Municipal Education department, Science and Education Innovation Centre (ZIIC), Project "Development of the Innovation Centre in Liepaja City" manager

Phone nr.: 0037126464841

E-mail: laura.grundmane@liepaja.edu.lv



June 2, 2021

Information for the media

Children invited to apply for summer lessons at the Nature House

On June 7, the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department will start leading summer outdoor lessons for children aged 5 to 10. Lessons will take place on working days at the Nature House, Horse Island. It is possible to apply for June lessons from June 2. The number of places is limited.

In June, children will have the opportunity to participate in the lessons "Bird Researcher" and "Young Geographer", during which they will go on an expedition around the Horse Island. In the "Bird Researcher" lesson, children will look into the world of birds, watch them, hear their voices and learn why a bird does not stay wet after a water bath? In addition, in the lesson "Young Geographer" there will be an opportunity to learn skills in orienting the environment and get acquainted with the work of a cartographer.

From Monday to Wednesday, lessons are intended for children aged 8-10 at 14:00 ("Bird Researcher") and 15:00 ("Young Geographer"). On Thursdays and Fridays at 14:00 and 15:00, parents can join the lessons (on Thursdays for children aged 8-10 with parents and on Fridays for children aged 5-7 with parents). Each lesson lasts 40 minutes and is free of charge.

Lesson schedule:

 Monday (for children from 8 to 10 years old): 14:00 – 14:40 "Bird Researcher";

15:00 – 15:40 "Young Geographer".

Tuesday (for children from 8 to 10 years old):

14:00 - 14:40 "Bird Researcher";

15:00 - 15:40 "Young Geographer".

Wednesday (for children from 8 to 10 years old):

14:00 - 14:40 "Bird Researcher";

15:00 - 15:40 "Young Geographer".

Thursday (for children from 8 to 10 years old with parents):

14:00 - 14:40 "Bird Researcher";

15:00 - 15:40 "Young Geographer".

Friday (for children from 5 to 7 years old with parents):

14:00 - 14:40 "Bird Researcher";

15:00 - 15:40 "Young Geographer".

Information to apply for lessons:

Fill in the application form: https://ej.uz/dabasmajuvasara;

Receive an e-mail confirmation of the reservation of a place in the lesson.

Participants have to dress according to the weather and suitable for outdoor activities. The beginning and end of each lesson is at the Nature House.

Additional information about applying by phone +37126644834 or e-mail dabasmaja@liepaja.edu.lv

The project "Development of the Innovation Centre in Liepaja City" is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

Liepaia Municipal Education department

Project "Development of the Innovation Centre in Liepaja City" manager

Laura Grundmane Phone nr.: 26464841

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

June 2, 2021

Information for the media

Children invited to apply for summer lessons at the Nature House

On June 7, the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department will start leading summer outdoor lessons for children aged 5 to 10. Lessons will take place on working days at the Nature House, Horse Island. It is possible to apply for June lessons from June 2. The number of places is limited.

In June, children will have the opportunity to participate in the lessons "Bird Researcher" and "Young Geographer", during which they will go on an expedition around the Horse Island. In the "Bird Researcher" lesson, children will look into the world of birds, watch them, hear their voices and learn why a bird does not stay wet after a water bath? In addition, in the lesson "Young Geographer" there will be an opportunity to learn skills in orienting the environment and get acquainted with the work of a cartographer.

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Lesson schedule:

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Tuesday (for children from 8 to 10 years old):

14:00 – 14:40 "Bird Researcher";

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14:00 - 14:40 "Bird Researcher";

15:00 - 15:40 "Young Geographer".

Thursday (for children from 8 to 10 years old with parents):

14:00 – 14:40 "Bird Researcher"; 15:00 – 15:40 "Young Geographer".

• Friday (for children from 5 to 7 years old with parents):

14:00 - 14:40 "Bird Researcher";

15:00 - 15:40 "Young Geographer".

Information to apply for lessons:

Fill in the application form: https://ej.uz/dabasmajuvasara;

Receive an e-mail confirmation of the reservation of a place in the lesson.

Participants have to dress according to the weather and suitable for outdoor activities. The beginning and end of each lesson is at the Nature House.

Additional information about applying by phone +37126644834 or e-mail dabasmaja@liepaja.edu.lv

The project "Development of the Innovation Centre in Liepaja City" is funded by the European Economic Area and the Norway grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Grants, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

Liepaja Municipal Education department

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E-mail: laura.grundmane@liepaja.edu.lv



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May 31, 2021

Information for the media

Young people discuss the topicality of biodiversity in the city

On May 28, the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department organized the second youth debate, this time within the framework of the International

Biodiversity Day. The aim of the discussion was to encourage young people to think about the importance of biodiversity also in the context of the urban environment.

The participants of the debate tried to answer the question: 'Is the biodiversity for those living in the city relevant or not?'. Considering the different places of residence of young people, as well as the epidemiological constraints in the country, the debate took place on the online platform Zoom.

Fifteen young people from different cities of Latvia - Daugavpils, Kraslava, Aizpute and Cesis attended the debate. Four specialists also worked with the youth:

- Elina Peksena, environmental education project manager of the World Wildlife Fund. The expert is also working on the Latvian Environmental Protection Fund's project 'Building a youth community that protects nature diversity';
- Anda Andrusaite, head of the Vidzeme Nature Education Center of the Nature Protection Agency;
- Regina Indrike, nature expert and head of Latgale Nature Education Center;
- Jolanta Bara, head of the Natural Resources Department of Daugavpils City Council.

During the debate, it was confirmed that biodiversity is also important for those living in the city, it should be thought about and acted upon, because it is nature that contributes to our physical and mental well-being. The young people also highlighted the alienation of the townspeople from nature, which creates various current problems that are closely linked to education and public awareness, such as the importance of biodiversity anywhere in the world.

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

May 18, 2021 Information for the media

The Nature House invites You to get to know the birds

One of the first heralds of spring is birds that travel through or return home to start nesting. This time the birds have also arrived at the Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department. This spring, the Nature House houses the

traveling exhibitions "Let's Get to Know the Birds" and "Beaks, Wings, Feathers" from the Talsi Regional Museum, as well as large-format games from the "Latvian Ornithological Society".

Considering the restrictions set in the country and the epidemiological situation, the exhibition is placed in the spacious windows of the Nature House, which also provides visitors of Horse Island with the opportunity to get acquainted with the diversity of birds when going for a walk. The exhibition tells about the nesting sites of birds, the feeding net, bird eggs, the types of their feathers and much more. To make exhibitions more interactive, they are supplemented with QR codes, in which everybody can find not only some educational games, but also listen to the voices of some of the most common birds.

In addition, the first interest education program "Environmental Management" is being implemented in the Nature House, in which one of the lessons is being developed on birds - "Bird Researcher". The aim of the lesson is to stimulate students' interest in STEM and environmental sciences and to motivate them to choose a career in environmental and other natural sciences. That is why all those interested are invited to look at the Instagram account of ZIIC Nature House (@ziic_dabasmaja), which shows a conversation with an ornithologist about birds, as well as other useful information.

The Nature House on Horse Island is located in a specially protected nature territory, which was originally established as an ornithological reserve for the protection of nesting and migratory birds. Liepaja lake is an important place to provide an important resting, feeding, nesting and feathering place for waterfowl during spring and autumn migration. It is also a place to protect specially protected bird species in Latvia and the European Union. Therefore, everyone is invited to watch the birds on Horse Island, to hear the beautiful nature singers through QR codes, as well as to learn something new about them.

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For additional information:

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

May 5, 2021 Information for the media

The first installation "Ant House" opens the exhibition of the Nature House

At the end of April, the first installation "Ant House" was placed in the co-creation space Nature House of the Science and Education Innovation Center (ZIIC) of the Liepaja Municipal Education Department. The installation has been developed within the Norwegian (EEA / N) grant project "Development of the Innovation Center in Liepaja City".

The installation displays a live ant nest that houses a tropical species of Australian weaver ants with their mother, males and working ants. In the "Ant House" anybody can observe life, natural diversity and natural

processes such as the insect's developmental phases, feeding, habitat building, colony organization, etc. It also represents the Madagascar hissing cockroach family, as cockroaches are an integral part of the ant feeding process. The aim of the installation is to allow visitors to understand the importance of nature conservation, revealing how amazing different species are, how delicate work is invested in creating each habitat.

"Ant House" is not only a part of the exhibition, but it will also be used for demonstration in workshops, for educating preschool, primary and secondary school children, pedagogues of educational institutions. The study process includes a licensed lesson about ants "Ant Researcher", which involves teachers' stories, visual demonstrations, creative tasks, interactive games, thus supplementing the content of the school program. The aim of the lesson is to stimulate students' interest in STEM and environmental sciences, as well as to motivate them to choose a career in environmental and other natural sciences.

The lesson "Ant Researcher" is intended for children and students of two age stages: preschool groups and 1st grade students, as well as 2nd – 4th grade students. In this lesson, students gain knowledge about the structure, appearance, food, habitat, the role of ants in maintaining a healthy ecosystem and their mutual hierarchy. Children have the opportunity to watch the ant nest online in real time, watch close-up video clips of the ant nest and participate in interactive activities to gain new knowledge creatively and with satisfaction. The project "Development of the Innovation Centre in Liepaja City" is funded by the EEA/N grant programme "Research and Education". Its total cost is EUR 986 049.00, of which EUR 754 327.40 is co-financing of the Norwegian Financial Instrument, EUR 133 116.60 is co-financed by the State budget of Latvia and EUR 98 605.00 by Liepaja City Municipality.

For additional information:

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April 28, 2021

Information for the media

The license is granted to the interest educational program "Environmental Management"

On April 13, the interest education program "Environmental Management" for students in the age group 5 - 10 years obtained a license. The program has been developed within the Norwegian (EEA / N) grant project "Development of the Innovation Center in Liepaja City" by the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department.

Seven different lessons have been included in the program. "Ant Researcher" is one of the first lessons that schools from different regions of Latvia are actively studying online. Other classes "Protected Nature Areas", "Quality of water", "Young Botanist", "Young Eco-technologist", "Bird Researcher", "Young Geographer" are

planned to be implemented over the course of the project. Thus, in the co-creation space Nature House on Horse Island, as well as now - during the communication restrictions, licensed interest education lessons will be available online for students and preschool children.

"Our main goal is to stimulate students' interest in the STEM and environmental sciences, to motivate them to research and study about natural sciences with creative and innovative teaching methods, as well as to understand their importance in human life," emphasizes ZIIC methodologist Laura Poruka. The interest educational program has been developed with the participation of ZIIC environmental science expert Sniedze Vise, developed in cooperation with the experts of the Faculty of Science and Engineering of the University of Liepaja Roberts Jurmalietis and Ance Elstina, as well as with Norwegian partners from the Jaermuseet Regional Museum.

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For additional information:

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April 7, 2021 Information for the media

It is possible to apply for free lessons on Ants at the Nature House

On April 7, the Nature House of the Science and Education Innovation Centre (ZIIC) of the Liepaja Municipal Education Department has announced an application for online remote learning for all educational institutions throughout Latvia. All lessons are implemented using the ZOOM platform.

The Nature House offers online lessons for children and students:

- "Ant researcher" for preschool groups (age group: 5-6 years) and 1st grade students. Duration: 20 minutes. It is possible to apply for lessons on Mondays, Tuesdays and Thursdays at 9:30 9:50, 10:10 10:30, 10:50 11:10, 11:30 11:50.
- "Ant researcher" for 2nd 4th grade students. Duration: 40 minutes. It is possible to apply for lessons on Wednesdays and Fridays at 9:20 10:00, 10:10 10:50, 11:20 12:00, 12:10 12:50.

The class will be divided in half, so for one full class (30 children) it is necessary to reserve two times. Lessons for 2nd - 4th grade students will start on April 14, but for preschool groups and 1st grade students - on April 15.

To apply for a lesson:

- Write the application email to the address dabasmaja@liepaja.edu.lv;
- The e-mail must indicate the educational institution, class or group name, number of children, teacher, teacher's contact phone number and e-mail to which we will be able to send the ZOOM access link:
- The representative of ZIIC will contact each teacher individually about the approved lesson application by calling the contact telephone number indicated in the e-mail;
- If the educational institution does not have the technical equipment for communication in the online lesson (microphone and / or camera), please inform the representative of ZIIC by e-mail or telephone.

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For additional information:

Laura Poruka

Liepaja Municipal Education department

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

March 17, 2021 Information for the media

Experts from the Trondheim Science Center share experiences with partners from Liepaja

On March 10th and 15th, 2021, employees of the Science and Education Innovation Center (ZIIC), project management of the University of Liepaja, as well as representatives of the Daugavpils Innovation Center met online with Norwegian partners from the Trondheim Science Center.

Innovation, research, education and competitiveness are the priorities of the Norwegian (EEA/N) grant project "Development of the Innovation Centre in Liepaja City". In order to develop the message of the project "Working together for a green, competitive and inclusive Europe", it is important to strengthen partnerships with professionals in the field.

Since 1988, the Trondheim Science Center has been promoting public curiosity and creativity by offering exciting activities, experiments, a 3D planetarium, a 360-degree space journey and other interactive installations for the whole family. Martin Kulhawczuk, head of exposition and development, presented interactive installations and emphasized the importance of science capital in modern society. This applies to the aggregation of all science-related knowledge, attitudes and resources that a person accumulates throughout his or her lifetime.

Anna Priedola, project manager of the University of Liepaja, presented installations that are being created in cooperation with ZIIC science and environmental experts: aquaponics system, bird development, nature and biodiversity, underwater world research. On the other hand, scientific expert Reinis Balodis demonstrated one of multimedia installations - kaleidoscope. It is planned to exhibit all installations in the Nature House, Zirgu sala 2, Liepaja.

At the second meeting, partners from Daugavpils Innovation Center joined and it was jointly decided to organize a study visit to Trondheim Science Centre at the end of 2021. If there are still restrictions caused by the Covid-19 pandemic, team members of the project will transfer training process on effective integration of installations and study programs online.

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For additional information:

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

March 1, 2021

Information for the media

The Science and Innovation Centre meets online with Norwegian partners

In order to promote fellowship, discuss the progress of the project, and share experiences, employees of the Norwegian (EEA / N) grant project "Development of the Innovation Center in Liepaja city" of Liepaja Municipal Education Department organized a meeting with Norwegian partners from the Jaermuseet Regional Museum through the Zoom platform on February 25th, 2021.

As the project provides development and implementation of educational programs at the Science and Education Innovation Centre (ZIIC)- purchase of the equipment for the co-creation space development at Autoru Street, as well as for the development of installations intended for the Nature house, the Norwegian partner's experience is influential.

At the beginning of the meeting Kristine Niedre-Lathere, Head of the Liepaja Municipal Education Department, emphasized the importance of partnership in the development of education sector. Project manager Laura Grundmane, environmental science expert Sniedze Vise, educational methodologist Laura Poruka and expert Kitija Kuduma presented the current progress of the project and vision for the future. In addition, project manager Magne Hognestad and his colleagues represented The Jaermuseet Regional Museum. In order to involve everybody in a passionate teaching performance of mathematics, participants of the meeting played the game "Magic Mathematics".

This meeting is significant for the implementation of the project, because the Norwegian experts' experience will be considered when developing effective educational programs, and co-creation spaces of the Innovation Center in Liepaja. As well as dialogue will help to find solutions to the consequences of the COVID-19 pandemic. In order to promote students' interest of the STEM and environmental sciences, ZIIC is planning to transfer a part of the learning process online.

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For additional information:

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January 27, 2021

Information for the media

Young people discuss environmental career choices

On January 27th, 2021, a youth discussion on the choice of career in environmental areas and its perspectives was held by the Nature House of The Science and Education Innovation Centre of the Liepaja Municipal Education Department. The debate was organized through the Zoom platform in cooperation with the Centre for Debate. Sixteen young people from four schools in Liepaja (Oskars Kalpaks Liepaja Secondary School No 15, Friendly Invitation Liepaja Secondary School No 5, Janis Cakste Secondary School No 10, and Liepaja State Gymnasium 1) attended the discussion.

In order to support students with training for the debate, four professionals were attracted – Gunta Sneidere (Gunta Šneidere) (chemist - technologist at "Liepajas Udens" Ltd), Laima Lapina (Laima Lapina) (environmental manager specialist at "Liepajas RAS" Ltd), Andra Bekere (Andra Beķere) (geographical system information specialist at Rural Support Service), and Ilze Elbere (Ilze Elbere) (researcher and head of the Student Council of the Latvian Centre for Biomedical Studies). These specialists are educated in one of the environmental areas, and they practically work in positions in accordance with the acquired profession. The role of experts in the discussion was to support young people with their practical experience in the field.

The focus of the debate was on career choices in environmental fields, encouraging students to think about whether they have a perspective on their careers and what the motivation could be. In addition, we encourage debaters to think about how global processes such as the COVID-19 pandemic, the rapid technological and scientific development, the economic and political situation in the world, etc. affect young people's career choices, especially in environmental professions.

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October 14, 2020

Information for the media

The Science and Education Innovation Centre signs an agreement on cooperation with Liepaja University

This year on October 15 at 4pm in the Nature house Kristīne Niedre-Lathere, Head of Liepaja Municipal Education Department, and Dace Markus, Rector of Liepaja University are going to sign the Partnership Agreement on implementation of the activities planned by the European Economic Area and Norway (EEA / N) grant project "Development of the Innovation Center in Liepaja City" in the Nature House and Cocreation Room on Autoru Street.

The project envisages development and implementation of educational programmes at the Science and Education Innovation Centre (ZIIC)- purchase of the equipment for the co-creation space development at Autoru Street, as well as for the development of installations intended for the Nature House.

The Faculty of Humanitarian Sciences and Arts of Liepaja University will develop the content of digital installations within the framework of cooperation, also an exhibit that will be on display at the Nature house. In its turn, the Faculty of Science and Engineering together with the ZIIC experts will work out 5 exciting educational programmes for children aged from 5 to 10 and youngsters aged from 11-18 in the STEM (science, technologies, engineering and mathematics) and environmental sciences, including a non-formal education programme for teachers.

Similarly, within the framework of cooperation, students of Liepaja University will be offered opportunities to do student internships in the Nature house and co-creation space, as well as activities of experience and skills development and masterclasses. Thus, there will be a possibility to apply the ZIIC technological provision, where students will be able to create real, applicable solutions – installations with sound, audiovisual or animation elements, including participation in creative classes and other activities directed towards the target group. Right now, cooperating with the Faculty of Science and Engineering, the classes "Life in Water" are being held in the Nature house within the framework of student internships.

The project "Development of the Innovation Center in Liepaja City" is financed by the EEA / N grant program "Research and Education". Its total costs are 986 049 EUR, out of which 754 327.40 EUR is co-financed by the Norwegian Financial Mechanism, 133 116.60 EUR is co-financed by the Latvia State Budget, but 98 605.00 EUR is co-financed by the Liepaja City Municipality. The Liepaja City Municipality is going to implement the project in close cooperation with the partners involved in the project - Trondheim Science Centre, Jærmuseet Regional Museum in Norway and Liepaja University, as well as other science and innovation centres in Latvia.

Information prepared by

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October 8, 2020



In the Nature house an interactive travelling exhibition "Nature healing – swamp" has been opened

Today on October 8 an interactive travelling exhibition "Nature healing – swamp" has been opened, which has arrived from the Regional Administration of Nature Conservation Agency Nature Education Centre "Forest House." The exhibition tells us in an exciting way about the swamp from an unusual angle – how the swamp and its resources serve for human health rehabilitation and recreation.

The air of the swamp is free from dust and flue gas, and it has got antibacterial features, which emerge from substances excreted by the swamp plants – phytoncides. Even though the variety of the swamp nature is comparatively small, every part of it serves for our health. Swamp animal watching can become a healthy and soothing way of recreation. Lots of people have heard that healing sulphur waters are formed under the swamps of Kemeri National Park. Both the water itself and the peat sludge enriched with it are traditionally used in medicine. The exhibition provides interesting information on the healing properties of the swamp.

An interactive class, accompanied by teachers, is also included in the visit to the exhibition. Groups of preschool, schools and individual visitors are kindly invited to see the exhibition. On October 15 specialists from the Nature Conservation Agency are going to arrive in order to conduct masterclasses for four groups of pupils and pre-schools.

Visitors can attend the exhibition in the Nature house of the Science and Innovations Centre at 2 Zirgu sala (Horse Island), Liepaja till December 15. Visits should be arranged in advance by calling 26644834 or writing an email to: dabasmaja@liepaja.edu.lv.

The time for pre-school and pupils' group visits: on Wednesdays, Thursdays, Fridays at 9:30am and 11:30am. The time for individuals and groups: on Wednesdays, Thursdays, Fridays at 2pm and 4pm, also on Saturdays at 11:30am, 2pm and 4pm.

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Science and Education Innovation Centre Nature house

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For more information about Norway Financial mechanism and its program, please visit eeagrants.lv

August 27, 2020



In Liepaja the Nature house has been opened in a Festive Occasion

In order to promote public interest in environmental science and nature studies, on Thursday, August 27 the Nature house on the Zirgu sala (Horse island) was opened in a festive occasion in the presence of the Minister of Education and Science, management of Liepaja City Council, project partners and specialists in the field of education.

In this place during the following three years an interactive exposition of environmental sciences will be created and a laboratory opened in which the inhabitants of Liepaja and its guests will be able to explore natural processes in an exciting way. During the next 36 months it has been planned to make 15 interactive installations, equip the laboratory of environmental sciences, develop new educational programmes for pupils and teachers, also arrange various masterclasses.

The visit to the Nature house during the project has been planned for free of charge, and it will be possible to apply for free classes and training as well.

"I am convinced that the visit to the Nature house for the young inhabitants of Liepaja and city guests, will be a once in a-lifetime experience, in which they will be able to acquire new knowledge and complement their existing knowledge through a completely different competency approach to learning. The unwritten purpose of this new place is to be close to nature, explore it and at the same time to become more knowledgeable. Today we have laid an important foundation for the growth of the new generation," emphasized Jānis Vilnītis, the Chairman of Liepaja City Council.

The Nature house is just one of the places where during the following years educational programmes related to environmental science are planned to be implemented – there is a plan to create a co-creation space at 4/6 Avotu Street, which will supplement the Science and Education Innovation Centre (ZIIC) with state-of-the-art exhibits, technologies and equipment, as well as with new interest-related educational programmes. "We are proud that we together with our cooperation partners have managed to combine smartly such important things for Liepaja – nature and science. May this place be for all of us as a source of inspiration, where the people of Liepaja and city guests can get to know the versatile environmental science, enhance our knowledge and awareness of what is happening around us," said Kristīne Pujāte, Head of the ZIIC and the Nature house.

It is planned to implement the project in three years in order to promote development of pre-school children, pupils and teachers' knowledge in STEM (science, technologies, engineering and mathematics) and environmental areas.

Development of educational programmes and installations will start in the nearest months. However, it is possible to apply for a visit to the Nature house right now by calling or writing to the ZIIC.

Even though the exposition is merely in the development stage and the first exhibits are planned to be displayed in spring next year, currently in the Nature house it is possible to see the exhibits created by the ZIIC's specialists' and cooperation partners which is like a little glimpse into the envisaged. Visitors will be able to get familiar with the invasive species of Latvia till September 29, attending the exhibition of the Latvian Museum of Natural History "Strangers in Our Nature." Visits should be arranged in advance, the first visit for individual visitors has been planned at 4pm on August 28.

In its turn, starting from September, individual visitors can apply for visits from Wednesday to Saturday at 2pm and 4pm, on Saturdays at 11.30am. Groups of pupils will be offered visits in the morning hours. You can apply for classes by contacting ZIIC specialists – email: ziic@liepaja.edu.lv, phone: 26644834, more information: www.facebook.com/LiepajaZIIC

The exposition of the Nature House will be created within the framework of the EEA / N grant program "Research and Education" financed by the project "Development of the Innovation Center in Liepaja City." Its total cost is 986 049 EUR, out of which 754 327 EUR is co – financed by the Norwegian Financial Mechanism, 133 116 EUR is co-financed by the Latvia State Budget, but 98 605 EUR is co-financed by the Liepaja City Municipality.

The building of the Nature house was created with the support of the European Maritime and Fisheries Fund (EMFF), within the framework of the event "Implementation of Community-led Local Development Strategies," the total costs of the building and environmental improvement is 458 703,65 EUR, out of which 270 000 EUR is from the EMFF and 188 703, 65 EUR from the Liepaja City Municipality.

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July 23, 2020

The Science and Education Innovation Centre of Liepaja launches a new development project

On July 23 Dita Traidās, Director of the State Education Development Agency (SEDA) and Inga Ekuze, the acting director of Liepaja Municipal Education Department signed an agreement on the implementation of the European Economic Area and Norway (EEA/N) grant project "Development of the Innovation Center in Liepaja City" in order to modernize the Science and Education Innovation Centre (ZIIC) in Liepaja.

The project envisages improvement of the Nature house and development of co-creation space which will supplement the ZIIC with modern exhibits, technologies and equipment, as well as new interest-related educational programmes. "It is important that we create new possibilities in regions of Latvia for a modern learning and co-creation environment development, which is going to be filled up with exciting educational programmes and classes for children and youngsters in the STEM (science, technologies, engineering and mathematics) areas. At the same time development of such innovation centres open up new cooperation forms between the comprehensive education, higher education and scientific institutions in Latvia and Norway," emphasizes Dita Traidās, Director of the SEDA.

It is planned to implement the project in three years in order to promote development of the pre-school children, pupils and teachers' knowledge in the STEM and environmental areas. It is planned to create cocreation space in the centre, also make an exposition in the Nature house. Development of the innovation centre will create new, modern and educational programmes both for youngsters and teachers about the STEM and environmental areas in order to change the stereotypes and concepts about the complex and serious nature of science and technologies. "Due to the project implementation, we will create opportunities for Liepaja residents and city quests to study environmental science in the Nature house, as well as acquire knowledge and skills in design thinking, implementing technically creative work. We are convinced that the project will promote development of the education sector in the city, exciting and contemporarily equipped learning environment will be as a foundation for pupils and also teachers in the development of their knowledge and skills," mentions Inga Ekuze, the acting director of Liepaja Municipal Education Department. The project "Development of the Innovation Center in Liepaja City" is financed by the EEA / N grant program "Research and Education". Its total costs are 986 049.00 EUR, out of which 754 327.40 EUR is co-financed by the Norwegian Financial Mechanism, 133 116.60 EUR is co-financed by the Latvia State Budget, but 98 605.00 EUR is co-financed by the Liepaja City Municipality. The Liepaja City Municipality is going to implement the project in close cooperation with the partners involved in the project - Trondheim Science Centre, Jærmuseet Regional Museum in Norway and Liepaja University, as well as other science and innovation centres in Latvia.

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