

«Kudrovo» Educational Centre
Vsevolozhsky district
Leningrad region
Russia

Children's engineering center of the SCHOOL-TECHNOPARK («Kudrovo» Education Centre)



The school's mission:
engineering education "from
school" on the basis of SCHOOL-
UNIVERSITY-ENTERPRISE

Opening date: September 1,
2016

«Kudrovo» Educational Centre is the largest educational institution in the north-west of the Russian Federation. Today, 2,967 children from grades 1 to 11 are enrolled, including the pre-school department for 313 pupils; 90 classes and 13 pre-school groups have been formed; there are 168 teachers, including 6 PhD

TOPONYMY OF SCHOOL SPACES



**Alexander
Popov**



**STREET OF SCIENTIFIC
LABORATORIES,
LADDER OF SUCCESS**

INTERACTIVE MUSEUM OF THE
DEVELOPMENT OF SCIENCE AND
MODERN TECHNOLOGIES
"RUSSIA in scientific and technological
progress: from a glorious past to a
confident future»



Sports spaces



“KUDROVO” EDUCATIONAL CENTRE. TIME FEED. Innovative

2016-2019 - Regional network resource center for the development of education in the Leningrad region

2017 - ... - Regional training center for "Yuniorprofi" competencies "Mobile robotics" and "Internet of things"

2019 - ... - Children's engineering center "AUTOPROM" NORTH-WEST

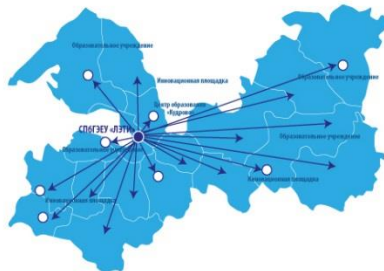


ШКОЛА, УСТРЕМЛЕННАЯ В БУДУЩЕ: ИННОВАЦИОННЫЕ ПРАКТИКИ

2016 г.

РЕГИОНАЛЬНЫЙ СЕТЕВОЙ РЕСУРСНЫЙ ЦЕНТР РАЗВИТИЯ ОБРАЗОВАНИЯ ЛЕНИНГРАДСКОЙ ОБЛАСТИ «КУДРОВО» КАК «ШКОЛА-ТЕХНОПАРК» с 2016 г.

ТЕХНОПАРК В ЦО «КУДРОВО»



18 образовательных учреждений
Ленинградской области - СЕТЕВЫЕ ПАРТНЕРЫ

2017 г.

РЕГИОНАЛЬНЫЙ ЦЕНТР ПОДГОТОВКИ ПО КОМПЕТЕНЦИЯМ «ЮниорПрофи» «МОБИЛЬНАЯ РОБОТОТЕХНИКА» И «ИНТЕРНЕТ ВЕЩЕЙ» с 2017 г.



Учебно-тренировочные сборы и отборочные соревнования в рамках национального чемпионата «Профессионалы будущего»

Индивидуальные проекты обучающихся и участие в учебно-исследовательских конференциях

Решение кейсов технической направленности и онлайн-конференции



Савальские Матвей и Полина (7.3 кл) - бронзовые призеры национального чемпионата «JuniorSkills» 2019 г. г.Москва, компетенция «Интернет вещей»



2018г.

ДЕТСКИЙ ИНЖИНИРИНГОВЫЙ ЦЕНТР «АВТОПРОМ «СЕВЕРО-ЗАПАД» с 2019 г.

ПРОСТРАНСТВА ХАЙТЕК-ЦЕХА ДЕТСКОГО ИНЖИНИРИНГОВОГО ЦЕНТРА

ВЗАИМОДЕЙСТВИЕ СОЮЗ "АВТОПРОМ СЕВЕРО-ЗАПАД" – СПБГЭТУ "ЛЭТИ" – "ШКОЛА-ТЕХНОПАРК "КУДРОВО" ПО ПОДГОТОВКЕ ИНЖЕНЕРОВ "СО ШКОЛЬНОЙ СКАМЬИ" В АВТОМОБИЛЕСТРОЕНИИ



ЛАБОРАТОРИИ
ТЕХНОПАРКА



ЗОНЫ КОВОРКИНГА



ТЕХНО-АРТ-СТУДИЯ



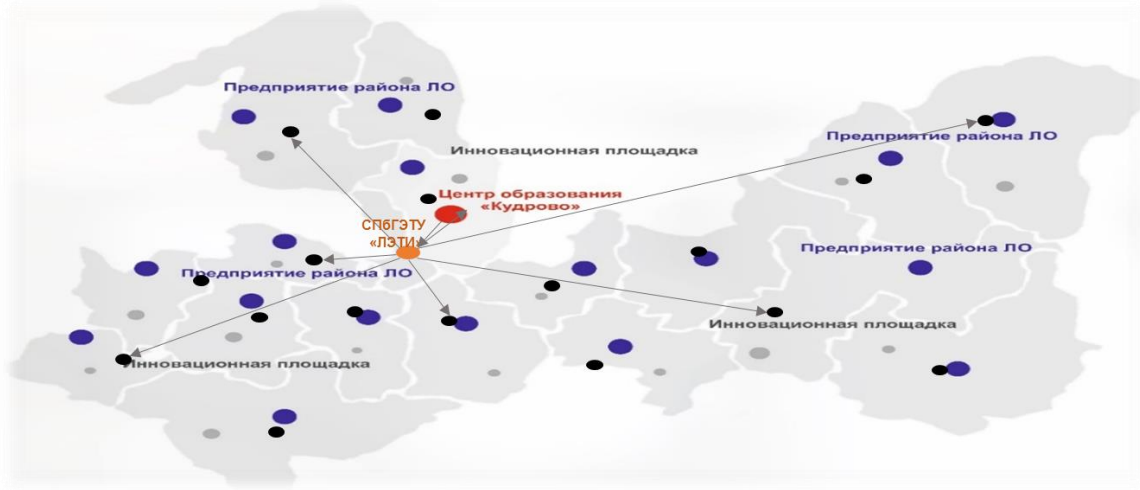
СТАНКИ с ЧПУ СЕРИИ «ЮНИОР»
КОМПЛЕКС «ЮНЫЙ
МАШИНОСТРОИТЕЛЬ»



ПРОЕКТИРОВОЧНЫЙ, ИГРОВОЙ
СЕКТОРЫ ИНТЕРАКТИВНОГО МУЗЕЯ



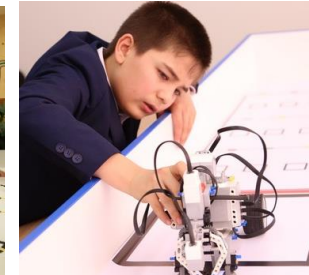
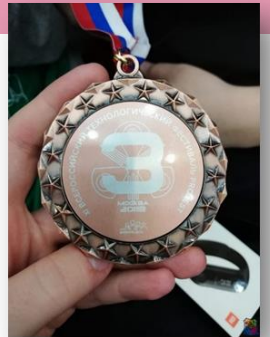
Results of the project "Regional network resource centre for the development of education in the Leningrad region: "Kudrovo" Educational Centre as "School-Technopark" in 2018-2019»



- ✓ there are 18 educational institutions of the Leningrad region in the network interaction
- ✓ the number of school students using the resource of Regional centre for individual development in the scientific and technical sphere: up to 1500 people annually

Our achievements:

- V national championship of Russia "Professionals of the future": Leningrad region team won gold medals in the competence "Internet of things" in the age category 14+ ;
- The Internet of things project of Vsevolozhsky district won in the "Technological startup" category at the «Profstart competition»;
- III regional championship «Juniorprofi»: in the competence "Internet of things", category 10+ - winners; "Mobile robotics" – prizers;
- XI All-Russian technology festival PROFEST Moscow, competence "Internet of things" - III place;
- qualifying stage of the regional round of the All-Russian 3D technology Olympiad - "10+" - I place, " 14+" - I place



“Kudrovo” Educational Centre is the basic ground

for:

- **regional** stage of the All-Russian competition "I give my Heart to children" for teachers of additional education from 13 districts of the Leningrad region
- ROBOFESTIVAL of the **Leningrad region** "Zanevsky-2019" (75 participants from 47 cities)
- **regional** stage of All-Russian Olympiad on the subject "Technology" (11 participants)
- Saint Petersburg Electrotechnical University "LETI" events within the framework of the **regional** project "School-Technopark", including annually: training camps (about 200 participants), online conferences (about 500 participants), HACKATHONS (about 200 participants), "LETI DAY" (about 50 participants), workshops in the laboratories of the «Technopark» (68 participants from 18 districts of Leningrad region), solving technical cases (about 180 people)



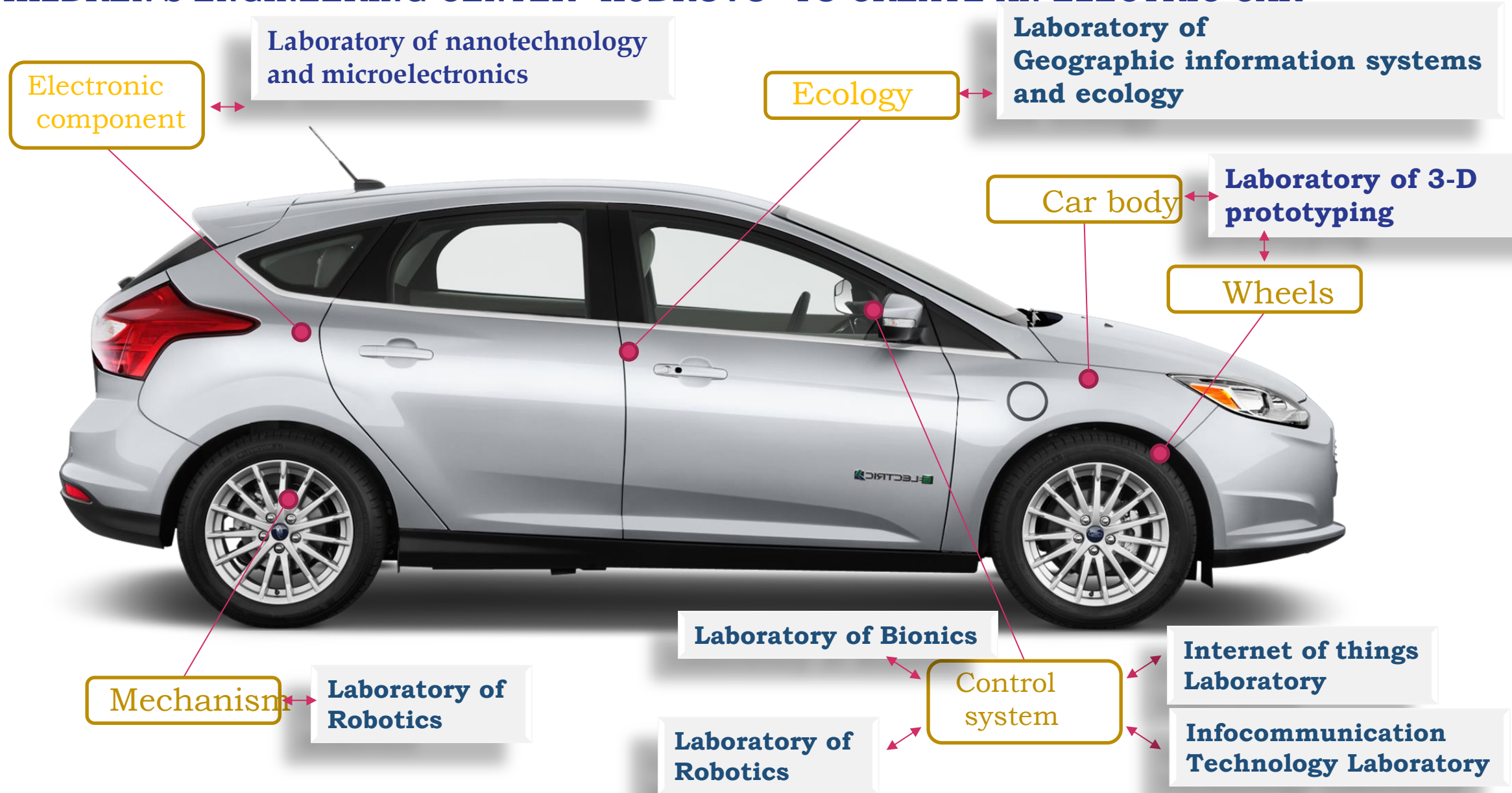
CHILDREN'S ENGINEERING CENTER "AUTOMOBILE INDUSTRY NORTH-WEST" CONCEPT

Project Road Map



- creation of the **HIGH-TECH SHOP** on the basis of Kudrovo Educational Centre;
- creation of the **circuit** by bringing the resources of the areas of partner organizations;
- **attracting engineering and technical specialists** of specialized enterprises to work with students and schoolchildren;
- creation and implementation of **educational programs** in the areas of activity of the Children's engineering center "Autoprom North-West";
- preparation of **teams and their participation** in competitions of various levels in the areas of activity of the center;
- ensuring the **personnel needs of the region** through the implementation of the concept of the Children's engineering center "Autoprom North-West" in the context of interaction between the school - institutions of professional education and the enterprise.

TASKS OF LABORATORIES OF THE HIGH-TECH WORKSHOP OF THE CHILDREN'S ENGINEERING CENTER "KUDROVO" TO CREATE AN ELECTRIC CAR



SPACES OF THE HIGH-TECH WORKSHOP OF THE CHILDREN'S ENGINEERING CENTER OF THE TECHNOPARK LABORATORY ZONE

Technopark is included in the educational environment of the school:

- The operation and development of **seven laboratories of the Technopark** is provided in the normal mode;
- The amount of students of the “Kudrovo” Educational Centre engaged in scientific and technical creativity in 2018 on average at school - **16, 8%** (the national average is 12.0%)

IIINFOCOMMUNICATION
TECHNOLOGIES cover the space
from communication tools to global
information security challenges

ИНФОКОММУНИКАЦИОННЫЕ
ТЕХНОЛОГИИ ОХВАТЫВАЮТ ПРОСТРАНСТВО
ОТ СРЕДСТВ СВЯЗИ ДО ГЛОБАЛЬНЫХ
ЗАДАЧ ИНФОРМАЦИОННОЙ БЕЗОПАСНОСТИ

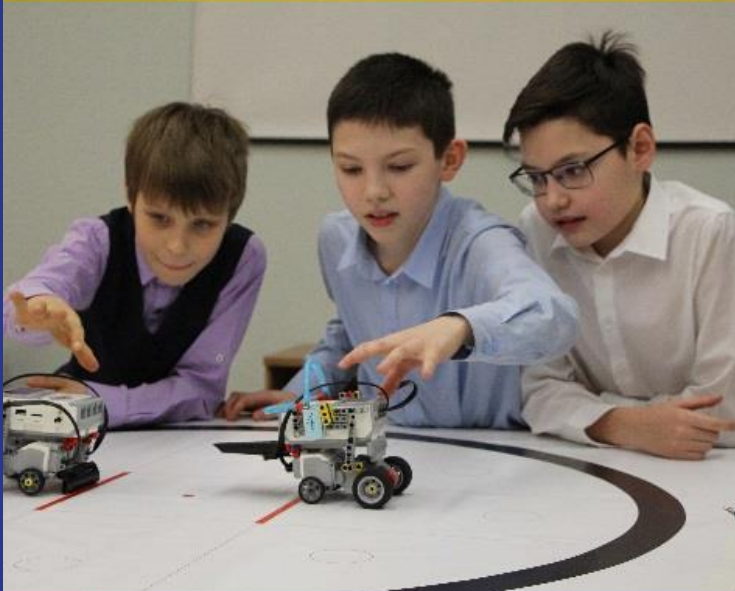
- ✓ РАЗРАБОТАЙ ПРОСТЕЙШИЕ ЭЛЕКТРИЧЕСКИЕ СХЕМЫ
- ✓ ИЗУЧИ СИСТЕМУ ПРОГРАММИРОВАНИЯ ARDUINO UNO
- ✓ ОСВАИВАЙ ЭЛЕКТРОНИКУ И ЭЛЕКТРОТЕХНИКУ

A young girl with dark hair, wearing a white shirt and a dark vest, is sitting at a desk and working on an electronics project. She is focused on connecting wires to a breadboard. On the desk, there is a breadboard with various electronic components, including resistors and integrated circuits. A small orange box, likely an Arduino Uno, is also visible. The background shows a typical classroom or workshop setting with a sink and cabinets.

SPACES OF THE HIGH-TECH WORKSHOP OF THE CHILDREN'S ENGINEERING CENTER OF THE TECHNOPARK LABORATORY ZONE

РОБОТОТЕХНИКА СОЗДАЕТ
АВТОМАТИЧЕСКИЕ ПРОГРАММИРУЕМЫЕ
УСТРОЙСТВА - РОБОТОВ

- ✓ РАЗРАБОТАЙ СВОЮ УНИКАЛЬНУЮ КОНСТРУКЦИЮ РОБОТА - СУМОИСТА, РОБОТА-ФУТБОЛИСТА, ...
- ✓ ОВЛАДЕЙ ЯЗЫКАМИ ПРОГРАММИРОВАНИЯ



ROBOTICS creates
automatic programmable
devices-robots

NANOTECHNOLOGY
AND
MICROELECTRONICS
discover the laws
invisible to the human
eye nanoworld

НАНОТЕХНОЛОГИИ И МИКРОЭЛЕКТРОНИКА
ОТКРЫВАЮТ ЗАКОНЫ НЕВИДИМОГО
ЧЕЛОВЕЧЕСКОМУ ГЛАЗУ НАНОМИРА

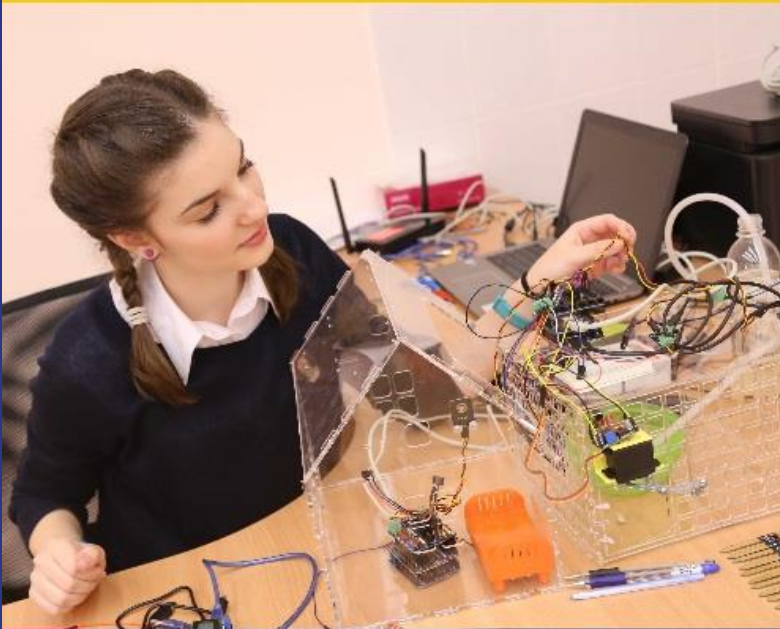
- ✓ ЭКСПЕРИМЕНТИРУЙ С МАГНИТНОЙ ЖИДКОСТЬЮ
- ✓ ИССЛЕДУЙ МИР С ПОМОЩЬЮ АТОМНО-СИЛОВОГО МИКРОСКОПА
- ✓ С ПОМОЩЬЮ НАНОПИНЦЕТА И НАНОСКАЛЬПЕЛА ИССЛЕДУЙ «УМНЫЕ МАТЕРИАЛЫ»



SPACES OF THE HIGH-TECH WORKSHOP OF THE CHILDREN'S ENGINEERING CENTER OF THE TECHNOPARK LABORATORY ZONE

ИНТЕРНЕТ ВЕЩЕЙ – ЭТО
ВЫСОКОИНТЕЛЛЕКТУАЛЬНЫЕ
ГАДЖЕТЫ НА СЛУЖБЕ У ЧЕЛОВЕКА

- ✓ УЗНАЙ, ЧТО ТАКОЕ МИКРОКОНТРОЛЛЕР, КАКИЕ БЫВАЮТ РЕЗИСТОРЫ, КАК УСТРОЕНА МАКЕТНАЯ ПЛАТА
- ✓ НАУЧИСЬ ИСПОЛЬЗОВАТЬ СВЕТОДИОДЫ И ПЬЕЗОДИНАМИКИ
- ✓ СПРОЕКТИРУЙ: «УМНЫЙ БУДИЛЬНИК», «УМНЫЙ ПОРТФЕЛЬ», «УМНЫЙ ДОМ ДЛЯ ХОМЯКА», ...



The INTERNET of THINGS
is a highly intelligent
gadget in the service of a
person

ENGINEERING MODELING and
3D PROTOTYPING is the
development of creative abilities
and early professional self-
determination during the
development of three-
dimensional modeling objects

SPACES OF THE HIGH-TECH WORKSHOP OF THE CHILDREN'S ENGINEERING CENTER OF THE TECHNOPARK LABORATORY ZONE

БИОНИКА: ПОЗНАНИЕ ТАИН ЖИВОЙ
ПРИРОДЫ ПРИВЕДЕТ ТЕБЯ В МИР
ТЕХНИЧЕСКОГО ПРОГРЕССА

- ✓ ПРИМЕРЬ БИОНИЧЕСКИЙ КОСТЮМ
- ✓ ЗАПУСТИ В НЕБО БИОНИЧЕСКУЮ ПТИЦУ
- ✓ НАУЧИСЬ ПРИМЕНЯТЬ СКАНИРУЮЩУЮ ЗОНДОВУЮ СТАНЦИЮ



ECOLOGY provides
the knowledge that
will save life on our
planet

ЭКОЛОГИЯ ДАЕТ ЗНАНИЕ,
КОТОРОЕ ПОЗВОЛИТ СОХРАНИТЬ
ЖИЗНЬ НА НАШЕЙ ПЛАНЕТЕ

- ✓ ДАЙ ОЦЕНКУ КАЧЕСТВА ОКРУЖАЮЩЕЙ СРЕДЫ:
ВОЗДУХА, ВОДЫ, ПОЧВЫ
- ✓ НАУЧИСЬ РАБОТАТЬ С ПРИБОРАМИ ЭКОЛОГА:
ШУМОМЕРОМ, ЛЮКСМЕТРОМ, ДОЗИМЕТРОМ, НИТРАТОМЕРОМ



BIONICS: learning the
secrets of nature will
lead you to the world of
technological progress

HIGH-TECH WORKSHOP SPACES OF THE CHILDREN'S ENGINEERING CENTER DESIGN SECTORS



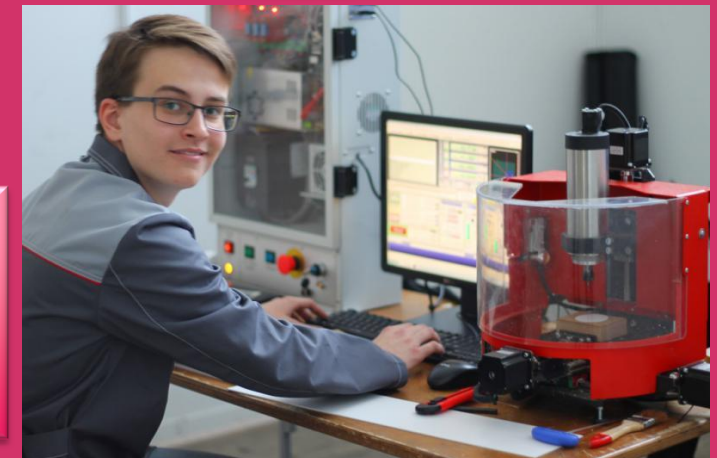
«Table of Master» in
the Interactive
museum



carpenter's and
locksmith's
workshops



CNC machines of the
"Junior" series in the
"Young machine Builder"
educational complex»



SPACES OF THE HIGH-TECH WORKSHOP OF THE CHILDREN'S ENGINEERING CENTER

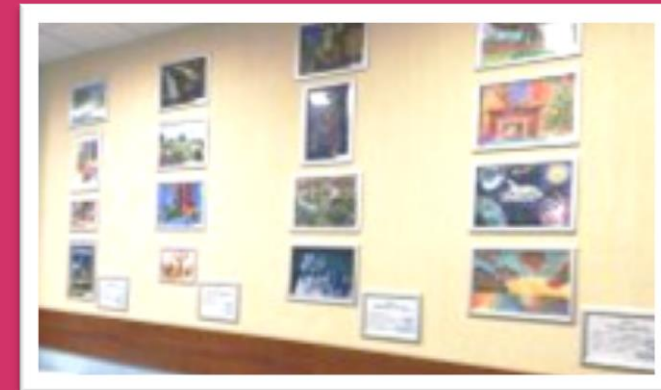
coworking zones



TECHO-ART STUDIO



EXHIBITION SPACES FOR READY-MADE PROJECTS



PARTNERS and PARTNER PLATFORMS

**COMMITTEE of
GENERAL and PROFESSIONAL
EDUCATION of the Leningrad
region**

**Administration of the
VSEVOLOZHISKY MUNICIPAL
DISTRICT of the Leningrad
region**



**Saint Petersburg
Electrotechnical
University "LETI"**

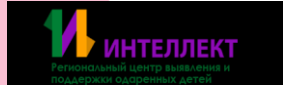


**18 Educational
Institutions of the
LENINGRAD REGION-
NETWORK PARTNERS**



**Leningrad regional Institute of
education development**

**REGIONAL CENTER
FOR IDENTIFICATION
AND SUPPORT OF
GIFTED CHILDREN**



**Centre of children's
(youth) creativity of
Vsevolozhsky district**

**Saint Petersburg
University of railway
engineering**



**"THE AUTO INDUSTRY
NORTHWEST"**

**Saint Petersburg state
University-
Art and Industrial Academy**

**Research and production
association "POISK"
(Murino)**

**Russian production
Association "UNIMATIC"
(Ykaterinburg)**

**National research
UNIVERSITY "Higher
school of Economics"**



We are open for cooperation!



Igor Y. Soloviev,
the Head of
“Kudrovo” Educational Centre
E-mail:
educentr@vsevobr.ru

