



Welcome to the Joint Research Centre Open Day

28 May 2016

Map and programme

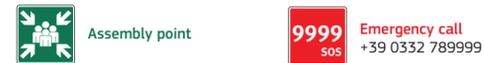


Joint Research Centre

Assistance

In case of emergency, contact JRC staff (light blue or yellow t-shirt) or call (+39) 0332 789999. Please write your phone number on childrens' badges!

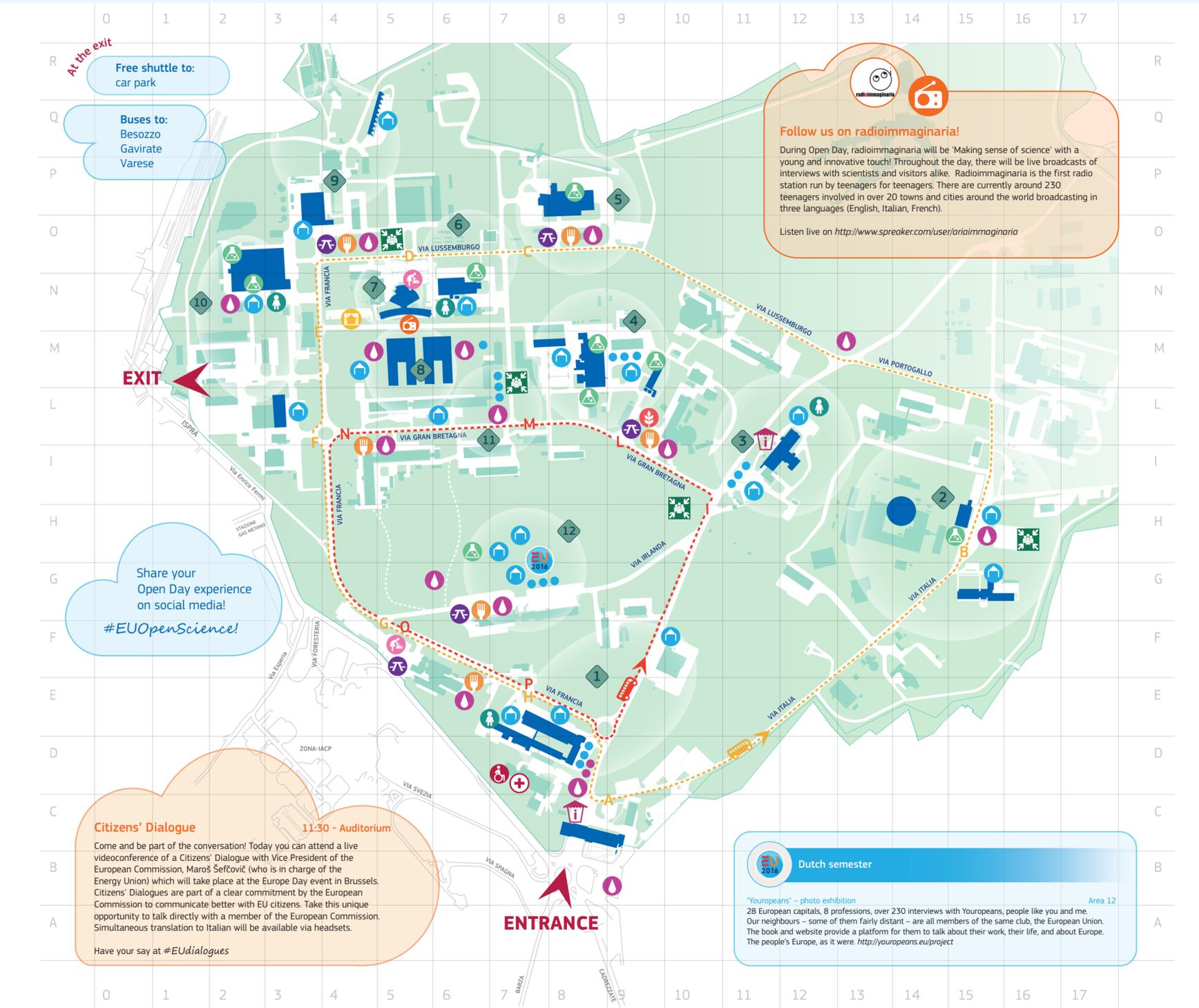
Lost and found
A lost and found service is located at the entrance.



Did you know that...

- 47 nationalities working at JRC Ispra, from 1 029 Italians to 1 Venezuelan
- 42 large-scale research facilities
- 402 buildings
- More than 110 databases available online
- We will replace our 122 service cars with electric vehicles by 2017
- 168 hectares
- About 3 000 employees, of which 2 000 based in Ispra
- 7 European Union reference laboratories
- 3rd largest European Commission site after Brussels and Luxembourg
- Inaugurated in 1959
- 6 JRC sites in 5 countries
- 36km of internal roads

Key



Science in action

<p>1 Area 1 (bld. 36)</p> <p>D8 The JRC & the EU: learning games D8 Working for the EU D8 Budget of the EU D8 European Commission Representation in Italy (Milan) D8 European Parliament D8 European Training Foundation (ETF) D8 European school D8 Fun but safe use of the Internet D8 Smart tachographs E8 Automated border control D7 Making sense of data E7 Do-It-Yourself science F10 Discover the Dosimetry and Calibration Laboratories</p>	<p>7 Area 7 (Auditorium)</p> <p>N5 Bioinformatics: "Find a sequence of DNA" N5 GMO detection and DNA extraction (EURL-GMFF) N5 Legal Highs - know the score</p>
<p>2 Area 2 (ESSOR)</p> <p>H15 Discovering radioactivity H15 ESSOR: guided tour G15 Interactive experiences by ENEA</p>	<p>8 Area 8 (bld. 100 - 101)</p> <p>M6 The Arctic and its creatures M6 Art & science M6 Remembering Gemona del Friuli M6 Bridging Waters exhibition M5 "The Colossal Colon" M5 Giant inflatable breast M5 What's your cancer risk? M5 European Cancer Observatory M5 How small they are! M5 Animal escape - alternatives to animal testing M5 Guided tour: "Is this product safe?" M5 Theatre and film show on health M5 Environmental impact of EU consumption M4 An eye in the sky - detecting suspicious voyages N4 Atomic detectives</p>
<p>3 Area 3 (Visitors' Centre)</p> <p>L12 2050: it's up to you! I11 Food - a fact of life L12 Identify the fish on your plate L12 Where do crops grow? I11 Feed the chickens L12 As busy as a bee L12 Preserving the precious treasure of the sea L12 Cyber playground L12 Climate change quiz I11 Farming game - harvest the fun!</p>	<p>9 Area 9 (bld. 59)</p> <p>O5 Water treatment plants O3 Powering the Ispra site O3 Greening the Ispra site - treasure hunt</p>
<p>4 Area 4 (bld. 24 / 68)</p> <p>M9 European Crisis Management Laboratory M9 7 billion people - where do we live? M9 Tsunami experiment M9 Copernicus - Europe's eyes on Earth M8 European Microwave Signature Laboratory (EMSL) M8 Galileo is European! M8 Vehicle Emissions Laboratory (VELA) M8 Energy and Transport: treasure hunt</p>	<p>10 Area 10 (bld. 15 - 18)</p> <p>N2 European Interoperability Centre for Electric Vehicles and Smart Grids N2 Power up the world with Minecraft! N2 Cyber school O2 Advanced Safeguards Measurement, Monitoring and Modelling Laboratory (AS3ML) L3 The fire station</p>
<p>5 Area 5 (ELSA)</p> <p>P8 European Laboratory for Structural Assessment (ELSA) P8 Safe homes of the future P8 Smart containers</p>	<p>11 Area 11 (bld. 26)</p> <p>L6 What's in your plate? L6 The truth about ink L6 To vape or not to vape? L7 H₂O footprint and the city of tomorrow</p>
<p>6 Area 6 (ESTI)</p> <p>N6 Energy efficiency - building an energy efficient city N6 European Solar Test Installation (ESTI) N6 African Renewable Technology Platform - switching on the lights in Africa N6 Design the future</p>	<p>12 Area 12 (grass)</p> <p>G7 Land degradation - Copernicus G7 "Yourepeans" - photo exhibition G7 Monitoring station for atmospheric research H7 Soil - the hidden treasure! H7 Biological diversity in Africa: wealth of a continent</p>

Talking science

Outdoor stage	Area 7	Amphitheatre	Area 1	Auditorium	Area 7	Visitors' Centre	Area 3
EUSECTRA show	10:00 - 11:00	Money, money, money. are you sure you know it? - by Andrea Pagano	10:00 - 10:30	"The juggler's gamble" - The Benuzzi show	10:15 - 11:15	Historical evolution of forest functions - by Roberto Pilli	11:00 - 11:30
EUSECTRA show	11:00 - 12:00	Repeated at 12:30 - 13:30, 14:30 - 15:00, 16:00 - 16:30		LIVE from the Schuman room at Europe Day in Brussels - CITIZENS' DIALOGUE with Maroš Šefčovič, Vice-President for the European Commission and in charge of the Energy Union	11:30 - 12:30	From Kyoto to Paris: an overview of climate change agreements & of the reporting of greenhouse gas (GHG) emissions - by Simone Rossi	11:30 - 12:00
"The Science Juggler" - The Benuzzi show	12:00 - 13:00	Crossing boundaries: TBA21, a trans-disciplinary approach - by Markus Reymann, Director	10:30 - 11:30	Intelligent cities by Giuseppe Pretto and Bernd Gawlik videolink to Schuman room in Brussels	13:00 - 14:00	Offshore oil & gas safety - by Stefania Contini	12:00 - 12:30
JRC musical performances	13:00 - 14:00	Volunteering, social responsibility, environment	11:30 - 12:30	Impact of climate change by Greet Maenhout and Arwyn Jones videolink to Schuman room in Brussels	15:00 - 15:30	The nano world - by Sara Totaro	12:30 - 13:00
EUSECTRA show	14:00 - 15:00	Crossing boundaries: TBA21, a trans-disciplinary approach - by Markus Reymann, Director	13:30 - 14:00			Historical evolution of forest functions - by Roberto Pilli	13:00 - 13:30
JRC musical performances	15:00 - 17:00	Cyber security: how can a hacker enter my life? - by Stefania Orlandi and Fabrice Wawak	15:00 - 16:00			From Kyoto to Paris: an overview of climate change agreements & of the reporting of greenhouse gas (GHG) emissions - by Simone Rossi	13:30 - 14:00
							<p>"Chemicals" and other nasty words... - by David Asturiol Bofill 14:00 - 14:30</p> <p>Offshore oil & gas safety - by Stefania Contini 14:30 - 15:00</p> <p>The activities of the ENEA research laboratories at Ispra - by Patrizia Pistochini 15:00 - 15:30</p> <p>The nano world - by Sara Totaro 15:30 - 16:00</p> <p>Makerspaces and DIY Science - by Paulo Rosa 16:00 - 16:30</p>

A connected digital single market

Bringing down barriers to unlock online opportunities
The internet and digital technologies are transforming our world. In order for Europe's economy, industry and employment to take full advantage of digitalisation, the European Commission is committed to bringing down barriers which limit the offer and use of online services. The JRC supports this agenda by providing scientific data on online markets and cybersecurity.

Cyber school Area 10
Come to the Cyber School and learn to write code with your favourite princesses and heroes! Learn to program droids in a galaxy far, far away, discover the basics of game programming and unleash your inner creativity! This activity is linked to the Digital Agenda for Europe, which underlines the significance of IT proficiency for future generations.

Cyber playground Area 3
Children are increasingly using the Internet as a source of entertainment and to connect with their peers. How can we ensure their safety online and avoid risks such as cyberbullying? Come and play with the latest digital toys and test your knowledge in the Happy Onlife game! Scientists will raise awareness and provide information on the JRC's research in this important area.

Smart tachographs Area 1
Did you know that the JRC contributed to legislation for the new smart tachographs, which will be obligatory from 2019? Our scientists will be on hand to demonstrate how these on-board digital recorders keep track of driving and rest hours of truck drivers to ensure better road safety and fair competition between road companies. A live demo with a large truck will show you how road police perform controls.

Automated border control Area 1
Discover the science behind passport control and border crossing in a real-life simulation. Finger prints and facial image are examples of biometrics inserted into your passport. How is this information used and protected by cryptography? You will also be able to create a digital 3D image of your face to take home! The JRC studies conformity and interoperability of electronic passports and provides an independent source for technical and scientific expertise in this field.

Fun but safe use of the Internet Area 1
The internet has become an indispensable resource and is increasingly used for children's entertainment. How can we ensure that they have fun in a safe and secure environment? Come and try your hand at graphical design with this fun, digital photo-editing tool whilst our scientists explain the importance of cybersecurity.

JRC Ispra site facilities

The JRC Ispra site is the largest JRC site and the third biggest Commission Site after Brussels and Luxembourg. It occupies an area of 168 ha. Around 2.500 people work here every day.

The fire station Area 10
The fire brigade operated by the firefighters of Varese occupies a corner of the Ispra site and provides essential assistance to the JRC and the local community. Come and see the red engines and live rescue demonstrations!

Water treatment plants Area 9
Guided tours of the water treatment facilities of the Ispra Site will explain how Lake Maggiore's water is treated at the JRC to provide purified water to JRC staff and local communities, and how waste water is cleaned before returning it back to Novellino River, which flows into Lake Maggiore.

Powering the Ispra site Area 9
The JRC Ispra site has an energy management policy which aims to improve its energy supply and reduce energy consumption. The JRC's tri-generation plant already meets almost 100 % of the site's energy needs. Come and learn about the energy management policy and see for yourself the impressive tri-generation plant!
NB: Due to electromagnetic interference (EMI), people with pacemakers or other medical electronic devices are not permitted to enter.

Greening the Ispra site - treasure hunt Area 9
Children's treasure hunt starts here! Come and discover the ways in which the JRC proactively contributes to a greener and more sustainable JRC. Together with the JRC EMAS team, the Ispra site Green Team will be on hand all day to help explain, through fun activities for the whole family, how the JRC Ispra applies the Commission's Eco-Management and Audit Scheme (EMAS).

Visitors' Centre

The Visitors' Centre is where we welcome and introduce the JRC on a daily basis to a wide range of visitors such as policy-makers, scientists, students and the general public. We have hosted over 12.000 visitors since our inauguration at Open Day 2013. Today you can join in with activities both inside and outside – don't miss the beehives, cyber playground, feeding the chickens; games promoting lifestyle choices, online safety and agriculture knowledge; presentations and all our interactive indoor exhibits!

JRC Mission

As the science and knowledge service of the European Commission, the Joint Research Centre's mission is to support EU policies with independent evidence throughout the whole policy cycle.

 **EU Science Hub**
e.europa.eu/jrc

 @EU_ScienceHub

 EU Science Hub - Joint Research Centre

 JRC Company Page

 EU Science Hub

Europe as a stronger global actor

Bringing together the tools of Europe's external action
The EU needs a strong common foreign policy to respond to global challenges, to project its values and to contribute to peace and prosperity in the world. The JRC carries out research in support of these objectives in the areas of global safety and security, crisis management, disaster risk reduction and monitoring natural and man-made hazards.

Discovering radioactivity Area 2
Did you know that naturally occurring radioactive materials are present all around us in our daily lives? Learn how we are exposed to natural radiation and test your knowledge in our quiz. Prizes to be won!

ESSOR: guided tour Area 2
ESSOR is the second nuclear reactor on the Ispra site created for nuclear research. It operated from 1968 until 1983. The reactor is no longer operational and the entire nuclear area is being decommissioned. You are invited to book a guided tour of the 'nuclear island', including the ESSOR reactor.
NB: Bookable event, register at the entrance (bld. B4). People under 18 and pregnant women cannot enter. Each tour can accommodate a group of maximum 20 people.

Discover the Dosimetry and Calibration Laboratories Area 1
Do you know what a dosimeter is? How can we be sure that all dosimeters function in the same way? During this guided visit, you will learn about measuring the radiation that people and the environment are exposed to and about the calibration of these measuring instruments.

European Crisis Management Laboratory Area 4
Come to see the largest touch-screen video wall in Europe showing information and communication technology solutions for crisis scenarios ranging from man-made and natural disasters to health crises. Every half an hour, we offer a series of talks covering the EU Aid Explorer, Satellites and emergency support, Tsunami, and Media Monitoring.

7 billion people - where do we live? Area 4
See what EU capitals look like from space. What is the Global Human Settlement Layer and how can it be used for urban planning, demographic growth analysis, disaster risk management and more? Developed at the JRC, this tool automatically analyses data taken by satellite images, calculates how many buildings there are in any area and estimates how many people live there.

Tsunami experiment Area 4
Tsunamis can strike without warning, taking thousands of lives. The JRC has developed a Tsunami Wave Propagation Model and a Tsunami Alerting Device to predict the wave propagation and alert people at risk. Take part in this live demonstration to understand an important physical property of water waves: propagation speed depends only on the water depth and not on the initial wave amplitude. Understanding this property explains why, during the devastating 2004 Indian Ocean tsunami, the wave arrived in Sri Lanka at the same time as in Thailand, even if Sri Lanka is 2,300km further away.

Copernicus - Europe's eyes on Earth Area 4
Come and learn more about Europe's incredible satellite programme and the Emergency Management Service! Copernicus is the European Programme which provides a European capacity for Earth observation. Coordinated by the JRC, the Copernicus Emergency Management Service supports the management of emergency and relief efforts in the case of natural disasters (e.g. floods, forest fires, landslides, earthquakes and volcanic eruptions), humanitarian crises and man-made disasters around the globe. Come and discover early warning systems for flood and fire, and check if you can identify in a satellite image the effects of a disaster.

An eye in the sky - detecting suspicious voyages Area 8
With approx. 70% of the Earth's surface covered in water, maritime surveillance is challenging. Is it possible to track all the small boats involved in illegal activities? One innovative solution, being explored by the JRC, is the use of high definition cameras being attached to tethered balloons on ships or land. This fun and interactive demonstration will let you test how they could be used for maritime surveillance activities.

Preserving the precious treasure of the sea Area 3
How do we make sure that European fish stocks are not overfished? Come to play and learn how the JRC uses the data on the location, course and speed of fishing boats from the vessel monitoring system (VMS) to detect illegal fishing activities. Test for yourself if the fish caught by fishermen match their declaration. And see if you can identify the fraudulent fish through DNA analysis!

Remembering Gemona del Friuli Area 8
On 6 May 1976, a violent earthquake hit the town of Gemona del Friuli and affected the whole Udine region. The earthquake claimed victims and caused a lot of damage. The event marked the beginning of a culture change in how societies address the issue of protection against earthquakes. A photo exhibition documents the JRC's role during this event and the subsequent research work towards the adoption of Eurocodes - a unified set of standards for safer buildings in Europe.

European Laboratory for Structural Assessment (ELSA) Area 5
Come and see this impressive laboratory dedicated to research on the vulnerability of buildings to earthquakes and other hazards. Did you know that the ELSA reaction wall is the largest facility of its kind in Europe and one of the largest in the world? Mini-labs and other activities will take place here during the Open Day – find out more below.

Safe homes of the future Area 5
Children, test your engineering skills in this fun activity! Build your own house using mini-bricks and test its resistance on our shaking table which simulates earthquakes. Scientists working at the ELSA laboratory will teach you about the principles of structural dynamics and explain the role of smart sensors in our homes of the future.

Smart containers Area 5
Do you know what a shipping container looks like from the inside and what makes it 'smart'? Made of hybrid composite materials to enhance security, this innovative container prototype, tested by the JRC is fitted with sensors and anti-tampering systems. You can interact with it to see how it senses external vibrations! The JRC's ELSA laboratory is studying how innovative shipping containers, fitted with sensors and wireless devices, can improve the security of the supply chain.

European Microwave Signature Laboratory (EMSL) Area 4
What is an anechoic chamber? And how can it be connected to GPS? Come and step inside one of Europe's largest anechoic chambers to learn how scientists conduct experiments on electromagnetic emissions by simulating satellite transmissions. Be sure to ask how the JRC has contributed to finding solutions for Europe's technological challenges!

Galileo is European! Area 4
Track your car! Come and play our fun satellite navigation game and learn about Galileo – Europe's satellite navigation system! Galileo gives users an alternative to the American GPS or the Russian Glonass signals. But in order to be successful, Galileo needs to be inter-operable with the other two systems, which is where the JRC steps in. We perform compatibility studies on Galileo and the other systems, which will enable the coexistence of these systems without interference.

Advanced Safeguards Measurement, Monitoring and Modelling Laboratory (AS3ML) Area 10
Come and take a tour of this laboratory to learn about the nuclear fuel cycle and inspection of nuclear facilities. Safeguarding methods, analysis of open source data on sensitive nuclear countries, export control and innovative inspection tools are some of the topics demonstrated here. A quiz for the kids 'Do you qualify as a nuclear inspector' will guide them through the lab.

Atomic detectives Area B - outdoor stage
Another day at a European border checkpoint: an alarm is triggered, a car is stopped and front-line officers search the car for radioactive material. This show is a real-life simulation of the activities carried out at the JRC's European Nuclear Security Training Centre (EUSECTRA), which instructs front-line officers on how to detect and respond to illicit trafficking of nuclear or other radioactive materials. Put yourself in the shoes of an 'atomic detective' and test some of the tools and devices used for detecting and analysing radioactive materials.

A new boost for jobs, growth and investment

Stimulating investment for job creation
Strengthening Europe's competitiveness and stimulating investment to create jobs is one of the top priorities for the European Commission. The JRC carries out economic analysis and studies in many different sectors to provide EU decision-makers with robust data, indicators and statistics. These serve as a basis for policies which make smarter and more sustainable use of resources.

What's in your plate? Area 11
'Food contact materials', everything that comes into contact with food as it is produced, packaged, transported, stored, prepared and consumed needs to be safe. The JRC's Reference Laboratory for Food Contact Materials tests such materials to provide the basis for EU legislation which aims to ensure that the products on the European market are safe. Today, we will show you how we do this. Your help is also needed! Please help contribute to the development of legislation in this area by completing a survey. Your voice counts!

What's your cancer risk? Area 8
What is your risk of getting cancer? The Harvard Risk Tool is an online application which estimates your risk of cancer based on your lifestyle, age and family history and provides personalised tips for prevention. Our scientists are here to help you use the tool and to raise awareness of the importance of adopting a healthier lifestyle.

Land degradation - Copernicus Area 12
Come and visit the desert tent to learn how the JRC converts satellite data (taken from Copernicus, the world leading earth observation programme of the European Union) into routine products for observing ecosystem dynamics and land surface processes. How does a satellite sensor work? How do these satellite products that monitor land degradation around the globe get used? In fact, what is land degradation?

European Cancer Observatory Area 8
The European Cancer Observatory (ECO) is a project developed at the International Agency for Research on Cancer (IARC) in partnership with the European Network of Cancer Registries (ENCR). The ENCR was established as part of the Europe Against Cancer Programme of the European Commission. Hosted by the JRC, it promotes collaboration between cancer registries, defines data collection standards, provides training for cancer registry personnel and regularly disseminates information on incidence and mortality from cancer in the European Union and Europe.

'The Colossal Colon' Area 8
Come and walk through the Colossal Colon! Did you know that colorectal cancer is the third most common cancer in the world? An inflatable colon is a giant replica of the human colon which allows you to see the different stages of colorectal cancer. This interactive and unique educational tool can answer your questions concerning the structure and function of the colon in a fun way. Based on the JRC's activities, our scientists will be available to provide information on how to decrease the risk of getting cancer.

To vape or not to vape? Area 11
E-cigarettes are often advertised as a healthier alternative to traditional smoking. But how much do we really know about these new products? What are electronic cigarettes and what do they contain? Did you know we have a smoking machine in the JRC laboratory to do experimental testing? All these questions and more can be answered when you visit our stand. Let's discuss consumer product safety and research!

2050: it's up to you! Area 3
How engaged are you to create a healthy future? This game developed by the JRC is targeted at families and asks players about their choices during their daily lives. Your actions of today will be translated into one of the four future scenario simulations. Will your diet, leisure activities and transport choices help create a positive future? Play alone or together with your family and learn more about JRC's activities on nutrition and health.

Giant inflatable breast Area 8
Breast cancer is the most common cancer in women and responsible for the highest mortality rates. The JRC coordinates the European Quality Assurance scheme for breast cancer services, which aims to improve and harmonise breast cancer care in Europe. Through this 'giant inflatable breast' exhibit you will be able to identify and compare healthy breast tissue with tissue affected by cancer. Our scientists will be available to provide information on breast cancer, prevention and JRC activities in this area.

Do-It-Yourself science Area 1
Come and be part of the JRC's very first 'makerspace' and engage in DIY science! Makerspaces provide access to the collaborative knowledge and tools (e.g. 3D printers, laser cutters, CNC milling machines) of a scientific community to create, hack, and remake scientific equipment. Through this activity, our scientists demonstrate how citizens can engage and contribute with solutions to local and global issues.

Environmental impact of EU consumption Area 8
The transition towards sustainable production and consumption patterns requires us to be aware of the impacts of our lifestyles to be able to choose between different products available on the market. This exhibition will help you understand the impact of food, mobility and housing products, which we have evaluated considering their entire life cycle, starting from the extraction of raw materials to their end of life.

Making sense of data Area 1
Amazing insights from the wealth of data at our fingertips! The Queen and King of 'Envirolandia' will show younger visitors how they use data to make smart decisions. Interactive games and animated videos will show you the challenges and potential of using data. Travel across Europe on a virtual tour of our protected areas and learn about foreign species that are invading our ecosystems.

Where do crops grow? Area 3
This series of short documentaries and animated films focuses on crop production in Europe. What determines where crops are grown? What would be the European crop production in a good year versus a bad year? Let's look at how the JRC monitors and forecasts crop production and why this is important to trade, development policies and humanitarian assistance linked to our food security.

H₂O footprint and the city of tomorrow Area 11
Take part in this hands-on activity which will illustrate how much water you consume. Do we ever really consider how our lifestyles affect the availability of this natural resource? As water scarcity is already a problem in some parts of Europe, water availability and its efficient use are also issues that need to be addressed in Europe. Through an engaging show, we will answer your questions on what alternative water sources look like and how water diplomacy helps to overcome conflicts.

Bridging Waters exhibition Area 8
Under the theme 'Water Cycle', this exhibition displays a series of paintings by the emerging Polish artist Natalia Glowacka, together with competition entries by children (age 8-12) who illustrated how they perceive water. This fun and engaging activity will have you working in couples to produce your own paintings based on information from JRC scientists about their work on the water cycle and water consumption. Come and learn about how our research helps to find innovative solutions to water challenges in the urban, industrial and agriculture contexts!

Feed the chickens Area 3
Children, come and feed chickens with black soldier fly larvae! The purpose of this activity is to demonstrate how organic waste from the JRC's own canteen can be reused to produce nutritious animal feed. Scientists will help explain how the work of the JRC supports the Commission in delivering ambitious measures to cut resource use, reduce waste and boost recycling.

As busy as a bee Area 3
Did you know that if pollinators, such as bees, disappeared from the ecosystem, more than 25% of the European Union's food crops would fail within just a few years? Come to get a close look at bees busy at work in our observation beehives! Learn from our scientists how these incredible, industrious creatures work in harmony and how we can support them through the EU Biodiversity Strategy.

About the EU, the Commission and the JRC

Many Directorates General of the European Commission, EC Services and European Agencies who are involved in the science and research activities of the European Union have joined us for Open Day. The JRC is pleased to welcome them and show you how we work together for stronger European research.

European Training Foundation (ETF) Area 1
The European Training Foundation is an EU agency based in Turin, Italy. It helps transition and developing countries to harness the potential of their citizens through the reform of education, training and labour market systems.

European Parliament Area 1
The European Parliament is the EU's law-making body and an important forum for political debate and decision-making at the EU level.

European Commission Representation in Italy (Milan) Area 1
The European Commission has representations in the 28 capital cities of the EU Member States. In Italy, they are seated in Rome and Milan and have a dual role: communicating about Europe in Italy and about Italy in Europe.

Working for the EU Area 1
Working for the European Commission is challenging! You will not find another organisation like it in terms of the multicultural environment and the work you will be doing. If you are interested in joining the European Union Institutions or the JRC, come along to our stand to learn about our recruitment policy and how to apply for jobs, be assisted in setting up an EPSO account, and practice EPSO tests.

Budget of the EU Area 1
Do you know how the European Union community budget is made up and what are the main objectives that guide its development? In collaboration with DG Budget, these fun and engaging computer-based games for children are geared towards educating our younger visitors about finance and budgetary matters of the JRC and European Commission. How well do you know your currencies – are you able to match the notes with the countries and beat the clock?

The JRC & the EU learning games Area 1
Come to watch some EU Tube videos about the history of Europe and the diverse work of the European Institutions. We have quizzes and short films to test your knowledge of the European Union. The Presidency of the European Council changes every 6 months – do you know which country is in charge of the current semester? Join the treasure hunt to track down all six semester symbols!

Art & science Area 8
The JRC is exploring the inclusion of arts in its scientific and policy-related work. Building on the success of the Resonances Art & Science festival organised as part of EXPO Milan 2015, an exciting and stimulating exhibition will be shown today. It contains original works of art and installations that encourage new thinking on what connects science, art and society.

Animal escape - alternatives to animal testing Area 8
This interactive exhibition enables you to view the issue of animal testing from the point of view of a laboratory animal – from a cage. Short cartoons and a movie projected on the walls of the cage present the work of the toxicologists who are looking for alternative methods to animal testing. An artistic element of the exhibition illustrates the most realistic 'escape' for laboratory animals.

Food - a fact of life Area 3
Activities for the whole family – come and test your knowledge on food and nutrition! As dietary and eating habits form early in life, children and adolescents are one of the major focus groups of the JRC's nutrition and health-related work. Today we will teach you about nutrition and its vital role in a healthy lifestyle through three family games ranging from easy to a tricky brain-teaser. Younger children are asked to put together two meals – a healthy one and an unhealthy one. Older children are asked to place food items in their right places on the food pyramid. And parents, do you have enough knowledge of food nutrition to identify which foods contain the most salt?

Theatre and film show on health Area 8
Step into our mini-cinema to take part in a play and see short films featuring different topics linked to JRC's research on health and consumer protection.
Film Show: 'About healthy ingredients and more' at 10.00, 12.00 and 16.00
Theatre Play: 'Safe or not safe, that is the question' at 11.00 and 15.00

The truth about ink Area 11
More and more adults and teenagers are getting 'inked'. In Europe, 12% of the population – more than 60 million of us – have a tattoo! Anyone can get a tattoo and inks for tattoos are now sold widely over the internet. But are they safe? There is a darker side of collateral effects, from allergic reactions, infections, and even potentially cancer effects. Come and learn about ink ingredients and their potential health risks and take our questionnaire to help us support the development of EU actions towards increased consumer protection.

Legal Highs - know the score Area 7
Scientists will be on hand throughout the day to pass on their knowledge about so-called 'legal highs'. Claimed to mimic the effect of illegal drugs, New Psychoactive Substances (NPS), also known as 'legal highs' are often packaged and promoted as 'natural herbal products', 'research chemicals' or even 'food supplements' allowing manufacturers to circumvent legislative mechanisms designed to protect citizens from such products. But are they fit for human consumption? Come and learn the truth about 'legal highs' and how the JRC uses advanced techniques to provide the European Customs and the European Monitoring Centre for Drugs with early identification methods of these substances.

Bioinformatics: 'Find a sequence of DNA' Area 7
Bioinformatics, DNA genomes, 'cluster of computers' and 'virtual machines' – let our scientists explain what they are and how they are linked! This stimulating demonstration will inform you about the JRC's work on DNA detection and analysis and how technology supports our work in this field. Assume the role of a scientist and pick out a sequence of DNA, use the hands-on virtual Bioinformatics tools.

GMO detection and DNA extraction (EURL-GMFF) Area 7
Time to play scientist and extract DNA from food sources! Our experts will explain how GMOs are detected and how DNA is replicated. Learn how these techniques are used to standardise food controls across the Member States. Work at the European Union Reference Laboratory for Genetically Modified Food and Feed assesses and validates GMO detection methods for food and feed across Europe, ensuring unsafe products are identified and refused, and others may require labelling to provide consumers with informed choices.

How small they are! Area 8
Experience a virtual tour of our nanotechnology lab and see how the JRC studies structures at a 'nano scale!' Invisible to the naked eye, the use of nanomaterials increasingly helps develop new devices for health applications, such as novel drugs and diagnostic tools. From the detection and diagnosis of diseases to tissue engineering and implantable medical devices, we study and characterise nanomaterials and nanomedicines to understand how they interact with biological systems in order to assess their safety and efficiency.

Guided tour: 'Is this product safe?' Area 8
And how can we be sure without testing it on animals? The EU promotes the replacement, reduction, and refinement of animal testing. It is the JRC's role to validate alternative methods not based on the use of animals. During this guided virtual tour, visitors will learn about the different steps required to assess the safety of products and substances. We will also present some new alternative methods, currently being tested, that could be used to check whether substances contained in consumer products are safe.

Identify the fish on your plate! Area 3
This game challenges you to match the DNA sequences to the correct species. Too tough? Use our interactive tool to help you. Learn more about the JRC's work in bioinformatics and how our scientists are collaborating to improve species traceability technologies and strategies for more sustainable fisheries and better consumer protection.

A resilient energy union with a forward-looking climate change policy

Making energy more secure, affordable and sustainable
Diversifying Europe's energy sources, increasing energy efficiency and use of low-carbon technologies, reducing energy consumption and emissions for a strong internal energy market will reduce the EU's need for energy imports. This will create internal market opportunities and boost economic growth and job creation. In this area, the JRC assesses new technologies for sustainable transport and fuels, studies energy efficiency and renewable energies and provides data and indicators on climate change.

Climate change quiz Area 3
Take part in our climate change quiz, choose your character and compete against an opponent as part of this awareness-raising tool on the issue of global emissions. From household appliances, agricultural activity to land and air transportation – do you know what are the biggest polluters? Come and test your knowledge and learn about the JRC's work on the Emissions Database for Global Atmospheric Research (EDGAR) which has plotted the history of global emissions for over 40 years. Did you know that this engaging resource is also available online at the JRC Science Hub?

The Arctic and its creatures Area 8
Come and have a look at a screen presentation and play our Arctic-themed quiz and games – go ice fishing, identify arctic creatures and win prizes! The warming of the Arctic has far-reaching consequences as the region acts as a regulator of the Earth's climate. Let our scientists explain how pollution and emissions from industrialised countries contribute to this warming and discuss the impact it has on the Arctic environment and on all of us.

Farming game - harvest the fun! Area 3
Calling all kids to the race line! Using a satellite image as the background, this jumbo sized game will test your knowledge of sustainable agriculture and the Common Agricultural Policy (CAP). Sounds too hard? Fear not, our scientists will be on hand to provide clues and more in-depth information about how the JRC contributes to ensuring the right balance between environmental protection and agricultural production. You can win prizes!

Monitoring station for atmospheric research Area 12
Come and see how tiny particles and molecules in the air can control the climate. The JRC's station for atmospheric research has been observing changes in our atmosphere for decades. In operation since the mid '80s, it uses the most advanced instrumentation and has a long record of air pollution monitoring. Come and observe the station's data to find out how well European policies succeed in restoring clean air and mitigating climate change.

Soil - the hidden treasure! Area 12
What treasure will you find? Paint and play games to win a t-shirt whilst learning about soil biodiversity around the world. This outdoors activity explains how the JRC studies the crucial role played by soil in issues such as food security and the delivering of key ecosystem goods and services. Come and explore this fascinating view of life underground, earthworms included!

Design the future Area 6
Join in on energy and transport painting and drawing activities. Young visitors and potential young scientists can enjoy colouring, painting and drawing competitions. Draw your car of the future in VELA or paint your house of the future in ESTI.

Power up the world with Minecraft! Area 10
Want to know more about the power we all use every day? Come and see us! Play this fun game whilst learning about smart grids and cybersecurity. How can the two support each other for a more sustainable and secure future? Decide where the power should flow, help avoid blackouts in your city and protect the power grid against hackers! We'll explain our work linked to smart grids and the cyber-security threats they face every day.

Energy efficiency - building an energy efficient city Area 6
Take part in the workshop "Building an energy efficient city", a hands-on building activity which uses waste materials and craft supplies. Our scientists are available to talk more about how this represents the JRC's research in sustainable energy planning for cities.

African Renewable Technology Platform - switching on the lights in Africa Area 6
How can a remote and isolated African village switch on the lights? Solar energy can provide electricity to communities where the basic infrastructure is missing. Do you want to find out how we can assess the options in rural Africa? Try out our AFRETEP app!

Vehicle Emissions Laboratory (VELA) Area 4
Come and take a guided tour of our Vehicle Emissions Laboratory (VELA) where you will see first-hand how motorbikes, cars and trucks are tested for emissions and efficiency. These laboratories study new technological options to reduce vehicle emissions in support of the European Commission's aim to ensure cleaner and safer cars on our roads. The findings made provide valuable information for the development and revision of EU legislation and for the assessment of new test methods for car type approval.

Biological diversity in Africa: wealth of a continent Area 12
Identify animal species and related ecosystems on a giant map of Africa. Based on satellite imagery, try to tell the difference between land cover classes at different places and periods of time. Realising the importance of the links between poverty, ecosystems and biodiversity, the European Union has made significant commitments to halt biodiversity loss in Africa. The JRC contributes to a systematic monitoring system, largely based on earth observation techniques, to identify biological resources and to assess threats resulting from human activities and climate change.

Energy and Transport: treasure hunt Area 4
A fun and educational treasure hunt linking the various aspects of transport and energy research. Visitors will visit VELA, ESTI and the Interoperability centre on the route, answer questions and win a prize!

European Interoperability Centre for Electric Vehicles and Smart Grids Area 10
Visit the European Interoperability Centre for Electric Vehicles and Smart Grids, JRC's newest laboratories, inaugurated in October 2015. We combine knowledge and test facilities in the areas of green car efficiency, hybrid exhaust emissions, electromagnetic compatibility and intelligent electricity grids. Find out what an electromagnetic field is and look into interoperability issues between the electric vehicles and the charging infrastructure.

European Solar Test Installation (ESTI) Area 6
How do solar panels work? Get hands-on with solar robots, racing cars and solar boats. See for yourself what happens when a hail storm pounds your new solar panels. Does it make financial sense to use panels in Holland? Visit ESTI, a unique laboratory which, since the 1970's, has been at the forefront of developing standards for the electrical performance of PV products.

Other activities

European school Area 1
Come to engage with some scientists of the future! Students from the European School in Varese will explain their prize-winning projects from the annual European School Science Symposium. There are 14 European Schools in 7 EU countries providing a multilingual and multicultural education to over 26.000 pupils.

Interactive experiences by ENEA Area 2
ENEA- Italian National Agency for New Technologies, Energy and Sustainable Economic Development – Ispra. Its laboratories in Ispra focus on studies and experimental research in the field of lighting and household appliances. Today, there are a number of interactive experiences, workshops and videos on ENEA's activities.