



Ark of Inquiry: Inquiry Activities for Youth over Europe

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Summary

The Ark of Inquiry project aims to raise awareness in school education and its stakeholders on matters concerning Responsible Research and Innovation (RRI) by promoting an interest in science through inquiry learning. The overall aim of the Ark of Inquiry project is to create a “new science classroom”.

In the Ark of Inquiry project a platform is developed through which carefully selected inquiry activities will be made widely available across Europe. This platform will bring together inquiry activities, learners and supporters (teachers, university students, researchers, staff of museums and science centres and universities). To support teachers, the Ark of Inquiry project has provided an array of face-to-face training to teachers to enable them to support and motivate the pupils in their RRI inquiry activities.

The engagement of teachers, research institutions, science centres and museums across Europe is central to the success of the project. This document describes both the rationale and process of engagement of such stakeholders involving teachers in the project, takes us through how these communities have begun being built gives an overview of the gains for the teachers if they join the Ark of Inquiry project, provides templates and assisting documents that the project partners have used in order to reach out to the communities, and provides figures and data from the community members reached during the course of the project. This deliverable offers a number of insights regarding the lessons learned from this process of engaging stakeholders as well as number of recommendations regarding RRI community building in school education.

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1. Introduction and rationale: engaging a large community of teachers, research institutions and museums in the Ark of Inquiry project

The Ark of Inquiry project has identified three different groups of supporting communities to be engaged during the course of the project and beyond. The three groups are 1) primary and secondary school teachers and teacher educators, 2) scientists and researchers in research institutions, and 3) scientists, researchers, and educators in science centres and museums.

The community of teachers is a key community for the successful implementation of the Ark of Inquiry project. This community consists of in-service teachers, pre-service teachers and student teachers, both primary and secondary school levels. Within this community a special core group of best practitioners and more motivated professionals will be established that will play a key role in evaluating and testing different aspects of the project. Therefore, establishing a large and engaged community of teachers for the project and supporting them with various means (teacher trainings, supporting resources, web platform, etc.) has been of pivotal importance to this project.

This document describes how the community of all the aforementioned stakeholders has been established in the project, gives an overview of the methods used in order to reach out to this community and gives an overview of the number of stakeholders reached and engaged.

The Ark of Inquiry project centres around two closely related concepts: Responsible Research and Innovation and Inquiry-Based Science Education (IBSE). Ark of Inquiry aims at raising youth awareness to RRI and, at the same time, building a scientifically literate and responsible society through IBSE practices.

According to the Science with and for Society action of the European Union's Seventh Framework Programme, Responsible Research and Innovation (RRI) is an approach to research and innovation which helps societal actors and innovators to work together during the research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of European society. In practice, this approach involves a) ensuring gender equality, b) taking the ethical implications of research into account, c) promoting science education, d) engaging society more broadly in the research process and e) increasing access to scientific results. (The EU's official articles and policy documents on Science with and for Society and Responsible Research and Innovation can be found at <http://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society>).

To achieve this aim, the Ark of Inquiry project sets the following clear objectives:

- Developing a pedagogical framework for identifying inquiry activities that promote pupils' awareness of RRI.
- Collecting RRI-related inquiry activities and environments.
- Building a large supportive community including research institutions, science centres and museums.
- Training primary and secondary school teachers.
- Developing the Ark of Inquiry platform integrated with the evaluation and award system.
- Making the inquiry activities available across Europe through the Ark of Inquiry platform.
- Disseminating the approach in schools, universities, science centres and museums and society in general.

In this context the Ark of Inquiry project not only aims to build a scientifically literate and responsible society through Inquiry-Based Science Education but also to raise young people's awareness of Responsible Research and Innovation by providing them with a collection of engaging inquiry activities in the STEM domain (science, technology, engineering and mathematics). In other words, the project's ambition is to translate and demonstrate the abstract term "RRI" into everyday real life educational activities and put it into practice in formal and informal learning environments.

Within this scope the involvement of scientists, researchers and educators from research institutions, science centres and museums is of vital importance. Collaborating with the community of teacher educators and school teachers along with their students and pupils, respectively, connect formal learning settings and curricula with informal learning environments, like museums and science centres, so that pupils can take part in engaging learning activities outside schools and learn first-hand how science works. The staff of museums and science centres also forms a part of the supporting community and, along with teachers, teacher education students and scientists, will motivate and guide the pupils in their inquiry challenges and further support them in learning and practicing inquiry activities. The overall success and sustainability of the project depends on the supporting community of research institutions, science centres and museums as a whole. In addition to providing support for the pupils and teachers, the community and network of STEM-related institutions created around the project has also provided and further developed the existing or newly created educational content with respect to engaging inquiry activities and assessment criteria for these activities. The community has also been involved in the training of the teachers through their existing and established education schemes or newly created training programmes. In conclusion, the Ark of Inquiry project sees the main role of the supporting community as being both 1) a contributor of the existing inquiry activities to the Ark of Inquiry platform; and 2) a supporter of learners in their engagement with the activities. In exchange for their contribution, the project offers the supporting community the opportunity to:

- Be part of a pan-European network of science centres, museums and research institutions and share expertise with other professionals working in the same field
- Be informed about the role of Responsible Research and Innovation in formal and informal education settings
- Share educational programmes and activities with a large network of teachers and pupils from all around Europe
- Discover and implement new engaging inquiry activities developed by other science centres and museums
- Get more visibility and attract more visitors
- Get evidence-based evaluation about the efficiency and success of the existing educational programmes and practices

In addition, the project has put a strong emphasis on the use of communities of stakeholders (teachers, research institutions science centres and museums), given that in flourishing communities (especially teaching communities), members exhibit a sense of belonging and trust, often (often but not exclusively) based on shared beliefs and ideas on educational approaches to aspects such as science teaching, the role of teachers as agents and initiators of knowledge and on the value of innovation. These communities of peers also tend to share goals, common aspirations on continuous development and the acquisition of skills and competencies. The latter seems to be a rather crucial factor. The stronger the connection between the online community and the most pressing demands and desires of the modern teacher (with a taste for professional development) the more successful the community and its relevant tools and the more meaningful the engagement.

According to Widenman (2010):

The Members of successful learning communities demonstrate a shared focus and common purpose in their community activities. Members interact within a well-defined domain of interest to foster mutual growth (Carr & Chambers, 2006). This development of a common focus has been found to be a key requisite for success in all of the reviewed studies. How is that focus to be achieved in online TLCs? The evidence to date suggests that the single most significant determinant is the perceived clarity and relevance of the community's purpose and objectives. Without a clearly defined set of goals that are seen to directly address the participating teachers' intrinsic needs, online TLCs are likely to fail. Teachers are unlikely to allocate precious time to activities for which the purposes and/or benefits are unclear (Carr & Chambers, 2006). Generic online communities are less likely to succeed than those that specifically target groups of teachers with common needs and interests. It cannot be assumed that a common purpose will simply evolve in a community (Lock, 2006). Community goals and activities must be contextualized in authentic situations and presented in a manner that makes them relevant to the actual practices of teachers in their classrooms (Kayla & Weller, 2007).

Finally, the role of RRI, both as a core aspect of the Ark of Inquiry approach and as force aiming to intensify the building of communities of peers should also be expanded.

RRI aims to introduce the theme of responsibility in the process and outcomes of research and innovation with certain core values, needs and expectations that are fundamental to the European society. It encourages all societal actors (researchers, citizens, policy makers, business, third sector organizations etc.) to work together during the whole research and innovation process in order to assess the potential ethical implications of research and innovative practices. In terms of policy, RRI aims to:

- Engage society more broadly in its research and innovation activities
- Increase access to scientific results
- Ensure gender equality, in both the research process and research content
- Take into account the ethical dimension
- Promote formal and informal science education.

RRI addresses a number of agendas and involves every key stakeholder (including policy-makers, researchers, industry and commerce, science educators, and civil society organizations as well as the public at large) essential for a fair society. In addition, it is through a wide umbrella how different features in the relationship between science and innovation and society are brought together, comprising the dimensions of ethics, gender equality, open access, public engagement, and science education. In the context of the Ark of Inquiry project, RRI is introduced in school education through the inquiry STEM related activities that also incorporate the aforementioned themes.

In this document we shall see that the Ark of inquiry project has succeeded in addressing many of these issues in its attempt to build a healthy community of peers.

2. Building the community of teachers in the Ark of Inquiry project

2.1. The communities of teachers

The engagement of teachers begun for all partners by building a series of tools in order to engage their teachers nationally (various means were applied for that). Following this development phase, the implementation phase has begun. Implementation has been taking place via two means in two phases in Estonia, Greece, the Netherlands, Finland, Cyprus, Italy and Austria. These countries have begun communicating with a considerable pool of teachers nationally, and on the other hand, they have been engaging a smaller group of more motivated teachers in a series of workshops. These motivated teachers have been engaged in testing project products, such as the functionality of the platform, teacher training materials, award system, etc. (from September 2015 to February 2016).

Additionally to the countries listed above, Turkey, Belgium, Germany, France and Hungary have also begun building their communities of teachers and have also started disseminating information on the project. Some of these countries, such as Belgium and France, have created a core group of more motivated teachers where they have also tested project products. The rest of the countries have mostly been working on building their larger list of community members.

Aside from partner countries, the project has also targeted teachers across Europe. We shall see evidence of community building and teacher engagement.

2.2. Pilot phase

Let us recall from D.3.1 that the piloting phase began in September 2015 lasting until February 2016. Each of the following partners (EA, UT, UTU, UCY, HAN, UNESCO, BMB) was requested to reach at least 5 schools from Estonia, Greece, Finland, Cyprus, Italy, the Netherlands and Austria. In each school, the partners needed to engage at least 3 teachers per school, reaching a total of 100 teachers in the piloting phase. These teachers were asked to give their feedback on various elements of the project (Ark of Inquiry platform, resources, evaluation and award system, training materials in some cases). In order for project partners to receive the feedback from the teachers, various methods were used. Ellinogermaniki Agogi as part of its role in WP6 circulated to all partners a guidance document in order for them to gather feedback, via a workshop format, on the platform, list of activities in the project and the award system. In most of the cases, partners conducted face-to-face

meetings in order to gather this feedback; in some cases, online communication was used. Some partners, such as the University of Cyprus, conducted special events in order for participants to test the teacher training materials prepared by them. Finally, an additional small number of partners selected other elements of the project to be tested (in Finland, teachers thoroughly tested specific activities; in Belgium and France, small presentations of the platform were conducted with time for comments and feedback, etc.).

Overall, this task has been successfully completed by the project partners as a number of motivated teachers have been highly engaged in the project. In deliverable D6.2, one can see the detailed reports sent by the project partners following the piloting workshops held in the various countries that show clearly and in detail the input that these teachers gave for the project.

Additionally to the workshops during the piloting phase, all partners made an effort to build their contacts and create mailing lists of teachers that would want to engage in the project and receive relevant information (on training opportunities, newsletters, resources, etc.) in the coming months. Details of these lists can be seen in the Appendix of this document, while in Table 2 you can see the total number of teachers gathered per country until January 2016.

Note: Going beyond the official project requirements, some partners (EADN from France and KHLim from Belgium were not required to engage during the pilot phase according to the DOW) conducted sessions with teachers and student teachers and asked for their feedback on various elements of the project in this piloting phase (platform, inquiry activities, etc.).

Table 1. Participants of piloting workshops and events

Country	Number of primary school teachers	Number of secondary school teachers	Number of student teachers
Italy	0	14	0
Greece	2	7	0
Belgium	0	0	8
Estonia	4	8	0
Finland	9	0	5
Cyprus	0	0	72
Netherlands	6	3	0
Austria	2	9	0
France	0	18	0
Total	23	62	85

Table 2. Teachers registered in mailing lists per country

Country	Number of teachers
Italy	38
Greece	154
Belgium	21
Estonia	38
Finland	0
Cyprus	171
Netherlands	32
Austria	20
Germany	0
Hungary	0
France	92
Turkey	99
Total	665

2.2.1. Characteristics of teachers and schools

At this piloting phase, the project needed to engage schools and teachers that met the criteria listed below.

The criteria for selecting schools:

- have good collaboration with the project partner involved in the Ark of Inquiry project;
- have the possibility to involve at least 3 teachers who meet the criteria set for selecting teachers;
- have the possibility to run out-of-school learning activities (e.g., in science centres);
- have the possibility to allow the involved classes to use a computer lab (computers) for Ark of Inquiry activities about one hour in a week;
- allow the selected teachers to participate in Ark of Inquiry trainings and pilot study;
- have to be open to pilot studies of the Ark of Inquiry project.

The criteria for selecting teachers:

- should be interested in inquiry learning (see definition from the Ark of Inquiry deliverables);
- should be able to communicate in English;
- should have basic technological skills for using Ark of Inquiry and communicating electronically;
- willing to participate in Ark of Inquiry trainings (three days in a year);
- willing to participate in the Ark of Inquiry pilot study (about one hour in a month);

- willing to run Ark of Inquiry activities with his/her pupils (about one hour in a week);
- should teach in one of the following categories:
 - elementary school teachers who teach science;
 - science teachers (teachers who teach physics, chemistry, biology or science or a closely related subject, e.g., environmental science, natural science).

It was important for partners to engage teachers from both primary and secondary schools. Reaching out to both primary and secondary school teachers depending on the country proved to be a challenge in some cases. Engaging secondary school teachers in countries such as in Italy or Greece proved to be easier than engaging primary school teachers. These teachers felt more confident to participate in such a workshop, they could see more the direct relevance for their work and were more used to utilising such instruments in their classrooms. On the other hand, in cases such as the Netherlands, it was easier to motivate primary school teachers, since in they generally have more flexibility in their implementation of the curriculum and less tight schedules.

2.2.2. How teachers were reached

Many of the partners had already a number of teachers they work with either at national or European level via other European projects they participate in. These existing contacts were used in many cases and were brought into the Ark of Inquiry community. Besides the existing connections, partners made an effort to engage new teachers in the project by several means under the guidance of Ellinogermaniki Agogi as WP leader of the communities building and under the assistance of UNESCO in their role as WP leader on dissemination:

- Sending out a Google form produced by EA (either in English or translated into local languages) and asking teachers to join the Ark of Inquiry project;
- Participating in conferences and events and exposing more teachers to the project;
- Individually calling existing contacts of motivated teachers;
- Using the assistance of the UNESCO Venice Office and the ASPnet network.

UNESCO has played a pivotal role in the project in encouraging the partners to use their local and national dissemination channels and is coordinating the collection of information on this aspect (see D7.3 for more updates regarding this issue).

2.2.3. Overview of tasks completed by teachers in the piloting phase

Teachers participating in the focus groups

- 1) Teachers participated in the introductory meeting with local coordinators of the project where the piloting process was explained in detail and a first introduction to the Ark of Inquiry platform was presented.
- 2) They familiarized themselves with the platform and chose at least 3 activities from the platform suitable for the class (according to the age of pupils, duration, domain, materials needed).
- 3) They conducted at least 3 classroom sessions, 45 to 90 min each or equivalent to one or two classroom sessions.
- 4) They provided feedback through questionnaires or/and interviews on the following topics: inquiry activities, scenarios, platform, evaluation and award system, etc.
- 5) A number of teachers from Cyprus gave their feedback on the training materials.

Additionally to the motivated teachers that participated in the focus groups, project partners, such as UCY, engaged a number of student teachers in piloting and testing the teacher training materials.

The UTU team in Finland engaged a number of teachers in testing some of the proposed Ark of Inquiry activities.

KHLim conducted seminars where Ark of Inquiry activities were tested, while HAN tested materials related to the evaluation system.

During this piloting phase and, as a number of teachers got involved in the project, some of these teachers conducted project activities in their classrooms, thus beginning to reach out to pupils around Europe.

2.2.4. Feedback from teachers participating in the piloting phase

Teachers participating in the focus groups

These teachers have given valuable feedback to several aspects of the project, as mentioned above. For more details on the reports with their comments and recommendations, see D6.1 produced by EA. Below is a list of some of the major issues raised.

1) Language barrier: Teachers in Estonia, Italy, Greece, and other countries realised it would take considerable effort to translate the activities into the local language should they want to use them with their pupils. Even in the cases that teachers' level of English was good enough to understand all resources, in order to use them in their classrooms they had to be in their local language. This was a common barrier and feedback received from almost all countries.

2) Teachers already involved in various projects and networks were already too overwhelmed with different activities and did not have time to dedicate to Ark of Inquiry. It was challenging for various countries (Estonia, Italy, Germany, etc.) to convince teachers to dedicate time to the project. Getting them to test the products was one issue, having them using the activities proposed would be another one.

3) Primary and secondary school teachers. In some of the project countries it was easier to recruit one group than the other. Primary school teachers seemed to have more time in their hands in some countries in order to participate in projects as opposed to secondary school teachers. On the other hand, it was mentioned by many primary school teachers that there seemed to be a lack of resources appropriate for the age groups in primary school in the platform.

Teachers filling in the Google forms

1) When teachers were asked in the mailing list of the Ark of inquiry project how they found out about the project, via a colleague was the most popular answer, followed by, respectively, via the internet, through their networks, and via the Ark of inquiry website and the project partners. Teachers that found out about the project via the website were from countries outside the consortium. Some variations in the order of these preferences exist among the main Google form used in English and the translated forms, though the general norm is that most people found out about the project via other people.

2) When teachers that used the Ark of Inquiry mailing list were asked which topic of the Ark of Inquiry project was most interesting for them, the most popular answers were, respectively, training opportunities and new online resources, possibility to upload their own resources, followed by competitions for schools and relevant publications.

2.3. Large-scale implementation phase

During the large-scale implementation phase, partners had set out to reach teachers from all 12 countries (adding to the previously mentioned countries Turkey, Belgium, Hungary, France and Germany) and recruit at least 1000 teachers in schools.

Table 3. Figures of teachers for the large-scale implementation phase

Countries	Number of in-house teachers
Greece, Italy, Germany, Turkey, France	100 * 5
Estonia, Finland, Netherlands, Hungary	80 * 4
Cyprus, Austria, Belgium	60 * 3
Total	1000 teachers

Additionally to the above, the project set reach out to 100 science and teacher education students. UT, UTU, UCY, HAN , UBER and KHLim will be mainly engaging science and teacher education students, since they run pre-service teacher education programmes in their institutions.

2.3.1. Characteristics of teachers in the large-scale implementation phase

At large-scale implementation phase there had been an emphasis on the following characteristics:

- Teacher(s) with good knowledge of the English language, both reading and writing;
- Teachers with interest in inquiry based science education approaches and methodologies;
- Teachers with positive attitude towards innovative methods of teaching and learning using new technologies;
- Teacher(s) with basic experience of using computers;
- In-service teachers in schools equipped with a classroom or lab with personal computers with Internet access.

In addition to the above, there was also an interest in teachers that are not necessarily familiar with Inquiry-Based Science Education (especially, since at this phase these teachers would be benefit from the training opportunities available in several countries as part of WP4). Since a number of activities were available in the local languages, at this stage we can also reach out to teachers who can only use activities in their native language.

It remains important for partners to engage teachers from both primary and secondary schools, as resources are available for both groups and as the project aims to eventually reach out to pupils in both age groups.

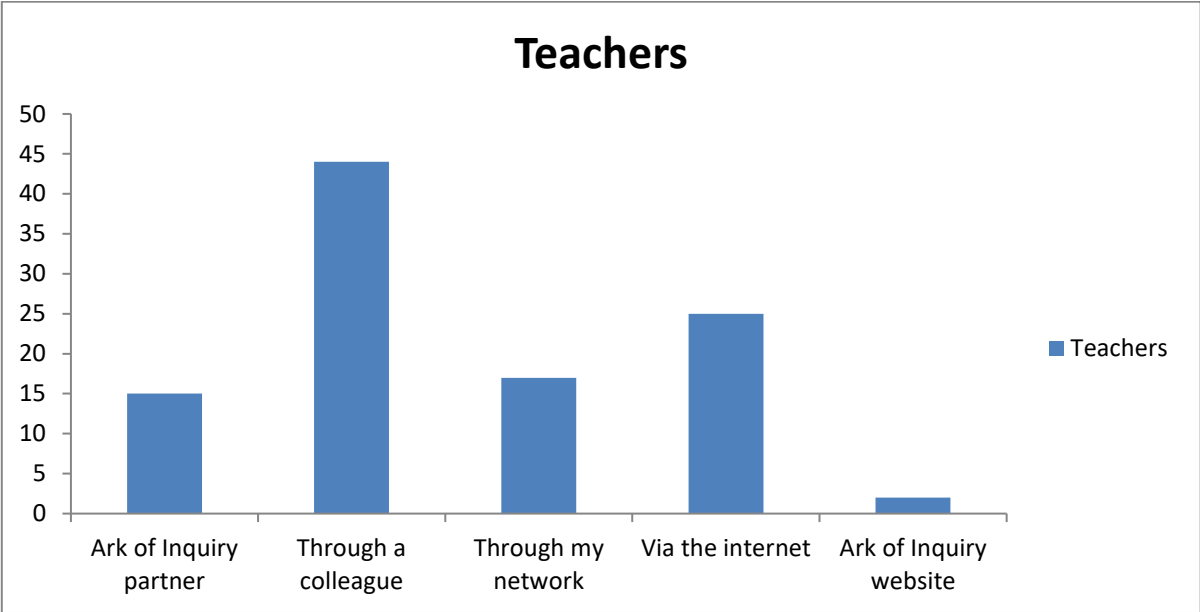
2.3.2. How teachers were reached

Engagement

The project offered a series of opportunities to engage schools in the project. Local dissemination channels (See WP7), the project website and social media presence (Facebook, Twitter, YouTube, etc.), local conferences and events, existing mailing lists, contacts with national and local teachers associations were all used by the partners in order to engage the community of teachers in our project and register in the Ark of Inquiry mailing lists. All these tools were used by the partners to engage all the different community members of the project and will also be used in the large-scale implementation phase (museum professionals, teachers, researchers).

Useful information about which communication channels partners was used in order to engage a larger community of members is collected by looking at how community members have been responding to the channels used so far. When looking at the English version of the mailing list of Ark of Inquiry that is also hosted on the project website, when people were asked how they found out about the project, from the 100 responses received the most common answer was via colleagues, followed by via the Internet, via their networks and the Ark of inquiry partners. This shows the importance of networking and beginning with a very strong existing community (even a small one) of engaged teachers that helps spread the word. Social media has not been used very much yet as a means of engaging the teachers but could offer great potential in keeping the community of teachers alive and vivid. There is no single recipe for the success of community engagement but different means to create these groups matching the characteristics of each country.

Table 4. Communication channels, teachers responding in Ark of Inquiry website Google form



As explained in other sections of this document, some partners decided to translate this form into their national language, while others used other forms of communication with their contacts. For examples of those partners that translated this form and had similar questions for their users, see the two tables below that show how the teachers responded nationally. Greece and Turkey, for example, that had some of the longest mailing lists. It is interesting to see that there is quite a difference between only two countries in the way the information reached them. In Greece, it is obvious that it mostly came directly from one channel, while in Turkey via many channels.

Table 5. Communication channels, Greek teachers’ responses

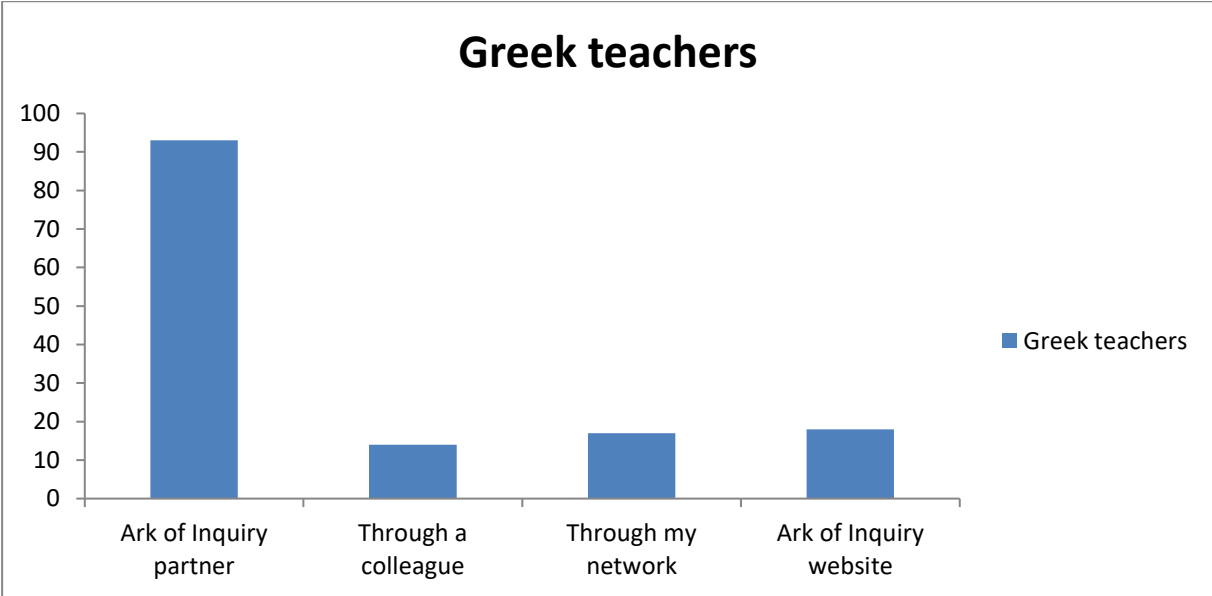
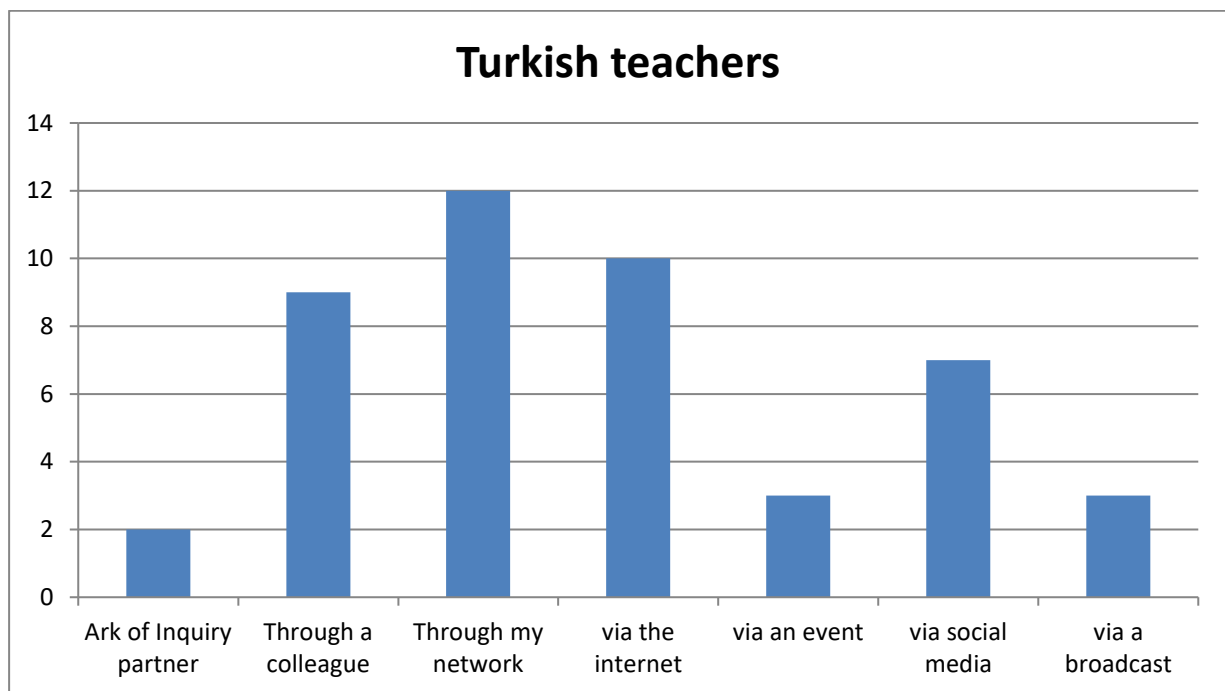


Table 6. Communication channels, Turkish teachers' responses



2.4. Community benefits

Further than identifying the community members, the project needed to ensure that the community members are motivated enough in order to contribute to the project, each one through their own role. The following rationale gives an overview of some potential issues that came up during the engagement process.

This rationale was already used as part of the recruitment process. Approaches were adapted depending on partners' contacts, local culture, etc.

Teachers needed to know why it would be interesting for them to join the project and how they would benefit from becoming part of the Ark of Inquiry teachers' community. Depending on their interests, it was clear that some candidates were more willing to participate than others; however, attendees needed to clearly see returning benefits in order for them to participate in the project.

Below is a list of proposed benefits for teachers to participate in the Ark of Inquiry project. These arguments were used by project partners in the process of creating the Ark of Inquiry teachers' community. Judging from the responses received through the Google forms filled in by community members, training opportunities was the most popular reason for joining the project. As mentioned above in the document, the use of new resources was also a very popular choice, followed by the possibility of uploading their own resources, which is provided to the teachers in the platform. In general, all arguments used below as benefits for the teachers were engaging for them.

Table 7. Benefits for teachers for participating in the Ark of Inquiry project

Benefit	Explanation
Training opportunities	Teachers participating in the project will get the chance to benefit from the training opportunities the project is offering on the resources produced, and their pupils can participate in the Ark of Inquiry activities.
New available resources on inquiry learning	The Ark of Inquiry resources will be helpful tools for teachers in order to structure their classroom activities on inquiry learning. It will help them to go beyond isolated activities to a more consistent approach on IBSE.
Certificate	Ark of Inquiry will provide teachers who attend the trainings with certificates in

	<p>the countries that this is possible. Teachers can use these documents to build up their personal portfolio.</p>
Win an inquiry award for their class	<p>Ark of Inquiry will hand out inquiry awards to the winners of the challenges. Winning an award could be a nice incentive for their class to become more motivated towards STEM.</p>
Link their classes with researchers	<p>Ark of Inquiry will have a community of research institutions willing to be active members of the project. Project members will be able to link classes with STEM professionals from research institutions.</p>
Link their classes with science centres and museums	<p>Ark of Inquiry will have a community of science centres and museums in countries that the teachers will be based. Project members will be able to link classes with museums and either propose conducting activities on their premises or help them link and invite museum educators to their schools.</p>
Evaluation of pupils' skills	<p>The Ark of Inquiry platform will provide the opportunity to teachers who use it to evaluate their pupils' skills on a one to one basis and to tailor lessons according to these results.</p>
Opportunity to disseminate own teaching materials	<p>For teachers, the project will be a great opportunity to also upload their own teaching materials to the Ark of Inquiry platform if they have produced any.</p>
Receive advice	<p>Ark of Inquiry will offer the opportunity to participating teachers to share their concerns and questions with the rest of the community members. Therefore, the platform may result in a very useful space for them.</p>

2.5. Approach and communication

In order to facilitate the communication with potential community members, all partners were provided with standard letter templates that may be accompanied by information leaflets, project brochures and other dissemination materials about Ark of Inquiry in electronic, web-based or printed form. Also, an online registration form was provided, https://docs.google.com/forms/d/1nNEtY5mLDW2SuPIJ6BiU_dpKTSIPn_Wco4ufJs2Utpk/viewform?c=0&w=1, which was disseminated to the network of partners' contacts and linked to the Ark of Inquiry website (www.arkofinquiry.eu). Partners were free to adapt the proposed letter to better suit their cases that can be found in the Appendix of this deliverable.

2.6. List of community members per country

The Ark of Inquiry partners, as mentioned above, used several means of communication in their respective countries to identify teachers that could become members of the Ark of Inquiry supporting community. They used the Google form provided by EA and published on [the Ark of Inquiry website](#), created their own forms, and sometimes did not use any forms at all but began establishing their communities by using the existing networks and channels. To get a glance of these efforts, see the Appendix of this deliverable. Details about the community members' profiles are provided in several forms included there.

2.7. Evidence of community engagement and growth

2.7.1. The Ark of Inquiry platform community

One of the most indicative evidence of the growth and development of the Ark of Inquiry Community of teachers is the number of teachers that have registered in the Ark of Inquiry platform for the purpose of implementing the **758 activities** that combine inquiry learning with Responsible Research and Innovation (RRI) themes.

Currently there are **2,121 teachers** registered in the platform, far exceeding the target of **1,100** set out by the project. A common feature in community development is the fact that successful communities are often built around high quality content that is appealing to the needs and aspirations of the teaching community. This seems to be the case with content (the inquiry activities) in the Ark of Inquiry platform.

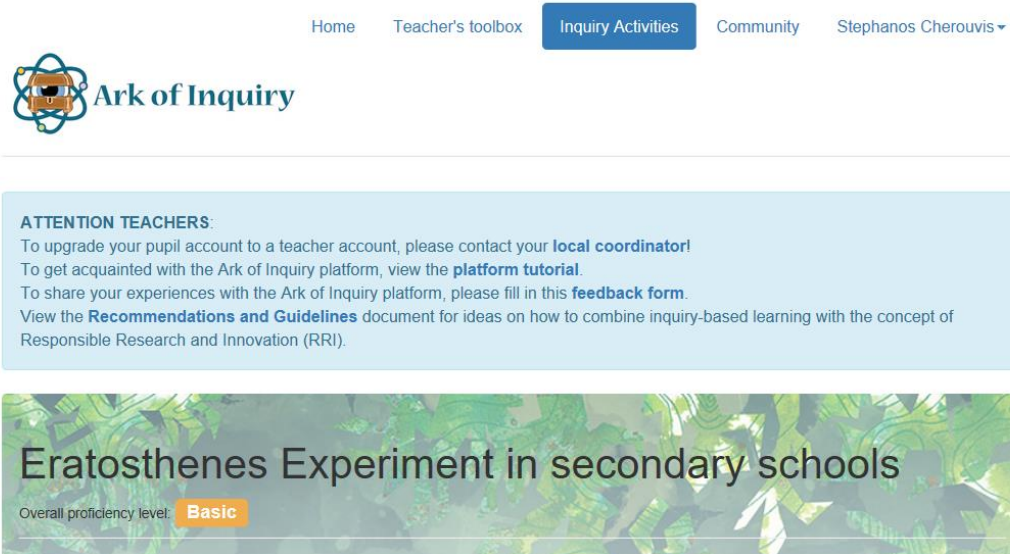


Figure 1. The Ark of Inquiry activities in the platform

Particular attention should be given to activities that they became the focus of a type of engagement that far exceeded both the aspirations of the partners, as well as any expectations for work carried out within projects with similar scope.

The **Eratosthenes experiment**, a flagship Ark of Inquiry activity and event that combines a straightforward application of an Inquiry activity with various RRI elements is an example.

The story of Eratosthenes: In 240 B.C., the Greek astronomer Eratosthenes made the first good measurement of the size of Earth. By noting the angles of shadows in two cities on the Summer Solstice, and by performing the right calculations using his knowledge of geometry and the distance between the cities, Eratosthenes was able to make a remarkably accurate calculation of the circumference of Earth. Eratosthenes lived in the city of Alexandria, near the mouth of the Nile River by the Mediterranean coast, in northern Egypt. He knew that on a certain day each year, the Summer Solstice, in the town of Syene in southern Egypt, there was no shadow at the bottom of a well. He realized that this meant the Sun was directly overhead in Syene at noon on that day each year. Eratosthenes knew that the Sun was never directly overhead, even on the Summer Solstice, in his home city of Alexandria, which is further north than Syene. He realized that he could determine how far away from directly overhead the Sun was in Alexandria by measuring the angle formed by a shadow from a vertical object. He measured the length of the shadow of a tall tower in Alexandria, and used simple geometry to calculate the angle between the shadow and the vertical tower

The activity was performed by schools in partner countries and beyond. Pupils are asked to re-create the experiment in their schoolyard under the guidance of their teachers. Pupils also use certain eLearning tools and the two Ark of Inquiry Educational scenarios, one for primary (http://arkportal.ut.ee/#/inq_act/1547) and one for secondary school pupils (http://arkportal.ut.ee/#/inq_act/1545). Schools were paired together according to their longitude and exchanged data on their measurements. They also shared their experiences and many participated in the Ark of Inquiry Eratosthenes International Photo Competition whose winners attended the Ark of Inquiry Summer School.

The activity is combined with certain RRI topics such as the role of women in the history of science, given that the story of Eratosthenes is often told together with the story of Hypatia of Alexandria. Via this discussion teachers bring up the gendered image that science has had for centuries and the stereotypes often associated with it. Following the measurements and conclusion phase of the activity another element is usually introduced. A discussion about the role of human impact on the planet that Eratosthenes first tried to measure, the sense of fragility that should become more evident to the pupils and a discussion about issues such as climate change may add to the activity additional RRI elements.

The Eratosthenes Experiment was organized by Ellinogermaniki Agogi on the 21st of March 2017 and the 22nd of September 2017 on the respective equinox days. Both events received a tremendous response making them two of the most significant in the world's education calendar. Overall, 675 schools participated representing 44 countries all over the world in March 2017. In addition, 403 schools from 47 countries this time participated in the September version of this Ark of Inquiry community event.

Table 8. Participation in the Eratosthenes Experiment activity

	March 2017	September 2017
Countries	44	47
Participating schools	675	403
Registered teachers / accounts	704	401
Pupils (all)	7039	4955
Schools submitted data	273	273
All participating teachers	1007	455
Participating Teachers in the Photo Contest	55	40

The success of the Eratosthenes experiment is in line with standard community development practice that sees communities of teachers built around exciting content (the Ark of Inquiry activities) that is delivered in a trusted online environment (the Ark of Inquiry platform) and it is further grown with the support of large-scale community events.

2.7.2. Community of implementation

Below (Table 9) you will find an overview on the figures of participants in the large-scale implementation phase. There is evidence of a steady growth of the community of teachers that have been engaged in the project through the various implementation exercises.

Table 9. Participants in the large-scale implementation phase

Country	Partner	Teachers	Pupils	Other
Austria	BMB	119	957	3
Belgium	UCLL	112	272	66
Cyprus	UCY	22	321	25
Estonia	UT/ AHHA	196	374	113
Finland	UTU	53	910	5
France	EADN	31	495	0
Germany	UBER	19	475	0
Greece	EA	22	201	7
Hungary	HRTA	6	127	0
Italy	UNESCO	84	1808	57
Netherlands	HAN	8	172	0
Turkey	BEKAS	13	300	3
Total		685	6412	279

The same holds for teachers who were engaged by partners who utilised their existing networks and contact lists as described in the previous passages. Again the noticeable increase (Table 10) in some of the countries is another indication of the Ark of Inquiry community expansion.

Table 10. Teachers registered in mailing lists per country

Country	Number of teachers
Italy	104
Greece	168
Belgium	138
Estonia	38
Finland	215
Cyprus	282
Netherlands	32
Austria	86
Germany	0
Hungary	0
France	92
Turkey	112
Other (Albania)	40
Total	1307

The partners have also attempted to engage a number of policy makers in their respective countries and beyond. There are cases such as Greece that policy makers such as school advisors in regional directorates invited the national coordinator (EA) to organise and deliver Ark of Inquiry training and mentoring to large groups of teachers that make up the teaching force in particular geographical areas. 4 such occasions took place in Greece with the Directorates of Kalamata, Pylos, and Tripoli in the Peloponnese and Evosmos in Thessaloniki inviting the Ark of Inquiry project to deliver one of the two official annual training days that the Department of Education requires each region to take. These are Government-sanctioned events and require all teachers to attend a full day event, while classrooms are adjourned for the entire day. UNESCO also successfully engaged the Albanian Ministry of Education and Sports who invited an Ark of Inquiry delegation to deliver a two day training event on the theme of the Inclusive Science Classroom: The Gender Issue (AoI, 2017).

3. Building the community of research institutions, science centres and museums

3.1. Science centres and museums

With respect to science centres and museums, the first step for the consortium partners had been to engage institutions in Estonia, Greece, the Netherlands, Finland, Cyprus, Italy, Austria, Turkey, Belgium, Germany, France and Hungary – the countries participating in the project. The aim was also to reach science centres and museums beyond these countries, all over Europe. Within these institutions, the project has mainly been looking for the following target profiles in order to have a better impact: educators in the STEM domain, staff or heads of learning/education departments, outreach experts, and directors. Particular focus was given to the following:

a. Educators (heads of learning/education departments)

Each science centre and museum has a small or larger education team. The role of this team is to produce educational material for teachers and pupils to accompany their visits to the museums. The educational material is an extended part of the visit and is linked with the exhibitions and the curriculum. Additionally to these materials, the education teams produce workshops, curricula-based study programmes and educational projects as separate activities that run within the museums' premises, outside the museums in schools, or in other venues. Finally, a number of web-based educational resources are often produced with the aim of providing activities for families and schools. This is the most relevant target group the project needed to reach out to.

b. Outreach experts

Outreach experts usually belong in the education teams of the museums. Their job focuses on activities outside the museums' premises, very often in schools.

c. Directors

Directors are the decision makers of the museums and science centres. Any collaborations and agreements need to pass through their supervision in order to be accepted.

In general, the goal has been to reach people who are willing to share their experience and know-how and are interested to benefit from the project's resources. Motivated and influential staff in the museums that would be ready to share their resources with the project are needed. To achieve this, partners are using their existing connections, networks of museums they work with on the national or European level or other European projects they participate in.

As the number of science centres and museums to be reached varies from country to country, there was no expectation on the same number of identified or engaged organisations per partner or country. This depends, among other things, on the expertise of each partner, its existing network of contacts and its experience of collaboration with science centres and museums in the past or within the framework of other projects. Nevertheless, each partner tried to identify and create a first stage of contacts with science centres and museums in their countries so that further communication and community building is established towards efficient collaboration with the project.

3.2. Research institutions

With respect to research institutions, the first step for the consortium partners was again to engage institutions in Estonia, Greece, the Netherlands, Finland, Cyprus, Italy, Austria, Turkey, Belgium, Germany, France and Hungary – the countries participating in the project. The aim was also to reach similar or related institutions beyond those countries, from all across Europe. Within these institutions, the project has mainly been looking for the following target profiles in order to have a better impact: scientists in the STEM domain, and staff or heads of education departments and outreach groups. Particular focus has been given to the following:

a. Education group (head of education department)

The role of this group or department within a research institution is to produce educational material for teachers and pupils to accompany their visits to their premises, to organise visits of scientists to schools and informal learning premises, etc. These education teams often produce workshops and projects. Also, a number of educational web resources are often produced with the aim to provide activities for families and schools sharing the research that is conducted within their organisations. This is the most relevant target group the project needs to reach out to within a research institution.

b. Outreach department or group (head of outreach department or group)

The role of this department within a research institution is to produce outreach material for different target groups or the general public. This team will organise workshops, resources, and projects with the aim to provide activities for pupils and/or their families.

Similarly to the previous case, the number of institutions in this category to be reached varies from country to country, and so we do not expect the same number of identified or engaged organisations per partner or country. This depends, among other things, on the expertise of each partner, its existing network of contacts and its experience of collaboration with research institutions in the past or within the framework of other projects.

3.3. Community benefits

During the first stages of approach and communication, the project partners had to inform the potential community members about various aspects of the Ark of Inquiry project as well as provide strong arguments concerning the benefits that science centres, museums and research institutions could have by joining the Ark of Inquiry community. Depending on their interests and objectives, it has been clear that some candidate community members were more willing to participate than others. More than just identifying the community members, the project had to ensure that the community members are motivated enough to contribute to the project, each in its own role.

In the following table we summarised our proposed overview of the benefits and arguments that help elaborate on some potential issues that may arise during the communication and engagement process and/or later on during the project. These can be used as discussion or focus points during the recruitment process and accompanying dialogue (e.g., while partners send invitation letters or emails, information leaflets, etc., they may choose to focus or provide more information on certain aspects of the project’s objectives and goals that may be of direct or indirect benefit and interest to the addressed recipient). These approaches may need to be adjusted depending on local, country-specific circumstances, cultures and attitudes. For the sake of completeness, the table includes items addressed to all different community groups, i.e. science centres, museums and research institutions as well teachers and teacher educators.

Table 11. Description of benefits of participating in the Ark of Inquiry project

Benefit	Short description
Opportunities for collaborations (science centres, museums and research institutions)	Joining the community is an opportunity to expand their connections at the national and European levels with different stakeholders.
Development of opportunities and chances for funding in the future (science centres, museums and research institutions)	The project contributes to making Responsible Research and Innovation more relevant to education activities. It aims to translate and demonstrate the term “RRI” in practical use in formal and informal education. Being aware and informed of RRI and participating in the Ark of Inquiry project will help them to propose projects in the future. Especially if they are based in museums or research institutions, having an RRI focus will boost their chances to access EU’s funds.
Sharing educational activities with a larger community (science	The Ark of Inquiry community is an opportunity for them to share the educational activities and projects they are already running and to disseminate them on the local, national or

centres, museums and research institutions)	even European level. It is a chance for them to get more pupils around Europe to use their activities.
Evidence-based evaluation of educational practices, activities, outreach projects, etc. (science centres, museums and research institutions)	Ark of Inquiry, via its tools, will be able to offer participating science centres and museums evaluation mechanisms to assess the efficacy and impact of these activities, thus gaining useful information to further improve them.
Inspiring young people to follow STEM related careers (research institutions)	Numerous studies in several European countries have revealed a decrease of young people choosing STEM related careers. This will result in a lack of researchers in the coming years. Projects like Ark of Inquiry aim to inspire young people, give them confidence and bring them closer to the field of sciences.
More potential visitors (science centres and museums)	Science centres and museums that will share their activities and resources via the Ark of Inquiry platform will be able to use the platform as a beneficial dissemination tool to attract more classes and teachers in their area to their premises.
Visibility and wider dissemination of activities (science centres and museums)	Some of the activities shared by museums could be adapted and used on the European level by the other partners of the project. This will lead to higher visibility and wider dissemination of these activities.
New collection of resources on inquiry teaching and learning (science centres and museums)	The Ark of Inquiry web-based resources will be helpful tools for educators to structure their museums' educational activities on inquiry learning. It will help them to go beyond isolated activities to a more consistent approach to IBSE.
Training opportunities on IBSE approach and practices (teachers, teacher educators)	Teachers participating in the project will get the chance to benefit from the training opportunities the project is offering on the educational resources produced for teachers and pupils.
New collection of resources on inquiry teaching and learning (teachers, teacher educators)	The Ark of Inquiry web-based resources will be helpful tools for teachers to structure their classroom activities on inquiry learning. It will help them to go beyond isolated activities to a more consistent approach to IBSE.
Certificate, professional development (teachers)	Ark of Inquiry will provide teachers who attend the series of offered trainings with certificates. Teachers can use these documents to build up their professional development portfolio.
Winning inquiry awards (teachers)	Ark of Inquiry will hand out inquiry awards to the winners of the challenges. Winning an award could be a nice incentive for their class to become more motivated towards STEM and RRI.

Linking school classes to scientists and researchers (teachers)	Ark of Inquiry will have a community of research institutions willing to be active members of the project. The Ark of Inquiry members will be able to link classes with STEM professionals coming from research institutions.
Evaluation of pupils' skills (teachers)	The Ark of Inquiry platform will provide the opportunity to teachers who use it to evaluate their pupils' skills and to adapt their teaching practices according to these results.
Opportunity to disseminate teaching materials and resources (teachers, teacher educators)	For teachers and educators, the project will be a great opportunity to upload their own teaching materials and resources that their fellow teachers in their country or other countries can use.
Sharing advice and experience with the community	Ark of Inquiry will offer the opportunity to participating community members to share their concerns and questions with the rest of the community. Therefore, the platform may result in a very useful collaborative experience sharing and communication environment.

3.4. Evidence of community engagement of research institutions, science centres and museums

The Ark of Inquiry project has succeeded in engaging a number of research institutions, science centres and museums not only in the form of joint events and dissemination activities, but also in the field of content creation and in activities that combine the inquiry approach with an RRI element. This is evident in the various inquiry activities that have produced and implemented by the teachers with the aid and contribution by these institutions themselves. Table 12 offers an overview of such activities that are the result of stakeholder engagement with the Ark of Inquiry project and its platform. In addition, a fundamental aspect of Teacher/Learning community building concerns the fact that such communities tend to grow and remain active when built around reliable and attractive educational content. The successful engagement of these institutions demonstrated in the table below partly explains the popularity of both the Ark of Inquiry platform and the project as a whole in the teaching community.

Table 12. Activities in collaboration with Ark of Inquiry stakeholders

Title of Activity and link	Description	Research institutions, science centres and museums involved	Country

<p>Build your own seismometer (Φτιάξε τον δικό σου σειсмоγράφο)</p> <p>http://arkportal.ut.ee/#/inq_act/1574</p>	<p>An invitation to schools to build their own basic seismographs and a competition</p>	<p>National Observatory of Athens- Institute of Geodynamics</p> <p>The Office of the president of the Greek Republic</p>	<p>Greece</p>
<p>Extracting DNA by comparative tests</p> <p>http://arkportal.ut.ee/#/inq_act/1538</p>	<p>This activity is about looking for DNA in different matters. During the activity four comparative tests will be carried out using saliva, fruit, soil and sand. Saliva, soil and sand are placed in separate tubes, crushed fruit to the grip-sack. As two tests are carried out with the saliva, so it is useful to separate saliva and place it to the different cups.</p>	<p>Science Centre Ahhaa</p>	<p>Estonia</p>
<p>Gefahr aus dem Wasserhahn</p> <p>http://arkportal.ut.ee/#/inq_act/1692</p>	<p>This inquiry activity was designed to assess the inquiry and problem-solving competence of the high-level pupils through a science education activity and the collaboration of researchers in Germany.</p>	<p>Chemistry Institute, Chemistry HU Berlin</p>	<p>Germany</p>
<p>Hands-on: Electron diffraction at carbon crystal</p> <p>http://arkportal.ut.ee/#/inq_act/618</p>	<p>In this activity you will compare the predicted wavelength of the electron - following from de Broglie's hypothesis - with the experimental value measured from the electron diffraction pattern.</p> <p>This activity is part of a series of 12 learning stations and 4 hands-on activities about quantum physics and nanotechnology.</p> <p>The activity was developed by UC Leuven-Limburg in collaboration with the University of Antwerp. The university can give access to its laboratory where groups of pupils can perform the hands-on activities under the guidance of researchers.</p>	<p>University of Antwerp</p>	<p>Belgium</p>
<p>Hands-on: Electron diffraction at carbon crystal</p> <p>http://arkportal.ut.ee/#/inq_act/143</p>	<p>The aim of this activity is to measure the Planck's constant in a very simple way and with simple material. At the same time you will learn more about LEDs.</p> <p>This activity is part of a series of 12 learning stations and 4 hands-on activities about quantum physics and</p>	<p>University of Antwerp</p>	<p>Belgium</p>

	<p>nanotechnology.</p> <p>The activity was developed by UC Leuven-Limburg in collaboration with the University of Antwerp. The university can give access to its laboratory where groups of pupils can perform the hands-on activities under the guidance of researchers.</p>		
<p>Hands-on: Diffraction of light at a hair</p> <p>http://arkportal.ut.ee/#/inquiry/144</p>	<p>The aim of this activity is to measure the thickness of a hair using light diffraction. This activity is of novice proficiency level as the inquiry path is predefined. The orientation phase, in which curiosity is stimulated, corresponds with the introduction. This phase is followed by the experiment in which the pupils collect data and process them (investigation phase); at the end they formulate a short conclusion and reflect about the results.</p> <p>The activity was developed by UC Leuven-Limburg in collaboration with the University of Antwerp. The university can give access to its laboratory where groups of pupils can perform the hands-on activities under the guidance of researchers.</p>	University of Antwerp	Belgium
<p>Hands-on: Discrete emission lines of chemical elements</p> <p>http://arkportal.ut.ee/#/inquiry/142</p>	<p>With this inquiry activity you will learn how to measure the emission lines of He, or of any other chemical element. This activity is of novice proficiency level as the inquiry path is predefined. The orientation phase, in which curiosity is stimulated, corresponds with the introduction. This phase is followed by the experiment in which the pupils collect data and process them (investigation phase).</p> <p>The activity was developed by UC Leuven-Limburg in collaboration with the University of Antwerp. The university can give access to its laboratory where groups of pupils can perform the hands-on activities under the guidance of researchers.</p>	University of Antwerp	Belgium

<p>C-vitamin: egy Nobel-díjat érő molekula</p> <p>http://arkportal.ut.ee/#/inq_act/2008</p>	<p>An activity on the role and value of Vitamin C</p>	<p>Regional Pedagogical Service and Research Center at the University of West Hungary.</p>	<p>Hungary</p>
<p>Προγράμματα Περιβαλλοντικής Εκπαίδευσης του Κυπριακού Κέντρου Περιβαλλοντικής Έρευνας και Εκπαίδευσης</p> <p>http://arkportal.ut.ee/#/inq_act/1896</p>	<p>16 Environmental education activities, designed to provide schools and pupils with a hands-on approach to a whole range of environmental challenges</p>	<p>Cyprus Center for Environmental Research and Education (CY.C.E.R.E.)</p>	<p>Cyprus</p>
<p>Playdecide: Genderstereotype in MINT-Fächern</p> <p>http://arkportal.ut.ee/#/inq_act/1728</p>	<p>Playdecide is a discussion game that allows you to get to know and work on complex topics without previous knowledge. The present Playdecide is intended to encourage pupils to debate gender stereotypes in STEM professions based on tangible information. The course of the game encourages the formation of opinions and the development of solution strategies.</p> <p>The activity was developed by the Science Center Netzwerk Österreich.</p>	<p>Science Center Netzwerk Österreich</p>	<p>Austria</p>
<p>Liquid tricolor</p> <p>http://arkportal.ut.ee/#/inq_act/1472</p>	<p>How to make the Dutch flag with liquids?</p> <p>In the explanation of the assignment a link is made with pollution: water can easily absorb other substances, this also applies to dirt. If there is junk - oil, for example - in the water, it will spread and be absorbed by the water unless you clean the water immediately.</p>	<p>Watermuseum Arnhem</p>	<p>Netherlands</p>
<p>Ijsblokjes in zout en zoet water</p> <p>http://arkportal.ut.ee/#/inq_act/1471</p>	<p>Which ice cubes melt faster, those in fresh or salt water?</p>	<p>Watermuseum Arnhem</p>	<p>Netherlands</p>
<p>Vies water schoonmaken</p> <p>http://arkportal.ut.ee/#/inq_act/1470</p>	<p>How can you clean dirty water? In this activity, pupils will try out different ways to clean water.</p> <p>The activity makes the theme of water pollution a topic of discussion and can be a reason to think with the pupils about causes, consequences and</p>	<p>Watermuseum Arnhem</p>	<p>Netherlands</p>

	solutions of water pollution		
Waterreis door de tijd 3D NL reliefkaart http://arkportal.ut.ee/#/inq_act/1469	What are the high and low places in the Netherlands? Is there a risk of flooding? What happens if the sea level rises further? How can you keep the Netherlands safe and dry? After this lesson, the pupils are familiar with the relief map of the Netherlands, they have done several experiments with the map and they have thought about what climate change means for the Netherlands.	Watermuseum Arnhem	Netherlands
Heureka tiedetempu http://arkportal.ut.ee/#/inq_act/942	Why does the snow float and the stone falls to the bottom? Can the plants sweat? Can you get the boiled egg in and out of the bottle? Heureka's science labs offer small and short studies and experiments on simple tools found in school. Experiments are found on seven different topics, such as sound, heat, motion and power, substances and reactions, light and color, electricity and magnetism, and life and senses.	HEUREKA	Finland
DNA Fingerprint http://arkportal.ut.ee/#/inq_act/241	An inquiry activity focusing on the analysis of molecular variations in DNA.	L'ECOLE DE L'ADN ASSOCIATION	France

3.5. Stakeholder (research institutions, science centres and museums) engagement highlights

The picture would not be complete without references to certain highlights and best practices of stakeholder engagement. These are cases where Ark of Inquiry engagement gathered a type of momentum and reach that offers further justification of its success.

The Athens Observatory Geodynamic Institute and the Aol's national coordinator Ellinogermaniki Agogi organised a school competition, titled "Build Your Own Seismometer". The competition was opened to pupils in lower and upper high schools in Greece and it involved basic principles of the inquiry cycle model as well as aspects of social awareness and engagement in the field of civil protection!

Teams of students, in collaboration with their teachers, were asked to design and build their own seismometers and to document the process in a presentation, using photographs and other audio-visual aids.

The competition was organised in the framework of the Ark of Inquiry project. The teams were asked to submit their projects by April 15 2017, for evaluation by a committee of scientists and teachers that included well-known Greek seismologists, Dr. Gerasimos Chouliaras and Dr. George Drakatos. The committee created a short-list of the 10 best entries, which received prizes at an ceremony held at the Athens Observatory on May 5.

The success of the activity was highlighted by the fact that it was endorsed by the Office of the President of the Greek Republic.

The activity reached all major news organisations (int.ert.gr/school-competition-invites-students-to-build-their-own-seismograph/)



Figure 2. Award Ceremony for the Ark of Inquiry “Build your own Seismometer” Activity

Another excellent example of successful stakeholder engagement, actually outside the partner countries, concerns the Albanian Ministry of Education Youth and Sports and the Albanian Women in Science Network. The project through UNESCO established a type of cooperation with both stakeholders that was highlighted by the two-day teacher training event that was organised by the aforementioned institutions, UNESCO and Ellinogermaniki Agogi.

The event aimed to provide 40 teachers of science with the skills and lessons learned from the Ark of Inquiry project that will help them reach both girls and boys in their classroom.

The teachers are also expected to act as advocates of the Ark of Inquiry approach and platform to their fellow colleagues in the country (Ark of Inquiry, 2017).



Figure 3. The Ark of Inquiry teacher training event in Albania

4. Lessons learnt and recommendations for further action

The success of the Ark of Inquiry community building approach has been demonstrated in the interest that it has generated among the teaching community in Europe. It is anticipated that given this type of interest that both the established networks of teachers and the online community in the Ark of Inquiry platform will continue to use the Ark of Inquiry approach to inquiry learning and Responsible Research and Innovation in school education. Initiatives, such as the Eratosthenes Experiment and activities such as those listed in table 11 will continue to attract teachers, as well new projects in education.

In the networks established by the partners during the course of the project there is number of teachers who will be given the opportunity to further expand the reach of the project by becoming agents of change in their schools and beyond. Partners are committed to maintain and further enhance their networks, given the importance of RRI in school education.

5. References

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Appendix 1: First approach and communication

In order to facilitate the communication with potential community members, all partners have been provided with standard letter templates that may be accompanied by information leaflets, project brochures and other dissemination materials about Ark of Inquiry in electronic, web-based or printed form. Also, an online registration form is provided, shown in Figure 1, which was disseminated to the network of partners' contacts and linked to the Ark of Inquiry website (www.arkofinquiry.eu).

With respect to science centres and museums, the invitation letter as shown below is accompanied by the Ark of Inquiry leaflet, translated into their own language and with a link to the project website. This letter will only be the first invitation and a more detailed response should follow with instructions on how to contribute, information about the possible benefits, etc., if the science centre or museum is interested in participating in the project. Partners are free to adapt the proposed letter to better suit their cases.

---start of letter---

From: Name of partner, contact details

To: Name of recipient, contact details

Dear XX,

(Name of partner) is honoured to invite you to participate in the European project Ark of Inquiry, funded by the 7th Framework Programme. We are coordinating in (Country) the creation of a community in developing and supporting inquiry activities for teachers/pupils/museums/research institutions that are specifically addressing Responsible Research and Innovation aspects.

Our purpose is to increase the repository of resources on the Ark of Inquiry web-portal we are currently developing with a representative amount of Inquiry-Based Science Education activities in our country, and we believe that your contribution would be very valuable.

By participating in Ark of Inquiry you get the opportunity to share your activities with a large network of teachers and pupils, other science centres, museums and research institutions from all across Europe. Joining the Ark of Inquiry community will give you the chance to meet other professionals in science centres and museums involved in the project and get a much clearer grasp of the role of Responsible Research and Innovation in formal and informal education. Our web-portal will include a great number of educational resources, including workshops, short activities and games that are based on the inquiry method of science teaching and learning and can be useful to your institution. Furthermore, the Ark of Inquiry web-portal will become an additional source of dissemination for your organisation since the

project aims to reach more than 1000 teachers and 20 000 pupils in 12 European countries in the next 3 years.

We sincerely hope that you will be able to accept this invitation and that you agree to become a member of the Ark of Inquiry community. Should you kindly agree to receive more information, please fill in this form. For any questions, do not hesitate to send us an email, and we will be happy to answer. Please try to fill in your contact details by ...

Yours sincerely,

(Name and signature)

Note regarding the info you will provide us in the form: While the information gathered will be used for forming statistics about the participants in this project, all personal information that is provided (email, contact details, etc.) will be kept confidential within the Ark of Inquiry project and will not be given to third parties.

---end of letter---

For research institutions, the proposed letter is slightly changed to highlight their different role foreseen within Ark of Inquiry.

---start of letter---

From: Name of partner, contact details

To: Name of recipient, contact details

Dear XX,

(Name of the partner) is honoured to invite you to participate in the European project Ark of Inquiry, funded by the 7th Framework Programme. We are coordinating in (Country) the creation of a community in developing and supporting inquiry activities for teachers/pupils/museums/research institutions that are specifically addressing Responsible Research and Innovation aspects.

Our purpose is to increase the repository of resources on our web-portal with a representative amount of Inquiry-Based Science Education activities in our country and we believe that your contribution would be very valuable. By participating in the Ark of Inquiry project and joining its community, you get the opportunity to connect with a large network of teachers and pupils from all across Europe. Being a member of the community will give you the chance to meet other professionals in research organisations also interested in public engagement and provide you with a clearer grasp of the role of Responsible Research and Innovation in education. The Ark of Inquiry portal will finally include a great source of workshop ideas and activities suitable to be implemented in research institutions that you could use.

The project aims to reach more than 50 research institutions in 12 European countries and engage at least 20 000 pupils and 1000 teachers in the next 3 years.

We sincerely hope that you will be able to accept this invitation and become part of this community. Should you kindly agree to receive more information, please follow this link and fill in the form. For any questions, do not hesitate to send us an email, and we will be happy to answer. Please try to fill in your contact details by ...

Yours sincerely,

(Name and signature)

Note regarding the info you will provide us in the form: While the information gathered will be used for forming statistics about the participants in this project, all personal information that is provided (email, contact details, etc.) will be kept confidential within the Ark of Inquiry project and will not be given to third parties.

---end of letter---

The image shows a screenshot of a Google Forms registration page for the Ark of Inquiry project. The form is titled "Ark of Inquiry New Community Members" and includes a welcome message and a "Submit" button. The form is divided into two main sections: personal information and institutional details.

Personal Information:

- Name of your institution ***: Text input field.
- Surname ***: Text input field.
- First Name ***: Text input field.

Institutional Details:

- What type of institution do you belong to? ***: Radio button options: Science centre/Museum, Research centre, School, University, Other: [text input].
- What is your role in your institution? ***: Radio button options: Pupil, Student teacher, University student, Teacher educator, Teacher, Researcher, Museum educator, Other: [text input].
- City your institution is based at: ***: Text input field.
- Country your institution is based at: ***: Text input field.

Future Information:

- In the future I would like to receive more information on Ark of Inquiry on the following topics: ***: Checkable options: Training opportunities, New online resources for educators, Opportunity to submit resources, Competitions for pupils, Relevant publications and events, Ark of Inquiry newsletter, Tips on how to influence science education policy in my country, Other: [text input].

How did you hear about Ark of Inquiry? *: Checkable options: Ark of Inquiry partner, Ark of Inquiry website, Through an event, Through my network, Through a colleague, Through a publication, Via the internet, Other: [text input].

Submit button and footer: "Never submit passwords through Google Forms."

Figure 4. Ark of Inquiry community member online registration form

Appendix 2: List of identified community members per country

The Ark of Inquiry project partners made a survey in their respective countries to identify research institutions, science centres and museums that could become members of the Ark of Inquiry supporting community. The list should be considered as a representative first version of potential community members and is expected to be altered and supplemented during the course of the project. It covers prospective institutions in the twelve European countries where the partners are based: Estonia, Greece, Finland, Cyprus, Italy, the Netherlands, Austria, Germany, Turkey, France, Belgium and Hungary.

The identified organisations are listed briefly in Table 2. Details about their profiles, objectives and activities are provided in the template forms included in the rest of the document. In total, 41 organisations have been identified, including 19 science centres, 6 museums, 8 science centres and museums, and 8 research institutions. They offer a large variety of educational programmes and inquiry activities for schools and the general public focusing on various subjects of primary and secondary education science curricula (physics, chemistry, biology, geology, mathematics, informatics), technology and engineering, environmental and earth sciences, ecology and economics, health sciences, etc.

Table 13. List of identified community members per country

Index	Organisation name	Organisation type	Country
1	Energy Discovery Centre	Science centre	Estonia
2	Tallinn Technology and Science Centre Foundation	Science centre and museum	Estonia
3	Ice Age Centre	Science centre and museum	Estonia
4	Tartu Environmental Education Centre	Science centre	Estonia
5	University of Tartu Old Observatory	Museum	Estonia
6	NOESIS Science Centre and Technology Museum	Science centre and museum	Greece
7	Foundation of the Hellenic World, Hellenic Cosmos cultural centre and museum	Science centre and museum	Greece
8	Natural History Museum of Crete	Museum	Greece
9	Eugenides Science and Technology Museum and Planetarium	Science centre and museum	Greece

10	Heureka science centre	Science centre	Finland
11	Tietomaa science centre	Science centre	Finland
12	Archimedes: The fun side of science	Science centre	Cyprus
13	Department of Education, University of Nicosia	Research institution	Cyprus
14	Department of Education, Frederick University Cyprus	Research institution	Cyprus
15	Department of Education, European University Cyprus	Research institution	Cyprus
16	Città della Scienza	Science centre	Italy
17	Consorzio RSX (Ricerca, Formazione, Innovazione)	Research Institution	Italy
18	Museo Nazionale Scienza e Tecnologia Leonardo da Vinci	Science centre and museum	Italy
19	Naturalis Biodiversity Center	Museum	Netherlands
20	Science Center Nemo	Science centre	Netherlands
21	Science Centre Delft	Science centre	Netherlands
22	Utrecht University Museum	Museum	Netherlands
23	Veldwerk Nederland Field Study Centre	Science centre	Netherlands
24	Sciencehub Radboud University Nijmegen	Research Institution and science hub	Netherlands
25	The Museum für Naturkunde	Museum and science centre	Germany
26	Science Centre Spectrum	Science centre	Germany
27	The Austrian Science Centre Network	Network of Science Centres	Austria
28	Open Science	Science Centre and Laboratory	Austria
29	Die umweltberatung	Non-profit organisation	Austria
30	Teacher Professional Development, Implementation and Research Centre	Research institution	Turkey
31	Istanbul Bahçeşehir Science Museum	Museum	Turkey
32	İzmir Bahçeşehir Science Museum	Science centre	Turkey
33	L'arche des métiers	Science centre	France
34	Genopolys	Science centre	France
35	Cosmodrome	Science centre and museum	Belgium
36	Universiteit Antwerpen	Research institution	Belgium
37	Techniek- en Wetenschaps Academie	Science centre	Belgium

38	Hungarian Academy of Sciences	Research institution	Hungary
39	Eötvös Lorand University (ELTE) Museum of Natural History, Division in Mineralogy	Museum	Hungary
40	Csodák Palotája (CSOPA) Palace of Miracles	Science centre	Hungary
41	Mobilis Győr (The House of Discoveries)	Science centre	Hungary

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Tartu (UT) and AHHA
Organisation title	Energy Discovery Centre
Organisation type	Science centre
Country City/Region	Estonia, Tallinn
Website or other contact details	<p>www.energiakeskus.ee</p> <p>Põhja pst 29, 10415 Tallinn</p> <p>Phone: +372 620 90 21</p> <p>E-mail: info@energiakeskus.ee</p>
Brief description of the organisation	<p>The Energy Discovery Centre is a unique electricity and energy themed family science centre where visitors can discover, play and learn.</p> <p>Visitors can discover the secrets and interactive exhibits of the 102-year-old power plant, travel to distant planets and learn to know discoveries in space, take a look at the old diesel engine 'Russ', raise hair by walking on a lightning bridge and see a unique lightning demonstration.</p> <p>Visitors can find a seasonal exhibition room, a virtual planetarium, a science theatre, workshops and special educational programmes from Energy Discovery Centre.</p> <p>The centre is also in a partnership with many schools, because the exhibits and programmes are built up on Estonian school curriculum. Due to its historical power plant setting, the centre is mostly centred on IT, natural and formal sciences.</p>

Photos or other relevant material

ENERGIA AVASTUSKESKUS

AVASTUSRÖÖMI PAKUB Eesti Energia

MIS TOIMUB? TEENUSED PILETID INFO MEIST ABOUT US O HAC MEISTA UUDISED

PILDIGALERII

UUDISED JA TEATED

19.06.2015 Oleme 22.-24.06 avatud kell 12:00-17:00
Head võidupüha ja jaanipäeva!
[Loe lähemalt »](#)

15.06.2015 - Perepäevad Energia avastuskeskuses
06.06.2015 - Perepäevad 20.-21.06 «Avasta pöörpäeva tähistavaas»
12.06.2015 - Uuenenud avastuskeskust on aastaga külastanud üle 100 000 inimese
12.06.2015 - Energia avastuskeskus loob koos muuseumidega aarete näitust
[Uudiste ja teadete arhiv »](#)

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Tartu (UT) and AHHA
Organisation title	Ice Age Centre
Organisation type	Museum
Country City/Region	Estonia, Tartu county
Website or other contact details	www.jaaaeg.ee Äksi village, 60512 Tartu county E-mail: info@jaaaeg.ee
Brief description of the organisation	<p>The Ice Age Centre is a unique and original tourist attraction – a nature study and visiting centre that combines popular scientific approach to ice age with entertainment.</p> <p>Ice Age Centre – more than 2200 m² of exhibition area full of stories about ice ages on the background of world history and human beings in the wonderful changing nature.</p> <p>The purpose of the exposition of the Ice Age Centre is to offer its visitors hands-on experience with:</p> <ul style="list-style-type: none"> • Origins of ice ages and their effect on the landform and biota of the earth, Estonia and Vooremaa on the background of a wider geochronological scale and evolution of the Universe • Development of Estonian nature and human settlement after the last ice age • Causes of and research on climate changes

<p>Photos or other relevant material</p>	


Ark of Inquiry	Template of Identified Community Members
Partner name	University of Tartu (UT)
Organisation title	Tartu Environmental Education Centre
Organisation type	Science centre
Country City/Region	Estonia, Tartu
Website or other contact details	www.tartuloodusmaja.ee Lille 10, 51010 Tartu E-mail: info@teec.ee
Brief description of the organisation	<p>Tartu Environmental Education Centre is a diverse, open and friendly organization. Both children and the environment are important to them.</p> <p>They wish to promote a long-lasting and environmentally friendly way of living from generation to generation in Estonia. They hope that people will notice and care about the nature around them.</p> <p>They believe that they can spark interest to increase responsibility and awareness towards nature. They wish to introduce and promote environmentally friendly way of living to children, young people and adults.</p> <p>The children and young people's extracurricular programmes at the Tartu Nature School, the Environmental Information Centre, adult education courses and training programs for kindergartens, schools and employees know that every action changes the world.</p>

Photos or other relevant material

TARTU KESKKONNAHARIDUSE KESKUS

Like 1.2K

f s p EST | ENG



tartu loodusmaja

Üldinfo Teenused Sündmused Projektid Kontaktid Külastajatele

Otsi

HUVIKOOL

- Huviringid
- Huvikooli ajaveeb
- Lapsevanemale!

INFO INFOPUNKT

- Infomaterjalid
- Liitu listiga
- Avalikud üritused

KOOLITUSED

- Telli kursus
- Jalgrattakool
- Koolitustel osalemine

VARASALV

- Õppeprogrammid
- Õppematerjalid
- Näitused

Uudised

- 12.06.2015 Tartu loodusmaja on külastajatele avatud
- 10.06.2015 Näitus "Hingab ja heliseb" 10. juunist 4. septembrini
- 04.06.2015 Näitus "Meie põlevikivi ja paekivi" 4. juunist 27. novembrini
- 03.06.2015 Tartu loodusmaja suvised lahtiolekuajad
- 06.05.2015 Külli Laidla tekstiilide ja fotode näitus 12. mai-1. august

Juuni 2015

E	T	K	N	R	L	P
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8	9	10	11	12	13	14
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22	23	24	25	26	27	28
29	30	1	2	3	4	5

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Tartu (UT)
Organisation title	University of Tartu Old Observatory
Organisation type	Museum
Country City/Region	Estonia, Tartu
Website or other contact details	http://www.tahetorn.ut.ee/en Lossi 40, 51003 Tartu E-mail: tahetorn@ut.ee
Brief description of the organisation	<p>Nowadays, the Old Observatory is a modern museum and centre for school astronomy on Toome Hill. Historically, the Observatory was the gem of Estonian science and one of the most important centres of astronomy in the world.</p> <ul style="list-style-type: none"> • Visit our rich permanent exhibition on astronomy and the history of astronomy. Discover the world’s best telescope and a rare Arabic celestial globe, count the falling meteorites within a minute and learn to know the constellations of the Northern Hemisphere. • Book an educational programme or thematic birthday party. • Take part in planetarium shows, lectures, observation nights and other fun events.  <p>The Old Observatory is a branch of the University of Tartu Museum. Other branches include the UT Art Museum and the Old Anatomical Theatre (the latter is closed for renovation). The University of Tartu also has a Natural History Museum and Botanical Gardens</p> <p>The lobby is home to F. G. W. Struve’s geodetic measurements, which have left</p>

such an undying impression in the history of science that they have been added to the UNESCO World Heritage list. The Eastern Hall invites visitors to examine an assortment of historical telescopes of different shapes and sizes, which are all eclipsed by the world-famous Fraunhofer Refractor. In addition to the telescope collection, visitors can also explore our collection of globes, the oldest of which is an Arabic celestial globe from the Middle Ages. Numerous touchscreen computers offer information on the exhibits and a variety of interactive games. The Clock Room tells visitors how time was measured in Estonia between the two World Wars and what meaning and importance time carries in astronomy.



The Western Hall offers fun activities for both young and old. In addition to the information boards and computers that tell stories about the development of astronomy and Estonian astronomers, you can observe illuminated constellations, study the scale model of the Solar System, count different meteorites, and try to lift an iron meteorite. But that's not all! The ground floor leads into the basement where you'll find an exhibition on seismology. And if you go up the stairs you'll come across an interesting construction tower which, along with the Zeiss Refractor, might make a lover of astronomy out of any visitors.

Photos or other relevant material

UNIVERSITY OF TARTU MUSEUMS | Sitemap | EST

UNIVERSITY OF TARTU
OLD OBSERVATORY
1632

FOR VISITORS | EXHIBITIONS | EDUCATION | RESEARCH AND COLLECTIONS | ABOUT THE MUSEUM

UNESCO
United Nations
Educational, Scientific and
Cultural Organization

Visit the Old Observatory, included in the UNESCO world heritage list!

FOR VISITORS

Opening hours:
Tue-Sun 10.00-18.00

Museum address:
Lossi 40, Tartu
SEE ON THE MAP

Information:
(+372) 737 6932
TICKET PRICES

EVENTS | OBSERVATION NIGHTS

The Old Observatory organises regular events for astronomy enthusiasts, families and individual visitors. Find your favourite and come visit us!

Public observation nights take place from September to May, mostly twice a month and are free of charge for all the visitors!

JUNE

M	T	W	T	F	S	S
1	2	3	4	5	6	7
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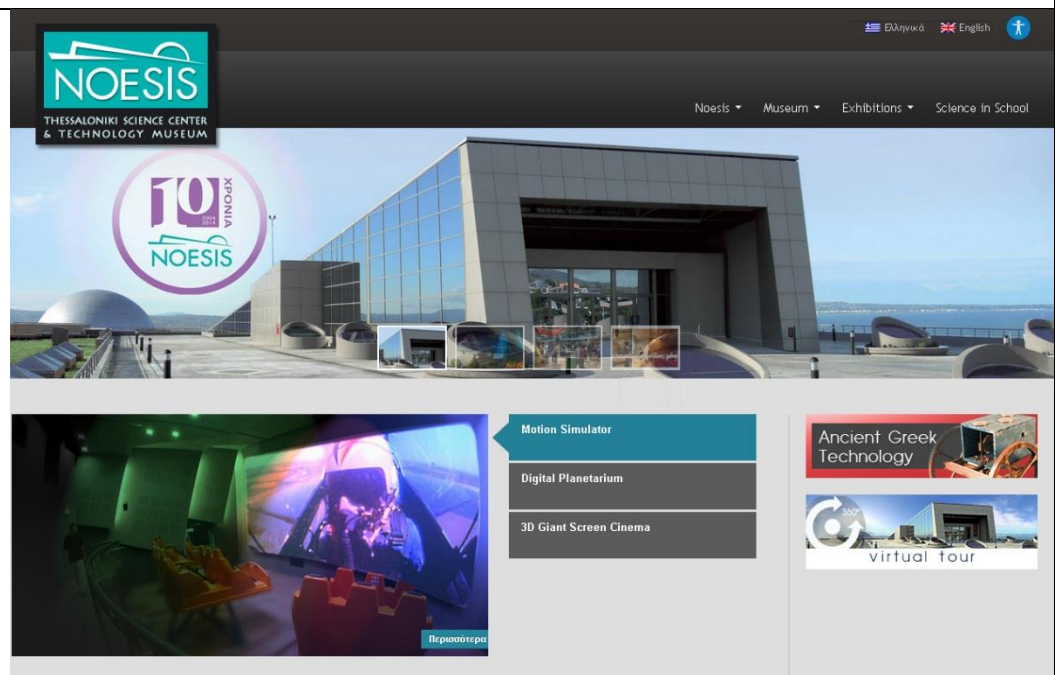
Ark of Inquiry	Template of Identified Community Members
Partner name	Ellinogermaniki Agogi (EA)
Organisation title	NOESIS Science Center and Technology Museum
Organisation type	Science centre and museum
Country City/Region	Greece, Thessaloniki
Website or other contact details	http://www.noesis.edu.gr
Brief description of the organisation	<p>Mission and objectives</p> <p>The Noesis – Thessaloniki Science Center and Technology Museum is a cultural and educational non-profit organization. It offers the public an environment conducive to the familiarisation with and the understanding of Natural Sciences and Technology, and is actively involved with subjects concerned with the technological culture. The main objective of the Center is the popularization of modern knowledge and its dissemination to the public through exhibitions, films, seminars and lectures. The brand name of the Center intends to emphasize the connection between its operation and human intellect (noesis), since the intention of its founders was to make scientific knowledge available to everybody. The activities of the center are aimed at the general public, dealing with general subjects within its scope. More specifically, the center’s activities are directed towards:</p> <ul style="list-style-type: none"> – School groups, for whom organised visits and guided tours are arranged; – Young people with an aptitude for Natural Sciences and Technology; – Educators, via the provision of ongoing training and support in their educational work; – Any other members of the public interested in Science and Technology, whether for reason of information, education or provision of services. <p>Goals</p> <ul style="list-style-type: none"> – The collection, salvage, preservation, documentation, and presentation of our technological and industrial heritage; – The attraction of interest; the education of the public, especially the younger generation, with the aim of creating a greater intimacy with Technology and


Natural Sciences (past, present, and future);
– The growth and spread of the spirit of innovation.

Activities

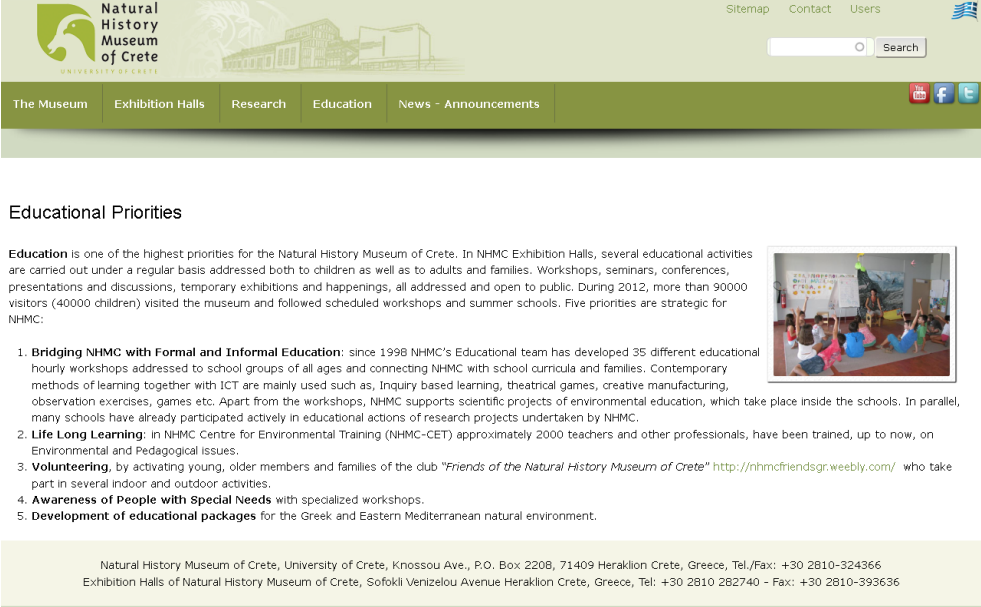
- Guided tours and organised demonstrations of the exhibits.
- Presentations of experiments in the fields of Physics and Chemistry.
- Film screenings, slide shows, and other audio-visual presentations.
- Operation of Science Clubs.
- Organisation and running of periodic exhibitions.
- Organisation of Technology competitions for school-children.
- Organisation of various events, such as conferences, talks, meetings, etc.
- Organisation and operation of a library (includes conventional and electronic media).
- Co-operation with other cultural bodies;
- Co-operation with Museums in other countries.

Photos or other relevant material



Ark of Inquiry	Template of Identified Community Members
Partner name	Ellinogermaniki Agogi (EA)
Organisation title	Foundation of the Hellenic World, Hellenic Cosmos cultural centre and museum
Organisation type	Science centre and museum
Country City/Region	Greece, Athens
Website or other contact details	http://www.fhw.gr/cosmos/
Brief description of the organisation	Hellenic Cosmos has presented a wide range of activities: interactive exhibitions, exhibitions with modern subject matter, Virtual Reality tours to monuments and sites of our cultural heritage, acclaimed documentaries on Hellenism outside the Greek borders, surfing the Internet, at the Foundation's web site about Hellenic history, and original educational programmes which are designed and materialized by the Foundation's Museum Educators Department. In addition, there are hosted artistic and music events, as well as festivals, lectures and seminars.
Photos or other relevant material	 <p>The image shows a screenshot of the Hellenic Cosmos website. At the top, there's a banner for 'HELLENIC COSMOS CULTURAL CENTRE' with a photo of the building. Below that is a section for 'THOLOS VIRTUAL REALITY THEATRE' located at 254 Pireos Str., with the tagline 'In the "Tholos", the Virtual Reality Theatre of Greece.' To the right of this section are two posters: one for 'TITANEZ - STIN ENOXI TON PAFETONON' featuring a mammoth, and another for 'TOY STORIES' featuring a horse and a woman. Below the main content is a navigation menu with links like HOME, HELLENIC COSMOS, THEATRON, THOLOS, ACTIVITIES, etc. There's also a 'Support us!' button and a search bar at the bottom.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	Ellinogermaniki Agogi (EA)
Organisation title	Natural History Museum of Crete
Organisation type	Museum
Country City/Region	Greece, Crete
Website or other contact details	http://www.nhmc.uoc.gr/en/
Brief description of the organisation	<p>Education is one of the highest priorities for the Natural History Museum of Crete. In NHMC Exhibition Halls, several educational activities are carried out under a regular basis addressed both to children as well as to adults and families. Workshops, seminars, conferences, presentations and discussions, temporary exhibitions and happenings, all addressed and open to public. During 2012, more than 90000 visitors (40000 children) visited the museum and followed scheduled workshops and summer schools. Five priorities are strategic for NHMC:</p> <ol style="list-style-type: none"> 1. Bridging NHMC with Formal and Informal Education: since 1998 NHMC's Educational team has developed 35 different educational hourly workshops addressed to school groups of all ages and connecting NHMC with school curricula and families. Contemporary methods of learning together with ICT are mainly used such as, Inquiry based learning, theatrical games, creative manufacturing, observation exercises, games etc. Apart from the workshops, NHMC supports scientific projects of environmental education, which take place inside the schools. In parallel, many schools have already participated actively in educational actions of research projects undertaken by NHMC. 2. Life Long Learning: in NHMC Centre for Environmental Training (NHMC-CET) approximately 2000 teachers and other professionals, have been trained, up to now, on Environmental and Pedagogical issues. 3. Volunteering, by activating young, older members and families of the club "<i>Friends of the Natural History Museum of Crete</i>" http://nhmcfriendsgr.weebly.com/ who take part in several indoor and outdoor activities. 4. Awareness of People with Special Needs with specialized workshops.

	<p>5. Development of educational packages for the Greek and Eastern Mediterranean natural environment.</p>
<p>Photos or other relevant material</p>	 <p>Educational Priorities</p> <p>Education is one of the highest priorities for the Natural History Museum of Crete. In NHMC Exhibition Halls, several educational activities are carried out under a regular basis addressed both to children as well as to adults and families. Workshops, seminars, conferences, presentations and discussions, temporary exhibitions and happenings, all addressed and open to public. During 2012, more than 90000 visitors (40000 children) visited the museum and followed scheduled workshops and summer schools. Five priorities are strategic for NHMC:</p> <ol style="list-style-type: none"> 1. Bridging NHMC with Formal and Informal Education: since 1998 NHMC's Educational team has developed 35 different educational hourly workshops addressed to school groups of all ages and connecting NHMC with school curricula and families. Contemporary methods of learning together with ICT are mainly used such as, Inquiry based learning, theatrical games, creative manufacturing, observation exercises, games etc. Apart from the workshops, NHMC supports scientific projects of environmental education, which take place inside the schools. In parallel, many schools have already participated actively in educational actions of research projects undertaken by NHMC. 2. Life Long Learning: in NHMC Centre for Environmental Training (NHMC-CET) approximately 2000 teachers and other professionals, have been trained, up to now, on Environmental and Pedagogical Issues. 3. Volunteering, by activating young, older members and families of the club "<i>Friends of the Natural History Museum of Crete</i>" http://nhmcfriendsgr.weebly.com/ who take part in several indoor and outdoor activities. 4. Awareness of People with Special Needs with specialized workshops. 5. Development of educational packages for the Greek and Eastern Mediterranean natural environment. <p>Natural History Museum of Crete, University of Crete, Knossou Ave., P.O. Box 2208, 71409 Heraklion Crete, Greece, Tel./Fax: +30 2810-324366 Exhibition Halls of Natural History Museum of Crete, Sofokli Venizelou Avenue Heraklion Crete, Greece, Tel: +30 2810 282740 - Fax: +30 2810-393636</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	Ellinogermaniki Agogi (EA)
Organisation title	Eugenides Science and Technology Museum and Planetarium
Organisation type	Science centre and museum
Country City/Region	Greece, Athens
Website or other contact details	http://www.eugenfound.edu.gr
Brief description of the organisation	<p>The Eugenides Science and Technology Museum and Planetarium has a long tradition in offering to schools and the general public a large variety of educational activities, workshops, thematic exhibitions and movies focusing on science and technology. In particular the Interactive Exhibition on Science and Technology is located over three floors with a total surface area of 1,200 m² and consists of 65 permanent interactive exhibits.</p> <p>The Exhibition is divided into three themes: Matter and Materials, Communication: Sound and Image, Biotechnology. Each theme occupies an entire floor, where the permanent exhibits have been installed and arranged in sub-sections. The Interactive Exhibition on Science and Technology seeks to bring the general public closer to the world of science and technology, a world which might seem mysterious and remote to most people. The Exhibition highlights current scientific and technological achievements and explains basic aspects of various phenomena. New composite materials, technologically advanced devices, simulations, models and specially designed activities are at visitors' disposal for exploration, experimentation, entertainment and learning.</p> <p>Museological approach and goals In the friendly, warm and contemporary setting of the Interactive Exhibition on Science and Technology, the Eugenides Foundation offers visitors of all ages educational stimuli, seeking to contribute to teaching, particularly young people, in the science and technology field and to engender a spirit of ongoing scientific and technological exploration. The Eugenides Foundation has been consistent in this effort since its founding and continues with the new Interactive Exhibition on Science and Technology, following on from the Physics Experiment Collections and the Technical Exhibits Halls.</p> <p>The main principle on which the design of the permanent collections' exhibit topics is based is three-fold: "hear-forget; see-remember; act-understand." The planning and implementation of the exhibited collections are based on the</p>

use of advanced museological tools, with high priority assigned to mechanical-interactive exhibits, interactive multimedia and audiovisual sources which are explicitly theme-oriented.

The most important aspect of the exhibition is its interactivity. Visitors play an active, rather than passive, role: they are called upon to touch, combine images and sounds, assemble various parts, observe and, in a word, to intervene in the exhibition environment. Visitors are able to repeat, to delve deeper and thus to gain motivation for further exploration. In this way, the exhibition cultivates and develops visitors' imagination and creativity.

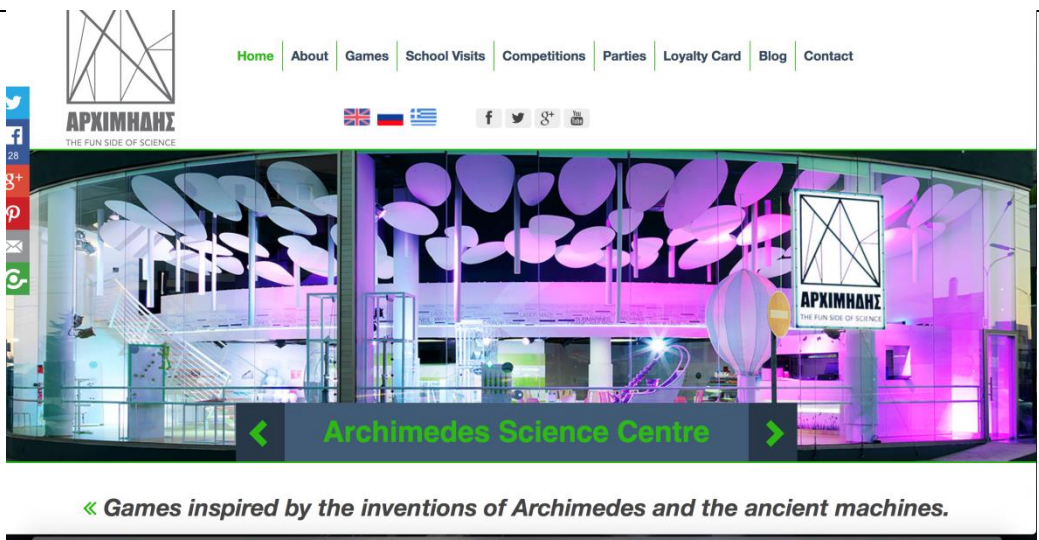
Through modern media that serve current educational concepts, visitors to the exhibition come into contact with the achievements of science and technology, getting away from the bare-bones environment of the traditional educational setting. For the youthful audience, which increasingly demands stimulation, the Interactive Exhibition on Science and Technology constitutes an alternative approach to scientific laws and principles, complementing the methods and practices of schools.

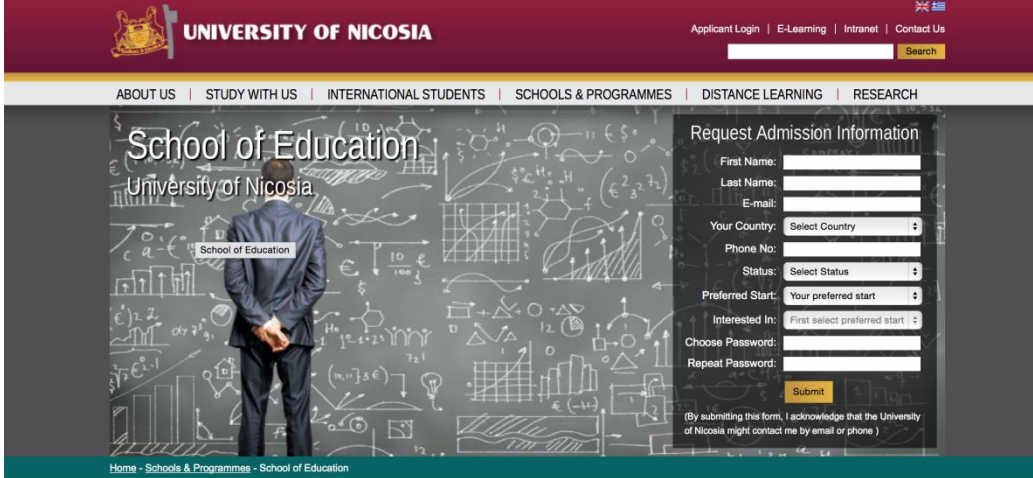
Photos or other relevant material

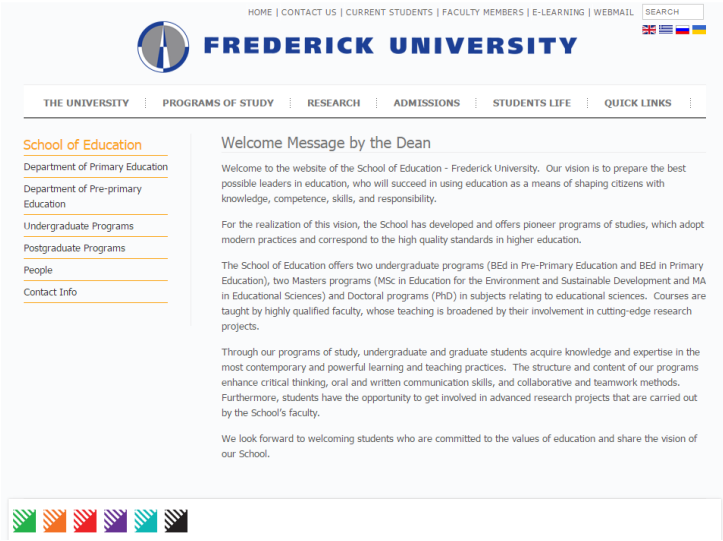
The screenshot shows the website for the 'Interactive Exhibition on Science and Technology' at the Academy of Athens. The header includes the Academy's logo and navigation links. The main content area is titled 'Θεματικές Ενότητες Έκθεσης' (Thematic Units of the Exhibition) and features a floor plan of the exhibition space with various units labeled A1 through A22. Three units are highlighted with images: 'Υψηλό και Υπόγειο' (High and Underground), '1ος όροφος: Επικοινωνία: ήχος & εικόνα' (1st floor: Communication: sound & image), and '2ος όροφος: Βιοτεχνολογία' (2nd floor: Biotechnology). Below the floor plan, there is a section titled 'Μόνιμη Έκθεση στο Ίδρυμα Ευγενίδου: Διαδραστική Έκθεση Επιστήμης και Τεχνολογίας' (Permanent Exhibition at the Eugeniou Foundation: Interactive Exhibition of Science and Technology), which provides details about the exhibition's location, area, and thematic units.

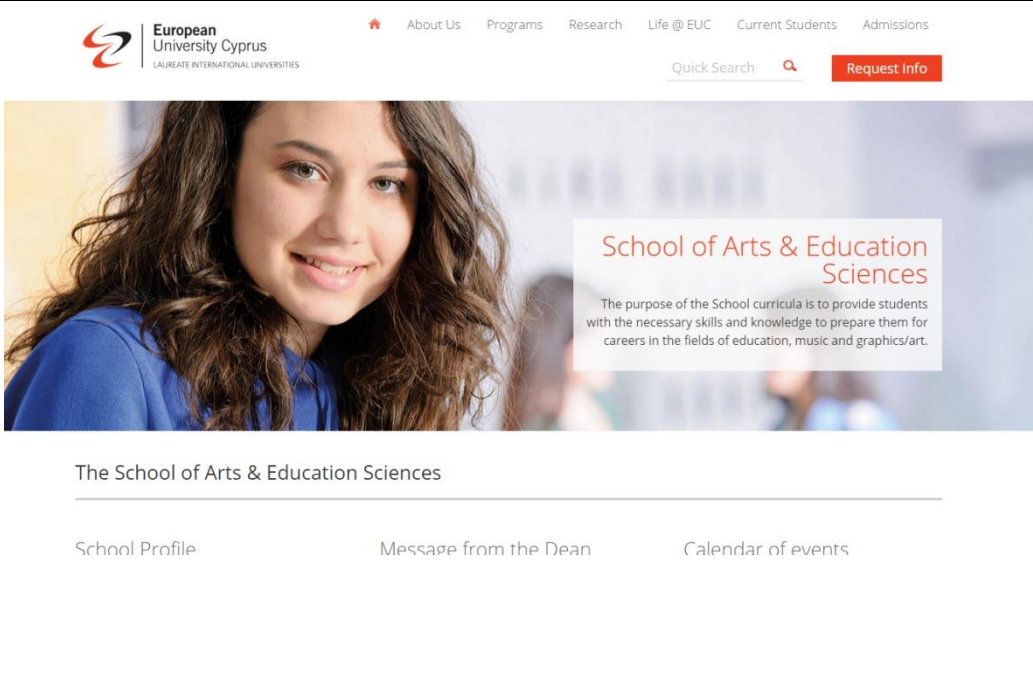
Ark of Inquiry	Template of Identified Community Members
Partner name	University of Turku (UTU)
Organisation title	Heureka - the finnish science centre
Organisation type	Science centre
Country City/Region	Finland, Vantaa
Website or other contact details	http://www.heureka.fi/en
Brief description of the organisation	<p>The Finnish Science Centre Heureka introduces the public to science and technology in an engaging and interactive way. Visitors can experience the joy of discovery through spectacular exhibitions, planetarium films and events. Located in the Tikkurila area of Vantaa, Heureka first opened its doors to the public in 1989. Heureka is one of Finland’s most popular recreational centres, attracting an average of nearly 300,000 visitors each year.</p> <p>Its mission is to share the enthusiasm for learning and to offer an environment for inspiration.</p> <p>Its foundation is in research and science, creating and offering world-class exhibitions and experiences for our visitors.</p>
Photos or other relevant material	

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Turku (UTU)
Organisation title	Science Centre Tietomaa
Organisation type	Science centre
Country City/Region	Finland, Oulu
Website or other contact details	http://www.tietomaa.fi/index.php?id=61&lang_id=1
Brief description of the organisation	Finland's first science centre Tietomaa offers fun and excitement for visitors of all ages. The changing theme exhibitions consist of over 150 exhibits, and there is also a magnificent super screen theatre and a glass elevator with a view over Oulu. The core of Science Centre Tietomaa consists of versatile and fascinating themed exhibitions that will provide fun mixed with learning or learning mixed with fun. There are more than 150 exciting exhibits in the exhibitions - just trying them out can easily take a whole day! There is always something new in Tietomaa. A new themed exhibition - one produced by Tietomaa or a visiting exhibition - is opened every year.
Photos or other relevant material	<p>ASTRONOMY</p> <p>STARS AND GALAXIES</p> <p>Stars and Galaxies astronomy programme opens up the huge proportions of space before the spectator. The vast distances make us feel tiny, and the unexplored frontiers of the universe hide wonders about which many of us have never heard.</p> <p>The programme explains the lifespan of stars, the structures of the universe and presents a journey that extends out of our own galaxy and to the borders of our current knowledge.</p> <p>TOWER</p> <p>TIETOMAA TOWER</p> <p>Tietomaa's tall landmark rises up to the height of 45 meters and was originally built as a water tower for a leather processing factory during the 1920s. The glass elevator constructed on the side of the tower carries you up 35 meters to the tower's viewing platform; there you can enjoy a spectacular view over the city of Oulu.</p> <p>If you walk down the tower stairs you can explore astronomy exhibits, a gemstone collection and a hologram gallery.</p> <p>ASTRONOMY SHOWS / TIETOMAA TOWER</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Cyprus (UCY)
Organisation title	ARCHIMEDES: The fun side of science
Organisation type	Science centre
Country City/Region	Cyprus, Limassol
Website or other contact details	http://www.archimedesmuseum.com/en/ Tel.: 7000 7887+357 96217177 - from overseas, contact@archimedesmuseum.com
Brief description of the organisation	<p>“ARCHIMEDES” is an educational playground, with games inspired by the inventions of Archimedes and the ancient machines. There are 21 games/machines for children between the ages of 5 and 105 years old. They are based on European standards and were created after years of work and observation of similar establishments.</p> <p>The science center promises to entertain, educate, and fuel a passion for science and technology. The visitor will be able to go through a laser maze, get lost in a mirror maze, pull a rope and lift himself up, build a bridge and walk over it, solve the “osteomachion” puzzle, fly a hot air balloon, play with 3D puzzles, and many more.</p>
Photos or other relevant material	 <p>The image shows a screenshot of the Archimedes Science Centre website. The website header includes a navigation menu with links: Home, About, Games, School Visits, Competitions, Parties, Loyalty Card, Blog, and Contact. Below the menu are social media icons for Facebook, Twitter, Google+, and YouTube, along with flags for the United Kingdom, Russia, and Greece. The main content area features a large photograph of the museum's interior, which is brightly lit with purple and blue lights. The interior is filled with various interactive exhibits and games. A caption below the photo reads: « Games inspired by the inventions of Archimedes and the ancient machines. »</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Cyprus (UCY)
Organisation title	Department of Education, University of Nicosia
Organisation type	Research Institution
Country City/Region	Cyprus, Nicosia
Website or other contact details	http://www.unic.ac.cy/schools-programmes/school-education Dr. Maria Evagorou (evagorou.m@unic.ac.cy) Dr. Lucy Avraamidou (lucyavraamidou@gmail.com)
Brief description of the organisation	<p>The Department of Education at the University of Nicosia offers two undergraduate programs (Bachelor in Primary Education and Bachelor in Pre-School Education), as well as a number of graduate programs (Masters' Degrees and Doctoral Degrees). Maria Evagorou and Lucy Avraamidou are currently teaching science content and methods courses both at the bachelors and the graduate programs of the School of Education. Given that inquiry has a central role within their courses, they will both contribute in promoting the Ark of Inquiry project through giving the opportunity to their students to access the educational materials that will appear in the project's website and thus become members of the Ark of Inquiry community.</p>
Photos or other relevant material	 <p>Home - Schools & Programmes - School of Education</p> <p>School of Education <small>Welcomes Messians</small></p> <p>The School of Education offers scientifically formed programs of study to deliver quality education at the Bachelors, Masters & Doctoral Level.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Cyprus (UCY)
Organisation title	Department of Education, Frederick University Cyprus
Organisation type	Research Institution
Country City/Region	Cyprus, Nicosia
Website or other contact details	http://www.frederick.ac.cy/school-of-education-home, Dr. Chrysanthi Kadji (pre.kch@fit.ac.cy)
Brief description of the organisation	The Department of Education at the Frederick University Cyprus offers two undergraduate programs (Bachelor in Primary Education and Bachelor in Pre-School Education), as well as a number of graduate programs (Masters' Degrees and Doctoral Degrees). Chrysanthi Kadji is currently teaching science content and methods courses both at the bachelors and the graduate programs of the School of Education. Given that inquiry has a central role within her courses, she will contribute in promoting the Ark of Inquiry project through giving the opportunity to her students to access the educational materials that will appear in the project's website and thus become members of the Ark of Inquiry community.
Photos or other relevant material	

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Cyprus (UCY)
Organisation title	Department of Education, European University Cyprus
Organisation type	Research Institution
Country City/Region	Cyprus, Nicosia
Website or other contact details	http://www.euc.ac.cy/easyconsole.cfm/id/164, Dr. Loucas Louca (L.Louca@euc.ac.cy)
Brief description of the organisation	The Department of Education at the Frederick University Cyprus offers two undergraduate programs (Bachelor in Primary Education and Bachelor in Pre-School Education), as well as a number of graduate programs (Masters' Degrees and Doctoral Degrees). Loucas Louca is currently teaching science content and methods courses both at the bachelors and the graduate programs of the School of Education. Given that inquiry has a central role within his courses, he will contribute in promoting the Ark of Inquiry project through giving the opportunity to his students to access the educational materials that will appear in the project's website and thus become members of the Ark of Inquiry community.
Photos or other relevant material	 <p>The screenshot shows the website for the School of Arts & Education Sciences at European University Cyprus. The header includes the university logo and navigation links: About Us, Programs, Research, Life @ EUC, Current Students, and Admissions. There is a search bar and a 'Request Info' button. The main content area features a large photograph of a young woman with long brown hair, smiling. Overlaid on the photo is a text box that reads: 'School of Arts & Education Sciences' and 'The purpose of the School curricula is to provide students with the necessary skills and knowledge to prepare them for careers in the fields of education, music and graphics/art.' Below the photo, the text 'The School of Arts & Education Sciences' is displayed. At the bottom, there are three links: 'School Profile', 'Message from the Dean', and 'Calendar of events'.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	UNESCO
Organisation title	Città della Scienza (Fondazione IDIS)
Organisation type	Science Centre
Country City/Region	Italy, Naples
Website or other contact details	http://www.cittadellascienza.it/ via Coroglio, 104 e 57, Napoli tel. 081 7352 220/222 bruyas@cittadellascienza.it
Brief description of the organisation	<p>Fondazione IDIS-Città della Scienza is a non-profit making organisation which has operated in Naples since 1987 and plays a leading role in the dissemination of scientific knowledge and technological innovation.</p> <p>Promoter and accomplisher of the City of Science in Naples, it is an operating foundation which main commitment is to widespread a new type of scientific citizenship, to bridge the gap between the scientific world and society. The aim is to ensure wider public involvement in science and technology, which can thus break out from the confines of the laboratory and engage in open dialogue with ordinary people. The realisation of this objective means collaborating to establish a knowledge-based society with new improved job prospects and greater social cohesion.</p> <p>Main filed of activities are the organisation of events and cultural activities of science communication and public understanding of science; research and demonstration international projects in science and society and citizens participation to science and technology, science education and informal learning.</p> <p>Vittorio Silvestrini, already awarded in 2005 by the EMYA (European Museum Year Award) for the best science and technology museum Micheletti Prize, has been selected as Laureate of the 2006 Descartes Prize for Science Communication promoted by the European Commission.</p> <p>After the fire which occurred in March 2013, the Institution is foreseen to re-open in October 2015, after renovation works have been completed.</p>

Photos or other relevant material



Ark of Inquiry	Template of Identified Community Members
Partner name	UNESCO
Organisation title	Consorzio RSX (Ricerca, Formazione, Innovazione)
Organisation type	Research Institution
Country City/Region	Italy, Padova
Website or other contact details	https://www.igi.cnr.it/ Corso Stati Uniti, 4 – Padova Tel. 0039.049.829.5000/1 xsegrgen@igi.cnr.it
Brief description of the organisation	<p>Consorzio RFX was set up in 1996, as a research organization promoted by CNR, ENEA, Università di Padova, Acciaierie Venete S.p.A. and INFN, in order to strengthen and give a more stable organization to the Padua Research Group.</p> <p>The role of the Consorzio is to prompt the cooperation between the partners and the industrial environment upon the specific areas of activity.</p> <p>The main goals are:</p> <ul style="list-style-type: none"> - Scientific and technological research activity in the field of controlled thermonuclear fusion, as a possible energy source. - Development of the RFX Project. - Design and realization of the Neutral Beam Injector (NBI) prototype for ITER. - Design, development and realization of new technologies, equipment and devices devoted to research activities and industrial developments. - Training activity of young physicists and engineers in close collaboration with Padova University. <p>The activities are carried out by a team of about 140 persons, of which 65 professionals and 75 administrative and technical support.</p>

Photos or other relevant material

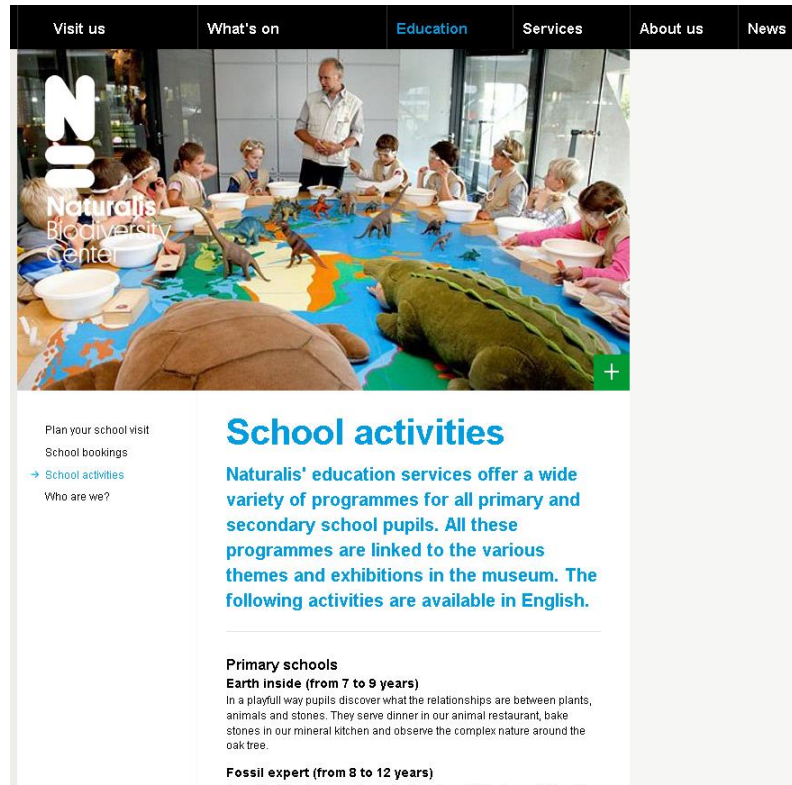


Ark of Inquiry	Template of Identified Community Members
Partner name	UNESCO
Organisation title	Museo Nazionale Scienza e Tecnologia Leonardo da Vinci
Organisation type	Science Centre and museum
Country City/Region	Italy, Milan
Website or other contact details	http://www.museoscienza.org/ Via San Vittore 21 – 20123 Milano Tel. 02 48 555 1
Brief description of the organisation	<p>The National Museum of Science and Technology ‘Leonardo da Vinci’ is founded 50 years ago with the mission to educate in science and technology. It consists of a very large collection of objects distributed in different sections devoted to earth, water and air transport, energy, telecommunications, metalurgy, models of Leonardo da Vinci’s projects etc. In the last years, the science centre aspect has also being strongly developed giving to the museum the interactive dimension necessary for the presentation of, and education in, science-oriented themes.</p> <p>The museum offers a variety of educational programmes within the historical collections and also in the 19 workshops which have been realised around different science-oriented themes (energy, colour, senses, chemistry, etc.). The educational activities and workshops are available for the schools during the week and for the general public in the weekends. The museum is also involved in different projects (local, national, European) in the fields of science education, museum education and teacher training.</p> <p>On 14 December 2004 the Museo Nazionale della Scienza e della Tecnologia Leonardo da Vinci received, from the President of the Republic and the Miniter of Education University and Research the Diploma of First Class and Golden Medal as a reward for its activity in the field of school education, culture and the arts during the year 2003.</p>
Photos or other relevant material	



Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organisation title	Naturalis Biodiversity Center
Organisation type	Museum
Country City/Region	Netherlands, Leiden
Website or other contact details	http://www.naturalis.nl/en/about-us/our-work/
Brief description of the organisation	<p>What we do: At Naturalis Biodiversity Center we want to describe, understand and explore biodiversity for human wellbeing and the future of our planet.</p> <p>Collection: We have already been doing this day in, day out for hundreds of years. We collect, conserve and study animals, plants and rocks. Our collection now contains 37 million objects and that makes it one of the largest in the world. And it is still growing each day thanks to the worldwide fieldwork of our researchers and many amateur scientists.</p> <p>Research: Using the collection, our researchers can carry out groundbreaking work. They do that on-site throughout the world and in our laboratories in Leiden. Thanks to their research, our understanding of how nature works and how we can use it is increasing.</p> <p>Education: We pass on our knowledge and expertise to tomorrow's researchers. We do that by giving lectures at, and doing joint research projects with, the University of Amsterdam, Leiden University and Wageningen University.</p> <p>Museum: In our museum young and old are awed by life on earth. By looking and, most important, doing. A visit to Naturalis gives a unique glimpse into the</p>

world of biodiversity!



The screenshot shows the 'Education' page of the Naturalis Biodiversity Center website. At the top, there is a navigation menu with links for 'Visit us', 'What's on', 'Education', 'Services', 'About us', and 'News'. Below the menu is a large image of a group of children sitting around a table with a world map, engaged in an activity. The text on the page includes:

- Plan your school visit
- School bookings
- School activities
- Who are we?

School activities

Naturalis' education services offer a wide variety of programmes for all primary and secondary school pupils. All these programmes are linked to the various themes and exhibitions in the museum. The following activities are available in English.

Primary schools

Earth inside (from 7 to 9 years)
In a playful way pupils discover what the relationships are between plants, animals and stones. They serve dinner in our animal restaurant, bake stones in our mineral kitchen and observe the complex nature around the oak tree.

Fossil expert (from 8 to 12 years)

Photos or other relevant material



Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organisation title	Science Center Nemo
Organisation type	Science center
Country City/Region	Netherlands, Amsterdam
Website or other contact details	www.e-nemo.nl
Brief description of the organisation	<p>NEMO is a science centre: an interactive, informal learning environment where the general public comes into contact with science and technology. Visitors see, hear and experience how scientific phenomena and technology play an important part in their lives. A science centre stimulates, excites, is instructive and works closely with the fields of science and education. As a national science centre, NEMO is responsible for a number of national activities such as the website Kennislink.nl en Het Weekend van de Wetenschap.</p> <p>Shared experiences Whether it's an exhibition or a learning pack, NEMO creates experiences that people can share. From young to old, with family, friends or at school. NEMO presents scientific and technological advances in an accessible way, showing them in their historical and social context, and exploring where they might take us in the future.</p> <p>At the heart of society In addition to being a fun and educational museum, NEMO is an institution where different groups within society can debate the implications of scientific and technological advances. NEMO is a registered museum and the owner of a significant historical collection.</p> <p>A spectacular building. The spirit of self-discovery that defines NEMO is also reflected in the building that has been its home since 1997. It has a striking exterior, with its copper-green silhouette recognizable from afar, while its interior minimizes distraction from the exhibitions and the discoveries that visitors make inside. And that is exactly how the Italian architect Renzo Piano envisioned NEMO.</p>



Photos or other relevant material

Always at NEMO

Do experiments in the Laboratory

[Laboratory ▶](#) [View all exhibitions ▶](#)

[▲ Back to top](#)

Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organisation title	Science Centre Delft
Organisation type	Science Centre
Country City/Region	Netherlands, Delft
Website or other contact details	http://www.sciencecentre.tudelft.nl/en/visit-us/what-is-science-centre-delft/
Brief description of the organisation	<p>Science Centre Delft turns Delft University of Technology inside out and allows you to see the role technology and science plays in society. As a visitor, you are invited to participate in and contribute to its development! Inspiration, creativity, timeliness and true interactivity are the principles behind the Science Centre, putting humanity, designs and buildings first.</p> <p>It is a quest; exciting and unfinished, just like real science!</p> <p>Amazing Technology</p> <p>In The Amazing Technology room you'll experience the 'wow'-effect. Touch, take part and experience in a room full of amazing equipment, fast experiments, measuring equipment and exhibits such as the Nuna solar car. All of the object are the result of real research, teaching and graduation assignments and competitions entered by TU Delft students and scientists.</p> <p>Work spaces</p> <p>At the work spaces it's time for (inter)action! Here TU Delft faculties, together with companies and other institutions, are working on solutions for tomorrow. You are invited to contribute ideas en participate, or just come along for a look round if you like.</p> <p>Labs</p> <p>Test developed technologies yourself in the labs. Prevent a dike breach, walk in the shoes of a surgeon, or race the Nuna solar car. The Science Centre has a game lab, where serious games can be tested. These are games that are used to experiment with reality. Furthermore, the Science Centre also has a bio lab,</p>

a robot lab and a sport lab.



Photos or other relevant material

TU Delft Delft University of Technology

Home | Home | English | Contact | [f](#) | [t](#) | [v](#)

zoek

onderwerp | persoon

Science Centre Delft

Bezoek | Kijken en Doen | **Educatie** | Zaalhuur | Over


Educatie

Primair Onderwijs
Voortgezet onderwijs

Science Centre Delft > Educatie

Educatie

Het Science Centre Delft organiseert in samenwerking met de TU Delft speciaal voor het primair- en voortgezet onderwijs educatieve activiteiten en projecten met als doel wetenschap en techniek dichterbij de leerlingen te brengen. Dit varieert: van speciale workshops bij de TU Delft tot verschillende producten zoals projectoffers en techniciënten voor in de klas. Kijk hier verder voor meer informatie!



Meer weten over educatie?

- [Primair Onderwijs](#)
- [Voortgezet onderwijs](#)

Contactgegevens

Mijnbouwstraat 120
2628 RX Delft

[Kaart & Route](#)


E-mail: educatie-sciencecentre@tudelft.nl

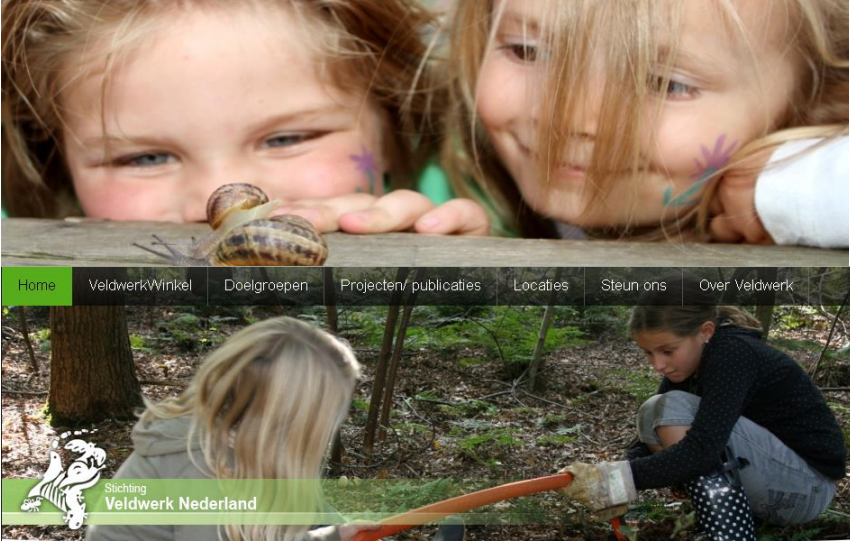
[Lees verder](#)

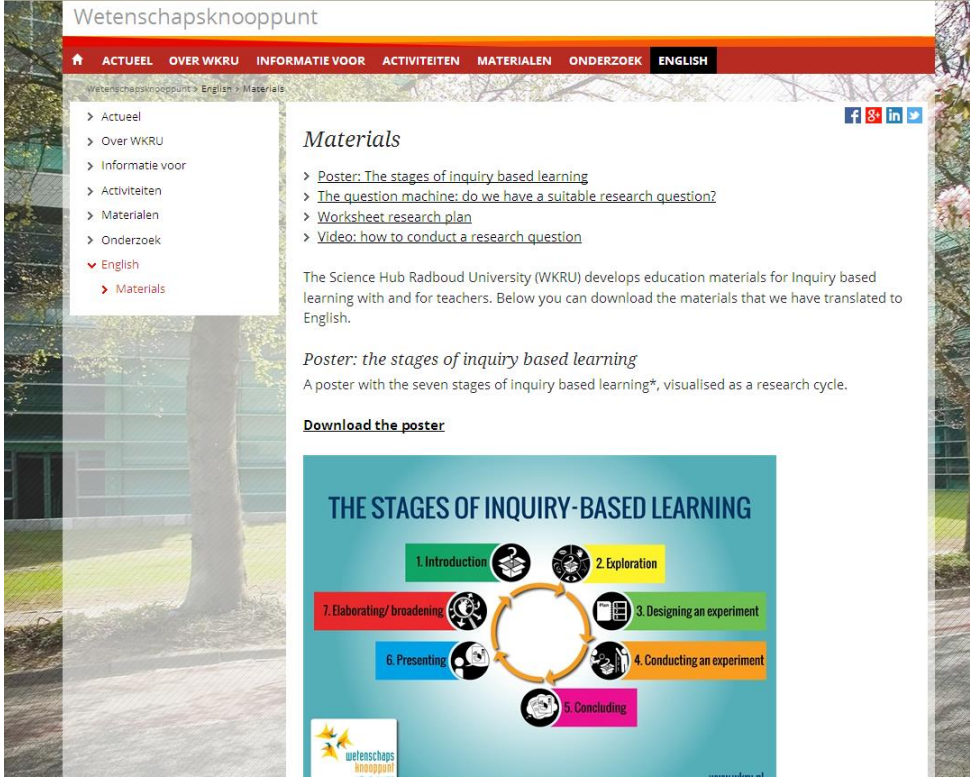
Direct naar:

- [Contact](#)
- [Routebeschrijving](#)
- [Tareven](#)
- [Openingstijden](#)

Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organisation title	Utrecht University Museum
Organisation type	Museum
Country City/Region	Netherlands, Utrecht
Website or other contact details	http://www.universiteitsmuseum.nl/english
Brief description of the organisation	<p>Come and explore together at the Universiteitsmuseum Utrecht (University museum Utrecht) and discover your inner scientist. At the museum you will experience the difference between science now and in the past. Put on a lab coat and go and do research in the Youth lab. The museum garden the Oude Hortus is, with the greenhouses filled with exotic trees and plants, an unexpected piece of green in the middle of the city center, where every season is different!</p> <p>About our exhibitions</p> <p>Tot op het bot - Down to the bone (temporary exhibition until dec 2015)</p> <p>At first sight, a human looks very different from a shark, a crocodile or a horse. And yet there are many similarities. But in what way are humans and animals similar? In how they digest food, or how they reproduce? Or how the skeleton or the heart are constructed? Will they get the same diseases, and can you treat them the same way? And what are the differences?</p> <p>Humans and animals have been investigated in Utrecht for over 200 years. The University Museum preserves objects from biology, (veterinary) medicine and dentistry that have been used for research and education. Go out and explore. Listen to the heart of a dolphin, look at your blood vessels, feel the skin of an elephant, and have a look at the operating room with a dog with a hernia!</p> <p>Rariteitenkabinet - Collection of Curiosities</p> <p>Have you ever seen a ying fox? Or a sperm whale penis? In the Collection of Curiosities, you will – nd all kinds of surprising objects, such as a dragon, puffer – fish and stuffed birds.</p> <p>Jeugdlab - Youth Lab</p>

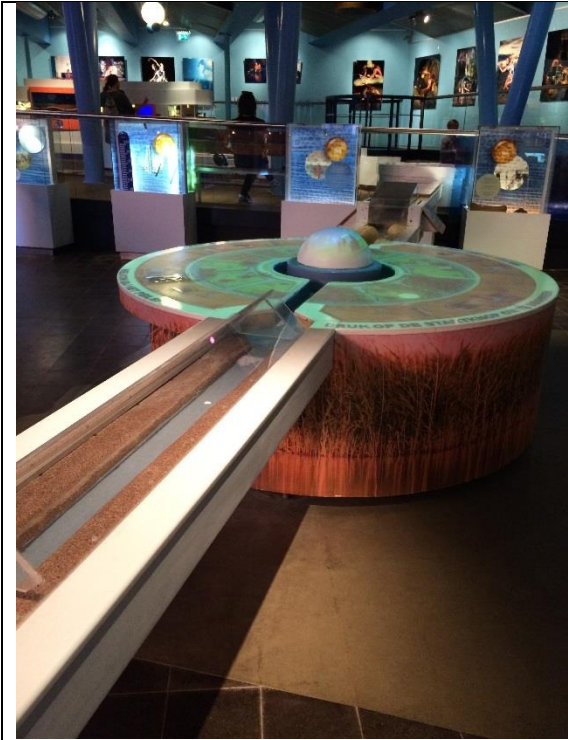
	<p>Hang your coat on one of the tongues and roll up your sleeves. In the Youth Lab, you can discover more about sight, taste, smell, hearing and feeling through experiments. But beware, you cannot trust your senses...</p> <p>Bleulandkabinet – Bleuland Cabinet</p> <p>At first glance, the Bleuland Cabinet is a little scary. This extensive collection of skeletons, fetuses in alcohol and wax preparations of body parts is not something you come across every day.</p> <p>Kennislab - Knowledge Lab</p> <p>The Knowledge Lab is the place to discover how science works. Ask yourself questions, develop theories, and experiment. Take part in the scientific process and discover your inner scientist.</p> <p>Oude Hortus - Botanical Garden</p> <p>In the middle of the busy centre of Utrecht lies a unique garden: the Oude Hortus. Housed at its current location since 1723, the garden boasts many special trees and plants, such as the 250-year-old Ginkgo biloba. In the summer, the Victoria amazonica, the largest species of water lily in the world, blooms in the greenhouse. In the stylish Ginkgo museum café, you can enjoy a quiet lunch or drink. The sunny terrace offers beautiful views of the garden and historic greenhouses.</p>
<p>Photos or other relevant material</p>	


Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organisation title	Veldwerk Nederland
Organisation type	Field Study Centre
Country City/Region	Netherlands, Apeldoorn
Website or other contact details	www.veldwerknederland.nl
Brief description of the organisation	Stichting Veldwerk Nederland stimulates a sustainable way of living by promoting inquiry learning and environmental involvement.
Photos or other relevant material	 <p>The screenshot shows the website interface for Stichting Veldwerk Nederland. At the top, there is a navigation menu with links: Home, Veldwerk/Winkel, Doelgroepen, Projecten/ publicaties, Locaties, Steun ons, and Over Veldwerk. Below the menu is a large image of children looking at a snail on a wooden plank, and another image of a woman working in a forest. The website features several category buttons: Kinderopvang, Basisonderwijs, Voortgezet onderwijs, Recreatie, Zorg, and Onderzoek. There are also sections for 'Volg Veldwerk Nederland op Twitter' and 'Laatste nieuws' with recent news items.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organisation title	Sciencehub Radboud University Nijmegen
Organisation type	Intermediate between university and education
Country City/Region	Netherlands, Nijmegen
Website or other contact details	www.wkru.nl
Brief description of the organisation	WKRU was founded in 2009 as the first science hub in the Netherlands, aiming to establish an exchange in information about science, between scientists, teachers and young students (4 – 16 yr). This exchange focusses on developing scientific curiosity and getting acquainted with methods of scientific research. Each year, scientists from three different top research groups, in-service and pre-service teachers work together to realize innovative educational projects. Results are disseminated by conferences, books, DVD and a website.
Photos or other relevant material	



Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organization Title	Watermuseum
Organization Type	Museum
Country City/Region	Arnhem
Website or other contact details	https://www.watermuseum.nl/
Brief description of the organization	The Watermuseum wants to create consciousness to its visitors about something very 'normal' as water. Sustainability is an important item in the expositions as is the location under sealevel of big parts of the Netherlands
Photos or other	



Ark of Inquiry	Template of Identified Community Members
Partner name	HAN University of Applied Sciences
Organization Title	Tech-lokaal Maas en Waal
Organization Type	Science centre
Country City/Region	Beneden Leeuwen
Website or other contact details	http://www.tech-lokaal.nl/scholen/
Brief description of the organization	In the Tech-Lokaal schoolclasses can participate in half-day workshops. Pupils can explore different techniques on 'discover-corners'.
<p>Photos</p> 	

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Humboldt (HU)
Organisation title	The Museum für Naturkunde
Organisation type	Museum and science centre
Country City/Region	Berlin, Germany
Website or other contact details	http://www.naturkundemuseum-berlin.de/
Brief description of the organisation	The Museum für Naturkunde - Leibniz Institute for Evolution and Biodiversity Science is one of the most significant research institutions worldwide in biological and geo-scientific evolution research and biodiversity. It has over 30 million items relating to zoology, palaeontology, geology and mineralogy, which are highly significant for science as well as for the history of science. Visitors can go on a research trip through the exhibitions. With the ability to access to various resources such as posters and animations.

Exhibitions



Seitenauswahl

- | The World of Dinosaurs
- | Evolution in Action
- | System Earth
- | The Cosmos and Solar System
- | Minerals
- | The Wet Collections
- | The Humboldt Exploratorium
- | Highlights of Preparation
- | Domestic Animals
- | Keller's Models
- | Touring Exhibition: Parasites
- | Special exhibition: Panda
- | Archive: Dead wasps fly further
- | Archive: Developments
- | Archive: Flies
- | Archive: Feathered Flight
- | Archive: The Realm of Elephants
- | Archive: Biopolis
- | Archive: 200 Years of Museum für Naturkunde

The Exhibitions

Since they opened in July 2007, the four new exhibition galleries on the theme of "Evolution in Action" have been attracting 500,000 visitors every year. They comprise the [World of Dinosaurs](#), [Evolution in Action](#), [System Earth](#) and [Cosmos and Solar System](#). A new attraction was added in September 2010, when the public was given permanent access to a [research collection](#) that is among the most technologically advanced in the world. And there is more to be discovered in the other exhibition galleries, as you can see on our webpages. Better still - come and see for yourself at our Museum!

We have special exhibitions that have become true crowd-pullers. Click here to find more information on our [special exhibitions](#) and accompanying events programme.

Opening hours

Tue to Fri: 9.30 a.m. - 6 p.m.
Sat, Sun & holidays: 10.00 a.m. - 6.00 p.m.
Mon closed

Admission

Adults: 6,- Euro
Children: 3,50 Euro

[Further information](#) →

[Download Imageflyer](#)
[Imageflyer \(pdf\)](#)

The World of Dinosaurs



Minerals



Evolution in Action



Domestic Animals



System Earth



Masterpieces of taxidermy



The Cosmos and Solar System



Keller's Models



The Humboldt Exploratorium



The Wet Collections



Special Exhibition

31 January 2015 - 31 July 2015

PANDA




International Touring Exhibition

Parasites - life undercover



Photos or other relevant material

Ark of Inquiry	Template of Identified Community Members
Partner name	University of Humboldt (HU)
Organisation title	Science Centre Spectrum
Organisation type	Science centre
Country City/Region	Berlin, Germany
Website or other contact details	http://www.sdtb.de/Spectrum.4.0.html
Brief description of the organisation	<p>Science Center Spectrum deals with attractive and astonishing phenomena that encourage young and old alike to join in the experiments independently. Revealing the cover for the Fundamental laws of nature, the basics of science and technical principles which are explained in a fun way.</p> <p>Science Center Spectrum enables Visitors to have the opportunity to explore and experiment for them in a playful manner. So they are able to discover about science and technology. Also Science Center Spectrum plays an important role in public education.</p>
Photos or other relevant material	 <p>The screenshot shows the website interface for Science Center Spectrum. At the top, there is a navigation bar with links to various museums: STIFTUNG, TECHNIKMUSEUM, SPECTRUM, TECHNOVERSUM, ZUCKER - MUSEUM, ZEISS - GROSSPLANETARIUM, and ARCHENHOLD STERNWARTE. Below this is a main header area with a large image of the building and a sidebar menu. The sidebar menu includes links for ENGLISCH, SUCHE, INHALT, STARTSEITE, DAS SCIENCE CENTER, FILME: ERÖFFNUNG, EXPERIMENTE, ANGEBOTE, SERVICE, UNTERSTÜTZER, and FÖRDERVEREIN. To the right of the menu is a contact information box for SCIENCE CENTER SPECTRUM, including address, phone, fax, and opening hours. Below the main header, there are two main sections: 'THEMENBEREICHE' (Thematic Areas) with a list of topics like 'Licht und Sehen', 'Wärme', 'Magnetismus', 'Mechanik und Bewegung', 'Musik und Hören', and 'Überblick'; and 'EXPERIMENTE' (Experiments) with a sub-section for 'Online-Experimente'. There are also images of a person interacting with a large blue sphere and a 90-degree angle experiment.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	Bundesministerium für Bildung und Frauen, BMBF (Currently BMB)
Organisation title	The Austrian Science Center Network
Organisation type	Network of Science Centers
Country City/Region	Austria (national network)
Website or other contact details	http://www.science-center-net.at office@science-center-net.at
Brief description of the organisation	<p>The ScienceCenter-Network is an association of Austrian organizations and persons furthering the understanding of science and technology by means of interactive science centre activities. ScienceCenter-Network has more than 130 partners of various back ground from all over Austria.</p> <p>The fields of expertise are very diverse, including education, science and research, exhibitions, design, arts, media and industry. The Austrian ScienceCenter-Network is also an active member of international associations, such as the European network of science centres and museums (ECSITE).</p> <p>Some of the main activities</p> <ul style="list-style-type: none"> - Participation in European Projects focusing on science center activities for everybody, education and training, projects for schools, and research. - Travelling exhibitions and interactive science center activities in different regional areas and for various target groups - from schools to socially excluded persons. - Discussion games facilitating the understanding of current scientific topics and the implications of innovation. - Education and training activities bringing schools and science together through explorative and inquiry based learning. - Research on the development, implementation, utilization and impact of science center activities, interactive exhibits and informal learning.

Photos or other relevant material

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ScienceCenter NETZWERK

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Willkommen beim ScienceCenter-Netzwerk

Wissenschaft auf leicht zugängliche Weise unmittelbar erlebbar und begreifbar machen.


das ist das Ziel des ScienceCenter-Netzwerks, einem Zusammenschluss von über 150 PartnerInnen aus den Bereichen Bildung, Wissenschaft und Forschung, Ausstellungsdesign, Kunst, Medien und Wirtschaft. Unsere vielseitigen Angebote laden zum selbstbestimmten Lernen, Experimentieren und Weiterdenken ein - unabhängig von Vorwissen und für alle Altersstufen.

Benutzername:

Passwort:

Anmelden

Wirkungswechsel




Die beliebte interaktive Wissenschaftsausstellung macht ab Mitte November ihre nächste Station in Klagenfurt. An die 20 Exponate warten auf neugierige BesucherInnen

Events - Highlights




Impressionen aus den Aktivitäten des Vereins ScienceCenter-Netzwerk mit Fotos und Kurzberichten zu Highlights und Events

Wissensraum




die Werkstatt für Neugierige vorbeischaun "entdecken" Spaß haben, Wiener Geschäftslokale werden für einige Wochen zu Orten für Entdeckungen und Experimente. 30.5.-31.7.2015, Schloßhoferstrasse 3, 1210 Wien

Netzwerktreffen



Ein lebendiges Netzwerk feiert sein bereits 50. Treffen! Beispielhaft Projekte vorstellen und gemeinsam analysieren, Strategien und Ideen entwickeln sowie neue Kontakte

SQA - für Schulen




Unterstützung von Schulen in ganz Österreich zum Schwerpunkt in

TraffXperts



Ein interaktives Diskussionspiel zum Thema Mobilitätsberufe. Spielunterlagen zum Gratis-Download auf www.science-center-net.at

Facebook



Das ScienceCenter-Netzwerk auf Facebook besuchen und immer auf dem Laufenden sein! - Like it

OUR OFFERS



EXHIBITIONS

With the cooperation of many network partners, the association initiates touring exhibitions, which provide insights into exciting interdisciplinary subjects experienced with hands-on exhibits (on e.g. networks or borders & boundaries).



EVENTS

With creative science center activities through workshops, action days and contests we encourage visitors in all Austrian provinces to marvel and research. Our website and our newsletter keep you up to date.



SCHOOL PROJECTS

Learning out of curiosity and independent research shapes our projects for the classroom. As learning outside the classroom sites, science centers and museums create new educational opportunities. Learning with a sense of achievement for pupils and teachers!



NETWORKING

Open exchange at the regularly scheduled network meetings promotes new contacts, joint development of strategies and ideas and the implementation of new projects. The Austrian network is also a valued partner in the international community.



TRAINING

Workshops, study groups, seminars as well as symposia and lectures with international guests provide quality intensive and participative teaching of science, technology and innovation.



RESEARCH

With its own research, ScienceCenter-Netzwerk analyses the impact and factors of successful science communication activities and informal learning and makes them available for further use.

ScienceCenter NETZWERK

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We are grateful for support by:

















PUBLISHING INFORMATION:
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ScienceCenter NETZWERK

Experience and comprehend science and technology

Experimenting

Discovering

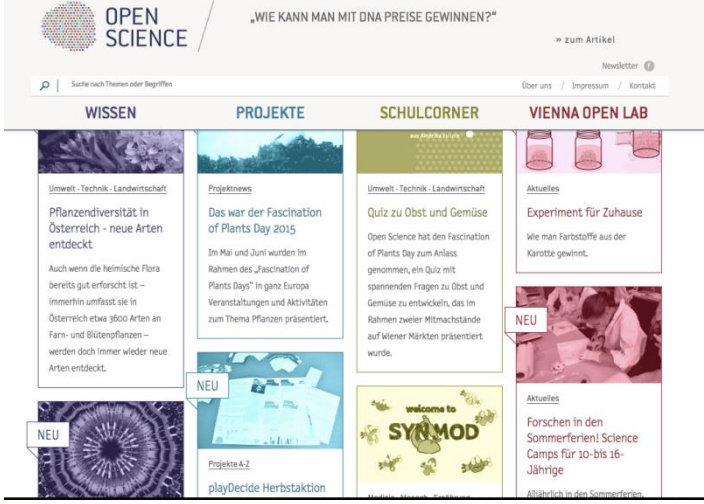
Marvelling

Learning






The platform for interactive science center activities
www.science-center-net.at

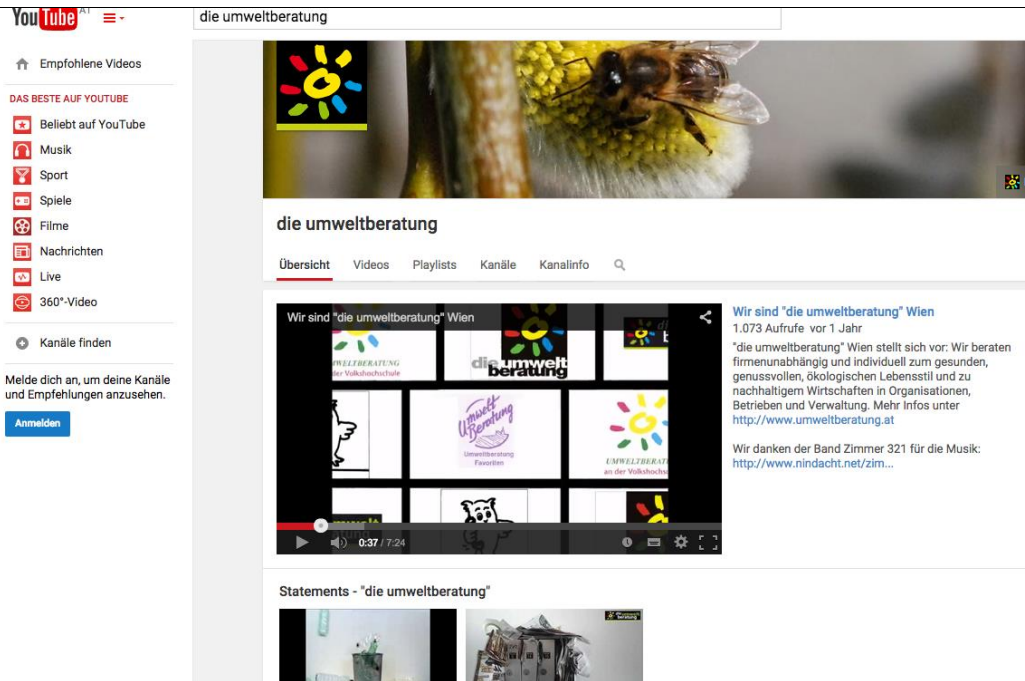
Ark of Inquiry	Template of Identified Community Members
Partner name	Bundesministerium für Bildung und Frauen, BMBF (Currently BMB)
Organisation title	Open Science
Organisation type	Science Communication and Laboratory
Country City/Region	Austria, Vienna
Website or other contact details	www.openscience.or.at
Brief description of the organisation	<p>Open Science fosters the dialogue between science and society with a focus on innovative technologies such as biotechnology. The Vienna Open Labs offer insights into the work of scientists by giving everyone interested in the topic the opportunity to experience science in open science labs. Specific educational programs are offered for schools. Pupils are invited to conduct their own experiments in the fields of genetics, genetic engineering, and biotechnology.</p> <p>The main objectives of Open Science are to create encounter spaces, where scientists and schools and the civil society come together and discuss current research and innovation topics to increase the people’s awareness on the work of scientists and on the consequences of innovation. Through discussion people are invited to actively participate in the process.</p> <p>The Open Science organises mobile exhibitions in Vienna and offers training material for schools on their website at www.openscience.or.at.</p>
Photos or other relevant material	 <p>The screenshot shows the homepage of the Open Science website. At the top, there is a navigation bar with the Open Science logo and the title '„WIE KANN MAN MIT DNA PREISE GEWINNEN?“'. Below the navigation bar, there are four main sections: WISSEN, PROJEKTE, SCHULCORNER, and VIENNA OPEN LAB. Each section contains several articles or project listings with images and text. For example, under WISSEN, there is an article about plant diversity in Austria. Under PROJEKTE, there is an article about the Fascination of Plants Day 2015. Under SCHULCORNER, there is an article about a quiz on fruits and vegetables. Under VIENNA OPEN LAB, there is an article about an experiment for home use. The website also features a search bar and a newsletter sign-up button.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	Bundesministerium für Bildung und Frauen, BMBF (Currently BMB)
Organisation title	“Die umweltberatung“
Organisation type	Eco-counselling non-profit organisation
Country City/Region	Austria, Vienna
Website or other contact details	http://www.umweltberatung.at
Brief description of the organisation	<p>“Die umweltberatung“ collaborates with environmental and consumer associations, universities, research institutions, ministries, municipal and regional government agencies, educational institutions and lobbies such as the Austrian Chamber of Employees, and the Austrian Chamber of Commerce. Several meetings, workshops and trainings are organised to transfer know-how in such subjects as the reduction of soil, air and water pollution. “Die umweltberatung“ also develops educational materials and workshops for teachers and trainers with regard to climate protection. The slogan: transforming theory into practice</p> <p>The aim: is the ecologically sustainable development of economy and society as part of AGENDA 21.</p> <p>The topics: building and living, housing, energy, waste, gardening, farming, food, consumption, eco-textiles, water, cleaning and washing, environmental education.</p> <p>The main aims are</p> <ul style="list-style-type: none"> • to raise awareness of environmental issues on the levels of civil society and politics. • to act as an educational institution offering courses and seminars. • to provide counselling with Environmental Service Centres (also by phone and with our website and online services). • to develop and implement environmental projects on a local and international level with a focus on international, European and regional aims and policies. • to further the participation of the civil society through social media (games


and online competitions).

"die umweltberatung" is part of the Austrian Network ÖKOLOG for schools which are interested in projects for sustainable development. Ecocounsellors advice schools to get the Austrian Ecolabel.

Photos or other relevant material



YouTube channel of "die umweltberatung" (<https://www.youtube.com/user/umweltberatung>)

Ark of Inquiry	Template of Identified Community Members
Partner name	BEKAS
Organisation title	Teacher Professional Development, Implementation and Research Centre
Organisation type	Research Institution
Country City/Region	Turkey Istanbul
Website or other contact details	Adres: Bahçeşehir Üniversitesi Kampüsü Çırağan caddesi Osmanpaşa Mektebi Sokak NO.4-6. Beşiktaş-İstanbul Tel : +90212 381 01 46 Faks : +90212 381 00 45 Mail : ogam@bahcesehir.edu.tr
Brief description of the organisation	Teacher Professional Development, Implementation and Research Center is a research center of Bahcesehir University. The center is responsible for professional teacher development courses for in-service teachers. In addition to the in-service teacher trainings, the center is also conducting educational researches in order to develop a better teaching and learning environments.
Photos or other relevant material	

Ark of Inquiry	Template of Identified Community Members
Partner name	BEKAS
Organisation title	Istanbul Bahçeşehir Science Museum
Organisation type	Science Museum
Country City/Region	Türkiye Istanbul
Website or other contact details	http://istanbulforkids.com/konu-basliklari/2010/1379/bahcesehir-koleji-bilim-muzesi-3/ T: (0212) 669 66 99
Brief description of the organisation	The aim of the museum is to attract everybody from 7 to 70 years who have an interest for the science, helping them to interact with various scientific tests conducted by the specialists.The Museum of Science is located at Istanbul.
Photos or other relevant material	

Ark of Inquiry	Template of Identified Community Members
Partner name	BEKAS
Organisation title	İzmir Bahçeşehir Science Museum
Organisation type	Science center
Country City/Region	Türkiye İzmir
Website or other contact details	http://www.karsiyaka.bel.tr/tr/neler-yapabilirsiniz/muzeler/bilim-muzesi +9(0232) 324 60 60
Brief description of the organisation	This is the second science museum of Turkey, after the museum in Istanbul. It's a new museum opened with the collaboration of Karsiyaka Municipality and Bahcesehir college, The aim of the museum is to attract everybody from 7 to 70 years who have an interest for the science, helping them to interact with various scientific tests conducted by the specialists. The Museum of Science is located at Mavisehir neighborhood in Karsiyaka district.
Photos or other relevant material	

Ark of Inquiry	Template of Identified Community Members
Partner name	Ecole de l'AND (EADN)
Organisation title	L'arche des métiers
Organisation type	Science Center
Country City/Region	France
Website or other contact details	http://www.arche-des-metiers.com/ L'ARCHE DES MÉTIERS - LE CHEYLARD - ARDÈCHE - Place des Tanneurs - BP 55 07 160 Le cheylard - Tél. 04 75 20 24 56 / www.arche-des-metiers.com
Brief description of the organisation	<p>L'Arche des Métiers réhabilite l'industrie, identifie un patrimoine industriel mal connu, enrichit les générations futures en leur permettant de visualiser et matérialiser les applications industrielles, désenclave notre pays par la découverte des sciences...</p> <p>L'Arche a une dimension éducative qui vise l'appropriation par tous de la société du savoir et montre au public une "passion industrielle"... La Communauté de communes Val'Eyrieux, premier pôle industriel de l'Ardèche, devait être reconnue. Ce pôle rayonnait déjà grâce à ses décideurs économiques et ses travailleurs dans le monde entier, c'était donc à lui d'être à l'initiative de ce "i" des industries ardéchoises. L'Arche, c'est de la culture industrielle à l'état pur. Elle sera le site de l'Ardèche industrielle.</p> <p>L'Arche des Métiers permet de créer un pôle d'excellence, de compétitivité, de savoirs pour tous... et de choisir l'industrie, l'économie comme réalité pour demain.</p> <p>L'Arche des Métiers a pour vocation de faire découvrir et de rendre accessible à tous la culture scientifique, technique et industrielle de la région des Boutières. Un voyage unique au coeur même des industries qui font la force de la Communauté de communes Val'Eyrieux et de l'Ardèche. L'Arche des Métiers est un lieu de savoirs, de partage, de jeux et de découvertes des industries textiles, des eaux minérales, des procédés mécaniques, des bijoux et du négoce de fruits. À la fois ludique et pédagogique, elle met en scène ce génie industriel au travers d'expositions, d'animations, d'échanges et de rencontres.</p>

Plus qu'une vitrine des industries locales, L'Arche des Métiers rend hommage à toutes ces générations qui ont oeuvré et qui continuent d'oeuvrer pour garder leur territoire dynamique, vivant, prospère et performant. L'Arche des Métiers, c'est l'Ardèche industrielle en concentré !



Photos or other relevant material




Ark of Inquiry	Template of Identified Community Members
Partner name	Ecole de l'ADN (EADN)
Organisation title	Genopolys
Organisation type	Science Center
Country City/Region	France
Website or other contact details	http://www.genopolys.fr/ Genopolys UMS 3656 Campus Arnaud de Villeneuve 141 rue de la Cardonille 34396 Montpellier CEDEX 5
Brief description of the organisation	<p>GENOPOLYS : Un espace scientifique de concertation</p> <p>GENOPOLYS est une Unité Mixte de Service (CNRS UMS 3656, Inserm US 022), créée le 1er janvier 2014 par le CNRS, l'INSERM, l'UM1 et l'UM2 (aujourd'hui fusionnée en Université de Montpellier, UM).</p> <p>GENOPOLYS est accessible à tous ceux qui souhaitent se réunir, se former et s'informer sur des sujets scientifiques, dans le domaine de la biologie et de la santé. GENOPOLYS est un pôle d'échange, qui s'adresse:</p> <ul style="list-style-type: none"> - au Grand Public. Notre objectif est de contribuer à la culture scientifique et médicale du citoyen, et de participer au dialogue Science & Société. - aux Chercheurs et Médecins, en favorisant l'intégration de la recherche clinique à la recherche fondamentale. - aux Industriels, avec l'objectif d'intégrer le monde la recherche dans l'entreprise par la formation, l'interaction et le développement. <p>Localisé à proximité des universités et hôpitaux, en lien physique direct avec des instituts de recherche, GENOPOLYS est facilement accessible par tramway ou bus. Tout le bâtiment est accessible aux handicapés et ouvert au public.</p>


Photos or other relevant material





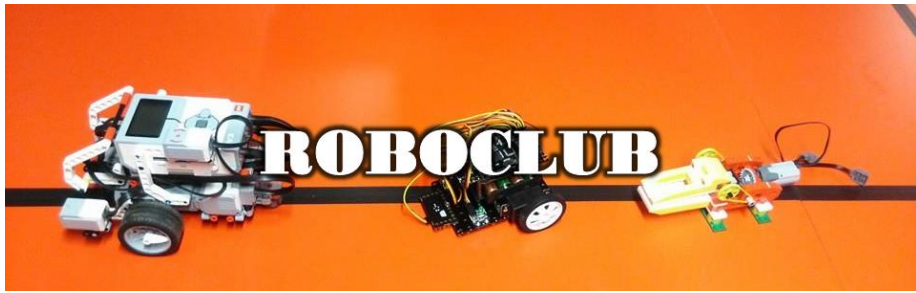
Ark of Inquiry	Template of Identified Community Members
Partner name	KHLim
Organisation title	Cosmodrome
Organisation type	Science centre / museum
Country City/Region	Belgium, Genk
Website or other contact details	http://www.cosmodrome.be/
Brief description of the organisation	<p>Mission and objectives</p> <p>The Cosmodrome Genk is an educational institution addressed to general public but more specifically to schools. The activities proposed are centered around space, stars, planets and weather forecasts.</p> <p>Up-to-date information is offered in the attractive multimedia form of the Cosmodrome shows. It is possible to choose among the many activities proposed, which are mostly adapted to a theme of the year. The Cosmodrome also offers extra activities specifically adapted to school groups and levels and the corresponding learning objectives. The activities allow to bring the learning subjects in an attractive way in extra shows, which are provided with work sheets. The teacher can build his/her own programme.</p> <p>In the main building there is place for 110 people. In case of larger groups, the visitors are divided into groups: while one group visits the Cosmodrome, the others make a chance to visit the other (gratis) facilities (interactive exhibitions, observatory).</p> <p>It is also possible to become member and enjoy several advantages.</p> <p>Here a summary of the shows currently offered:</p> <ul style="list-style-type: none"> - We are aliens: an activity in which the pupils look for possibilities of extra terrestrial life. - Astronaut: about the way in which a travel in the space influences our body. - Secrets of the sun: it gives information about the role of the sun in our solar

	<p>system.</p> <p>- Dawn of the Space Age: it is an historical reconstruction of the travels in the space. And many others.</p> <p>There are also different exhibitions, films, and other events.</p> <p>Permanent activities are offered by the observatory: a telescope with a lens of 20 cm and a focal length of 3 meters. The magnification power is of about 400 times. During the day it is possible to observe the sun and its solar spots; during the night to the moon, the stars and the planets.</p> <p>There is also a weather station on the roof of the Cosmodrome: the related data and graphics are uploaded online and can be freely used for activities.</p>
<p>Photos or other relevant material</p>	 <p>The image contains two photographs. The left photograph shows a large, silver telescope mounted on a black tripod, positioned in front of a white, dome-shaped structure, likely part of an observatory. The right photograph shows a group of children and adults gathered around a table, engaged in a hands-on activity. They appear to be working with red and white materials, possibly creating a model or conducting an experiment.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	KHLim
Organisation title	Universiteit Antwerpen
Organisation type	Research institution
Country City/Region	Belgium, Antwerp
Website or other contact details	https://www.uantwerpen.be/
Brief description of the organisation	<p>Mission and objectives</p> <p>The University of Antwerp develops, unlocks and disseminates scientific knowledge through research, education and services in a spirit of academic freedom and responsibility.</p> <p>The University of Antwerp is a young, dynamic and forward-thinking university. It integrates the assets of its historic roots with its ambition to contribute positively to society. The University of Antwerp develops, provides access to and disseminates scientific knowledge through research, teaching and service to society. It carries out these tasks in a spirit of academic freedom and responsibility. The University of Antwerp espouses active pluralism. In that spirit, it stimulates critical research and teaching, reflection and debate on scientific, social, philosophical and ethical questions.</p> <p>The University of Antwerp conducts creative and innovative scientific research which strives for international excellence. It stimulates both basic and applied research and their valorisation.</p> <p>The University of Antwerp offers internationally accredited academic teaching based on scientific research. It aims at the development and integration of knowledge, skills and attitudes that will prepare its students to take responsibility in society. The University of Antwerp stimulates public debate and greatly values its staff and students' service to society.</p> <p>The University of Antwerp is active in a global environment. It stimulates its staff and students international orientation.</p> <p>The University of Antwerp is committed to the development of its city and</p>

	<p>region. With its partners in the Antwerp University Association, it takes responsibility for higher education in the Antwerp region.</p> <p>The University of Antwerp attaches great importance to its close, historic links with Antwerp University Hospital and Antwerp Management School. It seeks constructive partnerships in the fields of research, teaching and academic service to society. In addition, the University shares its expertise with both public and private partners.</p> <p>The University of Antwerp fosters diversity and offers its staff and students equal opportunities and maximum potential for personal development.</p> <p>The University offers also the possibility for school groups to visit the laboratory to perform experimental activities (hands-on) connected to quantum physics: this collaboration was established between KHLim and the University in the frame of the European project Quantum SpinOff. Some of these activities have been reported in WP2.</p>
<p>Photos or other relevant material</p>	 <p>The first photograph shows a street scene in Antwerp with a blue and red sign for 'Universiteit Antwerpen' on a building. The second photograph shows two students in a laboratory setting, looking at a microscope.</p>

Ark of Inquiry	Template of Identified Community Members
Partner name	KHLim
Organisation title	Techniek- en WetenschapsAcademie (TWA)
Organisation type	science centre
Country City/Region	Belgium, Houthalen-Helchteren
Website or other contact details	http://www.techniekenwetenschapsacademie.be/
Brief description of the organisation	<p>Missions and objectives</p> <p>The Techniek- en WetenschapsAcademie (TWA) was started by the Katholieke Hogeschool Limburg (KHLim) , departement Lerarenopleiding in January 2014.</p> <p>The academy has as its goal to give pupils, between 8 and 14 years old, the same chances as an art or music academy, but in the world of technique and science. The TWA offers pupils the chance to meet technique and science and to further develop their interest in those subjects. The educators have as task to give workshops, in which the pupils can work hands-on, but also to offer insights in the technical and scientific background of what does and does not work. Therein is of outmost importance the educative aspect of HOW something works.</p> <p>The TWA is grown up after the project “de Techniekmobiel”. This is a kind of mobile class of technique in which all sorts of learning materials were hidden, like tools, building boxes, etc. This mobile class went around in various primary schools to help teachers in their technique and science lessons. One educator of the KHLim went to the school together with the mobile, to train the teachers using it.</p> <p>Than a mini-Techniekmobiel was created, which is a small version of the original one. This mobile is made to be used by the teachers themselves in their lessons. The teachers can borrow it via the TWA. The mini-Techniekmobiel has the following dimensions: 1m x 50cm x 50cm and it weight about 100 kg. It contains material for one class. It can be borrowed for different periods, from 1 day to maximum 1 month.</p>

	<p>The Academy was funded with as main goal to offer after school activities for pupils at one hand and on the other hand trainings for teachers and teacher students.</p> <p>Because of many requests it was decided to organize a first camp during the Easter holidays 2014. During this camp were organized many different technique and science activities for the pupils. As from that moment, several workshops are offered for school visits, after school activities, trainings, camps and birthday workshops as well.</p> <p>The workshops are organized according to the requests, after consultation with the applicant.</p>
<p>Photos or other relevant material</p>	  

Ark of Inquiry	Template of Identified Community Members
Partner name	Hungarian Researchers' Teachers Association (HRTA)
Organisation title	Hungarian Academy of Sciences (MTA)
Organisation type	academy of sciences (Mr. Laszlo Lovasz, the president of MTA is the patron of HRTA)
Country City/Region	Hungary, Budapest
Website or other contact details	http://mta.hu/ in English: http://mta.hu/english/
Brief description of the organisation	The Hungarian Academy of Sciences (MTA) is committed to the advancement, shaping and serving of science. Keeping the criteria of excellence in the forefront, the main responsibilities of the Academy, as the prime representative of Hungarian science, are to support and represent various scientific fields, and to distribute scientific results. MTA contributes not only to the organization of scientific research in Hungary, but also aims to tying the connection between Hungarian and international research closer. The Academy supports the scientific activities of promising young researchers, defends science ethics in public life, and guards the honour and values of scientific endeavours.

Photos or other relevant material



HUNGARIAN ACADEMY OF SCIENCES




HOMEPAGE OF HUNGARIAN SCIENCE

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- STATUTES
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- HUNGARIAN SCIENCE ABROAD
- PUBLICATIONS
- PUBLIC DATA
- THE ACADEMY CLUB

MTA PRESIDENT SUCCESSFULLY DEFENDS BASIC RESEARCH IN BRUSSELS



Six highly dependable European scientists were invited to present their arguments for basic research on Wednesday. Members of the elite delegation included Sir Paul Nurse, President of the Royal Society, and László Lovász, President of HAS. The EU commissioner responsible for research pledged that financing basic research would be least affected by EFSI, the new strategic investment scheme of the EU.

FREEDOM IN PRACTISING SCIENCE OBLIGES – LÁSZLÓ LOVÁSZ' PRESIDENTIAL ADDRESS



How can we fit into the scientific infrastructure of nations that are bigger and richer than we are, how can one remove enmity and stupidity from the arena of science, and what are researchers of the early 21st century responsible for? MTA's 186th General Assembly opens with those questions.

NUMBER OF MOMENTUM RESEARCH TEAMS SURPASSES 100



Who were the contemporaries in the Carpathian basin of the Greek warriors chanted by Homer? Why was the Kingdom of Hungary one of the engines of European economies in the Middle Ages? How can mathematics be used to underpin more prudent business investments? How reliable are the smart devices when reliability is a matter of life and death? How exactly does a habit or an environmental factor become cancerous? The 12 winners this year of MTA Momentum Funds are seeking answers to those questions. Their work is supported by HUF 400 million.

A COMMEMORATIVE PLAQUE WITH INTERNATIONAL BEARING IS NOW SEEN IN THE HIGH SCHOOL THAT JENŐ WIGNER HAD ATTENDED



It has been put up on the premises to honour Nobel Prize laureate Jenő Wigner, a graduate of the "Fasori" Lutheran Secondary School. It was in 1920 when "the first nuclear engineer in the world" graduated from the famous grammar school that shaped his future career.

SCIENCE TO PROMOTE CO-OPERATION IN THE MIDDLE EAST



In Amman leading scientists and high ranking decision makers were holding discussions about the role of diplomacy in science policies to manage crises, including any means of support using traditional diplomacy and the possible co-operation between the European Union the Middle East region. Professor László Lovász participated at the event as the President of MTA and as the Chairman of World Science Forum (WSF).

HAS and Audi Hungaria are to jointly develop automobiles of the future - by cooperating from

MTA President successfully defends basic research in Brussels

Hungarian researchers participate in global paleontological data analysis

How can you take a snapshot of the fastest motion in nature?

What is to come in 20 years' time? HAS to audit the inventory of major social issues

SEARCH IN NEWS

LETTERS AND ARTS

MTA'S COLLECTION OF ART

LIBRARY OF MTA

ENCOMPASS

HUNGARY'S NOBEL PRIZE WINNERS

LINKS

JOBS AND VACANCIES AT MTA

Events




Momentum program

JOB VACANCY

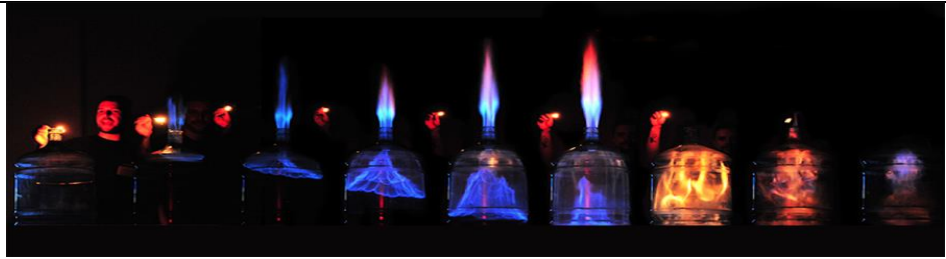
PRESS ROOM

SEARCH


Members of MTA
Scientists

Ark of Inquiry	Template of Identified Community Members
Partner name	Hungarian Researchers' Teachers Association (HRTA)
Organisation title	Eötvös Lorand University (ELTE) Museum of Natural History, Division in Mineralogy
Organisation type	Science museum
Country City/Region	Hungary, Budapest
Website or other contact details	web: https://www.facebook.com/elte.ttk.tm http://to.ttk.elte.hu/asvany-es-kozettar email: nhm@ludens.elte.hu or info@muzeum.elte.hu phone: +36 1 381 22 08 contact: Mr. Tamas Weiszburg
Brief description of the organisation	The museum was founded in 1775. The exhibition shows the history of geology and mineralogy, the principles of collecting minerals. During the occasions in the museum the visitors can determine minerals and make easy experiments.
Photos or other relevant material	

Ark of Inquiry	Template of Identified Community Members
Partner name	Hungarian Researchers' Teachers Association (HRTA)
Organisation title	Csodák Palotája (CSOPA) Palace of Miracles
Organisation type	Science centre
Country City/Region	Hungary, Budapest
Website or other contact details	phone: +36-30-210-55-69 email: info@csopa.hu web in English: http://www.csopa.hu/eng/
Brief description of the organisation	<p>The CSOPA mission is: to bring people and science together to make learning a fun experience to open the doors to a world of scientific exploration</p> <p>The CSOPA introduces the world of physics and the wonders of nature in a visual, entertaining and enjoyable way – meant not only for children. Our interactive and scientific exhibition offers an unforgettable experience for the whole family.</p> <p>The Center of Scientific Wonders offers a great way to spend time, for every age group. Young children can discover the way in which light, force and electrons work through entertaining games. Students can complement their school curriculum with practical experiences.</p> <p>Young parents can finally pair up with their children, play games together and even compete with each other.</p> <p>Those above 50 years of age can come along with their families, or they can come individually and recap on their scientific knowledge.</p> <p>At the Öveges Auditorium we hold exciting demonstrations, presenting experiments with electricity, thermodynamics and mechanics, where the visitors can also take part. At the Physics Show we demonstrate a wide variety of physics and sometimes chemistry experiments as well.</p>



Photos or other relevant material

Ark of Inquiry	Template of Identified Community Members
Partner name	Hungarian Researchers' Teachers Association (HRTA)
Organisation title	Mobilis Győr (The House of Discoveries)
Organisation type	Science centre
Country City/Region	Hungary, Győr
Website or other contact details	<p>web: http://www.mobilis-gyor.hu/</p> <p>email: mobilis@mobilis-gyor.hu</p> <p>phone: +36 96 618 111</p> <p>contact: Mr. Tamas Nemeth</p> <p>nemeth.tamas@mobilis-gyor.hu</p>
Brief description of the organisation	<p>The activities and the programs in Mobilis Győr similar to the CSOPA. Activities are dedicated for children, students in elementary and secondary grammar schools and their parents also.</p> <p>Young children can discover the way in which light, force and electrons work through entertaining games.</p> <p>Students can complement their school curriculum with practical experiences.</p> <p>Young parents can finally pair up with their children, play games together and even compete with each other.</p>
Photos or other relevant material	



MOBILIS GYŐR – A FELFEDEZÉSEK HÁZA
Mozgásban a tudomány!

GYERE ELI!
A játszóház

VEGYÉL RÉSZT!
Programjaink

TUDJ MEG TÖBBET!
Tudományról másfépp


VIDD HAZA!
Tudományos Jétkézből

ISMERJ MEG MINKET!
Mobilisról

KAPCSOLAT
Elérhetőségeink

NAPKÖZIS TÁBOROK
ÁLTALÁNOS ISKOLÁSOKNAK!

2015. mobilis7 élmény



PROGRAMOK, ESEMÉNYEK ←

04 júl
Mobilis a Györköcön, Györköcök a Mobilisban
A Felfedezések Háza, Győr tudományos játszóháza különleges, egyedi interaktív kiállítási eszközzel és látványos kísérleti bemut

29 aug
Extrém nyárázó a Mobilisban
A hagyományokhoz híven idén is extrém mozgásformákkal, valamint különleges, embern erővel hajtható közlekedési és sporteszközök bemutatásával hícsú

Az összes esemény megtekintése →

HÍREK

Befejeződött a Mobilis Pályaorientációs

Interaktív kiállítási központ és tudományos játszóház

INFO

Nyitva tartás

Appendix 3: Draft letters

For teachers in schools

Dear XX,

(Name of the partner) is honoured to invite you to become part of the European project Ark of Inquiry funded by the 7th Framework Programme. We are coordinating in (COUNTRY) the creation of a community in developing and supporting inquiry activities for teachers/students/museums that are specifically addressing Responsible Research and Innovation aspects.

We would therefore like to invite you to participate in the training opportunities that will be coming up in the next months in XX COUNTRY and to engage your pupils into the activities of this project. Ark of Inquiry will also give you the opportunity to exchange ideas and practices with teachers from other parts of the country and from all over Europe and will provide you with a great pool of new resources especially addressing Responsible Research and Innovation for your class.

The project aims to eventually reach more than 1000 teachers and 20.000 pupils in 11 European countries in the next 3 years.

We sincerely hope that you will be able to accept this invitation and become part of this community. Would you kindly agree to receive more information, please follow this link and fill in this 1-page form. For any questions, you can send us back an email and we will be happy to answer. Please try to fill in your contact details by 31 January.

Yours sincerely,

Note regarding the information you will provide us in the form: While the information gathered will be used for forming statistics about the participants in this project, all personal information provided (emails, etc.) will be kept confidential within the Ark of Inquiry project and will not be will not be disclosed to third parties.

For Pre-Service Teachers

Dear XX,

(Name of the partner) is honoured to invite you to become part of the European project Ark of Inquiry funded by the 7th Framework Programme. We are coordinating in (COUNTRY) the creation of a community in developing and supporting inquiry activities for teachers/students/museums that are specifically addressing Responsible Research and Innovation aspects.

We would therefore like to invite you to participate in the training opportunities that will be coming up in the next months in XX COUNTRY so that you will be able to support and motivate your future pupils in their inquiry activities. Ark of Inquiry will also give you the opportunity to exchange ideas and practices with other pre-service teachers from other parts of the country and from all over Europe and will provide you with a great pool of new resources especially addressing Responsible Research and Innovation.

The project aims to eventually reach more than 1000 teachers and 20.000 pupils in 11 European countries in the next 3 years.

We sincerely hope that you will be able to accept this invitation and become part of this community. Would you kindly agree to receive more information, please follow this link and fill in this 1-page form. For any questions, you can send us back an email and we will be happy to answer. Please try to fill in your contact details by 31 January.

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