

Application

Programme	Erasmus+
Action Type	KA210-SCH - Small-scale partnerships in school education
Call	2021
Round	Round 2

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Context

Project Title STEAM-Powered Education

Project Acronym SPE

Project Start Date (dd/mm/yyyy)	Project total Duration (Months)	Project End Date (dd/mm/yyyy)	National Agency of the Applicant Organisation	Language used to fill in the form
01/03/2022	18	01/09/2023	BG01 - Human Resource Development Centre (HRDC)	English

For further details about the available Erasmus+ National Agencies, please consult the following page: [We are here to help](#)

Project Lump sum 60000

Priorities and Topics

All project proposals under the Erasmus+ Programme should contribute to one or more of the programme's policy priorities.

Please select the most relevant priority according to the objectives of your project.

SCHOOL EDUCATION: Promoting interest and excellence in science, technology, engineering, and mathematics (STEM) and the STEAM approach

If relevant, please select up to two additional priorities according to the objectives of your project.

SCHOOL EDUCATION: Recognition of learning outcomes for participants in cross-border learning mobility

Please select up to three topics addressed by your project.

Entrepreneurial learning - entrepreneurship education

Work-based learning

Key competences development

Project description

Description

What are the concrete objectives you would like to achieve and outcomes or results you would like to realise? How are these objectives linked to the priorities you have selected?

The STEAM model was developed based on the fact that the concepts included in abstract disciplines cannot be understood by many secondary school pupils in terms of age range, their relevance to real-life cannot be reconciled, and therefore they are forgotten. STEM aims to direct learners to the information they want to reach with critical and creative thinking and to discover the targeted information themselves, by going through the assumptions based on the cause-effect relationship. STEM, which is formed by bringing together the first letters of the disciplines of Science, Engineering, Technology, and Mathematics, has gained the value it deserves in education as a STEAM model, with the adoption of the idea that art cannot be considered separately from these disciplines. That's why the European Social Fund announced the EU Multiannual Financial Framework (MFF) at the partner meeting of the CULT Committee in the European Parliament in September 2018. It suggested STEAM instead of STEM in education for 2021 – 2027. The "online" worlds of today's children, who were born after 2000 and called the Z generation, prevent them from fulfilling the responsibilities brought by reality. The apparent low academic achievement of this generation, which is very at peace with technology and the virtual world, in lessons containing abstract concepts during their education has become an issue for us teachers to take serious measures. The STEAM education model, which is based on the principle that students make sense of soft information by embodying it with objects and phenomena that can be encountered in almost everything in daily life, aims that learners discover the information themselves by associating the information with the outside world, thus making learning permanent. Only knowledge which we use in real life is valuable and unforgettable. Our project aims to achieve the following goals by giving particular importance to STEAM model applications in education processes: - Increasing academic achievement, which is 17% in basic courses, by at least 5% at the end of 20 months. - To increase students' problem-solving skills based on cause-effect relationships by at least 10% by increasing their creative and critical thinking skills. - With the wisdom of the crowd method, the students take an active role in the team, in peace with their peers, so they will be individuals who are more compatible with their social environment. - Revealing and supporting the artistic aspects of students. The relationship of the goals we set for our project with the priority of "Promoting interest and excellence in science, technology, engineering, and mathematics (STEM) and the STEAM approach"; The STEAM model not only serves the purpose of increasing academic achievement in basic courses at an optimal level, with its interdisciplinary transparency feature; but also includes the evaluation and support of students' critical, creative and collective thinking skills and artistic skills.

Please outline the target groups of your project

The target group of our project is our students, whose age ranges between 11-15 and the total number exceeds 1900 at the schools constituting our project partnership. We are planning to ensure the active participation of our students in the preparation, implementation, and evaluation stages of the international mobility activities of our project and in the activities to be carried out locally, to ensure the maximum efficiency required from our project. The regular meetings we will hold with the parents of the students during the preparation and implementation stages of our project, which aims to improve the artistic skills and social relations of our students as well as to increase their academic achievement, will enable the parents of the students to be included in the target groups. With the dissemination activities that will increase the visibility and awareness of our project, we aim for other secondary schools in the vicinity of our schools to benefit from the results and achievements of our project. For this purpose, each school will invite its students, along with school administrators and teachers in their surroundings, to introductory and information meetings and mobility seminars to be held on the dates and within the timeframes to be included in the dissemination plan and calendar. The majority of our students come from low-income families who make a living by working as a labourer. Our students are not only economically disadvantaged but also socially and culturally disadvantaged groups. To this day, we have very few students who have the chance to go out of the city. Unfortunately, the dreams of our students are limited to the few opportunities offered by the city they live in. In all schools in our project partnership, there are students from refugee families who had to leave their country due to civil war or economic concerns, and this number has reached 38 as of the 2021-2022 academic year.

Please describe the motivation for your project and explain why it should be funded

"According to the PISA score averages of 26 countries regarding the education variables and PISA scores of 2006, 2009 and 2012, and the results of one-way analysis of variance (ANOVA) showing the averages of the education variables by years, both the education variables and the averages of PISA scores did not show any significant change over the years." (Döş, İ., Atalrış, E. H. (2016). Evaluation of PISA exam results according to OECD data). Moreover, the idea that this situation has worsened with the transition to online education by interrupting face-to-face training due to the Covid-19 pandemic has started to become widespread among educators. Another problem that we have to face with the transition to online education is that the indifference of the Z-generation students, who are increasingly dependent on technology, to abstract lessons in the digital environment has increased significantly. At the time when our project emerged as an idea, this situation came to the fore through the meetings we held with the schools that formed our partnership. Participation in mathematics, science, technology and information classes has decreased by 13% to 22% since the beginning of the pandemic and the transition to online education in April 2020. With the full transition to face-to-face education, our teachers both try to quickly regain their lost time and energy during online education, and they have to overcome another difficulty such as adapting our students to the post-pandemic adaptation processes. Our project motivation is to motivate our

students to basic courses more and to increase their academic success by 5%, and enable them to adapt more easily in the post-pandemic adaptation processes. As the STEAM model has all the features that will provide this motivation we need, it can be easily applied in almost all the courses we teach thanks to its interdisciplinary permeability. All the schools that make up our partnership have carried out some studies with the STEAM model and have achieved very successful results. When we assign duties and responsibilities to our students for a common purpose apart from the traditional methods and techniques in classroom activities, the following results have emerged:-They can use very creative methods to achieve the desired goal,-They transfer information between disciplines even though no advice is given in this direction,-Even though they were not directed, they tried to complete the missing information by contacting other course teachers,-The desire to communicate and share information has increased,-They can distribute tasks according to their abilities and work more efficiently in groups. Each school in our project partnership has worked in a different STEAM area. Thanks to our project, each school will not only share its own STEAM experience but also easily integrate the knowledge and skills that it will transfer from other partners into their education programs.

How does the project address the needs and goals of the participating organisations and the identified needs of their target groups?

One of the problems caused by the Covid-19 pandemic has been the necessity of switching to online education at all levels of education. In addition to the factors that prevent participation in online courses such as lack of technological infrastructure and economic inequalities, it is observed that students' participation in basic courses, where abstract concepts are intense, is low. Moreover, the time lost by students who have limited participation in live lessons must be replaced quickly. All schools in our partnership had to face these problems directly under these pandemic conditions. All of the partner schools in our project will facilitate the adaptation of students to the school environment after the pandemic, position them at the center of education and take part in all learning stages; We think that we can meet these needs effectively and quickly by using a model that researches, questions, draws conclusions and allows to establish a connection between information. When we applied methods that would enable our students to discover instead of just presenting information in the activities we carried out in our schools before, we encountered the results that they could think more creatively and critically, work together more harmoniously by putting their differences aside, and acquire the knowledge and skills that would enable them to reach the goal more easily. Students learn that the information we try to teach in the lessons is about the facts, and events that we encounter in daily life. Learning becomes much faster and permanent when students realize its relationship with objects. In the activities we carried out using the STEAM education model, which is the theme of our project, we came across the following results: -When the components causing the problem are examined, students can produce more rational solutions, - The information gains functionality only if it is made sense and used, -The students can easily organize in line with their background knowledge and personal skills without intervening in teamwork. To adapt the STEAM education model to different disciplines effortlessly, the schools that make up our partnership need to share their different STEAM experiences with each other. Our project will provide us with the necessary motivation to transfer the experiences, pedagogical knowledge, and skills of our partners in the STEAM fields where they are experienced. With our project, our stakeholders will be able to: -Include STEAM applications in mathematics, science and technology lessons, increasing the academic success of students by at least 5%. - By using the multi-disciplinary feature of the STEAM model, they will increase the number and quantity of works produced in the fields of engineering and art. - They will enable students to discover knowledge, the knowledge to be acquired will become more functional and permanent in this way.

What will be the benefits of cooperating with transnational partners to achieve the project objectives ?

Our project goals are to increase the academic success of our students in basic courses, which our partners also have to face and which has been made even more difficult by the difficult conditions brought about by the pandemic; It has been shaped by our needs to develop creative, critical and collective thinking skills and to bring their artistic skills to light. Each school that forms our partnership has carried out activities, studies, and school projects in a different area of the STEAM model. An international project to be carried out by increasing the impact and scope of these studies carried out in our schools will serve to increase the visibility and thus the number of people who will be affected by the results, as well as enable the sharing of experience among the project partners. Our STEAM project will enable us to gather the individual works of our partners under one roof. None of the institutions that will take part in our project as a partner has Erasmus+ project experience. Our schools will have the chance to carry out activities in cooperation with international partners for the first time with our STEAM project. They will transfer them to their schools and in this way, they will be able to make necessary updates in their education programs. Our project will enable our project partners to give an international character to the work they do in the field of STEAM, thus maximizing the number of people affected by the expected results of the activities. Another important advantage of our STEAM project is that our project partners, who have not had any international project experience before, will bring together students and teachers from different countries and educational cultures. Participants will be able to directly observe the sample studies of the host schools in the field of mathematics, science and technology, and will be able to integrate the gains into their education programs as well as learn by experience. The virtual mobilities to be organized after the international mobility will provide the necessary motivation and reason for the partner schools to plan and successfully implement activities by the engineering design cycle (MTD) in the fields of arts and engineering, and will also enable the participants to increase their digital skills. English, the common language of our project, will help the participating students and teachers to improve their communication skills in a foreign language during the activities. As a natural result of international cooperation, participants who have not yet had the opportunity to go outside the borders of the country will be able to get to know a different culture on-site.

Participating Organisations

To complete this section, you will need your organisation's identification number (OID). Since 2019, the Organisation ID has replaced the Participant Identification Code (PIC) as unique identifier for actions managed by the Erasmus+ National Agencies.

If your organisation has previously participated in Erasmus+ with a PIC number, an OID has been assigned to it automatically. In that case, you must not register your organisation again. Follow this link to find the OID that has been assigned to your PIC: [Organisation Registration System](#)

You can also visit the same page to register a new organisation that never had a PIC or an OID, or to update existing information about your organisation.

Kaanland EOOD (E10280035)

Applicant organisation OID	Legal name	Country
E10280035	Kaanland EOOD	Bulgaria

Applicant details

Legal name	Kaanland EOOD
Country	Bulgaria
Region	Разград (Razgrad)
City	Razgrad
Website	

Profile

Is the organisation a public body?	No
Is the organisation a non-profit?	No
Type of Organisation	School/Institute/Educational centre – General education (primary level)

Background and experience

Please briefly present your organisation.

What are the organisation's main activities?

"The house of miracles" Talent school, Kaanland EOOD is a small enterprise that was founded to fight the negative effects of Covid 19 on education and social skills and competencies of Bulgarian pupils and Youth. Its main goal is to direct the attention of young people to the development of their potential and talent by rediscovering the beauty of social relationships and partnerships for a better world. Among the priorities are global education and citizenship and the development of education in Bulgaria as a condition for inclusive growth. It was established by Mrs Ayten Kyazimova who is very experienced in education and national and Erasmus + projects. Within the framework of our school; raising entrepreneurial, creative, innovative, and active individuals are our priority. We are working with our project writing team and eTwinning project team to reach our goal of being an innovative school that will increase its cooperation and contact with international institutions.

What are the organisation's activities in the field of this application?

"The house of miracles" Talent school, Kaanland EOOD was created with the aim to improve the quality of life and conditions for education of all children, as well as the ones with disabilities and Roma and their families at the local and national level. We provide high-quality education in a welcoming and friendly environment and inspire the pupil to flourish as a person. STEAM model activities have been included in mathematics in-class activities. Activities were designed and implemented for our students in areas such as area and volume calculation, velocity problems, and finding the angles of geometric objects. The results obtained with the evaluation rubrics that we have prepared for the targeted acquisitions show us that the STEAM model applications are successful in providing the expected effect on our students. We have been organizing Science Festivals in our school for the last 2 years to encourage scientific thinking and increase the interest in scientific developments.

What profiles and age groups of learners are concerned by the organisation's work?

Our target group are pupils from 6 till adults, as well as the ones with fewer opportunities and from disadvantaged situations and teachers. Most of the students in our school come from families with financial inadequacies, and for this reason, the knowledge of the students about life is limited to the education they receive at school. None of our students has had the opportunity to be abroad yet, and most of them have not had the chance to go beyond the borders of the city of Razgrad, where our school is located.

How many years of experience does the organisation have working in the field of this application?

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Action Type	As Applicant		As Partner or Consortium Member	
	Number of project applications	Number of granted projects	Number of project applications	Number of granted projects
Small-scale partnerships in school education	0	0	1	0

I understand and agree that the National Agency can use the information it has about my organisation's previous participation to assess my organisation's capacity to implement activities under this application.

Partner Organisations

Partner organisation OID	Legal name	Country
E10115868	Elementary school Branko Radicevic	Serbia
E10016008	Pamukoren Ortaokulu	Turkey

Elementary school Branko Radicevic (E10115868)

Partner organisation details

Legal name	Elementary school Branko Radicevic
Country	Serbia
Region	Serbia
City	Bujanovac
Website	www.nasaskolaosbrankoradicevicbujanovac.rs

Profile

Is the organisation a public body?	Yes
Is the organisation a non-profit?	Yes
Type of Organisation	School/Institute/Educational centre – General education (primary level)

Background and experience

Please briefly present your organisation.

What are the organisation's main activities?

Osnovna škola "Branko Radičević" is located in in the far south of Serbia. Our students participate in many sports competitions organized by our country and others. Our school, which wants to provide the highest quality education and follow European trends, aims at the continuous improvement of its staff and the modernization of the teaching process. We aim to successfully prepare our students for the next level of their education (high school) and to provide them with the best possible knowledge and skills. In addition to foreign languages, we have experienced that subjects such as mathematics, physics and informatics (STEM) are highly appreciated by both parents and children, and we strive to keep up with and meet all innovations in the mentioned subject area.

What are the organisation's activities in the field of this application?

The inclusion of STEAM model applications in classroom activities by the teachers of our school is among the priority targets we have set for the last 2 years. We carry out the following studies in our school to enable our students to benefit from the advantages of the STEAM education model, which has been called the education model of the century by many important educational scientists, such as developing critical and creative thinking skills, making independent decisions and applying these decisions, and relating abstract concepts with their immediate environment: Completed studies in the field of science: *Ubleck (Oobleck) - Non-Newtonian fluid experiments. *Circuit Bars projects. *Experiments to create a vacuum effect on water mass with heat and temperature variables. -In the field of art class *Fibonacci Art Project *Pendulum Painting Project

What profiles and age groups of learners are concerned by the organisation's work?

There are 1200 children aged between 7 and 15 in our institution. The vast majority of our students are from families who have low-income. For parents of children, there is little prospect of finding a job. For this reason, the parents of many of our students live far from their homes to work as workers in different cities of our country or different countries in Europe. 7 refugee students from families who had to leave their country for different reasons receive education at our school. Most of our students are among the socio-economically disadvantaged groups. Very few of our students have had the opportunity to go outside the borders of Romania until today. Apart from the social and cultural activities we organize at our school, our students have very little chance to take part in the activities. For this reason, cultural trips and cinema events are organized by our school teachers together with our students.

How many years of experience does the organisation have working in the field of this application?

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Action Type	As Applicant		As Partner or Consortium Member	
	Number of project applications	Number of granted projects	Number of project applications	Number of granted projects
School Exchange Partnerships (KA229)	3	1	7	0

I understand and agree that the National Agency can use the information it has about my organisation's previous participation to assess my organisation's capacity to implement activities under this application.

Pamukoren Ortaokulu (E10016008)

Partner organisation details

Legal name	Pamukoren Ortaokulu
Country	Turkey
Region	Aydın
City	Kuyucak/Aydın
Website	http://pamukorenoo.meb.k12.tr/

Profile

Is the organisation a public body?	Yes
Is the organisation a non-profit?	Yes
Type of Organisation	School/Institute/Educational centre – General education (primary level)

Background and experience

Please briefly present your organisation.

What are the organisation's main activities?

"Pamukoren Ortaokulu" is a secondary school that provides education at the primary level. In our school, besides the compulsory basic courses, we carry out many cultural activities, sports competitions and social club activities to raise our students as individuals who are ready to adapt to society. We have a young and dynamic staff of instructors who do not tire of constantly searching for ways of modernization to increase the quality and quantity of the teaching process at the school. Our teachers have taken part in many local projects that increase their digital competencies, especially to overcome the difficult conditions created by the pandemic, and they have participated in webinars organized by the ministry of education. In the online education process, we tried to enrich our teaching processes by designing activities where our students take part in in-class activities and share responsibilities with their peers.

What are the organisation's activities in the field of this application?

The STEAM club, created by our school's technology and informatics teachers, started its activities at the beginning of the 2020 academic year. With the outstanding efforts of our teachers, our social club, which includes 33 students, has completed 11 successful scientific projects in the field of technology, design and informatics in the first semester. Our teachers, who guided our students in the design of scientific projects, workshops and evaluation stages, motivated our students to discover the targeted knowledge in line with the principles of the STEAM education model. During all the planning, design and production stages of scientific projects, our students learned by working in teams of 3, researching and developing their scientific projects based on this information. At the end of the semester science exhibitions, we had the opportunity to share the works of our students with the local people.

What profiles and age groups of learners are concerned by the organisation's work?

In our school, pre-school, primary and secondary school levels are educated together. The total population of our students, whose ages range from 6 to 15, is 572 as of the 2020 academic year. Approximately one-third of our students are from families who migrated from rural areas to the city due to economic reasons. We also have 22 students who are refugees, along with our students who have significant cultural adaptation problems. 54 of our students studying at our school live with only one of their parents due to a separated family. In a way that reflects the general human profile of the city of Tetovo, our students who study at our school generally belong to low-income families and to families who make a living as a craftsman and tradesmen. Therefore, most of our students are in disadvantaged groups both socially and economically.

How many years of experience does the organisation have working in the field of this application?

Action Type	Number of project applications	As Applicant		As Partner or Consortium Member	
		Number of granted projects	Number of project applications	Number of granted projects	Number of project applications
School education staff mobility (KA101)	2	0	0	0	0
Adult education staff mobility (KA104)	1	0	0	0	0
Short-term projects for mobility of learners and staff in school education	1	0	0	0	0

I understand and agree that the National Agency can use the information it has about my organisation's previous participation to assess my organisation's capacity to implement activities under this application.

Cooperation arrangements

How was the partnership formed? What are the strengths that each partner will bring to the project?

The low academic grades of our students in disciplines involving abstract concepts have led us to the need to search for different teaching methods that can be applied during in-class activities. Particularly, the item "giving more space to techniques and models that will enable students to discover the target knowledge during pre-adolescence" among the decisions taken at the 2021-2022 year head meeting for mathematics can be considered as a starting point for the implementation of STEAM model activities in our school. We have deepened our work with the eTwinning working group of our school examining the STEAM model projects carried out on the platform and we have carried out studies so that it can be applied in different disciplines. In this period when our project was conceived as an idea, we reviewed the Erasmus+ program guide and decided that the most appropriate Erasmus+ program was the KA210 project partnership to increase the scope and impact of the STEAM activities we conduct at the school, to share our experiences with transnational partners and to benefit from their STEAM model experiences. Our project work started with the publication of our project summary, which includes the subject of our project, the content of the activities and the profiles of the target age group students, on the eTwinning partner finding platform. We contacted the institutions that responded to our partnership call via e-mail and asked them to answer the following questions: -In which curriculum did you include STEAM model applications? At the end of the activities, which scale and measurement tools did you use? -What kind of contributions can you make if our project is entitled to receive a grant? - Does your school have staff with Erasmus+ project management experience? If yes, in which field did he or she work? We requested more detailed information about their work in the STEAM field by improving our communication with the schools that answered our questions from our potential project partners. The information obtained has concluded that our project partners can contribute to our project with the following features: Branko Radicevic -Science teachers have received special training in the field of STEAM. Carried out activities by applying the STEAM education model in the field of science course.-Developed unique measurement tools that enable students to take a role in determining the extent to which the activities achieve the targeted gains. Pamukoren Ortaokulu -Having carried out studies using the STEAM model in technology design workshops. -Having integrated STEAM activities into the technology course curriculum and achieved a significant difference in the quality and quantity of emerging technology projects. -Having eTwinning project experience in the STEAM field. Each school that forms our project partnership will contribute within the scope of their experience in the field of STEAM learning model and the discipline they specialize in.

How will you ensure sound management of the project and good cooperation and communication between partners during project implementation?

To develop the project idea with our project partners, we have created a WhatsApp communication group that includes contacts and legal representatives of the institution for easy sharing of ideas and opinions. We continued to use the e-mail service for document sharing. All the writing stages of our project were carried out with the active participation and approval of our project partners. If our project is entitled to receive a grant, this group consisting of contacts and legal representatives will be responsible for the execution and supervision of all project activities within the predetermined plan, under the name of the project management team. During the execution phase of our project, monthly online meetings will be held with the participation of each partner institution's legal representative and contact person, and evaluations will be made about the completed activities, they will express their opinions on the preparation of the activities in the project activity plan and minimize the possible risks to be encountered, and they will ensure that the necessary measures are taken on behalf of their schools. During the preparation process, which lasted from the signing of the project contract with the Bulgarian National Agency to the official start date of our project, the legal representatives of the school will be responsible for the establishment of the project units (dissemination, participant selection commission, activity evaluation and logistics) and the signing of bilateral agreements describing their duties and responsibilities with the personnel to be assigned in the units. To ensure communication between the project units, a WhatsApp group will be created with the participation of the authorized person who will work in the units. The project partner will lead a project unit in each school competency area. Project units will be responsible to the unit of the school that will carry out their work and lead according to the project activity plan. Information and opinions-suggestions will be shared between the teams about the evaluation of the completed activities and the preparations of the planned project activities through monthly skype meetings. In case of a request by any of the unit members, urgent online meetings can be held, and the organization and meeting hours on this subject will be announced by the authorized unit via the WhatsApp channel. A WhatsApp group will be created for communication between the already existing eTwinning project teams of each partner school, and the monthly meetings between the teams will be held on the platform using the online meeting feature of the eTwinning platform. Document sharing between the project management team and other units will be done via e-mail. If the communication between the units is broken or its continuity cannot be ensured, phone calls will be made, information will be obtained about the reason for the disruption in communication and the problem will be resolved.

Have you used or do you plan to use Erasmus+ platforms for preparation, implementation or follow-up of your project? If yes, please describe how.

In the Preparation Phase of our project, the eTwinning platform was used to publish the project partnership call and to provide contact information of potential project partners. Both of our project partners were selected from among the institutions that responded to this call. After the project partners were determined, each institution searched the Erasmus+ Project Results platform with the keywords "STEAM in education" and gathered information about the completed project

summaries specific to the subject. During the planning process of our project, a total of 7 Erasmus+ KA229 strategic partnership projects were examined. As the project writing team, we analyzed the article "Reviewing the potential and challenges of developing STEAM education" using the School Education Gateway/publications interface, and tried to deepen our knowledge of STEAM as a pedagogical model. In the Implementation Phase, a new eTwinning project will be launched, designed by the eTwinning teams of our Schools, in coordination with the achievements and expected results of our STEAM project. In Follow-up Stage, our project summary, which will be published on the Erasmus+ Project Results platform, will be a safe tool to use in the dissemination of our project, as well as an important resource for educators and teachers who conduct research and want to learn about the STEAM model.

Please describe the tasks and responsibilities of each partner organisation in the project.

As in the development and writing stages of our project idea, each institution that forms our partnership will take responsibility for the successful execution and conclusion of our project in the field of talents and expertise. To ensure the desired efficiency with the project activities and to carry out the preparation, implementation and evaluation stages of the activities within the plan and in coordination, each school in our partnership will carry out the following activities with their institutional capacities, personnel qualifications and STEAM model competence areas: Kaanland EOOD -Preparation of the project activity plan and calendar. -Preparation of the budget plan, meeting the budget expenditures according to the plan and issuing documents such as receipts, tickets, bills for expenditure items. -Preparation of interim reports and final report of our project. -To lead the dissemination units of the partner schools during the dissemination activities. - Establishment of communication channels between project units. Branko Radicevic -Executing guidance and mentoring duties for the activity evaluation units of partner schools. -Opening the official website of our project. - Creation of social media accounts. - Preparation of the activity plan called Art is Everywhere, which is the virtual mobility of our project. Pamukoren (TR) - Guiding eTwinning teams with project management experience. - Organizing the logo contest to be conducted on our project's social media accounts and website. -Preparation of our e-journal after the end of the project activities. -Preparation of the activity plan of our project, Our World is One Machine virtual mobility. The general responsibilities and duties that all project partners will be responsible for fulfilling simultaneously are as follows, in addition to the special duties that we mentioned above and that have been shared considering the areas of competence of each project partner: -Creation of project units in the preparation phase of our project, making bilateral agreements with the teachers to be assigned in the units. -Making dissemination and evaluation studies and logistics preparations in accordance with the activity plan. - Conducting the participant selection stages transparently and fairly in line with the principles included in the activity plan. - Making arrangements to give a 60-hour English support course for the participants before the mobility. -To contribute to the preparation of the e-journal of our project. Researching accommodation facilities in safe areas of the city to be a host institution in transnational mobility, offering suitable accommodation facilities to institutions in 3 options. -In case of being the host institution for transnational mobility, holding online cultural preparation and mobility activity publicity meetings in 2 sessions 5 and 3 days before the mobility.

Activities

All the activities of a Small-scale Partnership must take place in the countries of the organisations participating in the project. In addition, if duly justified in relation to the objectives or implementation of the project, activities can also take place at the seat of an Institution of the European Union, even if in the project there are no participating organisations from the country that hosts the Institution.

In the following sections, you are asked to provide details about each project activity.

You are asked to provide information about each planned activity as a whole (e.g. its venue, duration, etc.), to define the activity's lead organisation, and optionally to list the other participating organisations. The lead organisation is typically the one organising the activity. The other participating organisations are all other project partners who will also take part in the particular activity. The estimated activity start and end dates can be changed during implementation.

Please include in the section below all planned activities and indicate the grant amount allocated to each one. Keep in mind that the total amount should be equal to the project lump sum requested.

Activity Title	af.activities.activity-estimated-start-date	af.activities.activity-estimated-end-date	Activity duration (in days)	Grant amount allocated to the activity (EUR)
Science in the Nature	16/07/2023	20/07/2023	5	19 800,00 €
Ready or not, here I come Math	14/01/2023	18/01/2023	5	19 800,00 €
The motion of the technology	15/07/2023	19/07/2023	5	19 800,00 €
Art in everywhere	15/07/2023	26/07/2023	12	300,00 €
Our world is a machine	19/08/2023	30/08/2023	12	300,00 €
			39	60 000,00 €

Activity Details (Science in the Nature)

Please complete the following table

Activity Title	Science in the Nature
Venue	Serbia-Bujanovac
Estimated start date,	16/07/2023
Estimated end date,	20/07/2023
Leading Organisation,	Elementary school Branko Radicevic (Serbia)
Participating Organisations	Pamukoren Ortaokulu (Turkey)
	Kaanland EOOD (Bulgaria)
<u>Grant amount allocated to the activity (EUR)</u>	19 800,00 €

Describe the content of the proposed activity.

The first transnational mobility activities of our project will be hosted by our Serbian partner Branko Radicevic. 6 students and 2 teachers from project partner institutions will participate in the training and workshop activities that will last for 5 days. Information will be given about the projects, activities and in-class activities carried out by the host school in the previous term. In the last 3 days of the mobility, participants will be provided to work in homogeneous groups in the context of a hypothetical problem or need, and they will be asked to find solutions to the given problem in common mind and cooperation. The content of the mobility action plan will be as follows: Day 1 Meeting, the introduction of the school building and ice-breaking activities. Presentation of host institution's STEAM experiences in the science discipline. Day 2: Information meeting, presentation and question and answer activities about simple physics principles, events and phenomena in the field of learning, which we often encounter in daily life. Day 3 Ublek (Oobleck) - Non-Newtonian Fluid; Production of liquid, which can be found in both fluid and solid form depending on the pressure it is exposed to, examples of usage areas. Group work; What problems can Ublek fluid solve? Day 4 Circuit Bars; examples of electrical circuit design using a combination of conductive, semiconductor and insulator materials. Group work; for what purpose and in what kind of devices can we use the conductive, semiconductor and insulator materials around us? 5th day: Behavior of water at different temperatures; creating a vacuum effect with heat and temperature variables. Group work; what kind of triggers can we create using water's response to different temperatures?

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results?

Participating schools in the Science in Nature transnational mobility will take place with 6 students and 2 teachers. However, within the scope of the sustainability studies to be organized in our schools after the mobility, the knowledge and experience that will be transferred to our schools with the studies of the host institution in the field of science and STEAM model will be transferred to all our students. In this way, the number of affected will be kept at the maximum level. Our dissemination units will also invite the science teachers and students of private and public secondary schools providing education services in our close vicinity to the information seminars to be held after the mobility. Thus increasing the number of beneficiaries of the project results. The criteria for the selection of participants by the project management team were planned as follows: - Motivation letters by the students explaining why they want to take part in the mobility (30 points) -Having at least A2 level English language proficiency (20 points).-Aware of their duties and responsibilities, believing in teamwork (20 points). - Volunteered in the STEAM studies we carried out in our schools (20 points) -Academic grade of 70 points and above (10 points). The number of male and female students participating in the mobility will be equal, and disadvantaged students will be given priority in case of equality in points. The participant selection commission determines the teachers who will accompany our students; -Being a teacher in the branch of science, which is the theme of the mobility activities (prerequisite) -Not participating in any Erasmus+ transnational mobility in the previous period of our project (50 points) - Making an active participation commitment in the project activities to be carried out in our schools during and after the mobility (30 points) -To be able to prove at least B1 level proficiency in English communication skills(20 points)

Explain how is this activity going to help to reach the project objectives.

The project partner institution, which will host the transnational project activity, will organize various events during the mobility to transfer their experience about the STEAM science field activities that they have completed in the previous period. With the information, presentations and question and answer activities that the host institution will make during the first two days, the participants will discover the relationship between the scientific knowledge they learned at school in the field of science and the areas of use in daily life. In this way, scientific knowledge will no longer be abstract for our students, participants will accept embodied knowledge much faster and more effectively, and their learning will become permanent. These activities, which will be held in the first two days of the mobility, will make a significant contribution to the achievement of the goal of "increasing the academic achievement of 17% by at least 5% at the end of 20 months". With the workshop activities to be held on the next days of the mobility, the participants will participate in activities related to the fields of use of

the scientific knowledge they will acquire. In the workshops where the participants will be divided into homogeneous groups, they will be asked to solve a hypothetical problem posed by a STEAM field activity, which will be presented practically. In the workshops that the participants will carry out by working together as a team, they will take active roles and responsibilities in activities that will directly contribute to the achievements of the following objectives: "Increasing the problem-solving skills of the students based on the cause-effect relationship by at least 10% with methods and practices that will increase their creative and critical thinking skills." and "The students take an active role in the team, in peace with their peers, and thus grow up as individuals who are more compatible with their social environment".

Describe the expected results of the activity.

Expected results for our participating students -They will be able to associate the targeted knowledge in the field of science with the events and phenomena they encounter in their environment. - The information to be presented with concrete materials will become meaningful. They will reach new and more complex information by starting from the existing knowledge. - Our students will realize that it is a more entertaining method to discover with their efforts instead of trying to absorb the information presented. Our students, who will learn by taking responsibility and making efforts in teamwork, will grow up as individuals who are more sensitive and respectful to their social environment. Expected results for our accompanying teachers - They will learn about STEAM education model applications applied in their field, with results of quantitative and qualitative measurement tools. -They will be able to design their own activities by benefiting from their experiences. They will have the opportunity to share ideas and opinions in the field of science education with their colleagues from abroad. - Our teachers, who will observe the methods, techniques and approaches included in the education by the teachers of the host institutions during the activities, will be able to synthesize the knowledge and skills they will acquire with their previous professional knowledge and create their own teaching approaches. Expected Results for Our Participating Schools -Our schools, which will have the experience of conducting an international project on the STEAM model, which is called the education model of the 21st century by many expert pedagogues, will be able to increase their institutional capacity and teacher competencies in the field of STEAM. With the STEAM model, we will be able to increase the quality of the education we offer in our schools, and our schools will become educational centres where more entertaining learning activities are carried out for our students.

Please provide a breakdown of the estimated costs for the activity.

In the preparation of the mobility budget, the expenditures included in the Erasmus+ Program Guide were taken into account. In determining the total mobility budget:

1. Participants' individual support budgets:

*Meeting accommodation and catering expenses. *Interim transfer expenses. *Purchase of disposable sim cards from mobile operators in the destination country.

2. Organization support budgets of participating schools:

* Covering unforeseen expenses during mobility. *Passport fee and travel insurance coverage. *Purchase of necessary consumables for dissemination activities after mobility.

3. Organization support budget of the host institution: *Performing the interim transfers of the participants with insured vehicles. *Purchasing the necessary consumables for the workshops.

4. Travel budgets: *Purchase of plane tickets. A total of 12 students and 4 teachers from 2 participating schools will take part in the mobility, which is planned to last 5 (+2 days of travel). When calculating the total individual support budgets: $12 \times 79 = 948$ Euros 1-day individual support budget of 12 students. $7 \times 948 = 6.636$ Euro 7-day individual support budget for 12 students. $4 \times 105 = 420$ Euros 1-day individual support budget for 4 teachers. $7 \times 420 = 2.940$ Euro 7-day individual support budget for 4 teachers. $12 \times 275 = 3300$ Euro Travel budget of 12 students. $4 \times 275 = 1100$ Euro Travel budget of 4 teachers. 13,976 Euro total individual support and travel budget for all participants. The current ticket prices of the airlines were calculated for the purchase of the airline tickets of the participants. If there is a difference between the date of the mobility and today's ticket prices, a reserve budget of 500 Euro will be transferred to the participating schools so that they can use it. $13.976 + 1000 = 14.976$ Euros. 1,500 Euro for the organization support budget of the participating schools (Unforeseen expenses, passport fee of participants, comprehensive travel insurance and post-mobility dissemination consumables expenses) are planned. $14.976 + 3000 = 17.976$ Euro Host institution organization. A budget of 1824 Euros (unforeseen expenses, interim transfers of participants, post-mobility dissemination consumables expenses) is planned for the support budget. With the sum of the budget items mentioned above, 19.800 Euro has been calculated as the planned budget expenditure for the Science in Nature mobility.

Grant amount allocated to the activity (EUR)

19 800,00 €

Activity Details (Ready or not, here I come Math)

Please complete the following table

Activity Title	Ready or not, here I come Math
Venue	Razgrad-Bulgaria
Estimated start date,	14/01/2023
Estimated end date,	18/01/2023
Leading Organisation,	Kaanland EOOD
Participating Organisations	Pamukoren Ortaokulu (Turkey) Elementary school Branko Radicevic (Serbia)
<u>Grant amount allocated to the activity (EUR)</u>	19 800,00 €

Describe the content of the proposed activity.

The second part transnational mobility activities of our project will be hosted by our school Kaanland EOOD. With the participation of 6 students and 2 teachers from the project partner institutions in the training and workshop that will last for 5 days, information will be given about the projects, activities and in-class activities that our school carried out in the previous period. In the last 3 days of the mobility, the participants will work in homogeneous groups in the context of a hypothetical problem or need, and they will be asked to produce solutions to the given problem in common mind and cooperation. It was decided that the content of the mobility activity plan would be as follows: Day 1 Meeting, the introduction of the school building and ice-breaking activities. Presentation of host institution's STEAM experiences in science. 2nd-day Information meeting, presentation and question and answer activities about events and phenomena related to simple physics principles that we frequently encounter in daily life. 3rd day Water Bridge Event; associating linear equations and graphs with slope. Workshops; relief maps, calculation of the projected and non-projected area of rough geography. 4th day Courier activity; finding the interior volumes of the cube, cylinder, sphere and prism-shaped boxes. Workshops; calculation of the maximum number of objects that can be placed in boxes of different sizes and shapes. 5th-day Catapult event; the study of the motion of objects under the influence of force. Workshops; catapult making. Calculation of tension force, determination of friction force effects on moving objects.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results?

In determining participant students and teachers, our participant selection commissions will also consider the selection criteria determined by the project management team. The prerequisite of being a mathematics branch teacher will be sought in the determination of participating teachers in the field of STEAM model mathematics applications, which is the subject of project mobility. A total of 12 students who will take part in the mobility will take the task and responsibility to ensure that their friends benefit from the project results with the peer teaching method in the workshops and in-class activities to be carried out locally after the mobility, and they will help to keep the number of people benefiting from the project results at the maximum level. Our participating teachers will enable their colleagues to gain knowledge and experience about mobility activities through the integration of the achievements to be carried out locally after the mobility into in-class activities. It is envisaged that all of our students studying at our school will benefit from the results of our project, with the achievements of transnational activities to be implemented in in-class activities and workshops. Mathematics teachers, students and administrators of other secondary schools in the vicinity will be invited officially to the information seminars to be organized by each school after the mobility. Information seminars, which will directly serve to increase the visibility and awareness of our project, will also increase the number of people benefiting from the mobility results.

Explain how is this activity going to help to reach the project objectives.

In our Science in Nature events, the experiences of our host school in the field of science, the STEAM model, whose positive effects on students were determined by quantitative and qualitative measurement tools, will be presented to the participants. In the first two days of the mobility, the participants will discover the relationship of scientific knowledge learned in classroom activities with real life, with activities such as presentation, information meeting and question-answer. Learning will become permanent for our students who can make sense of the information and associate it with different information. In this way, a direct contribution will be made to the goal of "Increasing the academic achievement, which is 17% in basic courses, by at least 5% at the end of 20 months". Participants will also gain the motivation they will need to use, deepen and adapt the scientific knowledge they will gain through their experiences in the workshops and in-class activities we will conduct locally after the mobility. In the next days of the mobility activities, our students will be divided into homogeneous groups and will participate in the workshops, and will try to find a solution to a given problem by using the available knowledge. During the activities, our students will use the wisdom of the crowd method even if they are not aware of it, they will exchange ideas with their peers from different cultures, discuss and find the most accurate solution. We think that the workshop activities will directly contribute to the achievement of the following project goals: "Increasing the problem-solving

skills of the students based on cause-effect relationship by at least 10% with methods and practices that will increase their creative and critical thinking skills" and " With the wisdom of the crowd method, the students take an active role in the team, in peace with their peers, and in this way, they grow up as individuals who are more compatible with their social environment."

Describe the expected results of the activity.

Expected results for our participating students - Students who have difficulties in learning concepts containing abstract information in the field of mathematics will gain the motivation they need to embody the target information and explore it themselves. They will realize that mathematics is a common language spoken by the whole world. They will be motivated to improve their knowledge of mathematics, which is limited only to their problem-solving abilities. -they will be able to relate their knowledge to events and phenomena in their immediate surroundings. Mathematics will become more meaningful. - They will be able to perform teamwork by experiencing a sense of belonging with their peers who have grown up in different educational cultures. Expected results for our accompanying teachers - they will be able to guide their students much more effectively in teaching mathematics lessons. -They will be able to focus the attention of students with learning difficulties on mathematics by concretizing abstract information. -They will be able to create eclectic teaching approaches by synthesizing the pedagogical knowledge and skills they will gain through their transnational experience with their own experiences. -They will have the knowledge, skills and experience to design their own STEAM activities in in-class activities after mobility. The professional motivation of our teachers, who will include more STEAM applications, will increase. Our teachers, who will have the opportunity to communicate and interact with their colleagues from abroad, will deepen their knowledge of different educational cultures. Expected Results for Our Participating Schools - With the privilege of Erasmus+ programs, our schools will become more known and preferred educational institutions in their immediate surroundings. -With international project management experience, our schools will have the motivation they need to take part in more comprehensive international projects in the coming years.

Please provide a breakdown of the estimated costs for the activity.

In the preparation of the mobility budget, the expenditures included in the Erasmus+ Program Guide were taken into account. In determining the total mobility budget:

1. Participants' individual support budgets:

*Meeting accommodation and catering expenses. *Interim transfer expenses. *Purchase of disposable sim cards from mobile operators in the destination country.

2. Organization support budgets of participating schools:

* Covering unforeseen expenses during mobility. *Passport fee and travel insurance coverage. *Purchase of necessary consumables for dissemination activities after mobility.

3. Organization support budget of the host institution: *Performing the interim transfers of the participants with insured vehicles. *Purchasing the necessary consumables for the workshops.

4. Travel budgets: *Purchase of plane tickets. A total of 12 students and 4 teachers from 2 participating schools will take part in the mobility, which is planned to last 5 (+2 days of travel). When calculating the total individual support budgets: $12 \times 79 = 948$ Euros 1-day individual support budget of 12 students. $7 \times 948 = 6.636$ Euro 7-day individual support budget for 12 students. $4 \times 105 = 420$ Euros 1-day individual support budget for 4 teachers. $7 \times 420 = 2.940$ Euro 7-day individual support budget for 4 teachers. $12 \times 275 = 3300$ Euro Travel budget of 12 students. $4 \times 275 = 1100$ Euro Travel budget of 4 teachers. 13,976 Euro total individual support and travel budget for all participants. The current ticket prices of the airlines were calculated for the purchase of the airline tickets of the participants. If there is a difference between the date of the mobility and today's ticket prices, a reserve budget of 500 Euro will be transferred to the participating schools so that they can use it. $13.976 + 1000 = 14.976$ Euros. 1,500 Euro for the organization support budget of the participating schools (Unforeseen expenses, passport fee of participants, comprehensive travel insurance and post-mobility dissemination consumables expenses) are planned. $14.976 + 3000 = 17.976$ Euro Host institution organization. A budget of 1824 Euros (unforeseen expenses, interim transfers of participants, post-mobility dissemination consumables expenses) is planned for the support budget. With the sum of the budget items mentioned above, 19.800 Euro has been calculated as the planned budget expenditure for the Ready or not, here I come Math mobility.

Grant amount allocated to the activity (EUR)

19 800,00 €

Activity Details (The motion of the technology)

Please complete the following table

Activity Title	The motion of the technology
Venue	Aydin-Turkey
Estimated start date,	15/07/2023
Estimated end date,	19/07/2023
Leading Organisation,	Pamukoren Ortaokulu (Turkey)
Participating Organisations	Elementary school Branko Radicevic (Serbia)
	Kaanland EOOD (Bulgaria)
<u>Grant amount allocated to the activity (EUR)</u>	19 800,00 €

Describe the content of the proposed activity.

The third part transnational mobility activities of our project will be hosted by our Turkish partner Pamukoren Ortaokulu. With the participation of 6 students and 2 teachers from the project partner institutions in the training and workshop that will last for 5 days, information will be given about the projects, activities and in-class activities carried out by our host partner in the previous period of our project. In the last 3 days of the mobility, the participants will work in homogeneous groups in the context of a hypothetical problem or need, and they will be asked to find solutions to the given problem in cooperation. It was decided that the content of the mobility action plan would be as follows: Day 1: Introductory meeting, the introduction of the school building and ice-breaking activities. Presentation of the host institution's STEAM experiences in the technology and design discipline. 2nd day: Information meeting, presentation and question and answer activities on the working principles of simple technologies that we often encounter in daily life and their relationship with STEAM lessons. 3rd day: Smart curtain; light sensor, digital thermometer and engine trigger switch systems workshops; Participants will develop smart curtains by bringing the systems together. 4th day Red light alarm; sensor, timer and sound warning systems Workshops; participants to develop an audio warning system for visually impaired individuals. 5th day: Movable arms; to give movement to the articulated parts using water, injector and IV hose. Workshops; Participants will design a model based on a problem related to the usage areas of movable arms.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results?

In determining participant students and teachers, our participant selection commissions will also consider the selection criteria determined by the project management team. The prerequisite of being a branch teacher will be sought in the determination of participating teachers in the field of STEAM model mathematics applications, which is the subject of project mobility. A total of 12 students who will take part in the mobility will take the task and responsibility to ensure that their friends benefit from the project results with the peer teaching method in the workshops and in-class activities to be carried out locally after the mobility, and they will help to keep the number of people benefiting from the project results at the maximum level. Our participating teachers will enable their colleagues to gain knowledge and experience about mobility activities through the integration of the achievements to be carried out locally after the mobility into in-class activities. It is envisaged that all of our students studying at our school will benefit from the results of our project, with the achievements of transnational activities to be implemented in in-class activities and workshops. Technology and design teachers, students and administrators of other secondary schools in the vicinity will be invited officially to the information seminars to be organized by each school after the mobility. Information seminars, which will directly serve to increase the visibility and awareness of our project, will also increase the number of people benefiting from the mobility results.

Explain how is this activity going to help to reach the project objectives.

In our The motion of the technology events, our project partner Pamukoren Ortaokulu will try to convey to our participating teachers and students their experiences about the activities that our project successfully carried out in the field of technology and design in the previous term. The experience gained through the activities carried out by the host institution using the STEAM model will be tried to be conveyed to the participants in the first two days of the mobility through various presentations, seminars and question-answer methods. In these activities, the participants will discover the relationship between the scientific knowledge tried to be taught in the technology and design course and the areas of use in daily life, they will make sense of the information to be presented by concretizing, and thus their learning will become permanent. These activities, which will be held in the first two days of the Technology Movement, will directly contribute to the goal of "increasing the academic success of our students, which is 17%, by at least 5% at the end of 20 months." In the next days of the mobility, they will be divided into homogeneous groups, working together with their peers from different cultures to try to find a solution to a presented problem. The workshops will enable the participants to access new information by building on existing knowledge. The workshops to be held under the guidance of the host school will provide the necessary motivation for the students to achieve the following goals of the project:" Increasing students' problem-solving skills based on cause

and effect relationship by at least 10% with methods and practices that will increase their skills." and " With the wisdom of the crowd method, the students take an active role in the team, in peace with their peers, and in this way, they grow up as individuals who are more compatible with their social environment."

Describe the expected results of the activity.

Expected results for our participating students -Our students who will realize that technology and design course is not just a curriculum taught in schools, will also be able to establish a relationship between the course content and its environment. - They will be able to find simple solutions to the problems they encounter frequently by using their creativity. Our students, who will learn to look at their environment from a critical perspective, will learn to take advantage of the opportunities offered by technology more intelligently. - They will learn that they can use it for different purposes when they reach it by their efforts, by researching, observing and making effort, instead of memorizing the ready information that is doomed to be forgotten. They will realize the importance of working in teams and together, putting aside their cultural, social and economic differences towards a common problem. Expected results for our accompanying teachers -They will be able to design activities that will improve students' creativity and critical thinking skills during learning processes. They will include more activities like that in in-class activities and they will be able to reach more students. -Our teachers, who will observe the STEAM model applications in the technology design field of the host school, will be able to create their teaching approaches by making use of these experiences after the mobility. - They will come together with their colleagues from different educational cultures, and our teachers will be able to share their professional knowledge and experience, and exchange ideas about event design. Expected Results for Our Participating Schools - With the privilege of Erasmus+ programs, our schools will become more known and preferred institutions in their immediate surroundings. -With international project management experience, our schools will have the motivation they need to take part in more comprehensive international projects in the coming years.

Please provide a breakdown of the estimated costs for the activity.

In the preparation of the mobility budget, the expenditures included in the Erasmus+ Program Guide were taken into account. In determining the total mobility budget:

1. Participants' individual support budgets:

*Meeting accommodation and catering expenses. *Interim transfer expenses. *Purchase of disposable sim cards from mobile operators in the destination country.

2. Organization support budgets of participating schools:

* Covering unforeseen expenses during mobility. *Passport fee and travel insurance coverage. *Purchase of necessary consumables for dissemination activities after mobility.

3. Organization support budget of the host institution: *Performing the interim transfers of the participants with insured vehicles. *Purchasing the necessary consumables for the workshops.

4. Travel budgets: *Purchase of plane tickets. A total of 12 students and 4 teachers from 2 participating schools will take part in the mobility, which is planned to last 5 (+2 days of travel). When calculating the total individual support budgets: $12 \times 79 = 948$ Euros 1-day individual support budget of 12 students. $7 \times 948 = 6.636$ Euro 7-day individual support budget for 12 students. $4 \times 105 = 420$ Euros 1-day individual support budget for 4 teachers. $7 \times 420 = 2.940$ Euro 7-day individual support budget for 4 teachers. $12 \times 275 = 3300$ Euro Travel budget of 12 students. $4 \times 275 = 1100$ Euro Travel budget of 4 teachers. 13,976 Euro total individual support and travel budget for all participants. The current ticket prices of the airlines were calculated for the purchase of the airline tickets of the participants. If there is a difference between the date of the mobility and today's ticket prices, a reserve budget of 500 Euro will be transferred to the participating schools so that they can use it. $13.976 + 1000 = 14.976$ Euros. 1,500 Euro for the organization support budget of the participating schools (Unforeseen expenses, passport fee of participants, comprehensive travel insurance and post-mobility dissemination consumables expenses) are planned. $14.976 + 3000 = 17.976$ Euro Host institution organization. A budget of 1824 Euros (unforeseen expenses, interim transfers of participants, post-mobility dissemination consumables expenses) is planned for the support budget. With the sum of the budget items mentioned above, 19.800 Euro has been calculated as the planned budget expenditure for The motion of the technology mobility.

Grant amount allocated to the activity (EUR)

19 800,00 €

Activity Details (Art in everywhere)

Please complete the following table

Activity Title	Art in everywhere
Venue	Bujanovac-Serbia
Estimated start date,	15/07/2023
Estimated end date,	26/07/2023
Leading Organisation,	Elementary school Branko Radicevic (Serbia)
Participating Organisations	Pamukoren Ortaokulu (Turkey) Kaanland EOOD (Bulgaria)
<u>Grant amount allocated to the activity (EUR)</u>	300,00 €

Describe the content of the proposed activity.

One of our project partners, Branko Radicevic, will lead participating schools in our virtual mobility. Online meetings will be held via zoom with screen sharing and free (40 minutes) features. Announcements and information about the online meetings to be organized by our project partner will be made through the project management team WhatsApp group and our project's social media accounts. Content of virtual mobility meetings: 15 August 2023; The Fibonacci Art Project (golden ratio) will be organized in 3 sessions (40+40+40 minutes). How to reach the golden ratio with Fibonacci numbers? Why is the golden ratio more pleasing to the eye? -What kinds of artworks can we design using Fibonacci numbers? - Artworks made in history with the golden ratio. -Coloring activities using Fibonacci numbers. August 18, 2023: It will be held in 2 sessions (40+40 minutes). Video and photo demonstrations of the works made by the participants in the art workshops. August 22, 2023; Pendulum Painting Project will be organized in 2 sessions (40+40 minutes). -What is pendulum momentum? -How to make a pendulum? -Introducing the painting activity using a pendulum. May 26, 2023: It will be held in 2 sessions (40+40 minutes). - Sharing of the visuals and videos of the participants' works in the art workshops.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results?

It is planned that 10 students and 2 teachers from each partner school will participate in our Art Everywhere virtual mobility. In total, 30 students and 6 teachers will be the direct beneficiaries of the virtual mobility. However, it is planned to increase the number of beneficiaries to the maximum level by publishing the videos and visuals of the online meetings and the workshops to be carried out afterwards on our project's social media accounts, on our youtube channel and on our project's website. In addition to digital platforms, we plan that our students at all levels of education in our schools will be beneficiaries with the visual sharing of the implementation stages of the Fibonacci art and pendulum painting projects and the exhibition of the products to be produced by our students in the Erasmus+ corners to be established on the ground floor of the main buildings of our schools.

Explain how is this activity going to help to reach the project objectives.

In online meetings and workshops to be held in our schools afterwards, the participants will discover the targeted knowledge by doing and experiencing it. Our students, who will work together with their peers in the workshops, will be able to help each other to discover the targeted information and will be able to produce a product by working together. Workshops and virtual mobility will directly contribute to the achievement of our following goals." Uncovering and supporting the artistic side of students." and "Increasing students' problem-solving skills based on cause-effect relationships by at least 10% through methods and practices that will increase their creative and critical thinking skills"

Describe the expected results of the activity.

Expected results for our participating students: -They will experience the laws of momentum and motion. They will know what Fibonacci numbers are and for what purpose they are used. They will know what the golden ratio is and how it is calculated. -They will be able to search for the golden ratio in the works of art they come across.

Please provide a breakdown of the estimated costs for the activity.

Each institution will be provided with an expenditure budget of 100 Euros for the 2 engineering projects that constitute the subject of our virtual mobility. Schools have these budgets: Fibonacci Art Project -Watercolor sets (10 pieces) -Watercolor brush sets (10 pieces) -25X35 120 gr drawing paper (100 pieces) Pendulum Painting Project -70X100 120 gr drawing paper (100 pieces) -24 pieces crayons (10 units)

Grant amount allocated to the activity (EUR)

300,00 €

Activity Details (Our world is a machine)

Please complete the following table

Activity Title	Our world is a machine
Venue	Aydın-Turkey
Estimated start date,	19/08/2023
Estimated end date,	30/08/2023
Leading Organisation,	Pamukoren Ortaokulu (Turkey)
Participating Organisations	Elementary school Branko Radicevic (Serbia)
	Kaanland EOOD (Bulgaria)
<u>Grant amount allocated to the activity (EUR)</u>	300,00 €

Describe the content of the proposed activity.

One of our project partners, Pamukoren Ortaokulu, will lead participating schools in our virtual mobility. Online meetings will be held via zoom with screen sharing and free (40 minutes) features. Announcements and information about the online meetings to be organized by our project partner Pamukoren Ortaokulu will be made through the project management team WhatsApp group and our project's social media accounts. Content of virtual mobility meetings: 19 August 2023; Wind Rose Generator Project will be organized in 2 sessions (40+40 minutes). How can motion energy be converted into electrical energy with wind roses? - Similarities with modern wind turbines. -What kind of tools can we use to make a functional wind rose generator? -What kinds of devices can we power with a functional wind rose generator? It will be held on 23 August 2023 in 2 sessions (40+40 minutes). Sharing of the visuals and videos of the participants in the school workshops for the production of windmill generators. 26 August 2023; The Mini Robot Insect Project will be organized in 2 sessions (40+40 minutes). - Demonstration of animations about the movement ability of the ladybug. -How can an animated ladybug model be made with simple tools? It will be held on 30 August 2023 in 2 sessions (40+40 minutes). Sharing of the visuals and videos of the participants in the school workshops for the production of the ladybug model.

Describe the target group for this activity. Who is going to take part and who is going to benefit from the results?

Our World is a Machine virtual mobility is planned to be attended by 10 students and 2 teachers from each project partner school. In total, 30 students and 6 teachers will be the direct beneficiaries of the virtual mobility. However, it is planned to increase the number of beneficiaries to the maximum level by publishing the videos and visuals of the online meetings and the workshops to be carried out afterwards on our project's social media accounts, on our youtube channel and our project's website. In addition to digital platforms, we plan that our students at all levels of education in our schools will be beneficiaries, with the sharing of drafts of windmill generator and mini robot insect projects in the Erasmus+ corners to be established on the ground floor of the main buildings of our schools, and the exhibition of the products to be produced by our students.

Explain how is this activity going to help to reach the project objectives.

In online meetings and workshops to be held in our schools afterwards, the participants will discover the targeted knowledge by doing and experiencing it. Our students, who will work together with their peers in the workshops, will be able to help each other to discover the targeted information and will be able to produce a product by working together. Workshops and virtual mobility include practices that will directly contribute to the achievement of our goal "to increase students' problem-solving skills based on cause and effect relationship by at least 10% with methods and practices that will increase their creative and critical thinking skills".

Describe the expected results of the activity.

Expected results for our participating students: They will learn by seeing, experiencing and doing the followings:
 -Energy can be produced using nature's own motions,
 -Conductive and insulating materials to be used in the transmission of the energy to be produced with the windmill generator,
 -practices for the use of the generated electrical energy,
 -Momentum tools to move a joint with the mini robot insect project.

Please provide a breakdown of the estimated costs for the activity.

Each institution will be provided with an expenditure budget of 100 Euros for the 2 engineering projects that constitute the subject of our virtual mobility. Schools will use these budgets for the purchase of the following materials: Wind Vane Generator Project -10 3v-6v DC electric motors, -Conductive wire, -Glue, -Plastic blade, -Purchase of wooden pedestals.

Mini Insect Robot Project -10 pcs 1.5 v Dc mini electric motor.- Conductor wire. -20 leds, -10 toothbrushes, - Paperclips.

Grant amount allocated to the activity (EUR)

300,00 €

Budget Summary

This section provides a summary of the estimated project budget. The table is automatically completed taking into account the described project activities and their estimated cost.

Activities	Grant amount allocated to the activity (EUR)
Science in the Nature	19800.0
Ready or not, here I come Math	19800.0
The motion of the technology	19800.0
Art in everywhere	300.0
Our world is a machine	300.0
Total (EUR)	60000.0
Project Lump sum	60000

Impact and Follow-up

How will you know if the project has achieved its objectives? What tools or methods will you use?

Achieving project objectives largely depends on the successful completion of project activities. Therefore, each school that forms our partnership will form an activity evaluation unit consisting of mathematics, science and technology design teachers during the preparation phase of our project. The project evaluation units will be led by our project partner Branko Radicevic evaluation unit, which has experienced teachers in the dissemination units of Erasmus+ projects in the past years. The activity evaluation units, which will organize monthly online skype meetings, will decide on the measurement tools and scales necessary to determine the success of the completed project activities, and together they will make the necessary arrangements in the measurement tools according to the content of the activity and the quality of the targeted achievements. Tools to be used to determine the extent to which the project objectives have been achieved: 1. Increasing the academic achievement, which is 17% in basic courses, by at least 5% at the end of 20 months. -Comparison of the academic success averages of the participants in the basic courses before and after our project. 2. To increase students' problem-solving skills based on cause-effect relationships by at least 10% with methods and practices that will increase their creative and critical thinking skills. - Observing the participation of the participants in in-class activities and creating student follow-up lists to be prepared for this purpose. 3. With the wisdom of the crowd method, the students take an active role in harmony with their peers in the team and thus become more adaptable to their social environment. -Student observation reports to be prepared by the teachers responsible for the activities in team activities. 4. Revealing and supporting the artistic aspects of students. -The rubric evaluation results of the works to be created by the students in the art classes. Tools to be used in the evaluation of transnational mobility activities: 1. Analysis of the activity logs, which will explain in detail how the participant students should be prepared with the information meetings to be held before the mobility. 2. Student follow-up lists to be prepared separately for each student by the responsible teachers of the schools that will host the mobilities. 3. Comparison of the first test and post-test questionnaires to be applied to students before and after the mobility. 4. Progress reports to be prepared separately for each participant by the accompanying teachers. Tools to be used in the evaluation of Science and Technology Club activities: 1. Rubrics arranged according to target achievements to be used in the evaluation of the products produced by the workshops. 2. Monthly and end-of-term evaluation reports to be prepared by the social club counsellor. In-class activities: 1. Organized rubrics that are specific to the targeted outcome.

How will the participation in this project contribute to the development of the involved organisations in the long-term? Do you have plans to continue using the results of the project or continue to implement some of the activities after the project's end?

The schools that will be partners in our project have done their studies in the field of the STEAM model and demonstrated the expected development in students by using quantitative and qualitative observation tools to determine the extent to which the desired goals have been achieved through the activities. All of our project partners have gained competence in a different STEAM field in the previous period of our project. Our project will provide all our partners with the necessary motivation and ground to benefit from the experience of other project partners. Activities and workshops will be carried out for all disciplines covered by the STEAM education model with the virtual mobility to be made after the transnational mobility, and the teacher competencies of all the schools in our partnership will be developed. Our teachers, who will take part in the online preparatory meetings before the mobility, during the mobility activities and in the virtual mobility, will have the opportunity to share experiences, exchange ideas and express opinions with their colleagues who are serving in different educational cultures. Our teachers will be able to design and implement their STEAM activities with the opportunity offered by this communication and interaction with their colleagues at partner institutions. For the results and gains to be obtained with our project to continue in the next period of our project; our teachers will carry out the following integration studies: 1. Integration of STEAM model applications into the annual program of the Science and Technology Club. Social clubs, which is one of the established practices of the schools that make up our partnership, will provide us with the legal basis necessary for the continuation of the results of our project. We plan to integrate at least 10 STEAM applications into the annual programs of the Science and Technology Club, which are already in existence within each project partner school. 2. We plan to integrate at least 10 STEAM activities into each of the annual plans of the courses covered by the STEAM model (science, technology, design, art, and mathematics) and update them in line with the purposes of our project. 3. 10 daily lesson plans with STEAM activities will be created for each of the disciplines of science, technology, design, art and mathematics. Each of the project partners will prepare their daily plan archive. In this way, we will have an archive containing the 120-day lesson plan. Our branch teachers will be able to benefit from this archive in daily in-class activities and will have a reliable source they can refer to for new and original activity design. After the completion of our project, our project website and social media accounts will continue to be accessible for at least 3 years, and sharing on local events to be held within the scope of sustainability will be made on these platforms. Each partner school will be able to apply for their own STEAM Erasmus+ KA 220 project.

Please describe your plans for sharing and use of project results.

- How will you make the results of your project known within your partnership, in your local communities and in the wider public? Who are the main target groups you would like to share your results with?
- Are there other groups or organisations that will benefit from your project? Please explain how.

To share the project results among the project partners, local communities and wider communities, "Project Dissemination Units", which will be formed by 3 teachers who can use the internet and social media very well, will be assigned by each partner school. The teachers of school Branko Radicevic, who were involved in the dissemination units in the Erasmus+ projects they took part in previously, will guide the other units with their experiences. Dissemination activities to be carried out in our schools forming our partnership: -April 2022; project introduction meetings. All partner schools will inform the participants about the purpose, objectives, content and results of our project with an introductory meeting to be held in the conference halls of the schools on April 2022, the date when our project will officially start. All the teachers in our schools, as well as the administrators and teachers of private and public secondary schools providing education services in our immediate surroundings and the local media will be invited to the meeting. -May 2022; Organization of Erasmus+ corners. All partner schools will create an Erasmus+ corner on the ground floor of their main building. They will keep this area open throughout our project and activity announcements and visuals will be shared there. May 2022; Project posters. Project posters of 120x240 cm will be hung on the front of the main buildings of the schools. Dissemination activities to be carried out locally: -May 2022; Printing and distribution of project brochures. The project partner will print and distribute a summary of every joint project, its aims, objectives, a brief summary of activities and expected results (200 copies) in their local language. -August 2022, February 2023, June 2023; mobility seminars. The experiences of our accompanying teachers will be conveyed to the participants with the seminars to be held in the conference halls of our schools after the transnational mobility. -July 2023, August 2023; webinars. After the virtual activities, the participants will be informed about the virtual activities via the zoom link. Dissemination studies to be carried out in the national area: -May 2022; Creation of social media accounts. Facebook, Twitter, Instagram and Youtube accounts bearing the name of our project will be opened to access. During the whole project, sharing will be made about the activities. -September 2023; Uploading our project idea outputs to EBA. The updated science and technology social club annual program, annual lesson plans, annual lesson plans and daily lesson plan archive will be published on EBA. Dissemination studies to be carried out at the European level: -June 2022; Launch of our eTwinning project. -July 2022; creating of our website bearing the name of our project. -October 2023; Publication of our e-journal bearing the name of our project.

Project Summary

Please provide a short summary of your project. Please be aware that this section (or part of it) may be used by the European Commission, Executive Agency or National Agencies in their publications. It will also feed the Erasmus+ Project Results Platform.

In view of further publication on the Erasmus+ Project Results Platform, please also be aware that a comprehensive public summary of project results will be requested at report stage(s). Final payment provisions in the contract will be linked to the availability of such summary.

Objectives: What do you want to achieve by implementing the project?

- Boosting the academic success of 17% in basic courses by at least 5% at the end of 20 months. -To boost students' cause-effect-based problem-solving abilities by at least 10% with activities that will develop their creative and critical thinking skills. -Using the wisdom of the crowd, students take an active role with their peers in harmony and grow up as individuals who are more compatible with their social environment. -Bringing to light and supporting the artistic side of the students.

Implementation: What activities are you going to implement?

There will be 3 physical and 2 virtual mobilities in our project, each of them is dedicated to a different STEAM discipline. - Dissemination activities for sharing the knowledge, experience, and practices, gained through mobilities, with mass audiences. - To adapt the educational methods and practices, which will be obtained with our project, to the curriculum, annual lesson plans, daily lesson plans and social club programs, integration studies will be conducted.

Results: What results do you expect your project to have?

With our project, our students:-Will have the ability to relate the abstract concepts, contained in the basic lessons, with the objects around them, materialize the target knowledge and their learning will be permanent. -Will be able to solve a problem by thinking creatively and critically. Our teachers: -Will be able to integrate STEAM model practices into in-class activities.-Will synthesize project experience with their previous technical knowledge and create their unique eclectic approach.

Annexes

The maximum size of a file is 15 MB and the maximum total size is 100 MB.
The maximum number of all attachments is 100.

Declaration on Honour

Please download the Declaration on Honour, print it, have it signed by the legal representative and attach.

File Name	File Size (kB)
DOH -declaration-on-honour (2).pdf	294
Total Size (kB)	294

Mandates

Please download the mandates, have them signed by the legal representatives and attach them here. You can add a maximum of 90 documents.

Please ensure that mandates are valid before submitting them to the National Agency. Mandates shall be provided at the latest before the signature of the grant agreement.

File Name	File Size (kB)
MAN -Kaanland EOOD (1).pdf	451
MAN -mandate-partner TR.pdf	530
Total Size (kB)	982

Other Documents

Please attach any other relevant documents, maximum 9. Please use clear file names.

If you have any additional questions, please contact your National Agency. You can find their contact details here: [List of National Agencies](#).

File Name	File Size (kB)
Total Size (kB)	0
Total Size (kB)	1276

Checklist

Before submitting your application form to the National Agency, please make sure that:

- It fulfills the eligibility criteria listed in the Programme Guide.
- All relevant fields in the application form have been completed.
- You have chosen the correct National Agency of the country in which your organisation is established. Currently selected NA is: BG01 - Human Resource Development Centre (HRDC)

PROTECTION OF PERSONAL DATA

Please read our privacy statement to understand how we process and protect [your personal data](#)

Submission History

Version	Submission time (Brussels time)	Submitted by	Submission ID	Submission status
2	02/11/2021 23:26:51	Ari Ali	1295866	Submitted
1	02/11/2021 22:44:45	Ari Ali	1295788	Submitted