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## INVITATION FOR STUDENTS TO PARTICIPATE IN A PROJECT

The topic of this call is the selection of students to participate in mobility in Poland, Spain and Serbia within the project "From game to STEM" which is co-financed by the Erasmus + project of the EU.

Selected students will have the opportunity to stay in one of the countries and participate in the activities provided by the program. By countries the topics are:

- Serbia-physics and math
- Spain-chemistry
- Poland-biology

**Terms:**

- **Mobility** - Erasmus + allows students to go on student exchanges and student internships that can be realized in any country participating in the program.
- **eTwinning** - eTwinning is a community of schools in Europe that offers a platform for educational activities (social network for schools).

The project will be implemented during 2020/2022. Years and approved is for funding under the Erasmus + program of the European Union.

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## ***More about mobilities***

### **Physics and math, Zaječar Serbia**

During five days students will learn on following topics:

- How to use household items for physics experiments (corrugated tube, bottles, guitars...)
- Treasure hunt with math (creating problems that include encrypting, linear equation, geometry...)
- Games to be used in physics and math classes
- Cell phone as tool in class
- Math is everywhere (application of math in nature, traffic, solving Fermi's problems, statistic, origami...)
- How to held a good workshop (advises from experienced teachers)
- Students will present their schools to other classes.

Team building will be organised at begging. Students will work in mixed teams (one form each country). During the mobility they will start working on ideas for two products: Creating physics experiment to be done by the whole class back home and Creating a treasure hunt game with problems from math. After mobility they will continue the work together on Twinning finishing their plans.

### **Biology and ecology, Suwalki, Poland**

The participants will focus on water issues. The students will take part in workshops in Wigry National Park and Suwalki Landscape Park labs and analyze the water characteristics from various lakes, compare the findings and analyze the connection of water properties with the fauna and flora in every lake. After the workshops in Poland the partners schools will analyze the water in the lakes or rivers in their regions and publish the findings on Twinspace.

The students will analyze a list of endangered species in Poland and find out if they are present in Suwalki region. Later the students will prepare a list of endangered species common in each partner's country.

The students will visit the landfill site and a sewage treatment plant to experience the recycling and purifying water following the workshops on how much waters is used every day by individuals. They are also going to analyze how much water is used to produce various items i.e. a T-shirt, 1 kg of beef etc. and how much water we could save by changing our lifestyle. The students will prepare and play a scavenger hunt to tour Suwalki with the focus on ecological issues i.e. looking for examples of good ecological practices in the town. These issues will be implemented in the STEM game.



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### **Chemistry, Baeza, Spain**

During five days students will learn on following topics:

- Safety in the chemistry laboratory
- Hazard identification of household products
- Chemistry and food
- Chemistry of olive oil I: analysis of the acidity of olive oil
- Chemistry of olive oil II: preparing soap with used oil
- Games to be used in chemistry learning
- They will present their schools to other classes.

In addition, students will have the chance to do the following visits

- Cultural visit: Baeza and Úbeda as World Heritage Sites
- Cultural visit: Granada/Córdoba
- Visit to an oil press factory & analysis laboratory (Real life application of Chemistry)

Students will be working in international groups (one student from each country). There will be in total 5 groups of 5 students working in the laboratory.

To manage every working group, we will set workstations for every activity.

### **GOALS OF FROM GAME TO STEM PROJECT:**

The goals of the project are:

- INTRODUCTION OF INNOVATIONS IN TEACHING STEM SUBJECTS THROUGH USE OF ICT (ARDUINO and video game)
- IMPROVEMENT OF KEY COMPETENCES OF STUDENTS THROUGH STEM SUBJECTS
- STRENGTHENING THE STEM TEACHERS COMPETENCE THROUGH NEW METHODS



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## ***General conditions of the concourse***

1. A student attends one of the high school classes in Gimnazija Zaječar.
2. Before the mobility, the student is ready to attend language, IT, cultural and psychological preparation workshops at school and/or through online workshops in case of an unfavorable epidemiological situation due to the Covid-19 pandemic.
3. After the mobility, the student is ready to participate in the activities of spreading their experiences with mobility as a peer educator (workshops, forums and other live and/or online events).
4. The student is interested in working in a team, to contribute to the work of the group.
5. The student is ready for responsible individual work.
6. The student is ready to accept the novelties in his work and apply them.

### ***Responsibilities of selected students:***

1. Active participation in project preparations (work on tasks on the eTwinning platform, regular communication with peers)
2. Participation in the chosen mobility (travel, active work on tasks and activities during the mobility, respecting deadlines)
3. Respect for the diversity of other participants in the project.
4. Participation in activities after mobility (peer workshops, media interviews, continuation of cooperation with project participants)
5. Acceptance of travel and accommodation conditions organized by the organizers, in accordance with the epidemiological situation.

### ***Obligations of the organizer:***

1. Providing and covering the costs of all transport during mobility (transport to and from the airport, airplane tickets, bus tickets, railway transport, city transport ...)
2. Providing and covering the costs of accommodation in the host family (in case of recommendation due to the epidemiological situation hotel / hostel).
3. Coverage of travel insurance of all participants during the entire mobility.
4. Organizing the presentations of results.

**Note:** More detailed obligations will be determined by the contract signed with the parent / guardian.



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### **Student selection**

The selection will be made in two phases. In the first phase, 20 students will be selected to work with on the eTwinning platform. Based on their work in the second phase, 5 students will be selected for each mobility. Please note that the student has the right to participate in more than one mobility.

#### **Phase I**

The principal forms a commission to review all applications.

To apply, students write a motivation letter in English and submit parental consent. Consent can be obtained from school psychologist, or physics teacher Mladen Šljivović or math teacher Dragana Sekulić Pilipović.

1. Students write motivation letter. On a maximum of one A4 page, font 12 must describe:
  - why is he / she the best choice (10 points)
  - how will he / she use the mobility (10 points)
  - what will he / she do after as peer educator (10 points)
2. Mandatory knowledge of English, which is proven in a conversation with an English teacher. Interviews will be organized after application. Students who do not know English cannot participate in the further selection.
3. Success in the previous year (20 points) (In Serbia the average grade is multiplied by 4)
4. Absence (5 points). In case students have any unjustified absence (skipped class without medical reason, parent or teacher permission) in this and previous school year points will be given in the following:
  - 0-1 unjustified absence (5 points)
  - 2-3 unjustified absence (3 points)
  - 4 unjustified absence (1 points)
  - 5 and more unjustified absence (0 points)
5. Students belonging to national minorities, Roma national communities as well as students from the category of socially vulnerable (material status, children without parental care ...) (1 point)

The calls start from 19.10.2020. to 23.10.2020. (14:00)

Method of application is submitting the motivation letter and consent of the parent/guardian to the school psychologist

The maximum number of points that a student can achieve is 56

The results will be published on October 27, 2020 at 12 o'clock on the bulletin board in the school and the school website.

After the results are published, there will be a 24 hour deadline for appeals and then the final results

Example of rubric used to score motivational letter



Cover letter	Statement	1	2	3	4	5
<b>why is he / she the best choice</b>	The student clearly expresses and states the reasons why he / she is the best choice.					
	The reasons are well-argued and meaningful.					
<b>how will he/she use the mobility</b>	The student states the practical personal skills he / she would acquire during the mobility.					
	The student states the way					
<b>what will he/she do after as peer educator</b>	The student lists ideas and examples that he / she would use in peer education.					
	Ideas and examples are argued and meaningful.					

### Phase II

1. eTwinning accounts will be created for all participants
2. They will receive instructions and assignments from the subject teachers on the eTwinning platform
3. Tasks will be scored according to pre-set criteria
4. Teachers will be scoring during the work on eTwinning based on regular work and quality. Each subject can bring up to 20 points

Scoring system for eTwinning	Points
Physics and math	20
Chemistry	20
Biology	20

**NOTE** For mobility in Serbia we will double the points in physics and math, for mobility in Poland we will double the points in biology, for mobility in Spain we will double the points in chemistry.

1. Three calls will be launched calling students to participate in mobilities. One call for Serbia, one call for Spain and one for Poland. Students can decide will they apply for any of these (they are not limited choosing one)
2. Students applying will write a letter explaining how will they use the mobility they are applying for.
3. When calculating the score for selection all points will be added (grades + absence + motivation + letter + eTwinning)
4. Five students for each mobility will be chosen. Reserve list will be created in case some of students dropout.
5. Each team of students has to include at least one girl.



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We wish all students the best luck in applying.

In case of any doubt please feel free to contact physics teacher Mladen Šljivović or math teachers Dragana Sekulić Pilipović.

Gimnazija Zaječar principle

Srdjan Stanojević