**Report on the virtual mobility in Türkiye**

“Our World is a Machine”

The overall purpose and goal was to make the students 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.

.

# 04-05 January 2023 (brainstorming and presentation 40+40 minutes)

Students, monitored by their teachers, did the researching and made a presentation about Wind Rose Generator. Students searched for and made presentations about the following topics:

* 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?

Students worked in pairs of two, in groups. Their presentations were shared among them so everyone could see what their friends were working on. Each group made a draft for windmills.

Each country made presentation on the topics mentioned above in their own language as well as in English. They shared it on the website, YouTube and social media.

# 06 January 2023 (Making mini generator 40 minutes)

Students demonstrated their presentations via Zoom to the students from Bulgaria, Turkey and Serbia. After the demonstration, there was a workshop “*the production of wind* roses/*generators*.”

Students worked together to create their own ***mini wind* rose *generator*** based on the knowledge and information they gathered. Also, more students were involved in the workshops mentioned below with the guidance of Art teachers.

* Paper Wind roses/genrators (Making colorful paper windmills)
* Drawing/ painting wind roses/genrators

*Each country shared the works on the social media, youtube and website. Drafts and products of windmill generator products were exibited in the Erasmus+ corners of our schools, and the exhibition of the products to be produced by our students.*

**10 January 2023 (40+40 minutes)**

**The Mini Robot Insect Project**

Students worked in groups monitored by IT Teachers. They searched for information about the movement of a ladybug.

Their presentation was shared among them so everyone could see what their friends were working on.

* Demonstration of animations about the movement ability of the ladybug was made by the students with the help of the leading teacher.

<http://youtube.com/watch?v=LpwaLv3_6bY>

<http://youtube.com/watch?v=MkL7qyOZu5k>

* Students used simple WEB 2.0 Tools so that they could learn how could an animated ladybug model be made.

<https://sketchfab.com/3d-models/ladybird-9b46e54611c543f3aeeacd2580994c34>

<https://sketch.metademolab.com/share/c60ad69dfacc455397eb3c3be7e772ab/wave_hello_3>

<https://sketch.metademolab.com/share/f553b76fdcf04f1b9edb42f2067832e8/running_jump>

<https://sketch.metademolab.com/share/d1f76e83730046c18a544ffd07e0328b/wave_hello_3>

Each country made a presentation on the topics mentioned above in their own language as well as in English. They shared it on the website, YouTube and social media.

**13 January 2023 (40+40 minutes)**

Students, guided by their teacher made a robot ladybug model.

*Each country shared the works on the social media, youtube and website. Videos and visuals of workshops for the production of the ladybug model were exhibited in the Erasmus+ corners of our schools, and the exhibition of the products to be produced by our students.*

In addition to the activities above, students made activities such as origami moving animals, drawing/ painting ladybugs.

# 16-18 January 2023 FINAL

# Kahoot quizz

# The last day students took the quiz to check what they had learned during the mobility. Quiz was done in several classes with the students who participated in workshops and those who didn’t. Many of the students who didn’t participate directly into the mobility but followed our works on the social media and school sharings, liked the quiz and learned basic things about the topics. A lot of students benefits from these workshops which in the end made this whole virtual mobility successful.

# Evaluation and benefits of the virtual mobility

# “Our World is a Machine” virtual mobility was planned to be attended by 10 students and 2 teachers from each project partner school. In total, 30 students and 6 teachers would be the direct beneficiaries of the virtual mobility. However, there were more teachers and students who took part in this mobility in addition to the main participants by participating additional activities and sharing our works on social media. In addition to digital platforms and additional activities, we planned that our students at all levels of education in our schools would 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.

# At the end of the mobility, an online evaluation questionnaire was developed and

# participants of the mobility answered the questionnaire. It contained thirteen

# items for rating and two open answers. All participants fulfilled the questionnaire online while only students mostly participated in the project were asked to fulfill the questionnaire on paper in addition to online one.

# 10 of the teachers answered the questionnaire. It contained eight items for rating and three open answers.

# Teachers who participated in this mobility were Art teachers, English teachers, the principal of our school, IT and Technology and Desing teacher.

# General impression of this mobility is positive. The most important disadvantage is the different holiday schedule between the countries and problems with internet connection. After solving the internet handicap, we overcame the holiday problem with the help of technology.

# All expected results mentioned below were achieved.

# They learned 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.

# Also, students learned the topics by experiencing and discovering together by helping each other and learning from each other. They worked as a team and they felt their potential.

# They learned from each other as well as individual. Besides, both teachers and students developed and improved IT skills by making presentations, making videos, using WEB 2.0 Tools and making/programming/building a mini robot while they developed and improved engineering ability by making/ building wind rose generators.

# In online meetings and workshops to be held in our schools afterwards, the participants discovered the targeted knowledge by doing and experiencing it. Our students, who worked together with their peers in the workshops, helped each other to discover the targeted information and produce a product by working together. Workshops and virtual mobility include practices that directly contributed 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".

# Dissemination of the mobility

# Dissemination of the mobility was done via social networks (Youtube, Twitter, Instagram and Facebook accounts) and through the website of our project. The works were also shared with families via our parents’ Whatsapp groups. Apart from that, we exhibited our works on our Erasmus+ project corner in our schools.

# All the students and teachers participated in this mobility received participation certificates in the end of our virtual mobility.

Our Virtual Mobility news is on our school website, too. <https://pamukorenoo.meb.k12.tr/>

20 February 2023

Prepared by: Emine TOPDAL

Ersin İŞSEVER

Headmaster

(Coordinator of the Virtual Mobility in Türkiye)

Pamukören Ortaokulu - Kuyucak, TÜRKİYE