



Colourful journey

Erasmus+ project



SLOVAKIA - CZECH REPUBLIC - ITALY

COLOURFUL JOURNEY



Erasmus+



Project description

Basic information



Main objective of the project: Exchange of Good Practices



Type of Action: KA220 - Strategic Partnerships for vocational education and training



Project Title: Colourful journey



Project Acronym: COLOUR



Project Start Date: 2019-09-01



Project Total Duration: 18 months



Project End Date: 2022-08-31

Objectives

- The project supports the acquisition of basic skills and wider competence development by enriching academic education with art.
- Motivation and engagement will be enhanced **by active learning methods**.
- The development of competencies will be supported by the use of scientific methods in **science, technology, engineering, art and mathematics, STEAM**.

Key Competences and Skills



Multilingual competence



Mathematical competence and competence in science, technology and engineering



Digital competence



Personal, social and learning to learn competence



Entrepreneurship competence



Cultural awareness and expression competence

Target groups

- The target group is secondary school pupils and teachers.
- Out of **100 pupils**, **54 direct participants** will take part on educational activities, others will participate in **other project activities**.
- Another target group is science and social science teachers, including **30 teachers** directly involved in activities, and **30 teachers using best practices**.

Outputs

- Methodological material
 - Materials: Worksheets
 - Note: The learning activity C1 is published in such a way that it can also be used by schools that do not have previous experience in organizing short-term exchanges of groups of students.
 - Web: <http://elearning.sosch.sk/>
 - Course: Colourful journey (2019-2022)
 - Access: Guest access

E-learning

Web: <http://elearning.sosch.sk/>

Course: Colourful journey (2019-2022)

C1 Learning Activity - Pigments 1 Bratislava

-  Instructions
-  Language preparation (SOŠCH)
-  Venue
-  Presentation of participating organisations
-  Ice-breaking activities
-  Introduction of project and activity C1
-  Worksheets
-  Finances
-  Attendance list
-  Certificate of attendance
-  Opening and closing speech
-  Evaluation of short-term exchange

Publicity

- Facebook: <https://www.facebook.com/ErasmusColourfulJourney>
- E-learning: <http://elearning.sosch.sk/>
- SOSČH Bratislava: <https://www.sosch.sk/>
- SPŠCH Pardubice: <https://www.spsch.cz/>
- IIS P.S. Padova: <https://www.istituto-scalcerle.edu.it/>



Project partners

Slovak Republic, Czech Republic, Italy

Partners

- **Coordinator**
 - Stredná odborná škola chemická Bratislava
- **Partners**
 - Střední průmyslová škola chemická Pardubice
 - Istituto di Istruzione Superiore Pietro Scalcerle

Partners



Stredná odborná škola chemická

Name: Stredná odborná škola
chemická

Address: Vlčie hrdlo 50, 821 07
Bratislava, Slovakia

Web: www.sosch.sk



Střední průmyslová škola chemická Pardubice

Name: Střední průmyslová škola
chemická Pardubice

Address: Poděbradská 94, 530 09
Pardubice-Polabiny, Česká
republika

Web: <http://www.spsch.cz/>



Istituto di Istruzione Superiore Pietro Scalcerle

Name: Istituto di Istruzione Superiore Pietro Scalcerle

Address: Via Delle Cave, 174, 35136 Padova, Italy

Web: www.istituto-scalcerle.it



Participants of learning activities

Number of participants on each learning activity C₁ – C₃

Organisation	Participants	Teachers
Stredná odborná škola chemická Bratislava	18	3
Střední průmyslová škola chemická Pardubice	18	3
IIS Pietro Scalcerle Padova	18	3
Total	54	9



Project activities

Activities

- **Short- term exchanges of groups of students**
 - C1 Pigments 1 Bratislava
 - C2 Pigments 2 Pardubice
 - C3 Pigments 3 Padova

Project Activities A1 – A10, C1 – C3



Timeline of C1-C3 Learning activities (plan)

Pigments 1,
Bratislava,
8.12.2019 –
14.12.2019

Pigments 3,
Padova,
29.11.2020 -
5.12.2020

Pigments 2,
Pardubice,
15.3.2020 –
23.3.2020

Timeline of C1-C3 Learning activities (update)

Pigments 1,
Bratislava,

8.12.2019 –
14.12.2019

Pigments 3,
Padova,

5.12.2021 –
11.12.2021

Pigments 2,
Pardubice,
27.3.2022 –
2.4.2022

Topics of Learning Activities



Pigments and Dyes for Textiles
Bratislava



Pigments in Coatings and
Paints
Bratislava



Pigments in Cosmetics and
Pharmaceutical Products
Pardubice



Food Dyes
Pardubice



Pigments on Canvas and Wood
Padova



Pigments in the manufacture
of glass and ceramics
Padova

Content – STEAM

Science

- Chemistry (inorganic chemistry organic chemistry), biology, toxicology,

Technology

- Chemical technology (inorganic and organic technology)

Engineering

- Devices for pigment production in an industrial scale

Art

- Painting on canvas, jewellery, gingerbread, blueprint, art-make up

Mathematics, Economy

- Price of product

Program of C₁ - C₃



Presentation of national teams



Team building activities



Pigment related activities



Art related activities



Preparing presentations by teams



Presentation of results



Pigments 1

8.12.2019 – 14.12.2019,
SOŠCH Bratislava

Main topics of C1 Pigments 1

- Textile pigments and dyes
- Pigments in coatings and paints

Pigment and art related program

- Workshop Indigo
- Workshop Slovenská ľudová majolica at Majolika Modra
- Workshop Blueprint
- Jewellery and decorations workshop
- Excursion to CHEMOLAK, a.s. Smolenica, producer of paints
- Visit to art exhibition DEIDI VON SCHAEWEN: Wrapped City at Kunsthalle
- Visit to Červený kameň castle
- Visit to modern art exhibition at Meulensteen Art Museum in Čuňovo

Pigments 1

9.12.2009

Presentation of national teams

Team of SOSČH Pardubice



Pigments 1

9.12.2009

Coffee break



Pigments 1

9.12.2009

Investigating the method of
synthesis of indigo



Pigments 1

9.12.2009

Visiting exhibition DEIDIVON
SCHAEWEN: Wrapped City at
Kunsthalle Bratislava



Pigments 1

10.12.2009

Excursion at Majolika Modra



Pigments 1

10.12.2009

Workshop Slovenská ľudová
majolica at Majolika Modra



Pigments 1

10.12.2009

Workshop Slovenská ľudová
majolica at Majolika Modra



Pigments 1

10.12.2009

Workshop Bluperint – Lucia
Dovalová



Pigments 1

10.12.2009

Workshop Bluperint – Lucia
Dovalová



Pigments 1

11.12.2009

Workshop Blueprint

Introducing the traditional
blueprinting technique



Pigments 1

12.12.2009

Excursion to CHEMOLAK Smolenice

Investigating the parameters of
coatings



Pigments 1

12.12.2009

Visiting exhibition of modern art at
Danubiana Meulenstein Art
Museum in Čuňovo



The background of the slide is an abstract, textured surface. It features a mix of vibrant orange and deep blue colors, with the orange being more dominant and appearing as a fine, granular texture. The blue is interspersed, particularly in the upper left and lower left areas, creating a layered, almost marbled effect. The overall impression is one of organic, natural pigments.

Pigments 2

27.3.2022 – 2.4.2022,
SPŠCH Pardubice

Pigments Pardubice

ERASMUS+ COLOURFUL JOURNEY
27.03 - 02.04.2022



Main topics of C2 Pigments 2

- Pigments in cosmetics, pharmaceuticals
- Food dyes

Pigment and art related program

- Analysis of pigments and colourants: TLC, Spectrophotometry, Raman, XRF
- Workshop Painting by enamel at Smalterie Praha
- Visit to Museum of Alchemists and Magicians of Old Prague
- Workshop on making and painting gingerbread at The Gingerbread house
- Workshop Food colourants
- Painting gingerbread
- Workshop Making decorative cosmetics (bronzer), fake wounds
- Chemistry show with pigments and colourants

Pigments 2

27.3.2022

Dinner on the first evening

Knowing each other

Ice-breaking activities

CLIL team members (Ms. Fodorová and Ms. Dömötörövé) joined the COLOUR teams



Pigments 2

27.3.2022

Dinner on the first evening

Knowing each other

Ice-breaking activities



Pigments 2

28.3.2022

Presentation of national teams

Team of SOŠCH Bratislava



Pigments 2

28.3.2022

Ice-breaking activities



Pigments 2

28.3.2022

Tour around the city



Pigments 2

29.3.2022

Museum of Alchemists and
Magicians of Old Prague



Pigments 2

29.3.2022

Alchemist show at Museum of
Alchemists and Magicians of Old
Prague



Pigments 2

29.3.2022

Lennons wall in Prague



Pigments 2

29.3.2022

Workshop Painting on ceramics in
Smalterie Praha



Pigments 2

29.3.2022

Workshop Painting on ceramics in
Smalterie Praha





Pigments 2

29.3.2022

Workshop Painting on ceramics in Smalterie
Praha

Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

Thin layer chromatography of
pigments





Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

Thin layer chromatography of pigments

Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

Spectrophotometric analysis of pigments



Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

Spectrophotometric analysis of pigments



Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

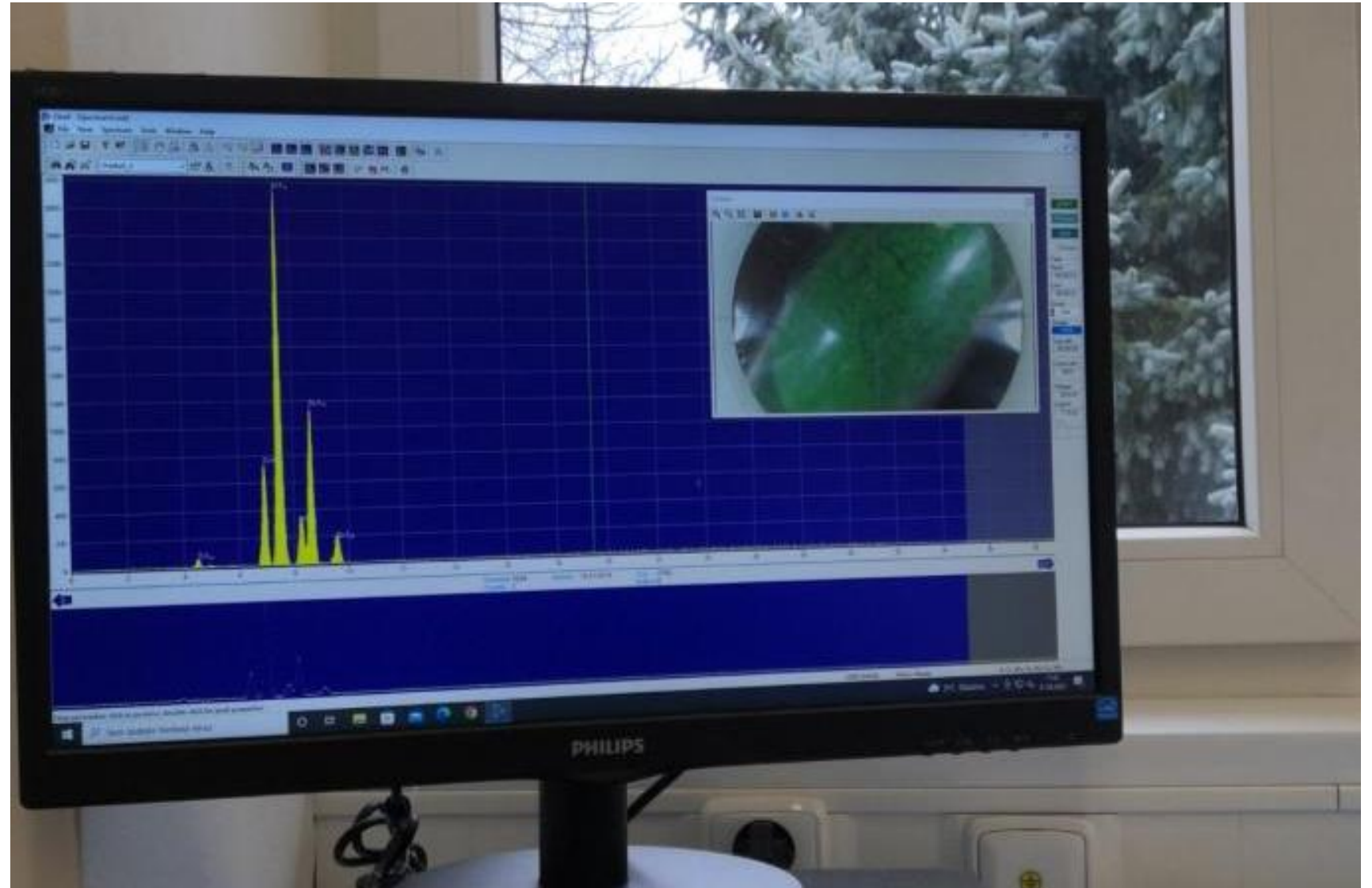
Analysis of pigments by XRF



Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

Analysis of pigments by XRF



Pigments 2

28.3.2022, 30.3.2022, 31.3.2022

Analysis of pigments by Raman spectroscopy



Pigments 2

30.3.2022

International team



Pigments 3

30.3.2022

Workshop Pigments in cosmetics
(Making bronzer)



Pigments

2

30.3.2022

Workshop Creating
fake wounds



Pigments

2

30.3.2022

Workshop Creating
fake wounds



Pigments 2

30.3.2022

Workshop at The Gingerbread house (Perníková chaloupka)



Pigments 2

31.3.2022

Workshop Painting gingerbread



Pigments 2

Augumented reality



Pigments 2

31.3.2022

Bowling



Pigments 2

1.4.2022

Presentation of results by
international groups



Pigments 2

1.4.2022

Colourful chemistry show



Pigments 2

1.4.2022

Colourful journey cake



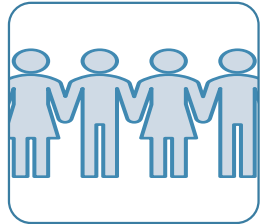
Colourful journey



Pigments 3

5.12.2021 – 11.12.2021, IIS
P.S. Padova

Physical and virtual mobility



Physical mobility: SPŠCH
Pardubice



Virtual mobility: SOŠCH
Bratislava

Main topics of C₃ Pigments 3

- Pigments on canvas and wood
- Pigments in glass

Pigments and Art related activities

- Lecture "About Giotto" and quiz
- Pigments in the history of art during down times and crosswords
- Dye extraction
- Alum synthesis
- Synthesis of a lake, calculation of the yield of the lake, evaluation of environmental impact
- Visit to Cappella degli Scrovegni and Musei Civici degli Eremitani
- Workshop Painting on panel at Musei Civici degli Eremitani
- IR and UV-visible characterization of the lake and distinction from the spectra of the dye
- Excursion to Murano island glasswork and glass colouring by metal oxides
- Workshop Glass artwork at Abate Zanetti Srl Glass School
- Lecture "The chemistry of binders"
- Workshop Painting on canvas with different binders and powder pigments.

Free-time program of C₃ Pigments 3

- Treasure Hunt in Prato della Valle
- Science in the hidden corners of Padua

Pigments 3

5.12.2021

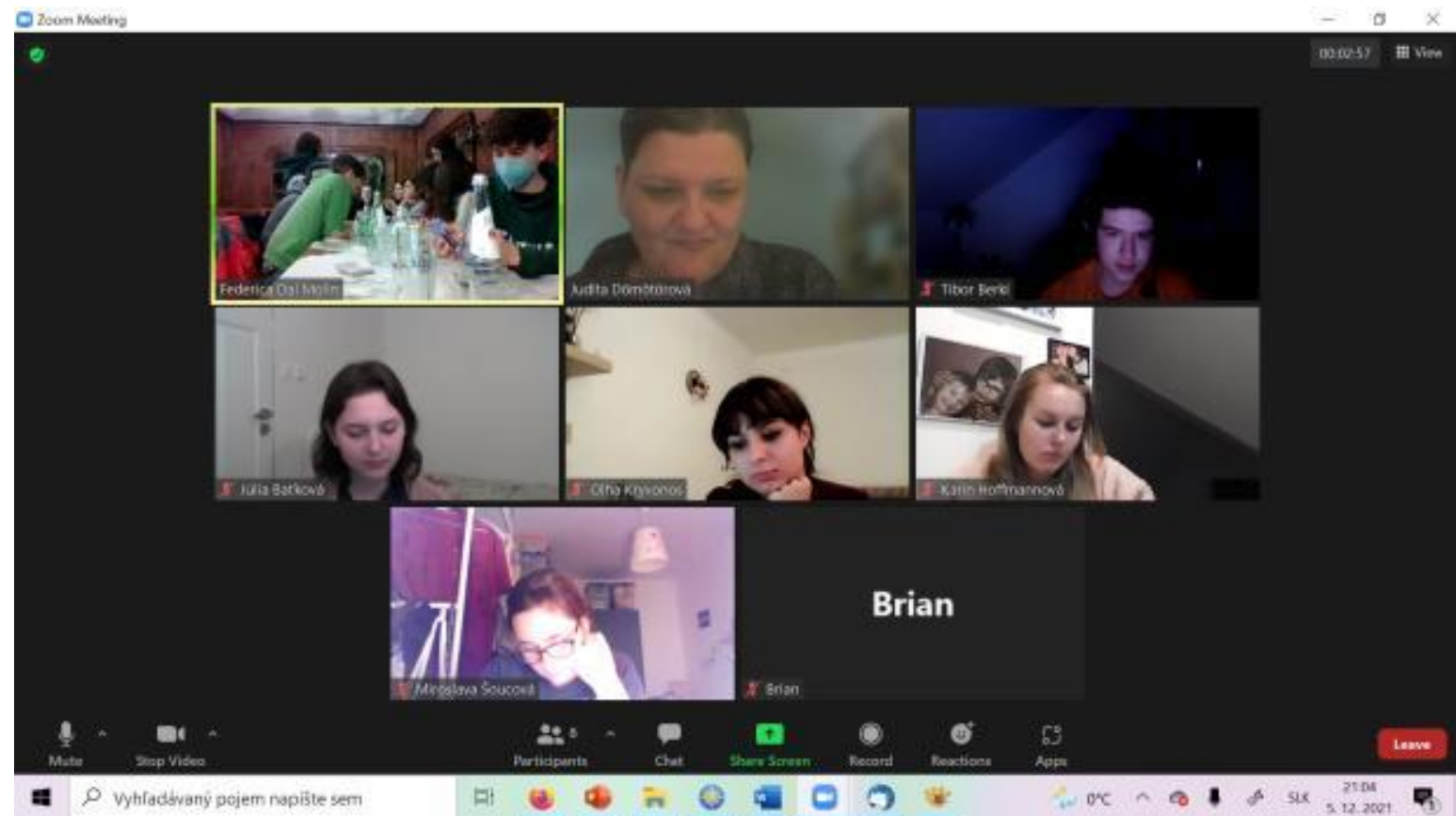
Dinner on the first day



Pigments 3

5.12.2021

Dinner on the first day – online for group from SOŠCH Bratislava



Pigments 3

6.12.2021

Lecture „About Giotto“



Pigments 3

6.12.2021

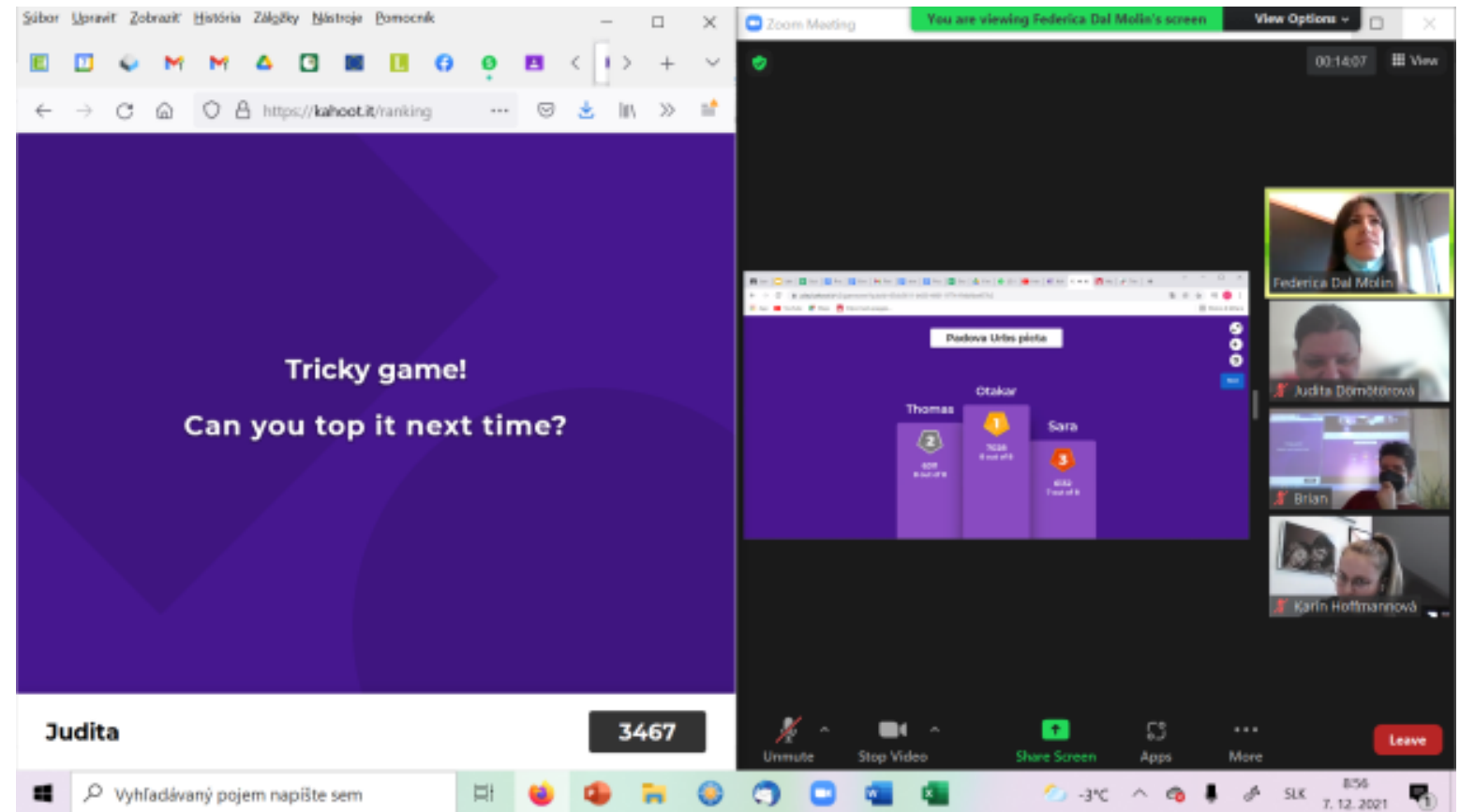
Team work on the second day



Pigments 3

6.12.2021

Kahoot quiz about Giotto



Pigments 3

6.12.2021

Team work on the second day -
online for group of SOŠCH
Bratislava



Pigments 3

7.12.2021

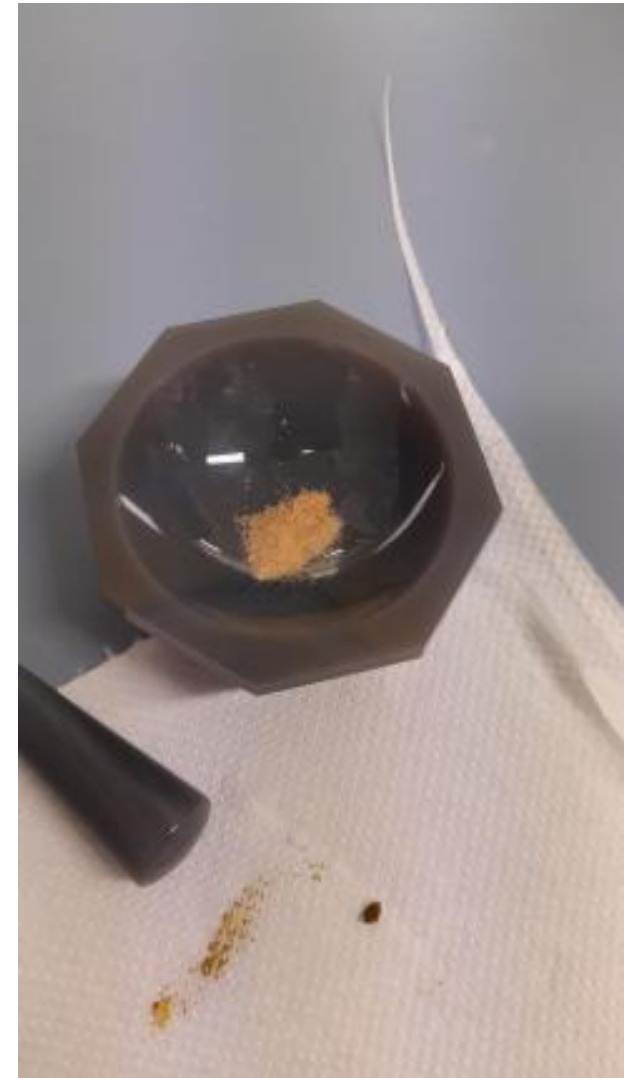
Transforming dye into a lake



Pigments 3

7.12.2021

Lake



Pigments 3

6.12.2021

Dye extraction at home

7.12.2021

Transforming dye into a lake at
SPŠCH Bratislava (online)



Pigments 3

7.12.2021

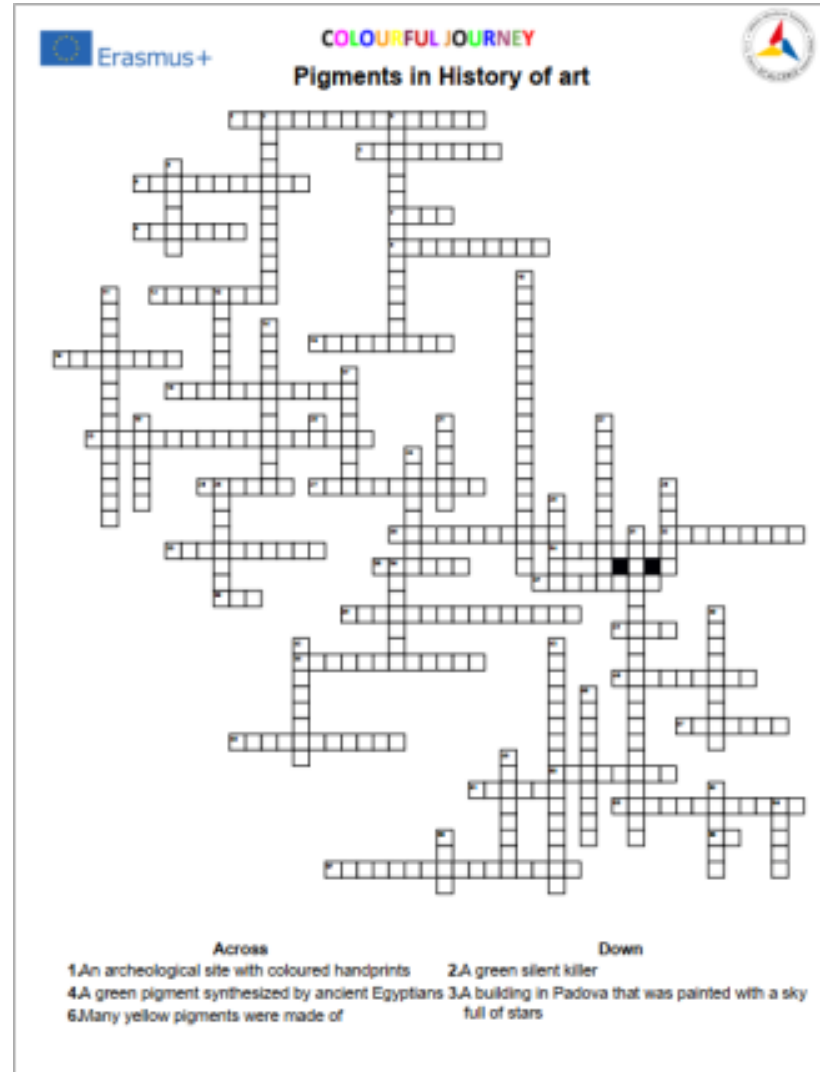
Group of SOŠCH Bratislava in lab –
online



Pigments 3

7.12.2021

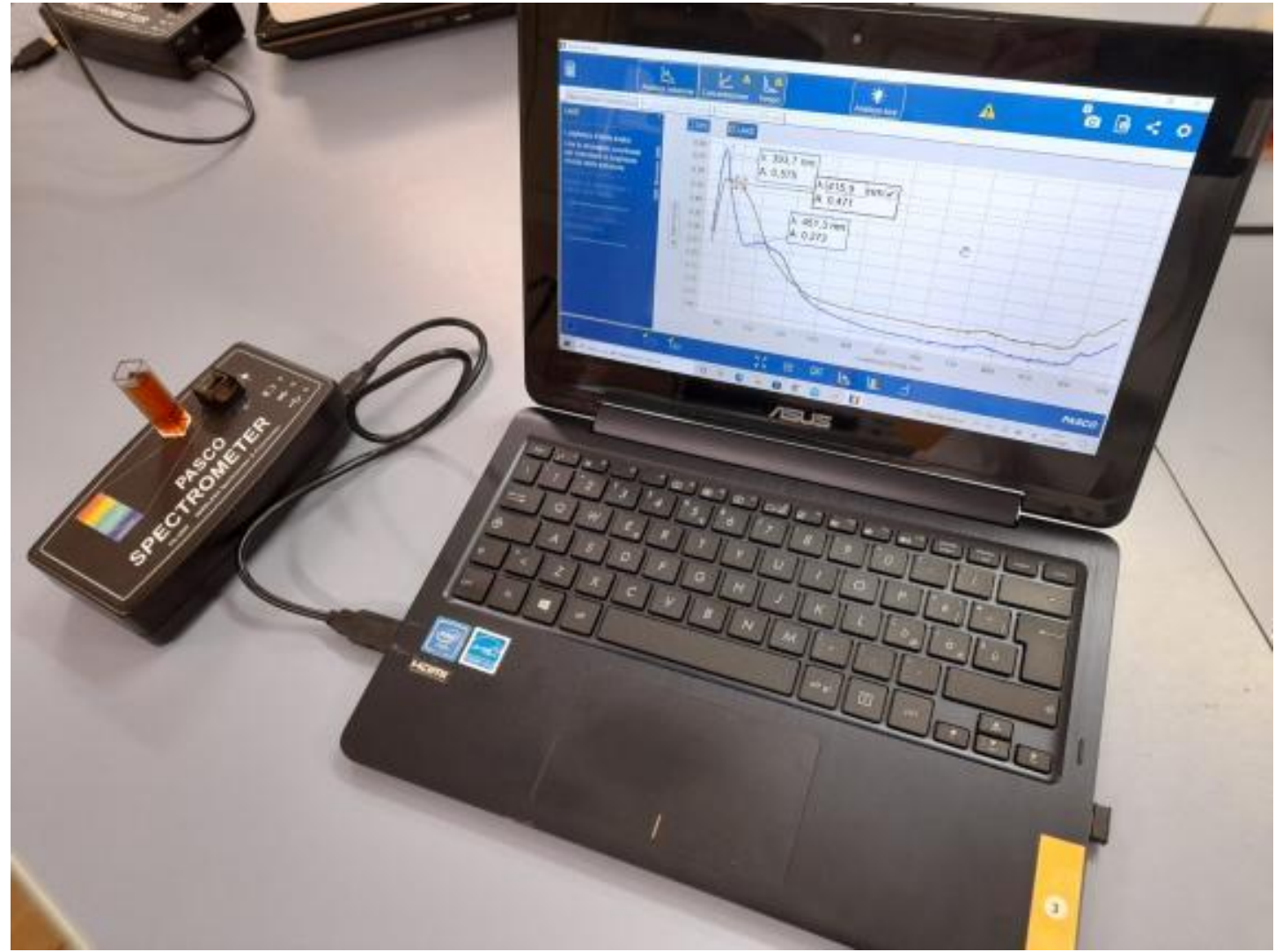
Pigments in the history of art during
down times and crosswords



Pigments 3

7.12.2021

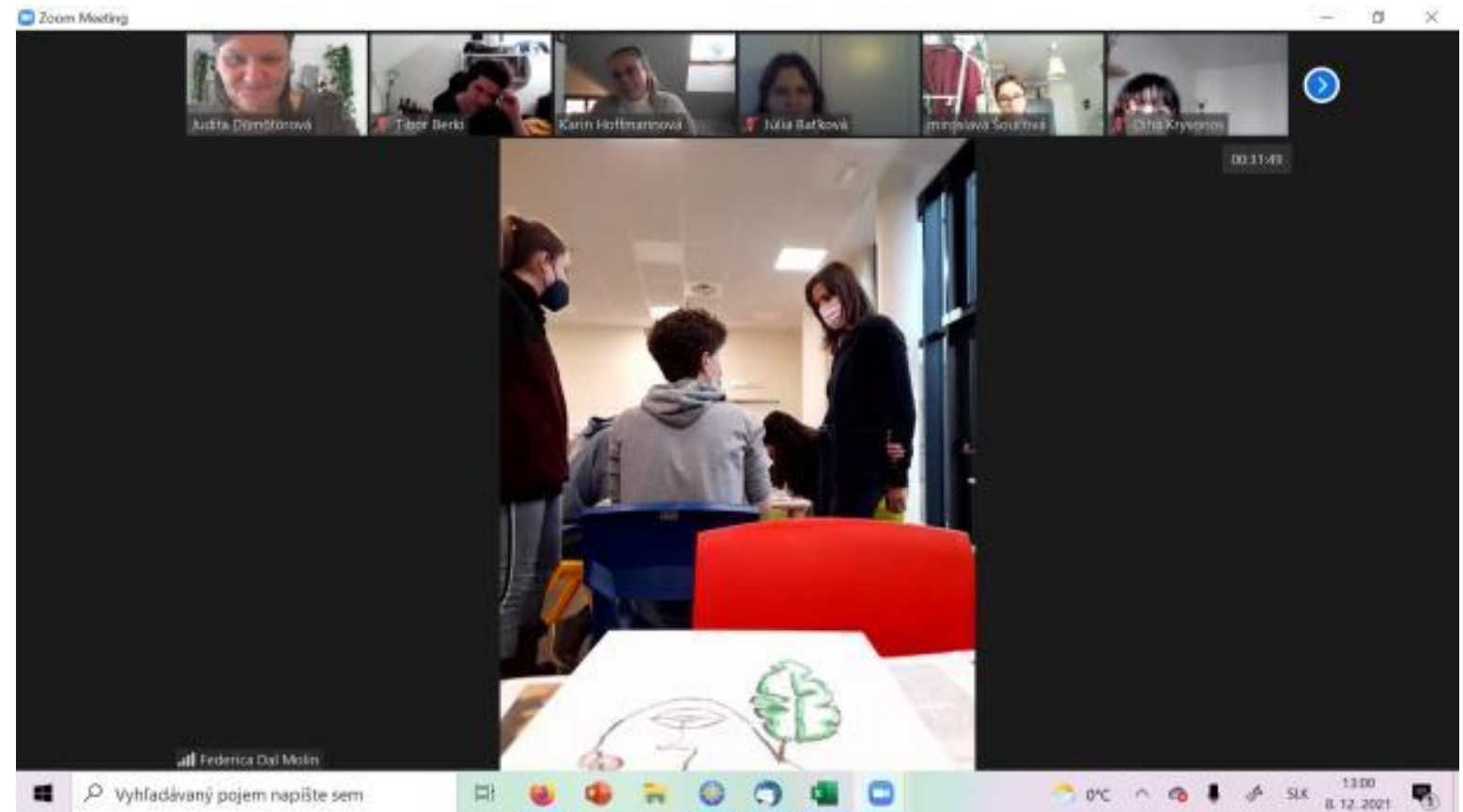
IR and UV-visible characterization
of the lake and distinction from the
spectra of the dye



Pigments

8.12.2021

Workshop Painting on panel at
Musei Civici degli Eremitani



Pigments 3

8.12.2021

Workshop Panel on painting in
Musei Civici degli Eremitani



Pigments 3

9.12.2021

Traveling to Murano by boat



Pigments 3

9.12.2021

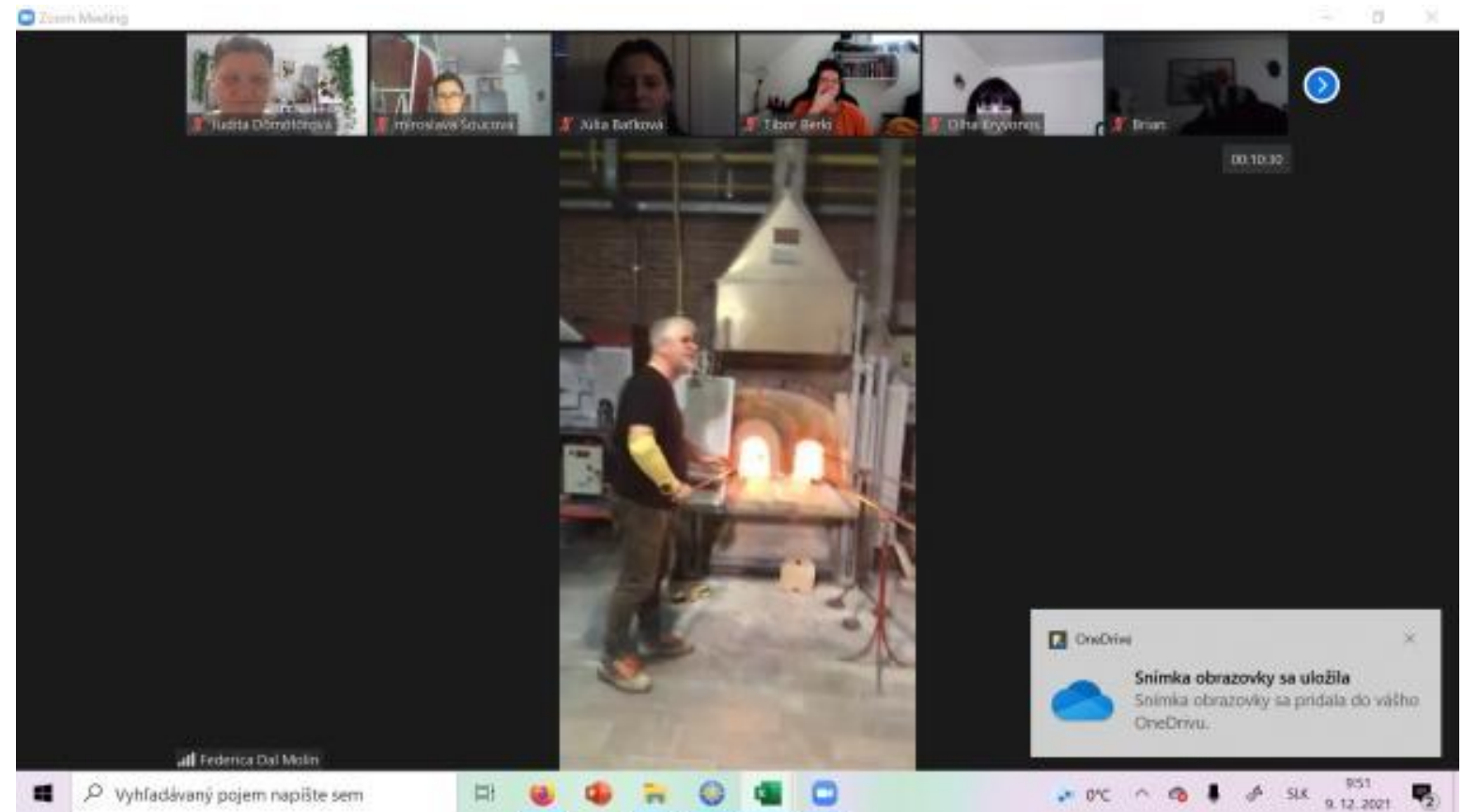
Workshop Glass artwork at Abate
Zanetti Srl Glass School



Pigments 3

9.12.2021

Excursion at Abate Zanetti Srl Glass School (Istituto Tecnico Tecnologico Paritario Indirizzo di Grafica e Comunicazione - Sede di corsi sull'arte del Vetro)





Pigments 3

Pigments 3

10.12.2021

Lecture "The chemistry of binders"
(Associazione Culturale Fantalica)



Pigments 3

10.12.2021

Workshop Painting on canvas


WORKSHOP: PAINTING ON CANVAS

ACQUERELLO
It's obtained by pitting the brush with some colour powder in the water, it's good to obtain shades

ACRYLIC
It's obtained by putting the brush with some colour powder in the acrylic resin binder, it's good to obtain darker color and shades

ALCOHOL
You mix the powder colour on the palette by adding the alcohol. You will obtain darkest color, because alcohol evaporates very easily. You can obtain shade by mixing color on the palette before painting.

OIL
It's difficult to use because he use air to dry and not vice versa such as the others, so you need many days to do the shading and the mixing. You can mix the oil directly on the palette.



00:00:38

Audita Dömötörová

Federica Dal Molin

Michał Szczyrowi

Brian

Pigments 3

10.12.2021

Workshop Painting on canvas



Pigments 3

10.12.2021

Workshop Painting on canvas with
different binders and powder
pigments



Pigments 3

10.12.2021

Preparing final presentation of
teams



Pigments 3

10.12.2021



Pigments 3

10.12.2021

Presentation of results by
international teams

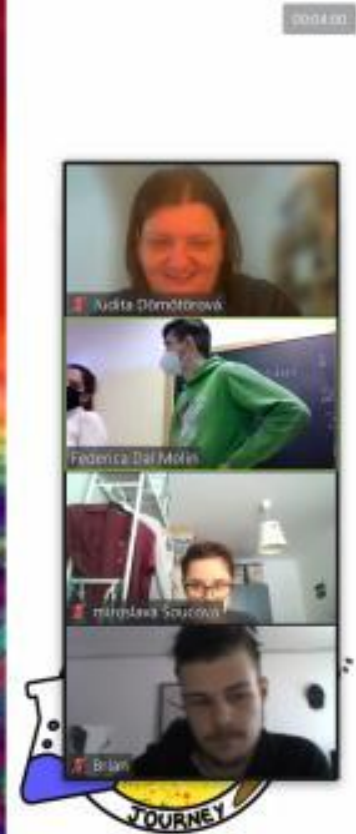
Two members of team from SOŠCH
Bratislava present online



Pigments 3

10.12.2021

Presentation of results by Bad
connected colours team



Pigments 3

10.12.2021

Presentation of results by team
CARMINE



Pigments 3

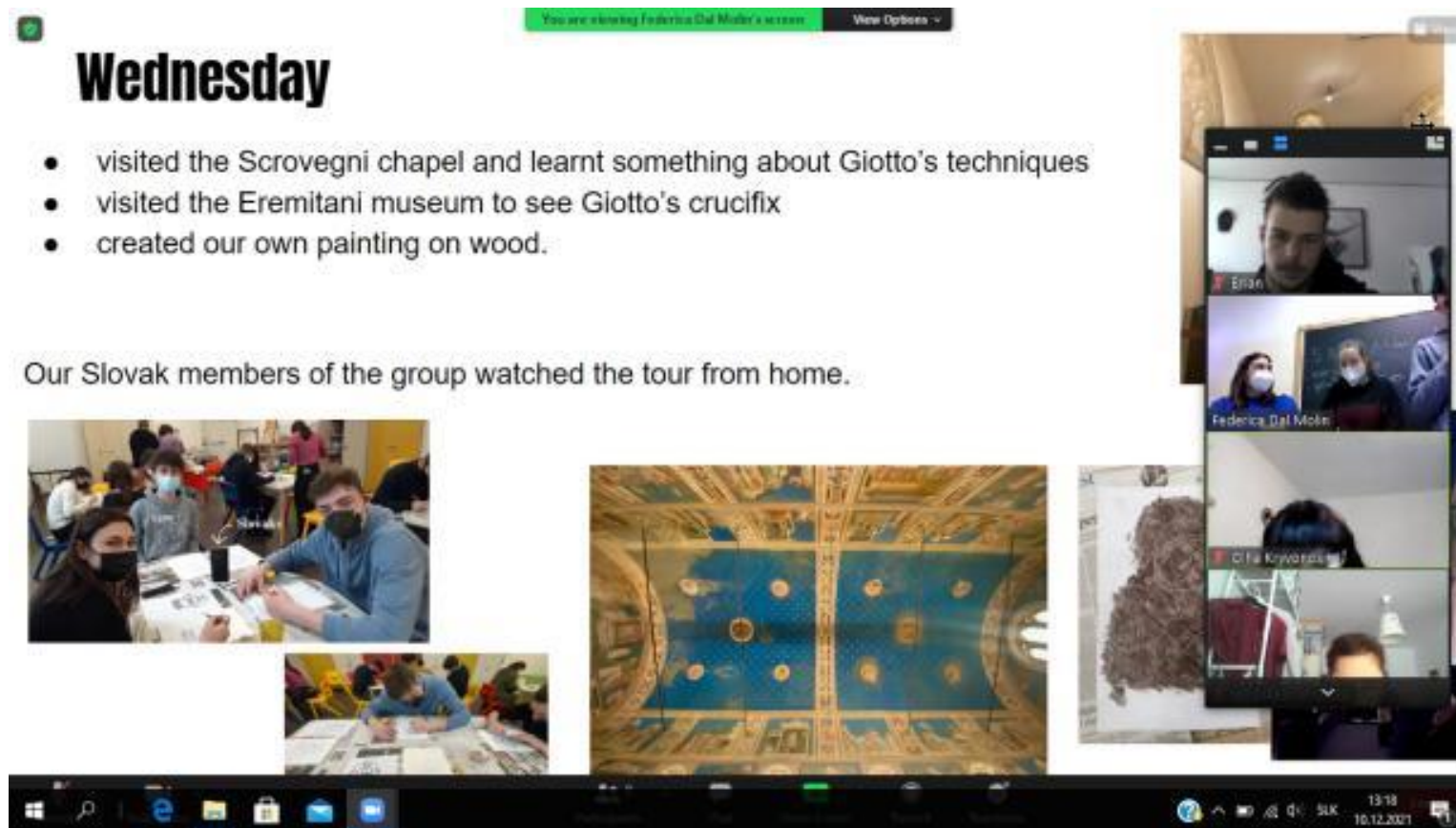
10.12.2021

Presentation of results by The Big chemical six team

Wednesday

- visited the Scrovegni chapel and learnt something about Giotto's techniques
- visited the Eremitani museum to see Giotto's crucifix
- created our own painting on wood.

Our Slovak members of the group watched the tour from home.

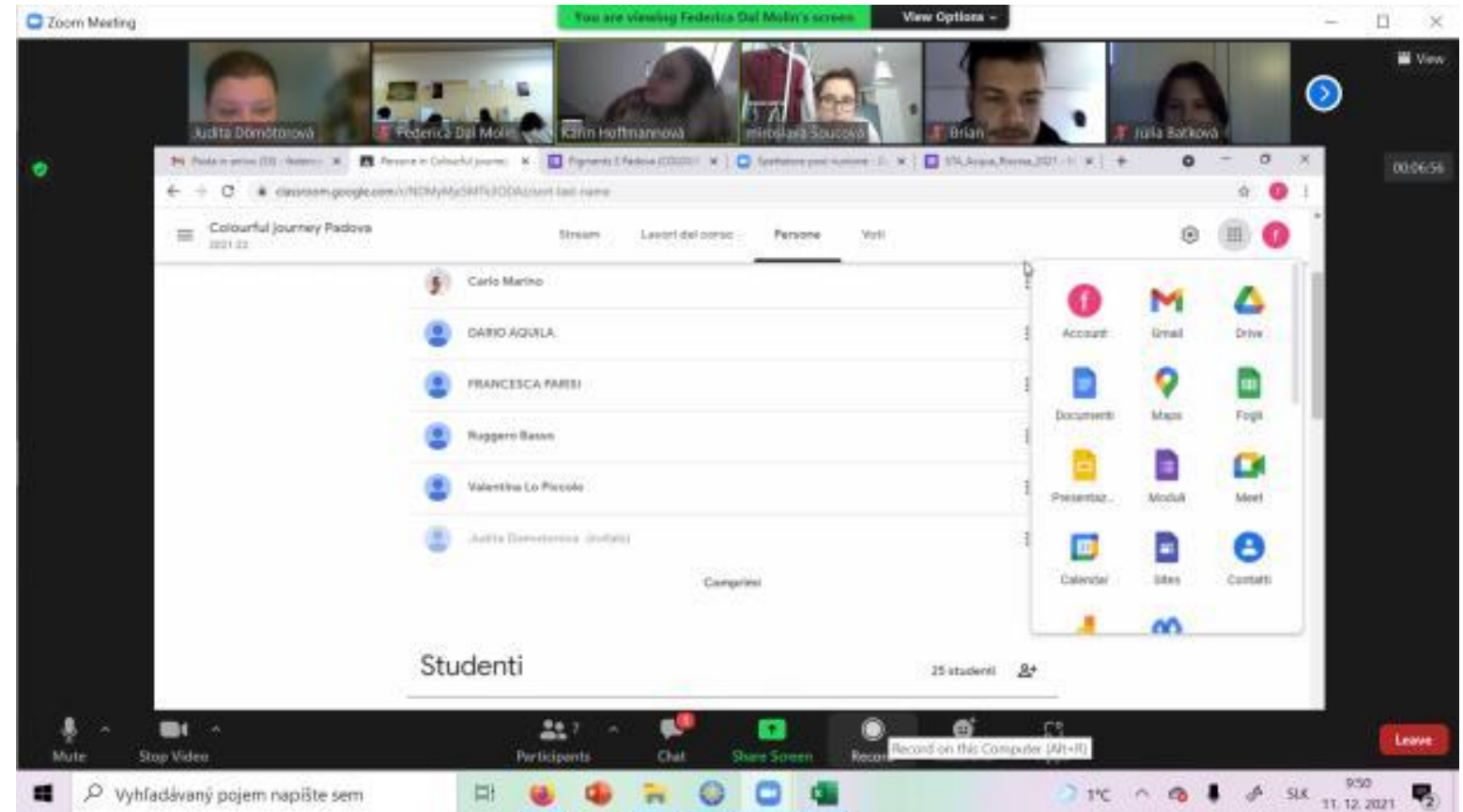


Pigments 3

11.12.2021

Evaluation of short-term exchange

Discussing the materials



Pigments 3

11.12.2021

Evaluation of short-term exchange

Evaluation form

The screenshot shows a Zoom meeting interface with a Google Form displayed in the center. The form is titled "Erasmus + KA2 Colourful journey" and features the Erasmus+ logo. It includes a section for "Choose your organisation..." with three radio button options: "Stredná odborná škola chemická Bratislava", "Istituto di Istruzione Superiore P. Scalferle Padova", and "Střední průmyslová škola chemická Pardubice". The form is part of a 4-page document, currently on page 1. The Zoom meeting shows several participants in a grid view at the top, and the Windows taskbar is visible at the bottom.

Contact

- Email: domotorova@sosch.sk