SF1

Vaalan lukio

Geoheritage and climate change opening the secrets of home

Erasmus+-project week
Verbania, Italy, autumn 2016

Visiting CERN - European organization for nuclear research. Geneva, Switzerland.


Universe of Particles


SM18


Mandelbrot: fractal images.
Bohr: identification of Cygnus X-1 as a black hole.
Hooke: law of elasticity and springs.
Newton: ratio lucis atomica.
Cassini: diaraia ad Martem et modulus systematis solaris.
Newton, Leibniz: calculus. 1665AD
Huygens, Wallace, Wren: laws of elastic collisions.
Boyle: gas law.
Fermat: principium minimi temporis in opticis.
Huygens: horologium pendulum.
Torricelli: barometrum hydrargyri et vacuum artificiosum. 1644AD
Torricelli: ratio motus aquarium.
Descartes: tractatus de methodo.
Snell: lex sinus refractionis.
Napier: logarithmus.
Galileo: idrostatica, principio di inerzia.
Kepler: leges motus planetarum. 1600AD
Gilbert: electricitas statica et magnetismus.
Fabricius: observatio stellae variabilis Mirae Ceti.
Stevin: de getijkheid van de valsnelheid.
Brahe: tabulae astronomicae concisae positionum planetarum.
Copernicus: ratio solis in medio. 1543AD
Da Vinci: meccanica, aerodinamica, idraulica.
Gutenberg: erste Druckerpresse.
माधव, शंकरा : अनंत श्रेणी
Occami rasor.
de Maricourt: De magnete.
Bacon: experientia aut probatio ut fundamentum certum.
series numerorum Fibonacciana.

Sightseeing in Geneva

Visiting the ethnographic museum.

Lunchbreak in Lausanne.

Arriving at Verbania.

Meeting the hostfamilies.


NUOVO PORTO


Comune di Verbania
n. 5
BAR NUOVO PORTO

Welcome to Verbania!

I.I.S. Lorenzo Cobianchi, our partner school

Finnish students' presentations on Monday

Italian students' presentations

Mikko Kiuttu, Rokua Geopark

Alessandra Magagna, Turin University

Ilaria Selva, Turin University

Lunch in the school canteen

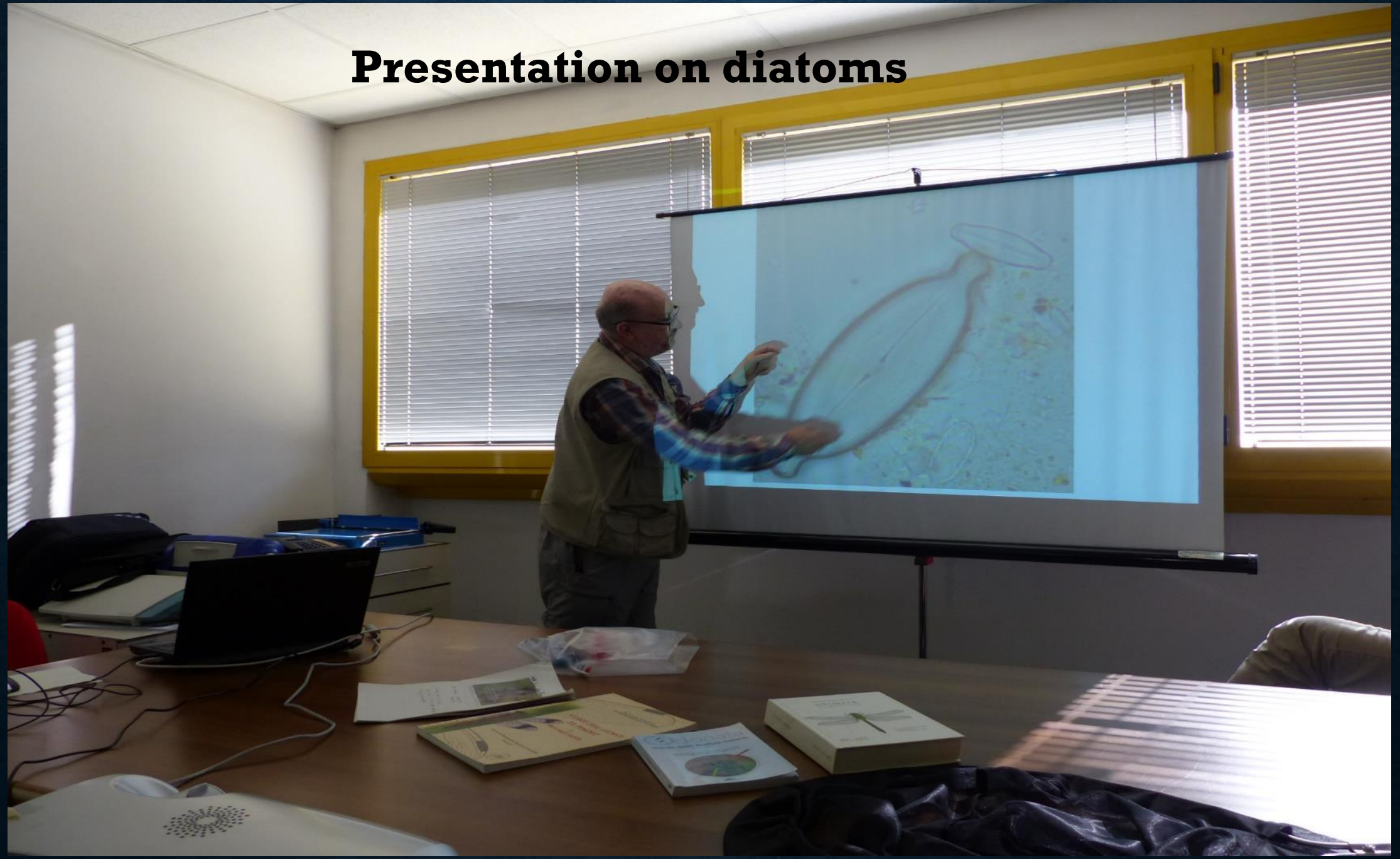
Teachers by Lake Maggiore

Visiting ARPA, the Regional Agency for the Protection of the environment

Presentation on dragonflies


to the
gonflies
d Europe

Presentation on diatoms



Visiting Rassa, an old village.


www.rassavalsesia.com
Benvenuti a Rassa
I CANTONI COMUNALI
Rassa
INFORMAZIONI TURISTICHE
RASSA

Professor Marco Giardino, Turin University

Edoardo Dellarole, director of Sesia Val Grande Geopark

Visiting the local museum


The cattle was taken back
to the farm from the mountains.

Heading for the Walser Museum

A local farm in the mountains


REGIONE PIEMONTE
Provincia di Vercelli
ASCOM
Comune di Riva Valdobbia
MUSEO ETNOGRAFICO DI STORIA E TRADIZIONI WALSER (MUSEO RABERNARDO)
E' stato allestito negli anni 1990-1991 e ha sede in una costruzione eretta nel XVII secolo secondo i canoni dell'architettura vallesana. All'interno di dodici locali sono stati ricostruiti gli ambienti della tipica abitazione walser: al piano terra la stalla, il soggiorno con la stufa in pietra ollare, la stanza per la lavorazione del latte e la dispensa; nei piani superiori le camere di abitazione e il fienile. Nel Museo sono esposti, oltre ad un interessante serie di attrezzi da lavoro che testimoniano le attività praticate per secoli dalle popolazioni locali, alcuni costumi tradizionali maschili e femminili. Preziosa testimonianza storica della vita walser è una raccolta di pergamene quattrocentesche e cinquecentesche riguardanti le famiglie del luogo.
DAL RISO AL ROSA
www.dalrisoalrosa.it
Sentieri dell'Arte
Oratorio di Sant'Antonio
Oratory of Sant'Antonio

The Walser Museum


SI PREGA DI
NON TOCCARE
GRAZIE


Museo Walser

La Minéra Hostel in Alagna Valsesia

Waiting for the cable car


www.freerideparadise.it
FREERIDE PARADISE
Telecabina ALAGNA - PIANALUNGA 1200 m - 2050
RITROVO
MEETING
DYNASTAR
DYNASTAR


monterosa ski
Alagna
VALSESIA

Heading for Monte Rosa and the Mosso Institute

Passo dei Salati


monterosa ski

Monte Rosa

Activities and field work on Monte Rosa


5
Fam. Boraginaceae
Eritrichium nanum (All.) Schrader - ERITRICHIO NANO
Alagna

Weather Station on Monte Rosa


VAUDE

The highlight of the project week

The Mosso Institute


1846
1910
PER GLI STUDI SEVERI
PER L' ESPERIMENTO SAGACE
PER LA PACE E LA VITA
NELLA MAESTÀ DELLE ALPI
ANGELO MOSSO
CREAVA E DONAVA
QUESTA SERENA DIMORA
AI SUOI ALLIEVI
A QUELLI CHE ANCORA
NON ERANO


Officina S. Giorgio - Torino


Quarzite
Gneiss aplitico
Quarzo

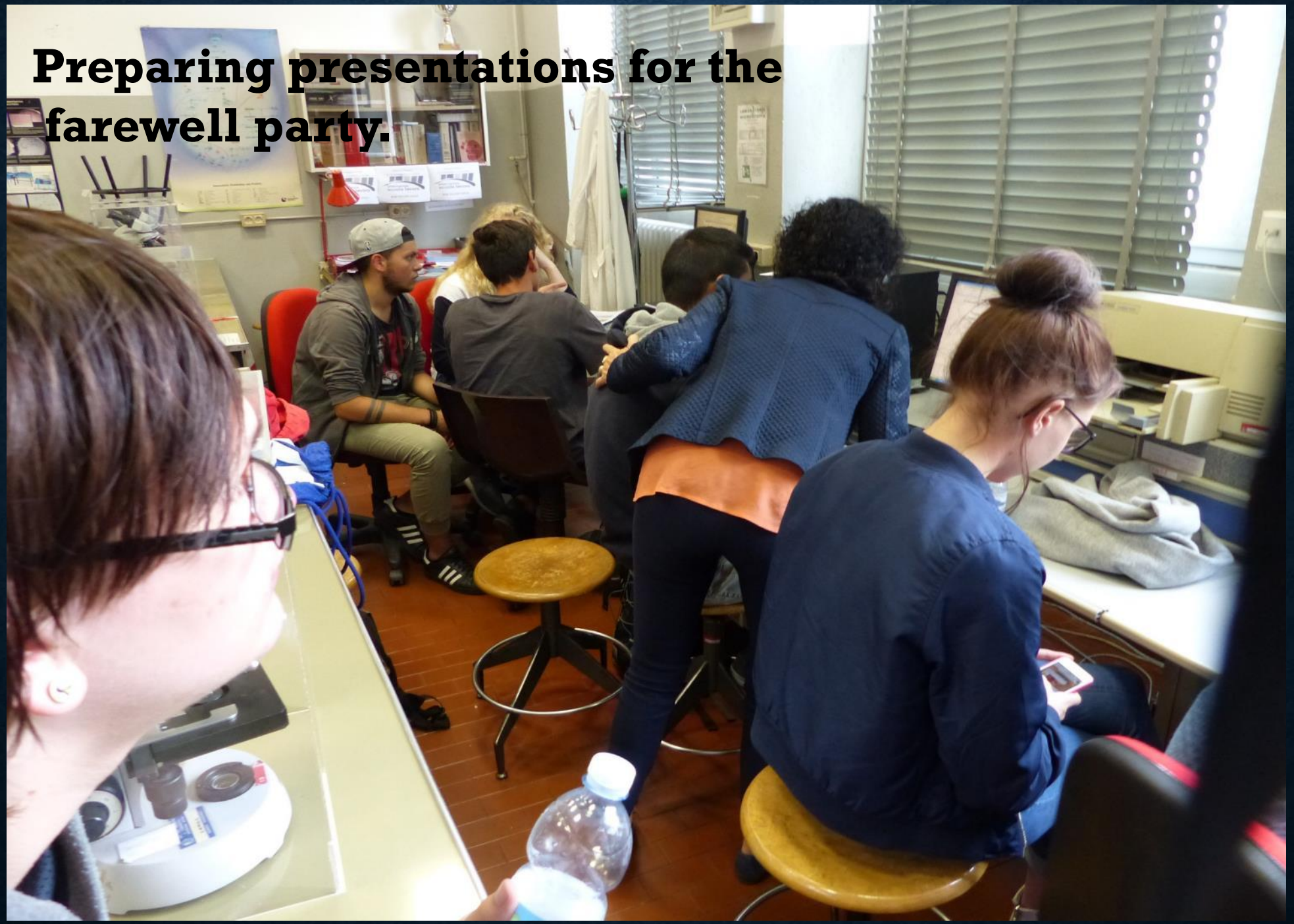
Activities in groups


ROHS GLACIER
LYS GLACIER
ALBASIN DI SEA GLACIER


LA RICERCA IN AMBITO
PERMAFROST

Visiting the Botanical Garden in Verbania

What a wonderful week!


Preparing presentations for the farewell party.


alternanza
scuola lavoro


ASUS

Students' presentations


Climate strongly conditioned migrations of Walser population in the first millenium and in the middleage they colonized the high quota areas in our territories estabilishing an autonomous economy based on agriculture and breeding.
After the «small glaciation» (about 1500 a.C.) climate didn't allow to do Walser activities and gradually brought to another migration flow to foreign countries with the consequent abandonment of some alps and villages.
Erasmus+


Erasmus+

The farewell party on Friday evening at school. Greetings from the school authorities and the principal.

The whole Erasmus+-team of the teachers

The teachers' official dinner

See you in Vaala in May 2017.

Photos

Vaalan lukio
Jouni Kauhanen
Riitta Olsbo
Jani Raitanen

Vaalan lukiolaisia Euroscola-matkalla Strasbourgissa 11.10.-13.10.2017

Euroscola-matkalle osallistuneet opiskelijat. Niko puuttuu kuvasta.

Syksyn aikana valmistauduttiin Euroscola-päivään

Kokoonnuimme useampaan kertaan koulupäivän jälkeen

Frankfurtissa menomatkalla 11.10.2017

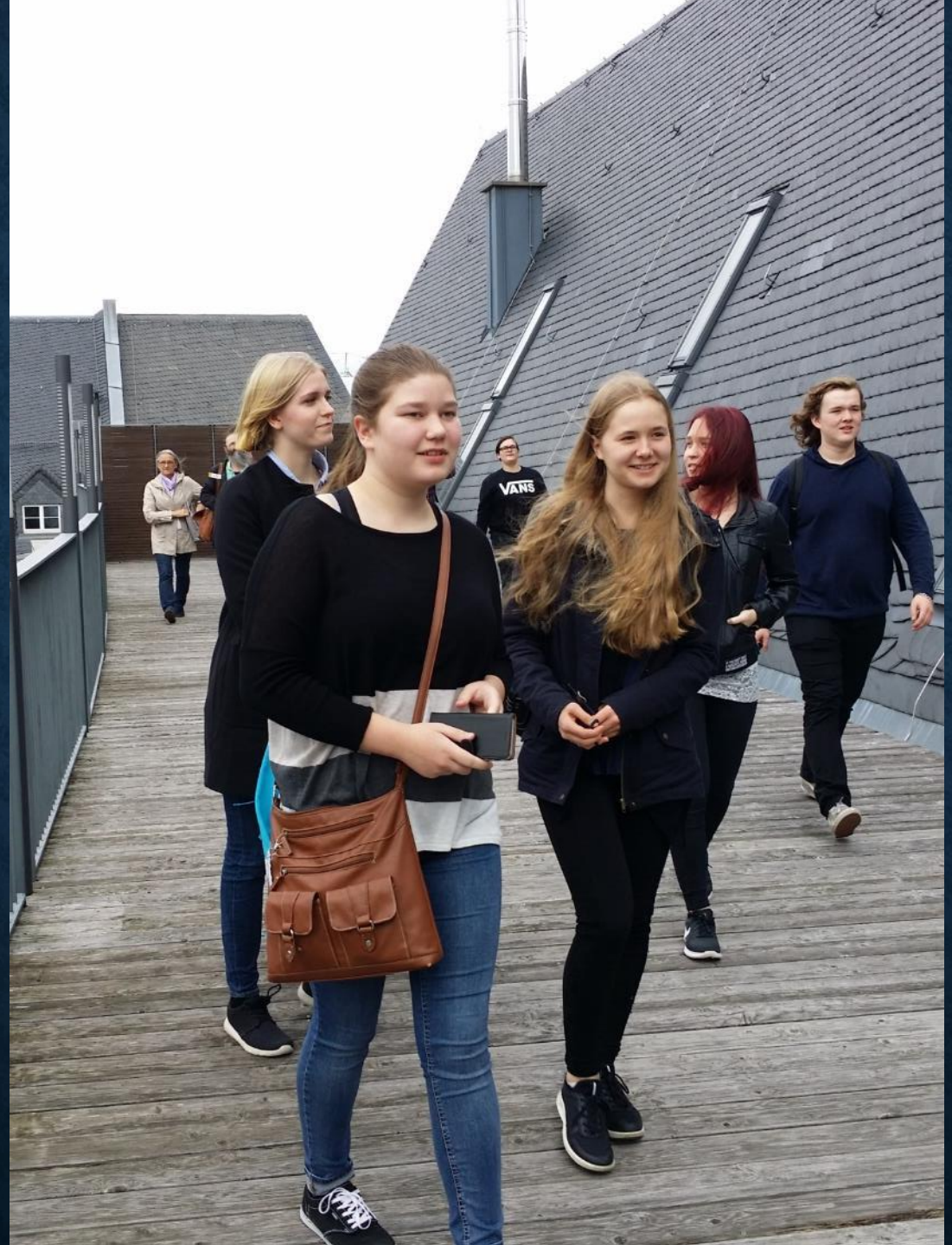
Odottelemassa metrokyytiä kaupungin keskustaan

Oppaanamme oli vaalalaissyntyinen Eila Denning

Frankfurtin tuomiokirkko

Lounaalla italialaisessa ravintolassa

Frankfurtin kattojen yllä


VANS

Frankfurtin kaupungintalo Vanhassa kaupungissa

Frankfurtin Vanhaa kaupunkia Römerin

Vierailimme Historiallisessa museossa


FRA

Pienoismalli Frankfurtista

Torstai 12.10.2017 Strasbourgissa Ranskassa

Matkalla Europarlamenttiin

Jännittävä päivä edessä

Louise Weiss-rakennuksen sisäpiha

Päivän ohjeet ja ryhmiin

EU-lippu

EU:n 28 jäsenmaan liput

Europarlamentin istuntosali 12.10.2017

Opiskelijoita ja opettajia 24 eri maasta

Euroscola-päivä oli tarkoitettu ns. EPAS-projektiin osallistuville kouluille.

Petriina ja Silja odottavat tyynesti vuoroaan

Petriina ja Silja esittelevät Suomea, Vaalaa ja Vaalan lukiota

Ilona ja Aino-Maija kuuntelevat tarkkaavaisina keskustelua

Mahdollisia tulevia europarlamentaarikkoja lukiostamme

Olli-Pekka pyytää puheenvuoroa

Mukava ja ikimuistettava päivä

Opettajien virallinen valokuva; Riitta ja Jouni keskellä

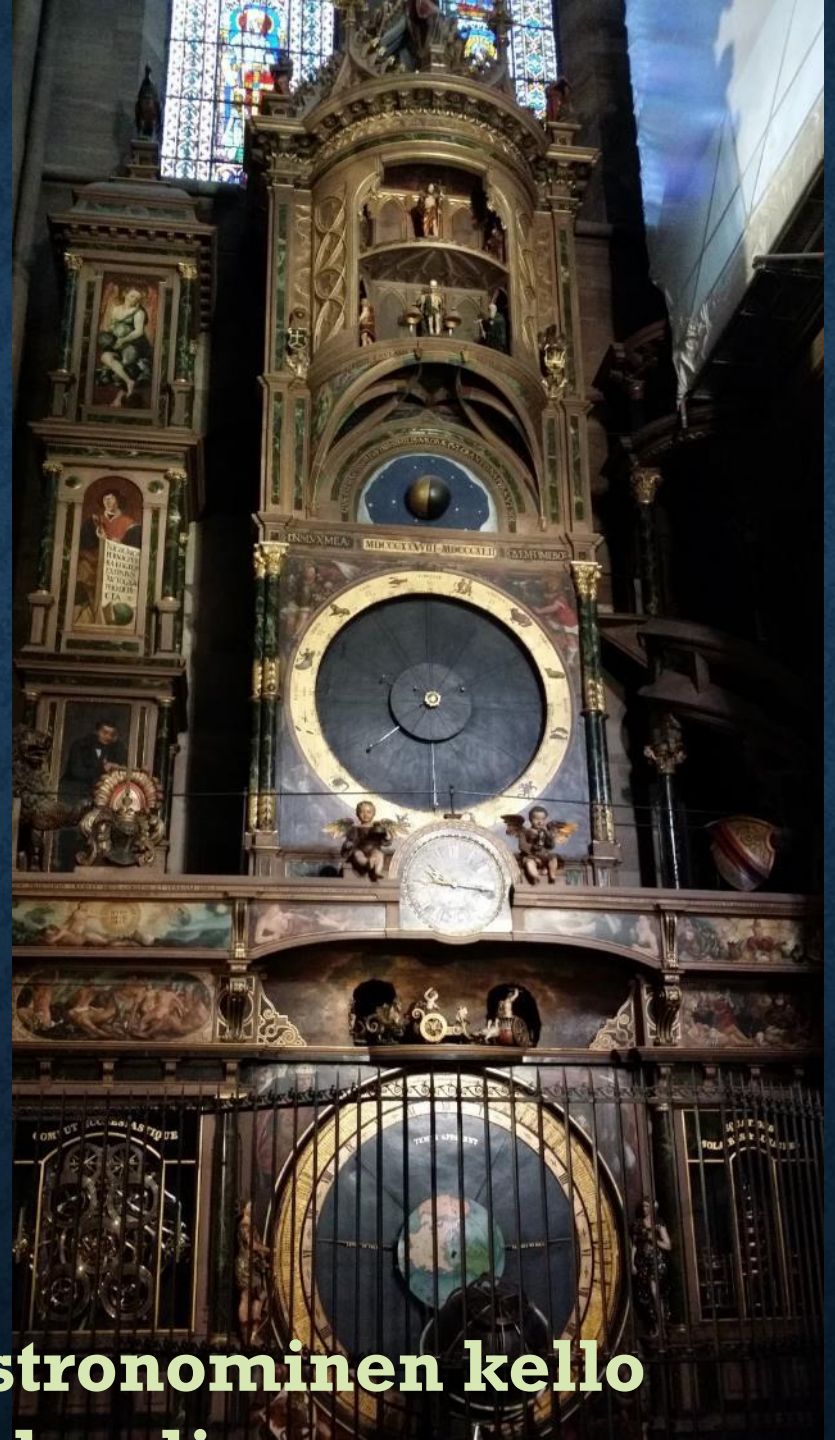
Strasbourgissa 13.10.2017

Lähdössä tutustumaan Strasbourgin nähtävyyksiin

Ill-joki

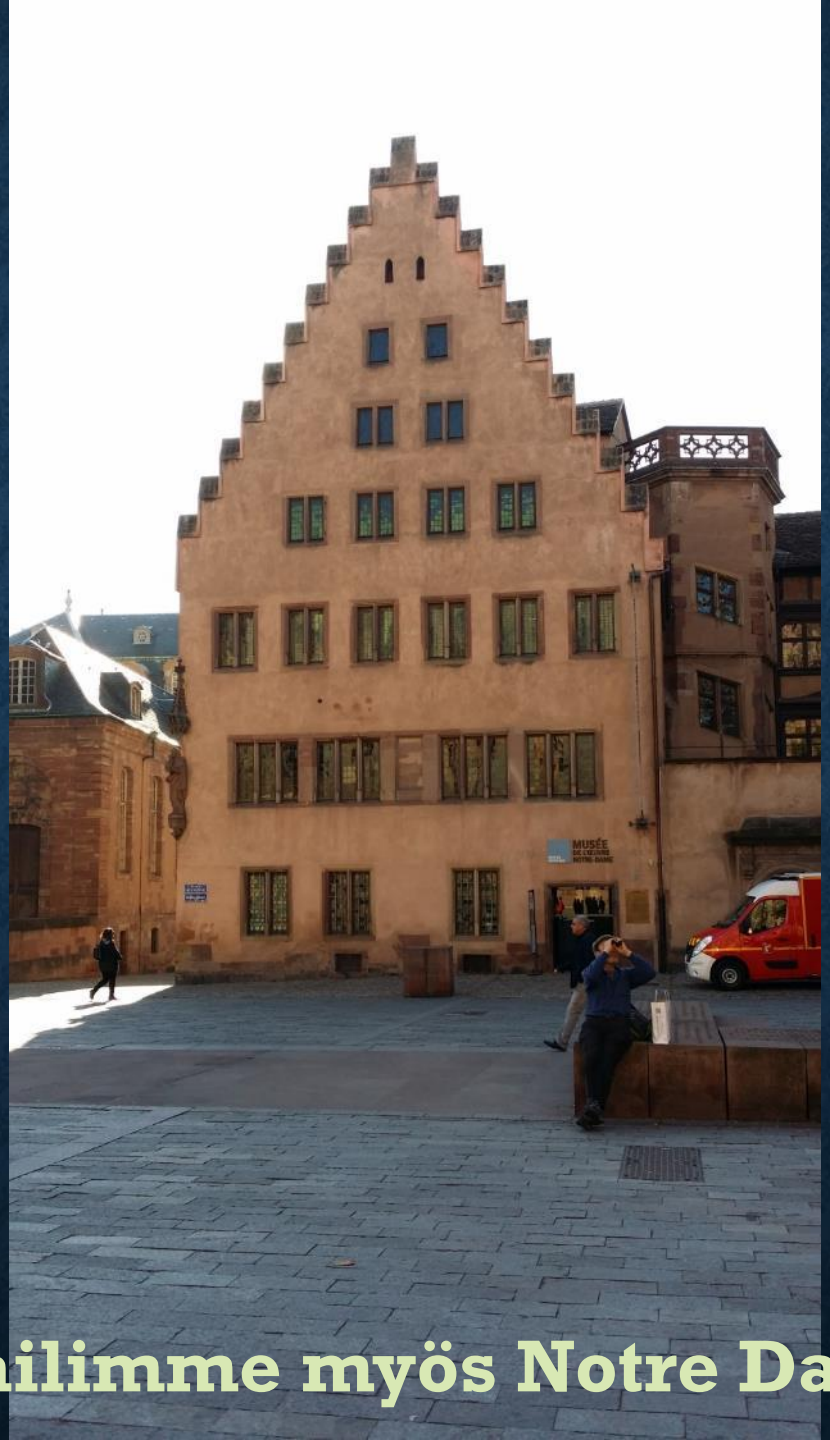
Strasbourgin tori Vanhassa kaupungissa; kuvassa kaupungin vanhin rakennus

Strasbourgin katedraali



Astronominen kello

Strasbourg katedraalin katolta kuvattuna



Vierailimme myös Notre Dame-museossa

Opiskelijoilla oli tehtävänä kuvata yksi kiinnostava kohde ja esitellä se myöhemmin muille blogissamme.

Lounaalla kiinalaisessa ravintolassa

Hotellihuoneiden luovutus. Kotimatka alkaa.

Kuvat

Euroscola
Riitta Olsbo
Jouni Kauhanen

Tutustu myös blogiimme osoitteessa

https://euroscolavaala.wordpress.com/

SF2

CLIMATE CHANGE AND GLACIERS - ACTIVITY A

Comparison of multitemporal orthophotos (years 1989, 1994, 1999, 2007, 2010, 2012) for understanding changes in the glacial environment of the Ban Glacier (Lepontine Alps, Arbola Group, Formazza Valley, Piemonte Region)

1. Observe and analyze each photo.
2. What are the two main geomorphological elements of this alpine environment?
3. Compare similarities and differences of the environment in different years.
4. Track the changes of the two main geomorphological elements through time by using different colors on the millimeter transparent paper.
5. Estimate the areal variations of Ban Glacier and lake through time.
6. Estimate the total length of the glacier through time by comparing the position of the glacier front.
7. Interpret what are the ongoing phenomena and write a short statement for describing them.

These activities were realized in cooperation with Cristina Viani PhD, Department of Earth Sciences, University of Torino, and the Italian Glaciological Committee

CLIMATE CHANGE AND GLACIERS - ACTIVITY B

Identification of glacial lakes through space and time (Valaisan Glacier, Graian Alps, Rutor-Valaisan Group, Aosta Valley; Google Earth satellite image, 2009)

1. Observe the satellite image and identify glacial lakes.
2. Indicate and interpret the possible sequence of formation of glacial lakes (Which are the oldest and which the most recent? Why did they formed through different times?).
3. What is the reason for different colors of the water into the lakes?
4. Write a short statement for describing the above-mentioned phenomena.

These activities were realized in cooperation with Cristina Viani PhD, Department of Earth Sciences, University of Torino, and the Italian Glaciological Committee

CLIMATE CHANGE AND GLACIERS - ACTIVITY C

Identification of changes through time of the Albaron di Sea Glacier (Graian Alps, Ciamarella Group, Grande di Lanzo Valley, Piemonte Region) and inventories of glaciers in Italy.

1. Observe and compare the photographs of the Albaron di Sea Glacier taken in years 1904 and 2007, as well as the ortophoto taken in years 1988 and 2012.
2. Look at the following table and at the graph.
3. What is the relationship between the number of glaciers, the percentage area loss and the glacier size?
4. What is the ongoing phenomenon? What are the effects of this phenomenon on a glacier over the next few years?

Data from inventories of glaciers in Italy		
year of the inventory	**number of glaciers**	**total glacierized area**
1927	774	n.d.
1960	838	500 km^2
1989	787	470 km^2
2015	903	370 km^2

Non-linear relationship between percentage area loss from CGI Inventory (1960) to the New Inventory (2015; *y axis*) and glacier size (*x axis*). (From: Il Nuovo Catasto dei Ghiacciai Italiani, 2015).

These activities were realized in cooperation with Cristina Viani PhD, Department of Earth Sciences, University of Torino, and the Italian Glaciological Committee

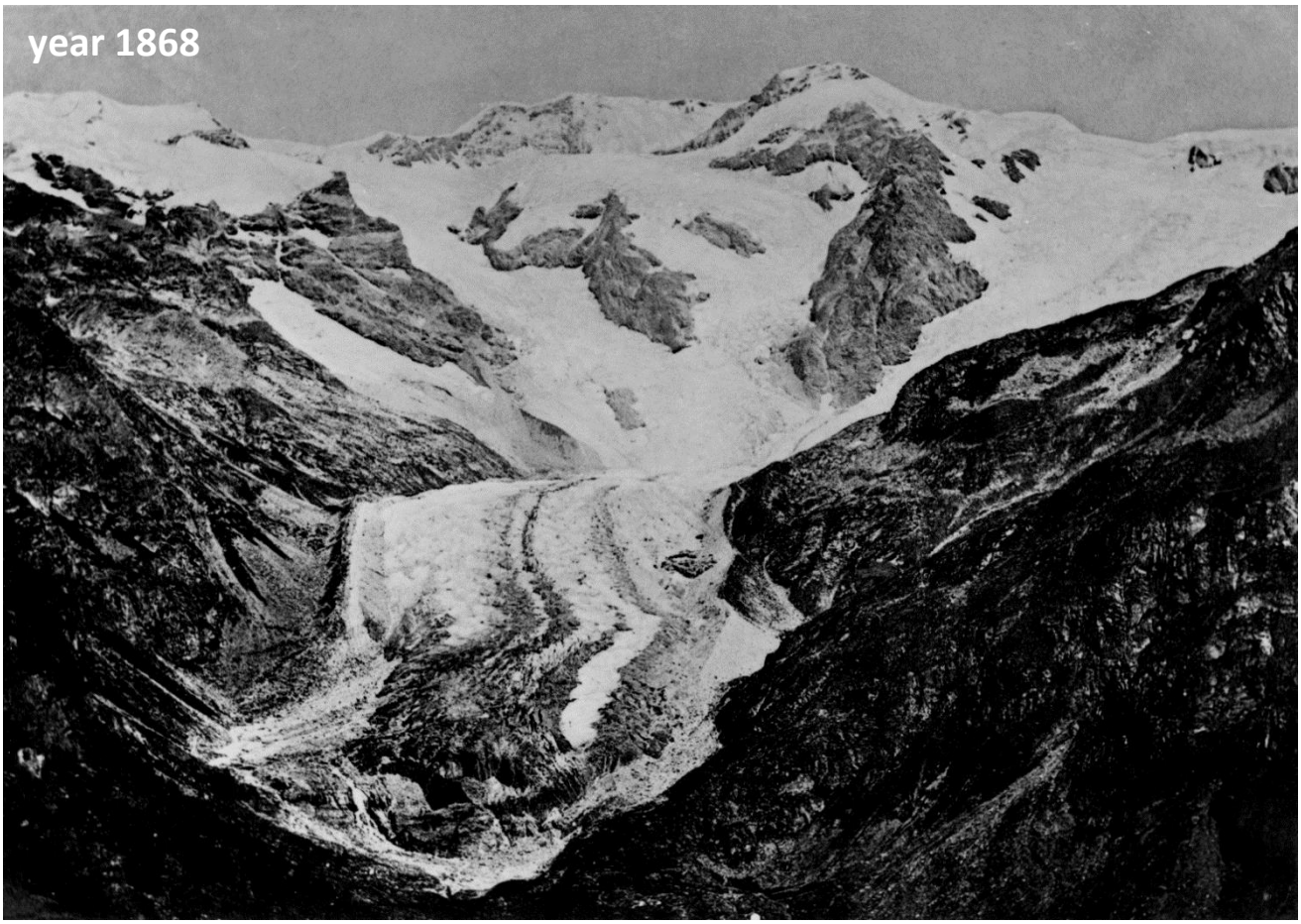
CLIMATE CHANGE AND GLACIERS - ACTIVITY D

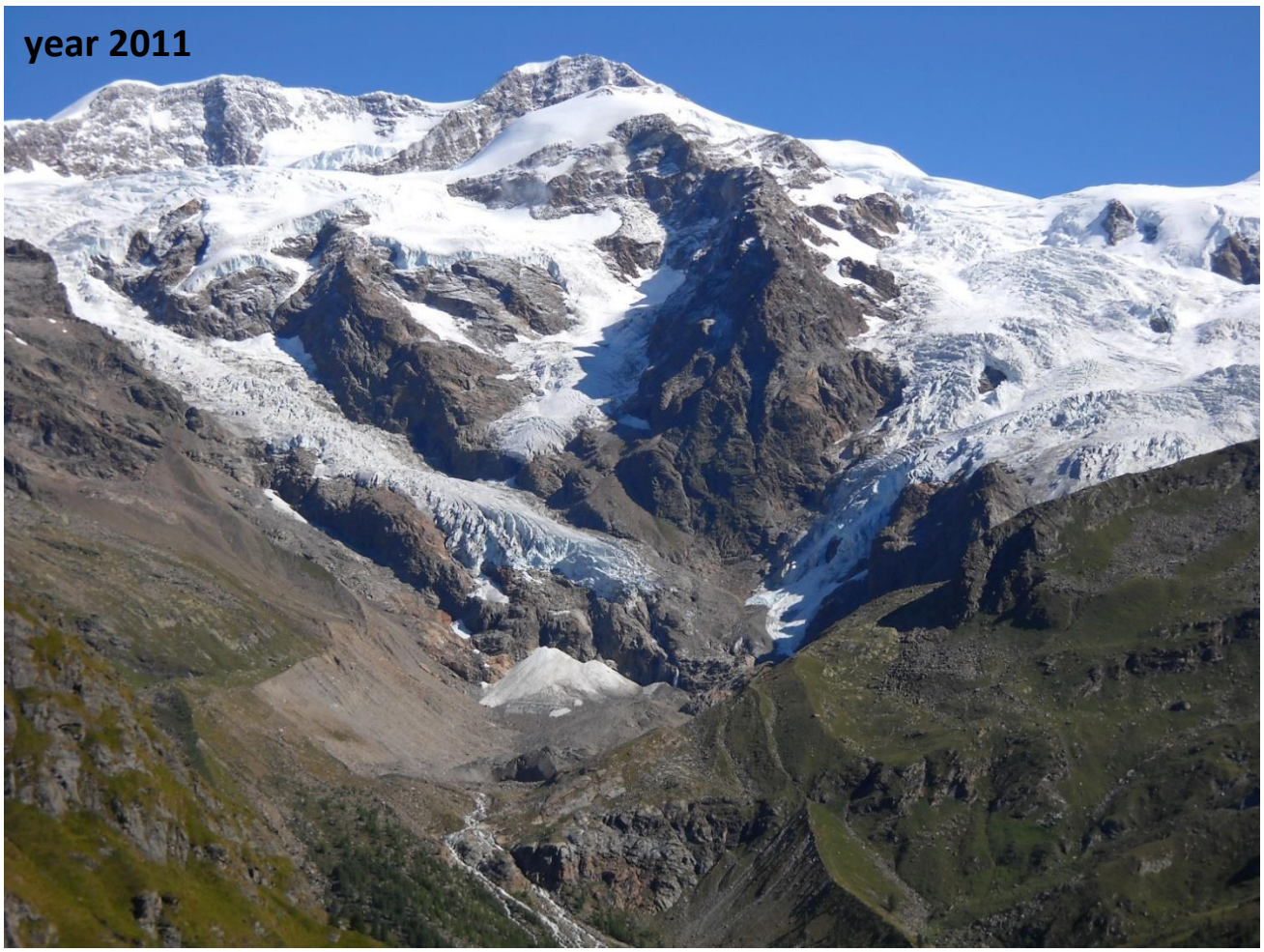
Identification of changes through time of the Lys Glacier (Pennine Alps, Monte Rosa Group, Lys Valley, Aosta Valley).

1. Observe and compare the photographs taken in years 1868 and 2011 of the Lys Glacier.
2. Find recognizable landforms and other features to be used as equivalent points to be used as references for photographic comparisons.
3. Use the map on ortophoto for identifying the glacial extents related to the photographs taken in years 1868 and 2011. Complete related labels and legend on the map, avoiding those not related to the presented data.
4. What is the ongoing phenomenon? Indicate some relevant geomorphic processes and factors related to the environmental changes.

These activities were realized in cooperation with Cristina Viani PhD, Department of Earth Sciences, University of Torino, and the Italian Glaciological Committee

ACTIVITY D - LYS GLACIER
(Pennine Alps, Monte Rosa Group, Lys Valley, Aosta Valley)





ACTIVITY D - LYS GLACIER
(Pennine Alps, Monte Rosa Group, Lys Valley, Aosta Valley)