



RIS Briefcase Project Briefcase Catalogue

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Welcome to the Briefcase Catalogue



A Hands-On Exploration of Earth's Natural Treasures

If you are not familiar with the concept of the Briefcase, please see this video: <https://www.youtube.com/watch?v=UBsPfhNbOGO>



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Welcome to The Briefcase Catalogue



Each Briefcase Includes:

- **Mineral Resources:**
Authentic samples of minerals, ores, or rocks (depending on the briefcase).
- **Real-World Everyday Products:**
Items crafted from the presented minerals, illustrating their practical uses.
- **Useful Instructions:**
A detailed guide to fully utilize the materials in the briefcase.
- **Notebook:**
Complete with a game guide, solutions, and exciting proposed experiments (depending on the briefcase).



1. Daily Use Minerals Briefcase / 2

Samples (depending on the briefcase!):

set 1 (quartz, galena, chalcopryrite, talc, fluorite, bauxite, kaolinite, hematite, lepidolite, calcite, gypsum);

set 2 (***Metallic minerals***– hematite, chromite, sphalerite, chalcopryrite, lepidolite, bauxite ***Industrial minerals*** - fluorite, talc, halite, quartz, graphite, calcite);

set 3 (fluorite, calcite, malachite, cinnabar, amethyst, cassiterite, galena, mica-lepidolite, skutterudite, hyaline quartz, sphalerite, orthoclase, wolframite, magnetite, and native gold);

set 4 (fluorite, hematite, chromite, talc, halite, quartz, sphalerite, chalcopryrite, graphite, calcite, lepidolite, bauxite).

Videos: https://www.youtube.com/watch?v=Ylc9AJC_nNc&t=20s;

https://www.youtube.com/watch?v=Ylc9AJC_nNc;

<https://www.youtube.com/watch?v=714uxxfQipE>;

<https://www.youtube.com/watch?v=gSsZE6d9Rk0>;

https://www.youtube.com/watch?v=Qm_2ma4smRg&t=3s;

<https://www.youtube.com/watch?v=MNoCj9Tlag4> ;

<https://www.youtube.com/watch?v=zBTntvUSM6Q>



2. Platinum Applications and the Importance of Recycling Briefcase

Partner: MONOLITHOS Catalysts & Recycling Ltd. (MON)

Country: Greece

Contact: yakoumis@monolithos-catalysts.gr; info@monolithos-catalysts.gr

Samples: platinum, palladium, rhodium, gold, rhodium, copper, nickel, zinc, silver, lead, cobalt and iron.



3. Secondary Raw Materials Briefcase

Partner: Inštitut SeMe, okoljsko ozaveščanje in trajnostni razvoj, Poljčane (i-SeMe)

Country: Slovenia

Email: kim@i-seme.si

Samples: samples of waste (metals, construction material, plastics, etc.) and new items made from them.



4. Minerals in Mobile Phones Briefcase

Partners: Technical University of Madrid (UPM) and University of Miskolc (UoM)

Country: Spain and Hungary

Contact: l.jorda@upm.es (ES) and helga.kovacs@uni-miskolc.hu (HU)

Samples (depending on the briefcase):
chalcopyrite, cassiterite, gold-bearing quartz, magnesite, petroleum, quartz, lepidolite, bauxite.

Videos:

<https://www.youtube.com/watch?v=7gi2HDU192A>;

<https://www.youtube.com/watch?v=wlt74qfSI0Q&t=22s>



5. Gold and Conflict Minerals Briefcase

Partner: University of Milano- Bicocca (UNIMIB)

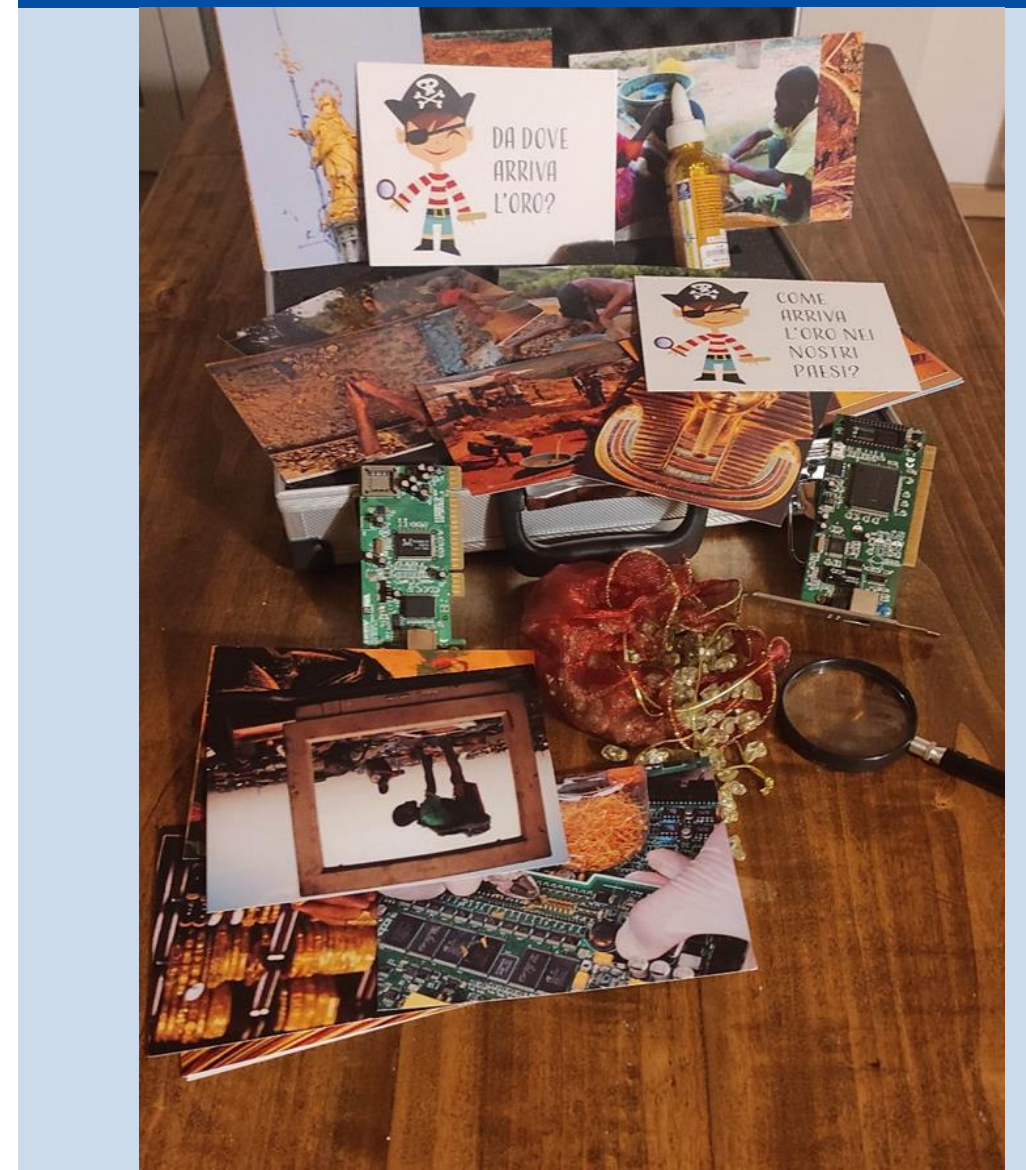
Country: Italy

Contact: mauro.fasoli@unimib.it

Elements: material which showcases the properties of gold-making and why it is so valuable, the various uses of gold, the social problems of gold extraction and refinement, and the necessity of recycling.

Video:

<https://www.youtube.com/watch?v=sn1r9MuuRZE&t=5s>



6. The Importance of Lead and Zinc in Our Lives Briefcase

Partner: Inštitut SeMe, okoljsko ozaveščanje in trajnostni razvoj, Poljčane (i-SeMe)

Country: Slovenia

Email: kim@i-seme.si

Samples: sphalerite, wulfenite, calcite, galena, pyrite, dolomite, fluorite, barite.



7. The Industrial Minerals Briefcase

Partner: Technical University of Kosice (TUKE)

Country: Slovakia

Contact:

zdenka.babicova@tuke.sk

Samples: calcite, dolomite, magnesite, gypsum, halite, talc, anhydrite, zeolite, gold, siderite, and precious opal.



8. Critical Raw Materials Briefcase

Partner: Gomez Pardo Foundation (FGP)

Country: Spain

Email: direccion.tecnica@fgomezpardo.es

Samples: magnetite, barite, gallium, lepidolite + marine salt, chalcocite, vanadite, sphalerite, fluorite, quartz, pentlandite; a collection of pure metals (CRM) obtained from these minerals.

Videos:

<https://www.youtube.com/shorts/7pGOJsuvlmY>;

https://www.youtube.com/shorts/O7X_1I7RIQA;



9. Volcano Briefcase (Ja BiH vulkan)



Partner: University of Banja Luka (UNiBL)

Country: Bosnia and Herzegovina

Contact: suzana.gotovac.atlagic@unibl.org

Samples: kaolinite, mica, white zeolite, green zeolite, bentonite, and pyrophyllite

Video:

<https://www.youtube.com/watch?v=Ri05ddv4D5g&t=10s>



10. Fluorescent Briefcase

Partner: Gomez Pardo Foundation (FGP)

Country: Spain

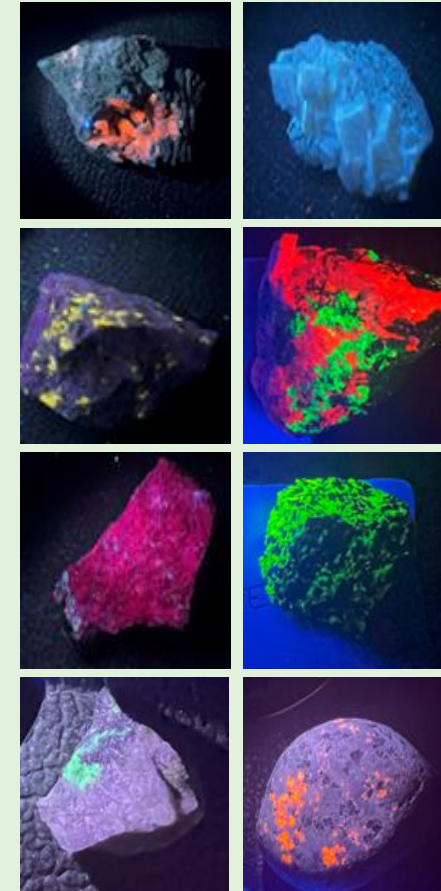
Email: direccion.tecnica@fgomezpardo.es

Samples: zincite, franklinite, calcite, tephrite, hydrozincite, tremolite, chalcocite, pollucite, norbergite, adamite, willemite, alunite and caliche, fossilized stromatolite, petrified wood, yooperlite, tanzanite, scheelite, fluorite, sulphur, apatite, opal, ambar, manganochalcite, calcedonies, aragonite, cerusite, corundum, hauyn.

Elements: a portable UV lamp (short wave, 254 nm), two UV lights (long wave, 365 nm & 395 nm) and a notebook with the game guide and the solutions.

Video:

<https://www.youtube.com/watch?v=WxJckZ0Ckqw>



11. The Briefcase of Minerals of Andalusia

Partner: Spanish National Research Council (CSIC)

Country: Spain

Email: m.regueiro@csic.es

Samples: pyrite, chalcopyrite, galena, sphalerite, cinnabar, magnetite, hematite, goethite, siderite, celestite, cinnabar, skutterudite, talc, feldspar, quartz, and wollastonite, but also some other that have been produced and had some relevance in the region.

Video:

<https://www.youtube.com/watch?v=IMz5NiSq2pA>



12. BOSS-MINE Briefcase (Bosnian super minerals)

Partner: University of Banja Luka (UNiBL)

Country: Bosnia and Herzegovina

Contact: suzana.gotovac.atlagic@unibl.org

Samples: onyx, opal, malachite, azurite, baryte, pegmatite, bauxite, green calcite, metagranite, limestone, and yrophyllite.

Video: <https://www.youtube.com/watch?v=cn4WXBbKkjg>



13. Earth's Backpack (CRM's in Our Daily Lives)

Partner: Geological Survey of Estonia
(GSE)

Country: Estonia

Contact: info@egt.ee

Samples: phosphorite, graptolitic argillite, glauconite sandstone, carbonate rock, blue clay, sand, gravel, oil shale, peat, and granite.

Video:

<https://www.youtube.com/watch?v=gmb9YZmoToA>



14. Special Briefcase (for blind and partially sighted pupils)

Partner: Inštitut SeMe, okoljsko ozaveščanje in trajnostni razvoj, Poljčane (i-SeMe)

Country: Slovenia

Email: kim@i-seme.si

Samples: fluorite, bauxite, magnetite, quartz, talc, muscovite, gypsum, apatite, malachite, halite and (non-mineral) coal.

Video:

<https://www.youtube.com/watch?v=7tv9M8M1jfE&t=2s>



15. The Little Miner Briefcase

Partner: National Technical University of Athens (NTUA)

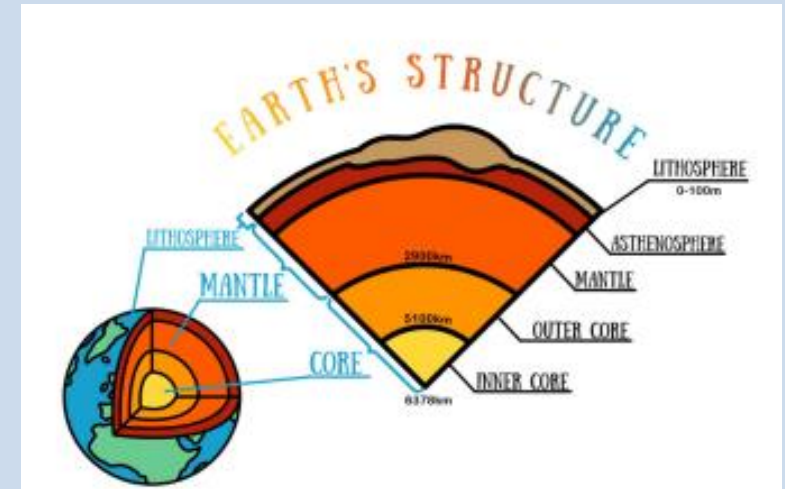
Country: Greece

Contact: maria@metal.ntua.gr

Elements: red, yellow, green, blue play dough, and knife.

Video:

<https://www.youtube.com/watch?v=61SN0wEH4zU>



16. Metallic minerals Briefcase

Partner: Polytechnic University of Tirana – Faculty of Geology and Mining (TIRU)

Country: Albania

Contact: ana.fociro@fgjm.edu.al

Samples: chromite, magnetite, halite, gypsum, bauxite, chalcopyrite, calcite, realgar-orpiment, apatite, and talc.

Video:

https://www.youtube.com/watch?v=BgV EP6o8Y_o



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17. Fossils Briefcase

Partner: Polytechnic University of Tirana – Faculty of Geology and Mining (TIRU)

Country: Albania

Contact: ana.fociro@fgjm.edu.al

Samples: a) **Macrofossils:** well-preserved remains of ancient organisms, such as shells, bones, and teeth;
b) **Microfossils:** Microscopic remains, including pollen grains, microorganisms, and planktonic organisms; and
c) **Trace Fossils:** Indirect evidence of ancient life activities, such as footprints, burrows, and coprolites.

Video:

https://www.youtube.com/watch?v=BgVEP6o8Y_o



18. Marble Briefcase

Partner: Marble, Stone and Materials Technological Center (CTM)

Country: Spain

Email: david.caparros@ctmarmol.es,
elena.lopez@ctmarmol.es

Samples: dolomitic limestone, slate, limestone, olomite, calcarenite, marble, granodiorite, granite, and ignimbrite.

Video:

https://www.youtube.com/watch?v=bNDmZkvOW_s&t=1s



19. Republic North Macedonia Briefcase No.1

Partner: Goce Delchev University (UGD)

Country: Republic of North Macedonia

Email: goran.tasev@ugd.edu.mk

Samples: quartz, tourmaline, azurite, hematite, magnetite corundum. sphalerite, galena, chalcopryite, pyrite, rutile, pyrolusite, chromite, calcite, aragonite, baryite, muscovite, biotite, marble, feldspar, and cleiophane.

Video:

<https://www.youtube.com/watch?v=YQm4ze pJTM4>



20. Republic North Macedonia Briefcase No.2

Partner: Goce Delchev University (UGD)

Country: Republic of North Macedonia

Email: goran.tasev@ugd.edu.mk

Samples: gypsum, specularite, phlogopite, stibnite, otavite, talc, magnesite, native silver, native sulfur, and malachite.

Video:

<https://www.youtube.com/watch?v=jEXzymsqn70>



21. Non-metallic Ores in Our Lives Briefcase

Partner: Masaryk University (MU)

Country: Czech Republic

Contact: zachovalova@sci.muni.cz

Samples: fluorite, graphite, talc, gypsum, feldspar, bentonite, diatomite, fonoilite, clay and loess, kaolin, quartz sand, limestone, marble, marlstone, slate, sand and gravel, granite, black and brown coal, crude oil.

Videos:

<https://www.youtube.com/watch?v=Ze2rwDoDSko>;

<https://www.youtube.com/watch?v=uN2yoL1-dIM>



22. The Fascinating World of Minerals Briefcase



Partner: National and Kapodistrian University of Athens (NKUA)

Country: Greece

Contact: mineralmuseum@geol.uoa.gr

Samples – rocks: lignite, marble, talc, kisseris.

Samples – minerals: malachite, graphite, gypsum, limestone, bauxite, mica, quartz and sulphur.

Video:

<https://www.youtube.com/watch?v=TF59vti94tM>



23. Minerals in Science, Manufacturing and Daily Life Briefcase



Partner: Lasnamäe Vene Gümnaasium (LVG)

Country: Estonia

Contact: tatiana.dudorina@laveg.edu.ee

Samples: sulfur; metal and mineral samples (magnetite, sphalerite, chalcopyrite, limonite, hematite, bauxite, cassiterite, pyrolusite, galena, graphite; gold, jade, green quartz, aragonite, gypsum, pyrope-garnet, calcite, obsidian, orthoclase, pyrite, rock crystal, chalcedony; coal; petroleum; hematite, talc, magnetite, quartz, orthoclase, graphite, granite, pyrite, gritstone, muscovite, shale, calcite, slate, marble, obsidian, gypsum, basalt, kaolinite, orthoclase, magnetite, amethyst, graphite, molybdenite, aragonite, calcite, hematite, gypsum, descloizite, muscovite, fluorite;

Videos: [https://www.youtube.com/watch?v=3POIPRw1Q1E&t=12s;](https://www.youtube.com/watch?v=3POIPRw1Q1E&t=12s)
<https://www.youtube.com/watch?v=ypUeyTDPzOg>



24. Goldpanning Briefcase

Partner: Technical University of Madrid (UPM)

Country: Spain

Contact: l.jorda@upm.es

Samples: pyrite nuggets (which simulate gold) mixed in sand (other minerals magnetite or cassiterite, depending on the sand).

Videos:

<https://www.youtube.com/watch?v=WPUxm08-9qE;>

<https://www.youtube.com/watch?v=9V6BLCxtlgo;>

<https://www.youtube.com/watch?v=jKridLiXUHA>



25. Microscope (Micromount) Briefcase



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Partner: Technical University of Madrid (UPM)

Country: Spain

Contact: l.jorda@upm.es

Samples: azurite, quartz crystal with petroleum inclusions, amber with insect, acicular aragonite crystals, galena alterations, various gems.

Video: <https://www.youtube.com/watch?v=8fLsRgBooT0>



26. Textured Marble Briefcase

Partner: Agrupación Empresarial Innovadora de la Piedra Natural (Cluster de la Piedra Natural)

Country: Spain

Contact: promocion@clusterpiedra.com

Samples: 9 types of textures of the same type of marble, Honed (Apomazado), Aged (Envejecido), Bushhammered (Abujardado), Bushhammered+brushed (Abujardado+cepillado), Scratching 1 (Rayado 1), Scratching 2 (Rayado 2), Flamed (Flameado) and Sandblasting (Arenado).

Video: <https://www.youtube.com/watch?v=UfrRMwIX2Ok>



27. ♥ Srce-Geo

Briefcase: Discovering Serbia's Geological Riches

Partner: University Union Nikola Tesla

Country: Serbia

Contact:

smrazovac@unionnikolatesla.edu.rs

Samples: calcite, massive sulfide, azurite, zeolite, covelin, chalcopyrite, bornice, bornite, pyrite and gypsum.

Video:

<https://www.youtube.com/watch?v=rDewPI6YFco>



28. The Mohs Scale of Mineral Hardness Briefcase

Partner: Inštitut SeMe, okoljsko ozaveščanje in trajnostni razvoj, Poljčane (i-SeMe)

Country: Slovenia

Email: kim@i-seme.si

Samples: talc, gypsum, calcite, fluorite, apatite, orthoclase feldspar, quartz, topaz, corundum, and (synthetic) diamond

Video:

<https://www.youtube.com/watch?v=7tv9M8M1jfE>



29. 3D Briefcase - Virtual Mine Visit and 360° Experience



Partners: FGP, UPM, CSIC, i-SeMe, TUKE, MON, EUROMINES, UNIMIB,

Contacts:

- **Spain:** direccion.tecnica@fgomezpardo.es & l.jorda@upm.es ; m.regueiro@csic.es
- **Slovenia:** kim@i-seme.si
- **Slovakia:** mario.molokac@tuke.sk
- **Greece:** yakoumis@monolithos-catalysts.gr; info@monolithos-catalysts.gr
- **Czech Republic:** sochorova@euromines.be
- **Italy:** mauro.fasoli@unimib.it

Items: mobile phone, 3D glasses, cartoon and plastic supports for phones and a notebook with the game guide and the solutions



30. Add Some Pepper to Your Life Briefcase



Partner: National Technical University of Athens (NTUA)

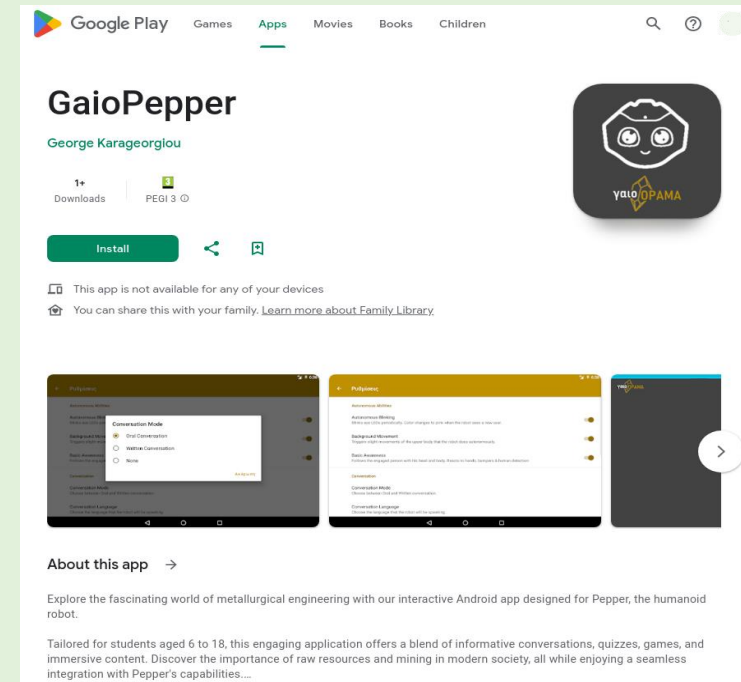
Country: Greece

Contact: maria@metal.ntua.gr

The application supports information and quizzes for the following minerals: bauxite, gypsum, sulfur, corundum, pyrite, fluorite, quartz, and chromite.

Items included: the robot Pepper and its charging cable (*Pepper can only be used in the museum grounds*).

The GaiPepper application is available through the Google PlayStore. After switching on Pepper, the user can launch the PlayStore and install the GaiPepper app.



31. Find the Intruder Briefcase



Partner: Faculty of Education – University of Zaragoza

Country: Spain

Contact: gcalvose@unizar.es

Samples: olivine, malachite, copal, bismuth, talc, quartz (colorless), dolomite, calcite, emerald, quartz (rose), hematite, fluorite, chalcopyrite, galena, orthose, sepiolite, goethite, tourmaline, graphite, magnetite, aragonite, Iceland spar, amethyst, pyrite.

Video:

<https://www.youtube.com/watch?v=nngNop5ieuE>



32. The Minerals of Madrid Briefcase

Partner: Ilustre Colegio Oficial de Geólogos

Country: Spain

Contact: rafael_jorda@hotmail.com

Samples: talc, galena, fluorite, sphalerite, muscovite, sepiolite, quartz, malachite, arsenopyrite and gypsum

Video:

<https://www.youtube.com/watch?v=6BYnxFHDJp4>



33. The Minerals of Spain Briefcase

Partner: Spanish World Geologists

Country: Spain

Contact: madrid@geologosdelmundo.org

Samples: galena, malachite, quartz, fluorite, calcite, beryl, pyrite, chalcopyrite, magnetite and gypsum.

Video:

<https://www.youtube.com/watch?v=ecwzE0kQ8a0>



34. Digital Minerals Briefcase



Partner: Faculty of Engineering, University of Porto (FEUP)

Country: Portugal

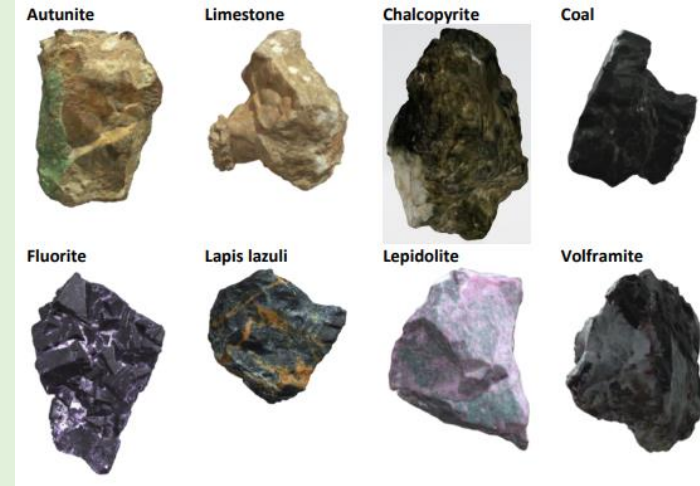
Contact: mldinis@fe.up.pt

Elements: laptop and its charger; two controls (one right and one left and their respective chargers), one pair of virtual reality glasses (head-mounted display - HDM), two sensors.

Samples to see: autunite, limestone, chalcopyrite, coal, fluorite, lapis lazuli, lepidolite, wolframite.

Video:

<https://www.youtube.com/watch?v=P-2LDWOqJuM>





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RIS Briefcase *Team*

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