


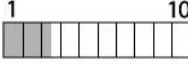


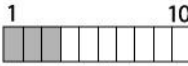





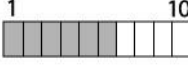


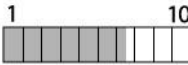


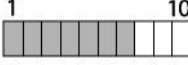




ROCKCHECK

E-LEARNING ABOUT IDENTIFICATION,
CLASSIFICATION AND USE OF ROCKS

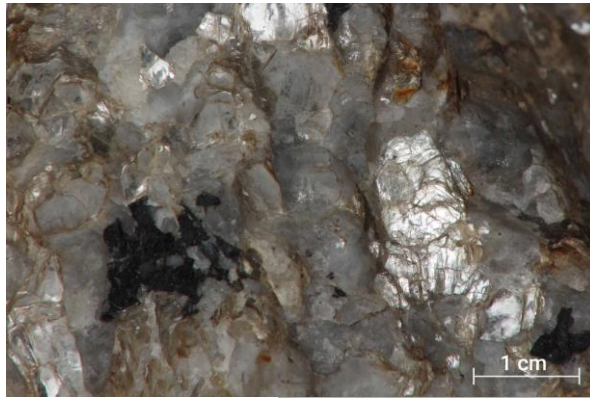


WHAT ARE MINERALS?

- Naturally occurring, homogeneous solid
- Constant **chemical composition**, an **ordered crystal structure**, certain morphological forms and properties
- More than 4.000 different minerals
- Only some of them are rock forming minerals - **basic building blocks of rocks**
- They are **identified according to their characteristics** and are very important for rocks identification

ROCKCHECK	IMPORTANT CHARACTERISTICS	COLOR	RELATIVE HARDNESS	OCCURRENCE IN ROCKS
MUSKOVITE and BIOTITE	Minerals with thin sheets shape. Muscovite is transparent and is generally silver colored, while biotite is dark and opaque.		1  10	
CALCITE and DOLOMITE	Calcite reacts rapidly with diluted 10% HCL, dolomite does not.		1  10	
AMPHIBOLE and PYROXENE	These two minerals are hard to distinguished. They have prismatic shape and build many igneous and metamorphic rocks.		1  10	
FELDSPAR	Mineral with rectangular angles and pearly glow that makes up some of the most common rocks.		1  10	
OLIVINE	Transparent to translucent mineral with a glassy glow.		1  10	
GARNET	Mineral with spherical to cubic shape.		1  10	
QUARTZ	One of the most common minerals. It is usually seen in rocks as transparent to translucent minerals, with a glassy glow.		1  10	

HOW DO WE RECOGNIZE MINERALS IN THE ROCK?



- **Shiny surfaces** (reflecting light)
- Some mineral grains are visible to the naked eye, others not (visible only under microscope)
- Same or different colors
- Same or different sizes

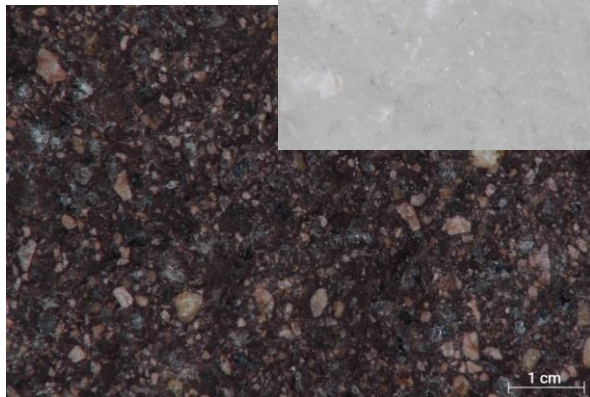
Difference between mineral and sedimentary grains?



Grains with flat, shiny surfaces.



Grains that look like sand, gravel or pebbles - they usually have rounded surfaces.



ROCKS and MAIN GROUPS

- Solid substance with more or less **constant mineral and chemical composition**
- The **earth crust** (lithosphere) consists of different types of rocks
- According to their formed processes rocks **classified into three main groups**:

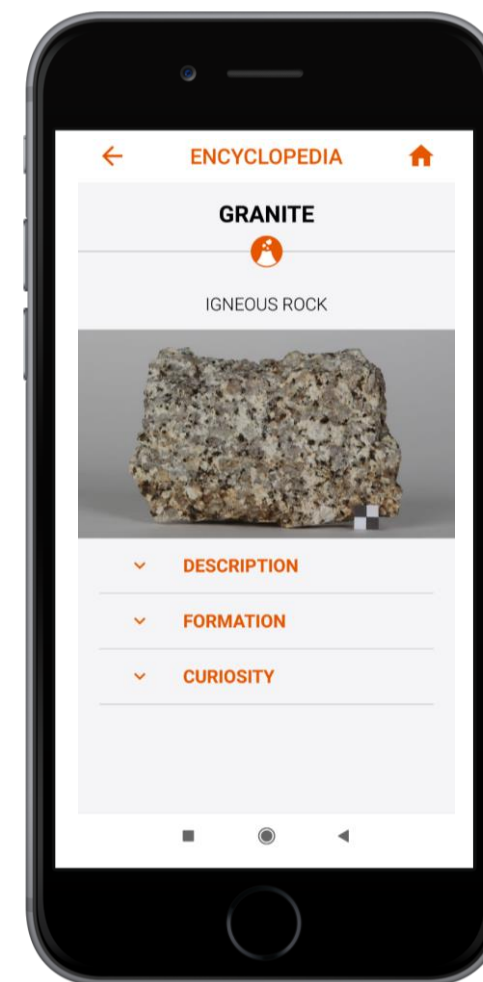
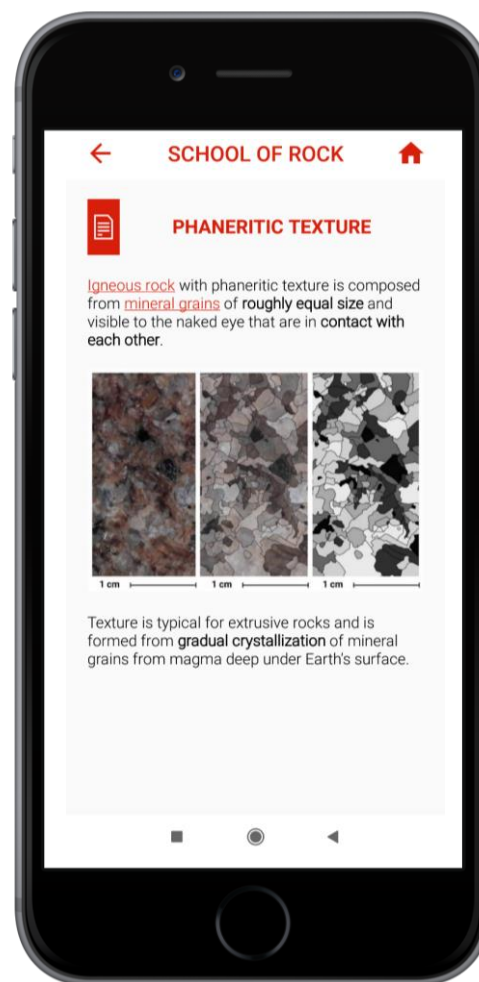
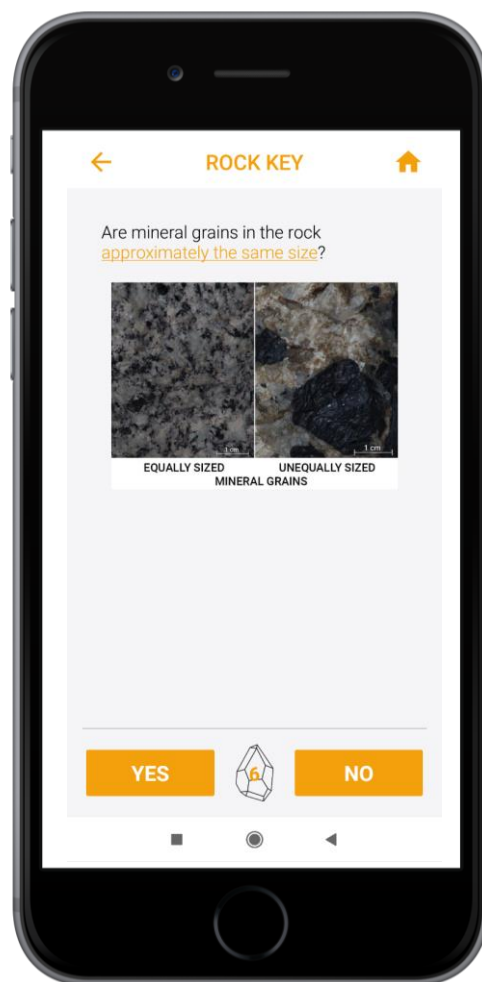
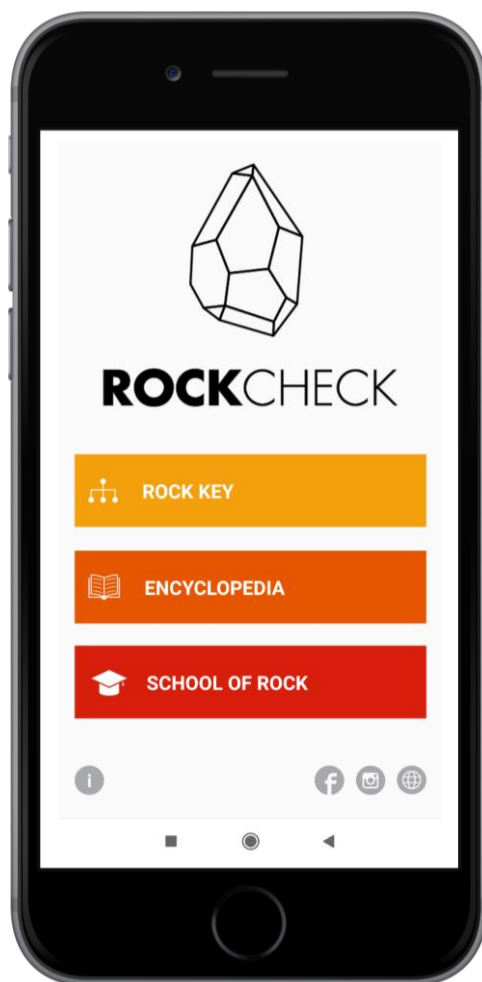





THE ROCK CYCLE

- **Rock cycle** describes how due to various processes one group of rocks turns into another one.
- It is an **overview of the formation and alteration of rocks** on and below the Earth's surface.

ROCKCHECK APPLICATION



HOW TO WORK IN MODULE 1 AND 2



MEET ROCKCHECK

ORIENTATION: Arrange all the minerals, rocks, and processes found on the upper left side of the worksheet into three tasks. The numbers represent the tasks in which you need to use available minerals, rocks or processes.

1 AVAILABLE MINERALS

2 CLASSIFICATION OF ROCKS
It won't be difficult with RockCheck

SEDIMENTARY ROCKS

CLASTIC

CHEMICAL/BIOCHEMICAL

IGNEOUS ROCKS

INTRUSIVE

EXTRUSIVE

METAMORPHIC ROCKS

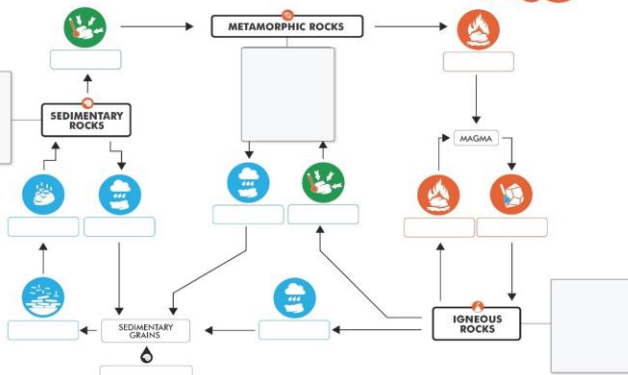
SCHISTOSE STRUCTURE

GRAINULOSE STRUCTURE

3 AVAILABLE ROCKS

1 MINERALOGICAL PUZZLE
Solve me in a few minutes

3 ROCK CYCLE
Get ready for a challenge



3 AVAILABLE PROCESSES

3 ROCK CYCLE
Get ready for a challenge

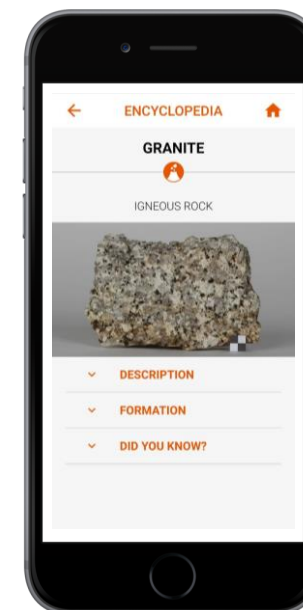
1 Select one rock. Find the minerals we need, to compose this rock.

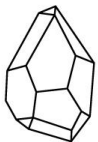
ROCK TYPE	IMPORTANT CHARACTERISTICS	COLOR	STREAK COLOR	HARDNESS	OCCURRENCE
SEDIMENTARY and BOTTLER	Minerals with the transparent structure. They are distinguished by their appearance in thin layers.	Gray	Gray	2-3 (can break with nail)	Common
CALCITE and DOLOMITE	Calcite reacts rapidly with HCl, dolomite does not.	White	White	3-4 (can break with nail)	Common
AMPHIBOLE and PIRRENITE	Minerals that build up amphibolite and hornblende rocks. In effect, they are the most common rocks.	Green	Green	5-6 (can break with hammer)	Common
FLUORAPAT	Mineral with rectangular shape that makes up a part of the most common rocks.	White	White	6 (can break with hammer)	Common
OLIVINE	Green mineral with olive color.	Green	Green	6.5-7 (can break with hammer)	Common
GARNET	Isometric mineral.	Red	Red	6.5-7.5 (can break with hammer)	Common
QUARTZ	One of the most common minerals. It is usually seen in rocks. In igneous rocks, it is a glassy mineral.	White	White	7 (can break with hammer)	Common

2 Determine rocks with RockCheck app and arrange them by type of rock.

Questions/Quiz

- Sandstone and quartz sand are important raw materials. What do we use quartz sand for?
- Limestone is a very useful rock. We use it for something that helps us get from one floor to another. What is it?
- What do we use clay for in cosmetics?
- Pumice is used a lot for beauty cleaning products. What does it help us get clean?





ROCKCHECK

- FB: KamenCheck
- Google play



Supported by:



RawMaterials
Connecting matters



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