

## Teacher's Card



## Who Wants to be a RM ambassador?

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### GENERAL INTRODUCTION

*Type of Activity (Lab activity or educational game, app, etc.), Targeted audience, problem or challenge formulation, What the students are going to explore and/or solve, how the activity can be organised (i.e. 2-3 phases), link with EU challenges*

max 1000 characters

Nowadays knowledge is transferred in a completely different way than it was in the past. Every bit of information is in our fingertips through devices such as Desktop computers, Laptops, Tablets and Smartphones. It is also well established that interactive applications such as quizzes could provide knowledge without even realizing it since they appear as highly amusing educational tool. Through quizzes the learning process is fun and stress free that ensures in most cases that the user will learn and stay motivated.

The “Who Wants to be an RM Ambassador?” quiz (RMAq) is a Microsoft Office PowerPoint Macro-Enabled Slide Show, with no sign up procedure, freely distributed from the official website of RM@School. When downloaded it is ready to be used.

The RMAq contains thirty (30) questions (15 questions each game, 5 questions each set) concerning raw materials and focuses on High School students.

### Key words:

Interactive quiz, Mineral Raw Materials, High School Students, Identifying Minerals, Use of Minerals, recycling, circular economy

## Extended background information

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The main objective of the RMAq is to provide knowledge in a relaxing and stress free way and also promoting and acknowledging the importance of Raw Materials in our lives.

Students will gain confidence, challenge themselves and be evaluated for the knowledge acquired.

### Glossary

RM: Raw Materials

RMAq: “Who wants to be a Raw Materials Ambassador?” quiz

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# Learning Outcomes

- The RMAq provides knowledge in a relaxing and stress free way, through an interactive application, since it appears as highly amusing educational tool.
- The RMAq also promotes and acknowledges the importance of Raw Materials in our lives.






















# Key Competence European Framework

<b>Literacy competence</b>
S2. Ability to express concepts, feelings, facts or opinion in written and oral form.
S4. Ability to interact in an appropriate and creative way in any situation.
<b>Multilingual competence</b>
S2. Ability to express concepts, feelings, facts or opinion in oral and written form.
S4. Ability to interact in an appropriate and creative way in any situation.
S7. Ability to use technical language accordingly to the field of work.
<b>Mathematical competence and competence in science, technology and engineering</b>
S1. Ability to use constructed thinking in order to solve a problem in every situation.
<b>Digital competence</b>
S2. Basic skills in ICT
<b>Personal, social and learning to learn competence</b>
S3. Ability to gain process and assimilate new knowledge, skills and qualification required for career goals.
<b>Citizen competence</b>
S1. Ability to effective interaction with other people
S2. Ability to adapt to the changing situation, being flexible and work under pressure
S3. Ability to work effectively and collaborate with other team members
<b>Entrepreneurship competence</b>
<b>Cultural awareness and expression competence</b>

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### United Nations' Sustainable Development Goals

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. They address the global challenges we face, including those related to poverty, inequality, climate change, environmental degradation, peace and justice.

		Enable access to basic services			Equal access to global expertise
		Safe medical devices			Sustainable urbanization
		Access to education			Responsible consumption and production
		Less hardship, more opportunities			Strengthen resilience, reduce disaster impact
		Safe and affordable water			Reduce marine pollution
		Energy – the golden thread			Sustainable use of terrestrial ecosystems
		Safety of workers and economic growth			Promote peaceful and inclusive societies
		Resilient infrastructure and sustainable industrialization			Better access to technology and innovation

## Contents – Theoretical principles

Nowadays knowledge is transferred in a completely different way than it was in the past. Every bit of information is in our fingertips through devices such as Desktop computers, Laptops, Tablets

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and Smartphones. It is also well established that interactive applications such as quizzes could provide knowledge without even realizing it since they appear as highly amusing educational tool. Through quizzes the learning process is fun and stress free that ensures in most cases that the user will learn and stay motivated.

The RMAq is a Microsoft Office PowerPoint Macro-Enabled Slide Show, with no sign up procedure, freely distributed from the official website of RM@School. When it is ready for use.

The RMAq contains a database of thirty (30) questions concerning raw materials. An example of a first set question that has four possible answers is the following:

Which of the following minerals, when in the form of sand, can be used to manufacture glass?

The RMAq is divided into three (3) sets of five (5) questions each, for a total of fifteen (15) questions. The questions if correctly answered are awarded with ten (10) points each. In the case of a wrong answer the student has a penalty of three (3) points. If the student uses one of the two help options a penalty score of five (5) points will be applied.

The student can choose one of the two help options, 50:50 or help from friends, each having a penalty score of five (5) points. The scores of each set are summed up and the type of ambassador (gold, silver, bronze) based on the score is announced.

## Learning Pathway

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**Step 1- Time & Activity:** 1 minute – By double clicking the file the quiz opens in a presentation mode (should the teacher want to modify the questions, then the Power Point software should be opened first and then the file should be opened by clicking on File→Open). The “Play” icon should be clicked to start the game.

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**Step 2 – Time& Activity:** 5 minutes - Teacher presents the rules of the quiz (by clicking on the “Rules” icon on the introduction screen of the quiz).



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# Who Wants to be an RM ambassador?

### Rules

- randomly pick a registered player
- 15 questions ( Set 1, Set 2, Set 3)
- 4 possible answers, 1 correct
- 1 minute to think about
- 10 point for each correct answer
- 2 help options
  - Audience help (Pollvote) (30 sec to vote)
  - 50 : 50 help (15 sec to decide)
  - - 5 points if a help is used, -3 for wrong answer
- BRONZE, SILVER OR GOLD Ambassador

### Audience

You can also participate answering the poll vote forms that will appear at your screen




Let's Play



**Step 3 – Time& Activity:** 3 minutes- Select a player. There are two (2) alternatives a) one (1) student will play all three sets of questions (15 questions in total) and b) three (3) students will play one set of questions each (5 questions each). Teacher can decide the number of players depending on the total number of students and the available time. The rest of the students participate as the “audience help”.

**Step 4 – Time& Activity:** 15 minutes- Set 1. The first question appears by clicking on the Box labelled “1” of Set 1 on the introductions screen. The question has four possible answers with two

help options a) 50:50 50:50 and b) audience help .



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**Question**

Which of the following minerals, when in the form of sand, can be used to manufacture glass?

*the second most common mineral in Earth's continental crust with a Mohs mineral hardness of 7*

A. calcite B. diamond C. gypsum D. quartz

50:50

Set 1 q1

If the student selects the correct answer a new screen will appear acknowledging the correct answer. The teacher needs to “click” the button “Score” and then click on the orange arrow on the down left corner of the screen to return to the introduction screen.

**Answer**

*Well done!*

**Correct**

*When heated at about 1656.0C it creates a liquid molten glass mixture*

**Ingredients**

- Recycled glass
- Limestone
- Soda Ash
- Silica Sand

*it is found in all types of rock igneous, metamorphic and sedimentary*

Press Score to count your correct answer Score


Set 1 q1

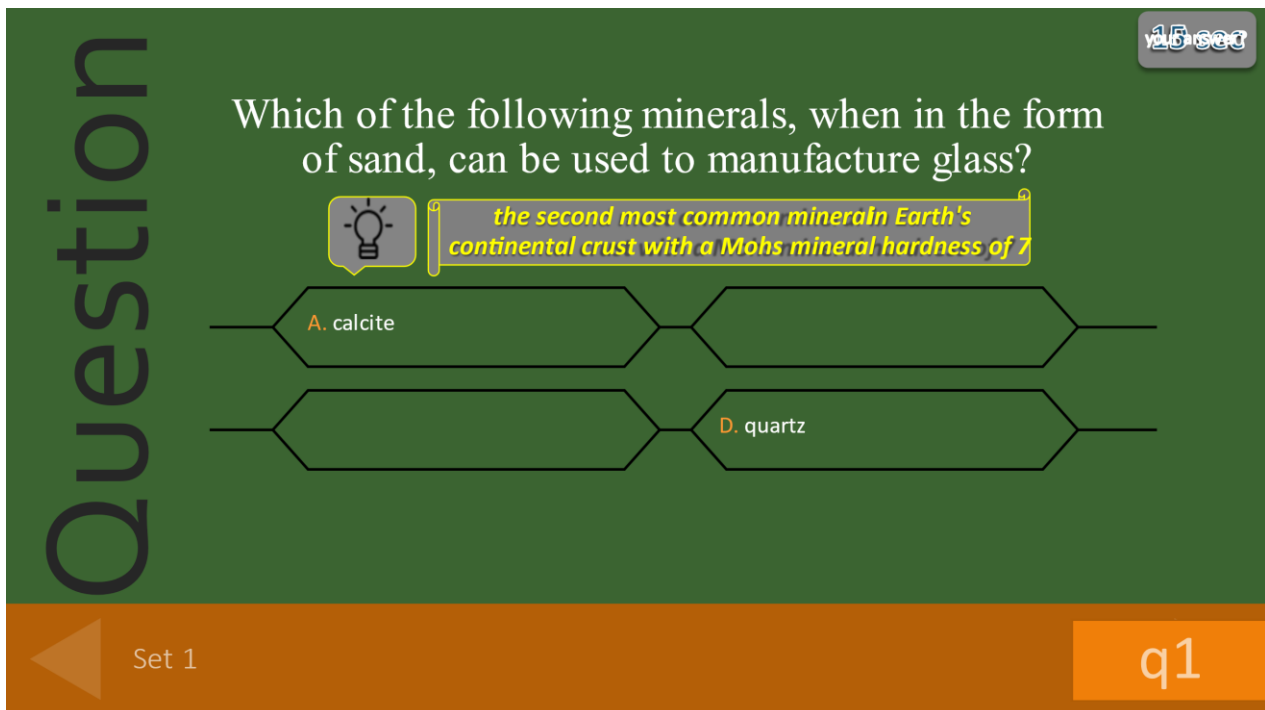
In the case of a wrong answer the student has the option to try again, however he is penalized with three (3) points. The teacher should click on the orange arrow on the down left corner of the screen to return to the introduction screen.



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In the case of using one of the two help options, a new screen with two out of four possible answers appear. The student will be penalized with five (5) points. The teacher should click on the orange arrow on the down left corner of the screen  to return to the introduction screen.



After answering all questions, the final score is calculated.

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**Step 5 – Time& Activity:** 5 minutes- The winner will be announced.

## Evaluation

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After the game, the attending students [player(s) & audience], answer a written questionnaire including 3 out of the 15 questions presented in the RMAq.

## Sources

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- [www.webmineral.com](http://www.webmineral.com)
- <https://www.mindat.org>

## Acknowledgement

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The development of the game “Who wants to be a R(aw) M(aterial) ambassador?” was carried out by M. Perraki, Professor, and P. Tsangaratos, Assistant Professor. I. Ilias, Dr. Geologist, designed the graphics. A. Kourtis, Dr. Engineer, V. Skliros and D. Psarraki, PhD students, presented the game in the live RM@Schools ESEE student activities (visits to the NTUA Mineralogical Museum gaio-ORAMA, European Student Conference, etc).

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