





## Summary

# RM@Art



	<b>Target age</b>	
	Age 12 - 19	
	<b>Level of difficulty</b>	
	<input type="checkbox"/> Easy <input checked="" type="checkbox"/> Medium <input type="checkbox"/> High	
	<b>Key words:</b>	
	Raw materials, minerals, pigments, colouring	
	<b>Abstract of the activity:</b>	
	<p>Minerals and ores are a key driving mechanism for technological advancement and are needed for everyday usage. From them we acquire a variety of products, from precious metals for electronic industry, elements for car batteries to clays for production of paper. However, for educational purposes it is important to remember how the usage of these resources developed. One of the earliest applications of these raw materials was an art long before any car or mobile phone existed.</p>	
	<p>Today, in the age of modern-day industrial pigments, it is not difficult to forget where the pigments were derived from before the chemical industry.</p>	
	<p>Modern humans were not the first species that have used the pigments in their drawings. In fact, the first known applications of pigments date as far back as 250,000 years BC when ochre extraction and usage has been documented by the early Neanderthals which makes it the oldest pigment consumption practice in human history. As humans evolved, more and more pigments were developed for expressing the artistic side of human culture. Many of these were from minerals while some were derived from plants or animals.</p>	

## Summary

This toolkit is designed to demonstrate some of the basic concepts of ores and minerals utilization in making colors.

Through the experimental activity, the students are making their own colours for painting in the traditional way. This is done by grinding the sample and mixing water with grinded mineral pigment and egg yolk to make egg tempera. Afterwards, these colours are being used for painting a picture.



### Learning Goals *(max 250 characters)*

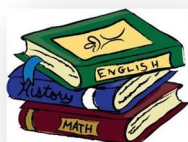
- Mineral resources awareness
- Understanding alternative usage of minerals and ores
- To be familiar with the origin of pigments



### Specific Abilities - *At the end of the activity the student will be able to:*

*(max 250 characters)*

- Better interact with their surroundings
- Express their emotions and needs creatively
- Practical usage of natural resource



### Cross-curricula Links- *Examples:*

- Geography
- Arts
- Chemistry
- Social Sciences



### Prerequisites - *Knowledge and skills necessary for carrying out the activity*

None



### Time requirement

1 h  20 min

### Instruments *(eventually):*

paintbrushes which students already have for Arts class

## Summary

### Learning and Teaching Support Materials - What you can find in the toolkit



1. Teachers' Card
2. Students' Card
3. Questionnaires
4. Mortar and pestle for sample grinding
5. Small rock sample of malachite, lapis lazuli, hematite and coal
6. Pre-grinded and semi pre-grinded malachite, lapis lazuli, hematite, limonite and coal
7. Paint jars
8. Linseed oil
9. Painting paper

RM  
Ambassadors

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