

## Summary

# GLASS RAW MATERIALS

Understanding the role of  
each raw material  
on a glass composition



### Target age



#### Age 5 and over

(According to the age of students and typology of school and laboratory equipment it is possible to adapt this activity)

#### Level of difficulty

Easy     Medium     High



### Key words:

*Glass composition, glass raw materials, colourants, luminescence*

### Abstract of the activity:



This activity aims to teach what is glass and what oxides can form a glass material. It suggests discovering natural raw materials to produce glass and what elements are used to give colour or luminescence to glass.

The glass samples can not be produced in the laboratory. It can be purchased, or several samples of colored glass can be found in our daily routine.

Eventually, the toolkit can be sent to teachers by request, by contacting Prof. Joao Pedro Veiga - [jpv@fct.unl.pt](mailto:jpv@fct.unl.pt)

### Learning Goals



- To be introduced to the glass material
- To understand which oxides are used to produce glass
- To learn which elements are used as colourants

## Summary



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

- Know how glass can be produced
- Identify what raw materials found in nature can be used to synthesize a glass
- Choose a colourant to give colour to glass materials



**Cross-curricula Links**

- Chemistry
- Materials
- History



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

- Basic chemical knowledge



**Time requirement plus eventually other boundary conditions (i.e. Instruments)**

- 3 h       30 min



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

1. Teacher Card
2. Lab Procedure/s- Module 1
3. Students' Cards
4. ppt with a Questionnaire (Quiz)



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