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Drinking tour through the museum

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This contribution focuses on an approach designed for learning about geological processes and materials in motivational environments through multidisciplinary ways, taking advantage of the unexpected resources that can be found in an unlikely source: Fine Art museums. The approach can be used either in formal or non-formal educational formats, and seems to be more effective if a theme is used for the tour around the exhibits.

The theme chosen here is the world of drinking, whether of water or wine, over different times and cultures, using direct (artefacts) and indirect (representations) sources to explore the geological processes and materials (raw and industrialized) that are linked to the theme. Figure 1 illustrates several examples that can be found and used in most Fine Arts museums.



Figure 1: Several of the objects that can be found and have strong geological learning applications

The world of water explores the resources that can help to describe and explain how water accumulates in natural reservoirs, how it is abstracted, stored and distributed in rural and urban environments and how it is managed in the home. The main activities are: *More than a water cycle*: focused on springs, karst, wells, aqueducts, cisterns, pipelines, fonts, etc. and how to manage a delicate natural resource; *Storing water at home*: focused on amphorae, vases, bottles, etc. their need for impermeability and how it is achieved with geologic materials; *Dispensing and serving water*: focuses on ewers, jars, glasses, etc., which are made of geologic materials and use permeability to cool water.

The world of wine focuses on the origin of soils and what minerals and environments are better for wine production and, like the case of water, how it is produced, stored and consumed and the way geologic resources aid the task. The main items are: *The "terroir"*: focussed on soils, vineyards and the quality of wine; *Especial vessels for wine transportation, storage and drinking*: from amphorae to "tetra packs".

When glass changed to crystal reviews the meaning of the world *crystal* in Geology and explores the world of glass production, particularly on the different additives used to change the physical properties of glass.

Stoups and chalices are important objects not only for Christians but also in many other religions. Natural materials, most of them of geological origin (common and precious stones and metals) have

been used in their manufacture, making them useful in exploring rock and mineral descriptions and in identification and classification schemes.

Objects that have changed their role follows naturally from being in a Fine or Decorative Arts museum, and explores the evolution from utilitarian to decorative objects of water storage and drinking vessels, that become lamps, flower displayers or just objects to be shown and seen.

Complementary information and suggested questions are given for each object in a card format that can help the approach to be replicated in different museums and with similar or different objects.

