

# Laboratory of Pottery

## A simulation of an archaeological excavation



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## TRADE IN MAGNA GRAECIA

The trade of pottery was one of the main economic sectors in antiquity. Products out of clay, vessels and utensils for cooking, for storage as well as decorative figures have been used in almost all ancient sites in an immense amount.

The coins issued by Greek colonies in Magna Graecia (coastal areas of Southern Italy) were inspired in many cases by Greek mythology and religion and indicate close cultural ties with the metropolis land. In both earlier times and periods of prosperity, the circulation of coins in a broad geographical area enhanced a diachronic economic and political interaction between the two worlds and transformed the area of Southern Italy and Sicily into Magna Graecia.

Studying the artifacts of Magna Graecia, you better understand the magnitude of this cultural exchange and exportation.







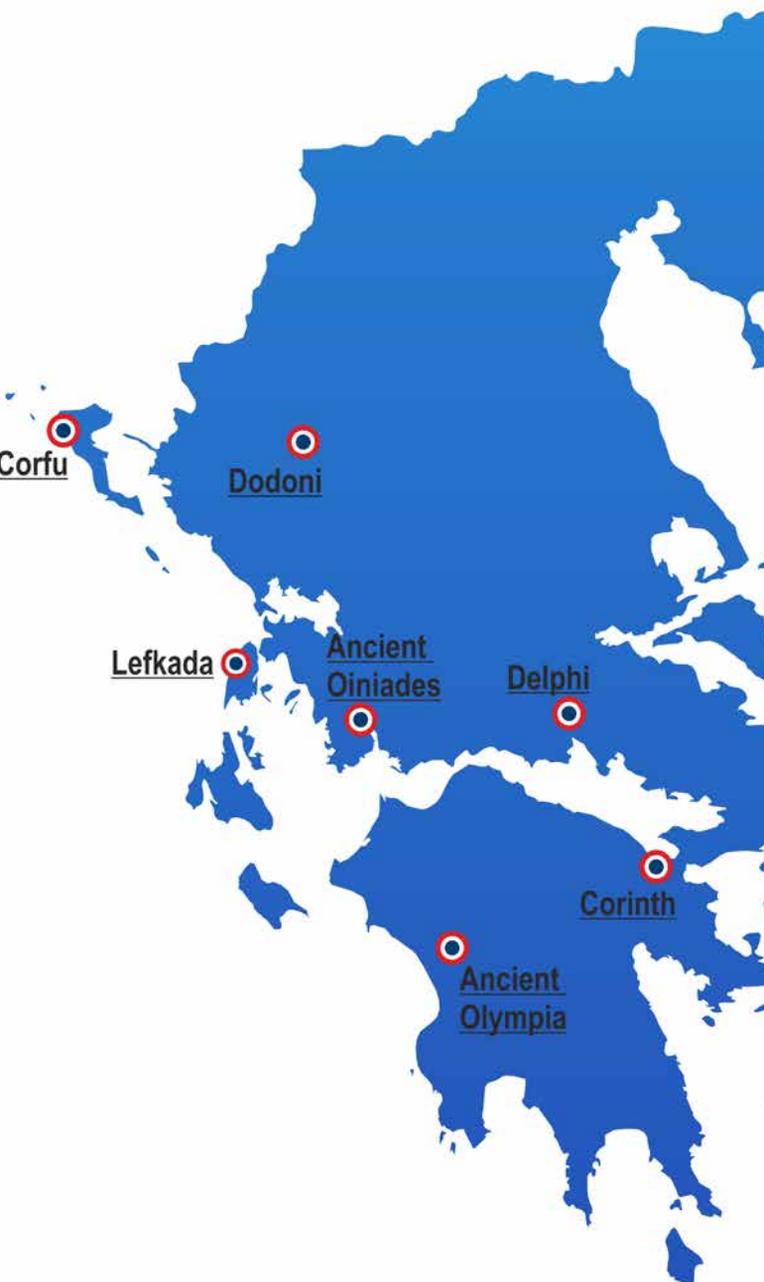
## ANCIENT GREEK

### TRADE

#### DID YOU KNOW

Grain (wheat, oats and barley), olives, grapes, olive oil and wine were commonly traded goods. They were stored and transported by ships in large jug-like clay amphoras. Merchants in the Italian colonies grew wealthy by exporting wheat, oats and barley to Greece in return for pottery and bronze figurines.

Athenian pottery was widely exported, especially to Etruria and to the colonies in southern Italy, where it inspired local imitations.



# Colonization and trade towards west

The **Greek** colonization towards the west since the 8<sup>th</sup> century BC created diachronic networks of economic and cultural ties between the Greek region and Magna Graecia. These expeditions in distant territories in order to exploit new lands and control the sea trading routes lied on information through earlier voyages, which reflect even on Greek mythology. The adventures of Odysseus and the labors of Hercules echo elements of early sailing routes and contacts with indigenous populations across the Mediterranean.

Colonization had a strong religious aspect, as the settlements were established with the approval of gods, and more particularly only after getting a positive oracle by the famed Sanctuary of Apollo at Delphi or the Oracle of Dodona in later times. The guidance of the gods was based on the ongoing feedback by the narratives of sailors or pilgrims that reached the Great Panhellenic sanctuaries, such as Olympia or Delphi, from distant lands in order to honor or express gratitude to the gods for their prosperity.

In these new territories, the settlers shared a common language, cult and institutions with the metropolis. In the course of time, they developed a Hellenic identity and maintained various cultural elements of the homeland.

For example, Naxos in Sicily depicted the head of Dionysus, chief god of the Metropolis Island and Syracuse the Corinthian Pegasus. In earlier times, most coins of cities in Magna Graecia depicted the mythical or hero founder and Olympian Gods and Goddesses. The Corinthian coins depicted on their obverse Pegasus, the winged horse and the head of Athena on the reverse. Taranto, a Laconian colony, had a representation of a dolphin on its coins, possibly identified with the hero settler Falanthos. According to the myth, the Oracle of Delphi advised the city to found a colony but the voyage ended to a wreckage and only the leader settler Falanthos survived. Since a dolphin rescued him, the new city depicted him as a dolphin on its coins. Another common theme was the symbol of the patron deity. In the case of Apollo, protector god of settlers, there were different ways of depicting the deity.

Cities of Sicily, such as Syracuse or Gela, issued coins of agonistic types, with a typical example being Gelon of Syracuse, who depicted on the city coins a quadriga, wishing to perpetuate his success in 484 BC Olympic Games.



## **COINAGE**

*was a common feature among the Hellenic world in terms of both technique and iconography that not only facilitated the commercial exchanges but also reflected the strong cultural ties between the two regions.*



# EXCAVATION ACTIVITY

## 1. FINDING THE COINS

During the excavation activity, the participants will have the opportunity to come across some special finds, which are crucial evidence in an actual archaeological research. Coins constitute a most safe chronological tool and their broad circulation indicate trade activity and cultural ties in antiquity around the Mediterranean. Thus, their iconographic types are inspired by religion, mythology or local history and bear various symbolisms.

Two coins are found buried in the soil and they are typical examples of the coins issued during the archaic or the classical period by important trade centers and colonies of that time in ancient Greece.

The first coin is a replica of a silver stater (c. 480 BC) issued by the city of Aegina. Aegina was the first Greek city-state to issue coins around the sixth century BC soon followed by Athens and Corinth and later on by the Greek colonies. On the obverse it depicts a marine turtle and on the reverse an incuse square.

The second coin is a replica of a silver tetradrachm (c. 500-480 BC) issued by the Athenians. On the obverse, it depicts Athena, the protector Goddess of Athens, and on the reverse an owl (the glaux), its sacred symbol.



*The silver stater  
(c. 480 BC) issued  
by the city of  
Aegina.*



*The silver  
tetradrachm  
(c. 500-480 BC)  
issued by the  
Athenians.*



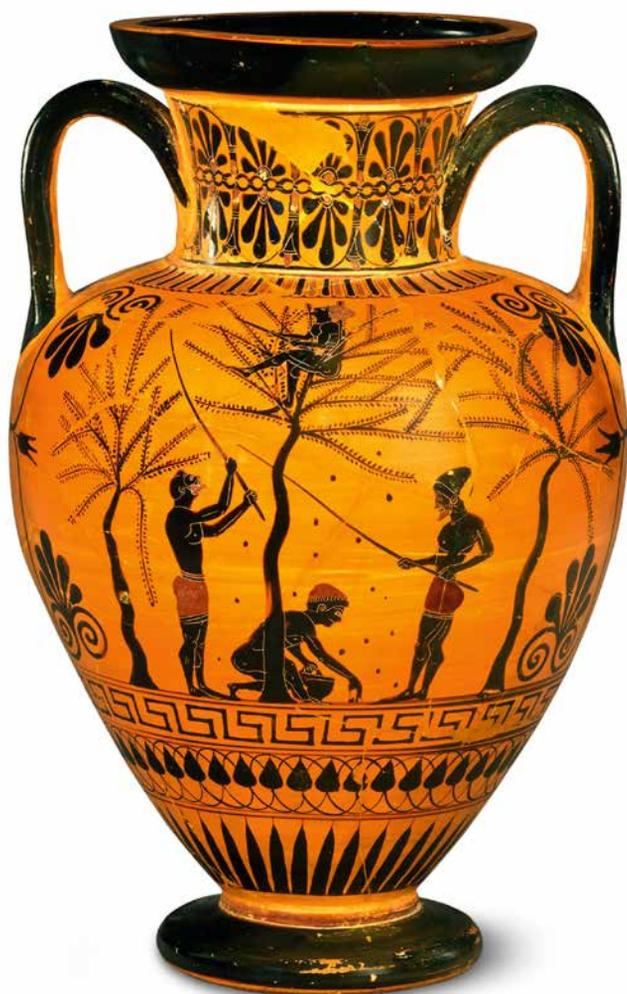
# Ceramic art

**Ceramic** art was another milestone of Magna Graecia. Red figured and black figured ceramics in different forms, shapes and sizes, where used in the daily life, the trade activities and decoration. Both Italy and Greece were widely recognized for the massive production of pottery elements. Some of the most well-known types of potteries manufactured, were used for the transport and trade of products via a marine or a land route, or the conservation of liquids and foods.

Ceramic art for Magna Graecia was an essential part of the civilization with a large number of workshops and studios in both countries.



*Different figures, techniques and methods of manufacturing, unique shapes of objects, exquisite details, but all under the mighty concept of Magna Graecia.*



# EXCAVATION ACTIVITY

## 2. LABORATORY OF POTTERY

### A. Pottery excavation

In the framework of the project you will have the opportunity to carry out an excavation in a sandbox as a simulation of an archaeological site. The procedure will be rather realistic as the steps and instructions will look like a real-life archaeological research.

For this activity you will need:

- a pair of gloves
- a small hand spade or dust pan and a bucket to remove the soil
- a trowel to carefully level the ground
- a selection of brushes in different sizes to brush off dirt
- a spoon to gather what is removed from narrow spaces
- a tape measure and a line level to mark at what depth and position you found an artifact
- a nesting screen to sift the soil and find small artifacts
- a digital camera to record the phases of the uncover and have a backup copy of the finds
- a north arrow scale to orientate artifacts and determine scale
- a caliper to measure the width or thickness of an object
- plastic bags, labels of indications, masking tape, ruler, markers, rubber, pencil





### 1. BEGINNING THE EXCAVATION:

In a real excavation process in order to begin a grid is usually set up, dividing the site into 5 m squares to better aid the positioning of the features and contexts on the overall site plan. In this simulation we consider the sandbox as one individual excavation square.

The excavation will begin by gradually revealing the horizontal layers. For this first step trowels, spoons, shovels and brushes will be used and the removed sand will be placed in a separate bucket.

You will have to evenly lower and throw away the sand, until they reach an approximate depth of 5 cm. At the first indication of a find, the first photo should be taken. Photographs should be taken in every step with a use of a north arrow scale to orientate artifacts and determine scale. The documentation and register of every step in an excavation process is of crucial importance, as it can provide a testimony in any upcoming complication.

When finding an artifact you will have to gradually start revealing it, using soft brushes and spoons, removing the sand according to its form and structure. Measurements and coordinates of the objects location, depth and distance from the limits of the trench-box, should also be reported. For these measurements the archaeologists use levels, rulers, callipers to have an overall idea of the shape of the artifact. All measurements, notes and details are filled in the special excavation form provided.

When getting to the point that the finds are almost unearthed you take a last photo from different angles and design the finds on the plan box of the excavation form, as well as filling in all missing data.

### 2. REMOVING THE ARTIFACTS:

Once revealed all the artifacts have to slowly be removed from the sand. Large objects can be removed by hand, always wearing polyethylene gloves, as for smaller objects tongs can be used for their extraction.

At every find has to be given a unique artifact number (record number) in order to identify it, the same number will also be marked on the accompanying label and the record form. All objects are then placed into separate polyethylene zip lock bags with their description label inside.



*NOTE1:  
In a real life excavation sieves are used in order to double check the removed soil/sand for any hidden small objects or fragments.*

### 3. CONSERVATION PROCESS:

Now you will have to deal with the conservation and restoration procedures. The artifacts will have to be examined and studied, cleaned and matched in order to create a unified structure.

The first step is to take all artifacts off the bags, always with their labels attached and study them. Photographs will be taken for each one of them, using good lighting and a scale. Additional measurements and examination of the surfaces in order to find decorative patterns, colors, shapes, varnishes, minerals, etc. In conservation the first cleaning procedure is a superficial one, with water, using sponges, cotton swabs, brushes, etc.

In the presence of more persistent stains and dirt, scalpels and harder brushes could be used. Then you should gather the finds and try to examine if they make a common unit or if they could be attached to each other. This is a typical procedure in the case of pottery sherds. When completing the puzzle, you will be asked to join all parts with a masking tape, in the inside and outside of the object.

An excavation form and a conservation record are provided for you to fill in during and after your work.

#### NOTE2:

*Conservators use distilled water in order to avoid the soluble and insoluble salts of the tap water.*

#### NOTE3:

*In real life the conservators continue with the aesthetic restoration of the object. Using appropriate adhesives, they glue the fragments together, they use a special kind of plaster to fill the missing parts and then color them (a tone brighter in order to be distinguished).*

The image shows two overlapping forms. The top form is the 'EXCAVATION FORM' and the bottom one is the 'ARTIFACT RECORD FORM'. Both are titled 'ARCHAEOLOGY OF MAGNA GRAECIA' and 'Excavating Magna Graecia on board'.

**EXCAVATION FORM**

Fill in the gaps

TEAM # \_\_\_\_\_ DATE \_\_\_\_\_

SITE: \_\_\_\_\_ TRENCH # \_\_\_\_\_

EXCAVATORS: \_\_\_\_\_

SOIL DESCRIPTION: \_\_\_\_\_

PHOTOS TAKEN

#1 \_\_\_\_\_

#2 \_\_\_\_\_

#3 \_\_\_\_\_

#4 \_\_\_\_\_

#5 \_\_\_\_\_

PLAN VIEW DRAWING

A 1 2 3 4 5 6 7 8 9 10

B

C

D

K

L

T

Notes-Description of Procedure

**ARTIFACT RECORD FORM**

FACT #	DESCRIPTION	MEASUREMENTS (in cm)	DEPTH (in cm)	FINDING POINT
	Conservation status (V=Very bad/B=Bad/G=Good/VG=Very good)	A - Length		
	Decorative patterns	B - Width		
	Shape	C - Thickness		
	Material			

## B. Pottery Observation under Stereomicroscope

- Take some fragments of pottery used for the activity of the “Archaeo Sand box”.
- Put the fresh cut of the fragments under the microscope.
- You will be able to observe the structure of the pottery distinguishing the varnish, the groundmass and the inclusions (often minerals or fossils). There are two explanatory images at the end of the document.
- Describe the varnish: it is a superficial colored layer. It is sufficient to define the color.
- Describe the groundmass:
  - color (brownish, reddish, ochre, grayish, etc.)
  - presence of fractures and voids. The voids are similar to holes.
- Describe the inclusions (minerals):
  - Shape: rounded, sharp, prismatic, etc.
  - Color: grey, white, black, etc.
- This is a very simplified list of the most common minerals present and visible in a pottery. Try to recognize them as follows:
  - Quartz: grey and vitreous aspect
  - Feldspar: milk white or colored
  - Micas: black or white with shiny aspect





## C. Laboratory for children

Age: 5-15 years old

As a supplementary activity of the above, the kids will be able to produce a ceramic handcraft like ancient Greeks using materials like sun-dry clay, water & fine sand. They can also paint ceramic placards and create their own collection of Ancient Greek artifacts.

So kids, you can now have your own “ancient” pottery on board!

After the pottery dries, you will paint it using suitable colors. You will have the opportunity to create either an amphora and paint it like the famous red and black figures, or a toy (maybe an animal or a human doll) as the ones found in excavations.

The selected ceramic placards represent the ancient Greek artifacts seen in Archaeological museums of Kerkyra and Olympia.

### Medusa

Medusa or Gorgo was one of the three Gorgons, the sister of Stheno and Euryale. She had snakes instead of hair and whoever looked at her was turned to stone. The ancient Greeks used her as an apotropaic symbol, as a symbol that cast out evil. On the placard she is shown in the centre of the west pediment on the Temple of Artemis in Corfu.



### Hercules

The twelve labours of Hercules (Herakles) were represented on the marble metopes of the temple of Zeus at Olympia. At the command of Eurystheus, Herakles went to Knossos to bring the wild and destructive bull back alive. On this placard, Herakles is shown with his club in his right hand at the moment he is attempting to capture the Cretan bull.





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ON THE ROUTE FROM GREECE TO MAGNA GRAECIA

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