

# Introducing Young People to the Protection of Heritage Sites and Historic Cities

A PRACTICAL GUIDE FOR SCHOOL  
TEACHERS IN THE ARAB REGION



REVISED SECOND EDITION

**Scientific preparation:** Zaki Aslan (Project Coordinator, ICCROM); Monica Ardemagni (ICCROM Consultant)

**Coordination:** Eman Qara'een; Robert Parua (UNESCO Amman Office Team)

**Proof Editing:** Zaki Aslan; Robert Killick, ICCROM

**Graphic Design:** MAXTUDIO, Rome

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FIRST EDITION

**Coordination:** ICCROM Team: Monica Ardemagni (Project Manager); Zaki Aslan and Sémia Yaiché-Akrou (ICCROM Consultants)

**UNESCO Team:** Eman Qara'een; Alexandra Sauvegrain

**Proofreading:** Christopher Mc Dowall

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# Introduction

## Background

It is a pleasure to present the second edition of the educational manual for school teachers *Introducing Young People to the Conservation of Heritage Sites and Historic Cities*. The first edition (*Introducing Young People to Site Management and Protection*) was a result of a four-day course organized by the UNESCO Amman Office, in collaboration with the UNESCO Associated Schools Project Network (ASPnet) and ICCROM (*International Centre for the Study of the Preservation and Restoration of Cultural Property*). The aim of the course, which was held in April 2002 at the World Heritage site of Petra in Jordan, was to set a model of cooperation between schools and site managers, and to develop new tools and methods to introduce cultural heritage in school curricula.

The success of the first edition led the UNESCO Amman Office and ICCROM to publish a second revised edition. In order to improve the new edition, ICCROM and the UNESCO Amman Office through its ASPnet Programme, organized a three-day workshop involving teachers from eight countries of the Arab region. The workshop took place in Tunis in February 2005 in the framework of the International Colloquium “*Villes du Patrimoine Mondial: le classement et après?*”, organized by the Regional Secretariat of the Organization of World Heritage Cities (OWHC.) on the occasion of the 25th anniversary of the inscription of the old cities of Tunis, Cairo, and Damascus in the World Heritage List.

One of the main aims of this initiative was to test the manual with ASPnet teachers, assess its applicability to the Arab context, and receive their comments and suggestions for improving the new edition. Following their remarks, this version has added a section focusing on old cities, architecture and art in the Arab region. It has also enhanced the graphic presentation with regard to colours, maps, drawings, and photos. The valuable experience gained in Petra was kept as it is from the first version and is presented in the second part. This publication focuses on both archaeological heritage and old Arab historic cities.

Reprinting this manual is part of the activities devised by ICCROM's ATHAR Programme to enhance community perceptions and understanding of the values of cultural heritage in the Arab region, and involve the local communities in the protection of their cultural heritage.

## Objectives

The objectives of the publication are:

- To encourage the participation of schools in conservation and awareness programmes aimed at safeguarding heritage sites and places;
- To forge links between teachers and those responsible for cultural heritage conservation and management;
- To enhance school co-operation with heritage site managers at a local level;
- To promote a model of long-term co-operation between schools and heritage sites.

This guide is a manual prepared for school teachers, who may adapt it for various age groups as necessary. It is, however, specifically developed for pupils of an age group that ranges between nine and twelve years old. It is the first manual of its kind focusing on the protection of cultural sites, both archaeological sites and historic towns. It is, however, hoped that experiences from other courses held, for example, on museums or natural sites will lead to developing a series of reference materials for teachers to promote heritage protection on a wider scale.

It must be emphasized that the aim of this guide is not to provide ready-made recipes, but rather to offer guidance in encouraging the involvement of young people and in enhancing their perception of, and role within, their own historical environments. While the manual is the result of experience gained at the World Heritage sites of Petra, Dougga and the old city of Tunis, other historical sites may or will be different, despite some overlapping similarities. Teachers must be aware of these possible differences, and adapt the relevant activities to the characteristics of the local or national site at which they choose to adopt the manual. Petra is

a major historical site of universal significance, but teachers can adopt this guide easily for less important sites of national and/or local interest. The role of students will be to promote their local site, and in so doing, to develop and revive the economy of their neighbourhoods. Students may suggest ways to promote their site related to its particular characteristics, which were not applicable at Petra.

The proposed activities and exercises in the guide are only examples of some of the ways to achieve the objectives of each unit. Teachers are free to propose and develop other activities or exercises, which may be suitable for the site they select, within the framework of cultural heritage protection. In developing this work, the aim is to offer teachers flexibility, at the same time providing basic and essential knowledge to impart to the class. Teachers will have to take into account the level of the students involved and the characteristics of the site, and in particular, its management structure. To this end, basic guidelines for teachers are provided in the manual.

**Zaki Aslan  
and Monica Ardemagni**

# How to use the guide

The manual is in two parts. The first part presents the activities and exercises relating to specific topics divided into units; the second part relates their practical application at the World Heritage site of Petra as a case study.

The manual contains seven units covering the following topics:

- Unit 1: Concepts in cultural heritage
- Unit 2: Understanding a historic place
- Unit 3: Causes of decay
- Unit 4: Conservation and site management
- Unit 5: Socio-economic and tourism development
- Unit 6: Awareness and outreach
- Unit 7: World Heritage

Each unit is divided into sections as follows:

- Guidelines for teachers
- Basic knowledge and key words
- Students in action

The case study of Petra also provides activity sheets that may be adapted by teachers to meet the requirements of their selected site. The three sections in each unit are organized as follows:

## 1. Guidelines for teachers

Inform teachers of what has to be done in advance to prepare and set up the activities in each unit (e.g. arrange meetings with site managers, acquire maps, and prepare documentary information) so that they may co-ordinate all the necessary arrangements prior to students visit to the site.

## 2. Basic knowledge and key words

Provide basic technical information to support the proposed exercises and practical activities. It also reviews essential notions of the subject in question. Key words with definitions have also been added to illustrate terms used in the practical exercises and to assist students in their overall comprehension of the unit topic.

## 3. Students in action

Are activities designed to test students' comprehension of the fundamental notions of the subject of each unit and to investigate, collect

and classify certain facts about the site they have selected. Worksheets/activity sheets are provided in each unit and should be photocopied for students.

As the manual is based on the experience gained in Petra, a set of activities and exercises that took place during the training course, have been included in the second part. The case study at Petra has been separated from the rest of the text in order to illustrate the entirety of the course.

Teachers should compare the activities suggested in the first part of the publication with those carried out in Petra. The order of units and activities is the same in both parts, and references are given in the first part to the relevant pages in the case study. It is hoped that using the activities suggested in the first part of the manual, together with the case study at Petra, **will inspire teachers to develop a similar project for their site.**

The activities are not necessarily arranged in an order that must be followed. They are only suggested activities and teachers should feel free to select those that they consider most suitable for their site, and for the level of their students.

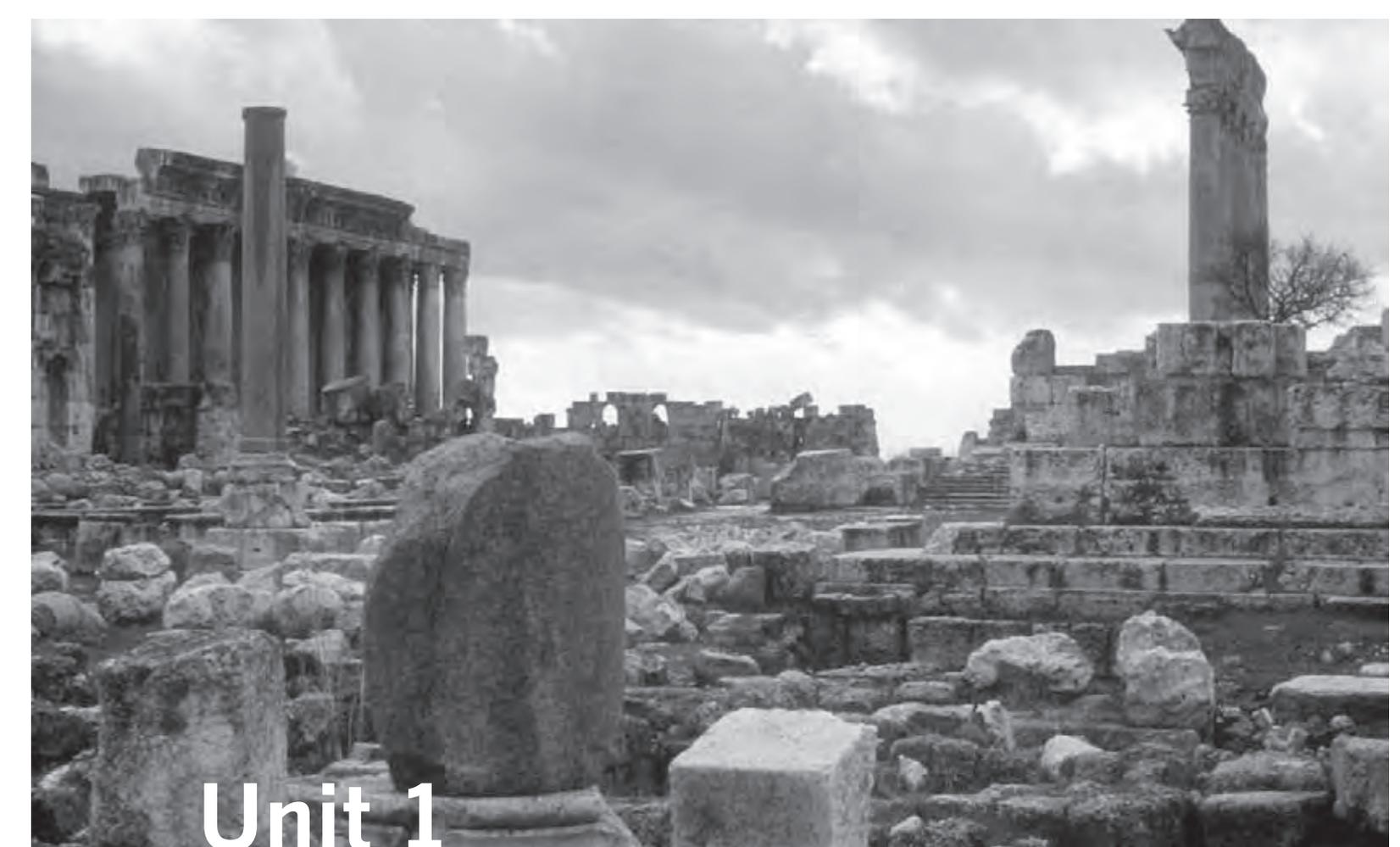
Although each unit has its individual objectives, on completion of the course students should be able to:

- understand the links between historical and natural environments and the necessity of their preservation for future generations and humanity;
- describe the selected site in terms of its historical, cultural and socio-economic values;
- recognize the various threats to cultural heritage;
- understand the alternatives available for site conservation, mechanisms for its sound management, and the benefits and dangers of tourism;
- identify the principal interest groups and stakeholders of the site;
- realize that preservation of heritage is also their responsibility, and that they can contribute to the protection of heritage sites in many ways.

Whenever possible, teachers should seek student

involvement at all stages of the course. For example, the choice of the site itself should be a joint decision discussed openly with the students. This could be done by first establishing selection criteria for the various sites in the vicinity of the school or even by voting in class. Teachers will, of course, have to provide information on all sites of possible interest to the students. Above all, students must feel that the choice is theirs. It may even be possible to select two sites and divide the school term into two periods. However, students must also be made aware of the time they have available to complete their project/s and achieve their goals.

While this manual provides guidance for teachers in heritage education, it is by no means definitive. It is designed to be flexible and provide a platform for teachers from which to develop the activities proposed and heighten student awareness of heritage issues. Teachers may also consider co-ordinating lessons with other teachers in the same school to link certain activities with other subjects in the school curriculum such as art, chemistry, geography, history, etc. It is hoped that this approach may also make students more aware of the interdisciplinary nature of heritage and increase their motivation in the long term.



# Unit 1

## Concepts in Cultural Heritage

### Learning objectives

At the end of the Unit, students will be able to:

- recognize the values and significance of cultural and natural heritage;
- understand the meaning of heritage and transmission of messages held therein from the past to future generations.

# Guidelines for teachers

This unit deals mainly with the significance and meaning of heritage, and the messages it conveys. It is important that students understand that value of a single property is not absolute, but is a social construct relevant to personal perceptions, and a product of historical and socio-political forces. Starting with students' homes or objects belonging to their families, analyze together how students relate with these objects. Enlarge this discussion to the quarter they live in and their city, identify which monuments have a particular interest for them, and discuss the reasons for such interest.

# Basic Knowledge

## a) WHAT is Heritage?

If you look in a dictionary, you will find that heritage means something that has been inherited. The word includes the concept of transmission from the past to the future. Heritage must, in fact, be considered a legacy that we receive from our ancestors and have to pass on to future generations.

Cultural heritage is the creative expression of a people's existence in the past, near past and present. It tells us about the traditions, the beliefs and the achievements of a country and its people.

We can distinguish two kinds of cultural heritage: tangible and intangible. The first includes material heritage (it can be physically touched) such as monuments, buildings, statues, paintings, objects, etc. The second deals with immaterial heritage such as music, dance, literature, theatre, languages, know-how, religious ceremonies, traditional performances, etc.

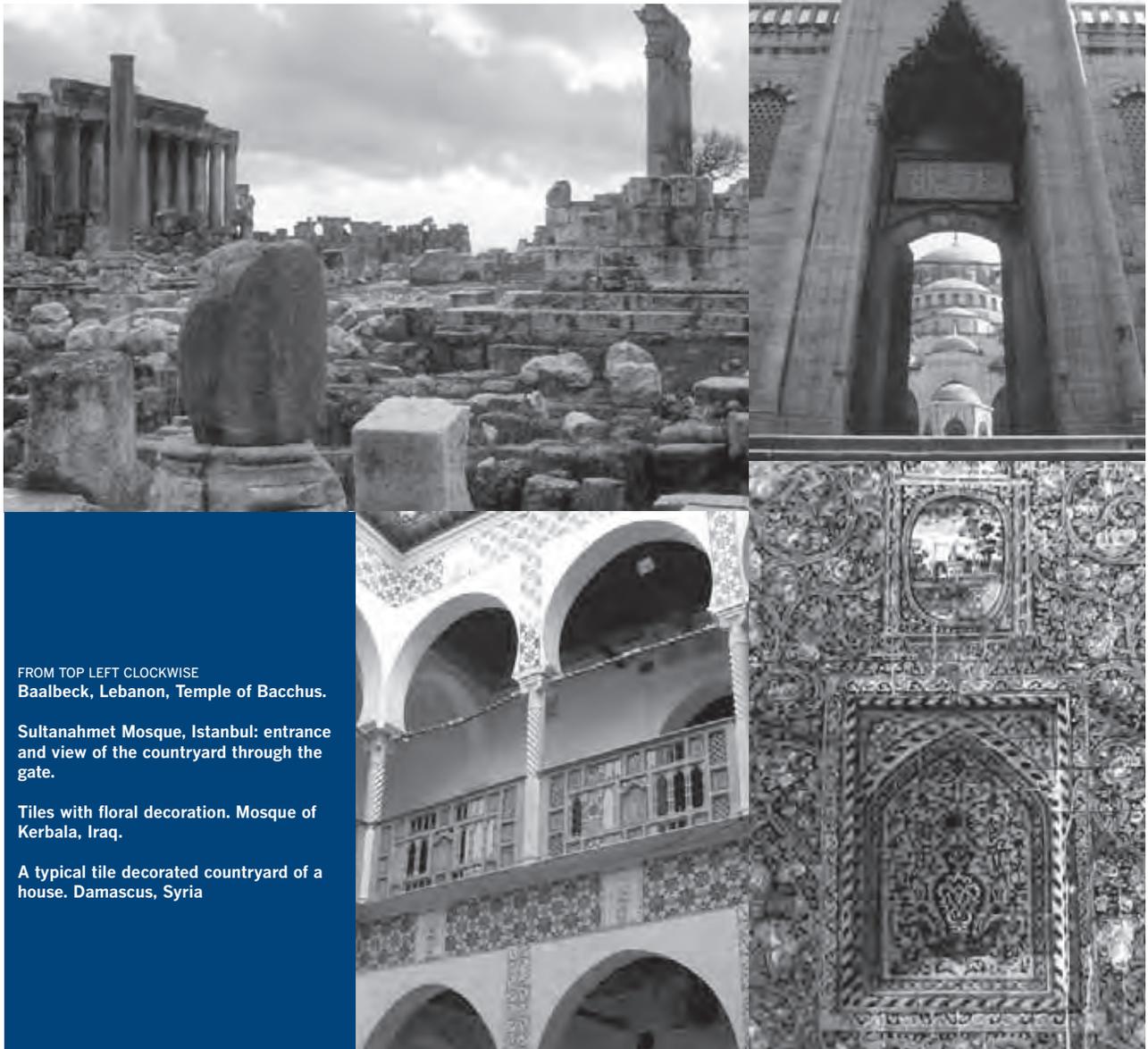
Tangible heritage, in its turn, comprises movable (it can easily be moved from one place to another; i.e. objects) and immovable heritage (it cannot be removed from its place of origin; i.e. buildings). The distinction between movable and immovable

heritage was used in the past, especially in national legislations that often referred to monuments, antiquities and works of art. Recently the tendency is to reduce the importance of these distinctions and integrate all aspects of heritage. In addition, another very important aspect has gained interest: cultural heritage in its material or immaterial aspect must be linked with the cultural values of the society that has produced it.

The meaning of the term cultural heritage has evolved over the last decades. Originally it referred only to masterpieces of artistic and historical value, now it is used more broadly and covers everything



FROM TOP CLOCKWISE  
Heritage Museum Art, Kuwait City, Kuwait.  
Archaeological site of Palmyra, Syria  
Palmyra, Syria, Temple of Baal.



FROM TOP LEFT CLOCKWISE  
Baalbeck, Lebanon, Temple of Bacchus.

Sultanahmet Mosque, Istanbul: entrance and view of the courtyard through the gate.

Tiles with floral decoration. Mosque of Kerbala, Iraq.

A typical tile decorated courtyard of a house. Damascus, Syria

that has a particular significance for people. At the present, the word heritage includes both cultural and natural heritage. If we want to understand the cultural diversities that exist in the world, we cannot separate culture from nature. Nature and culture are intimately linked; men have modified the environment and the environment has influenced human activity. While many heritage properties may be classified as either cultural or natural sites, some can be a mixture of both, belonging to a new category called “Mixed Heritage” (see also World Heritage Convention at page 73).

It is common that a cultural heritage item combines one or more of the following categories:

- architectural works and monuments,
- historical centres,
- groups of buildings,
- museums,

- archives,
- libraries,
- archaeological sites,
- cave dwellings,
- cultural landscapes,
- historical parks and gardens,
- zoological and botanical gardens,
- industrial archaeology.

Natural heritage includes:

- landscapes of natural beauty,
- geological and physical formations having scientific or aesthetic value,
- delineated areas that constitute the habitat of threatened species of animals and plants such as natural or maritime parks.

However, to better understand the different categories of heritage, see the table below.

CULTURAL HERITAGE		NATURAL HERITAGE
TANGIBLE HERITAGE		TANGIBLE & IMMOVABLE
Immovable	Movable	
Architectural works Monuments Archaeological sites Historical centres Groups of buildings Cultural landscapes Historical parks & gardens Botanical gardens Industrial archaeology	Museum collections Libraries Archives	Music Dance Literature Theatre Oral traditions Traditional performances Social practices Know-how Crafts Cultural spaces Religious Ceremonies etc.
		Natural or maritime parks of ecological interest Geological and physical formations Landscapes of outstanding natural beauty

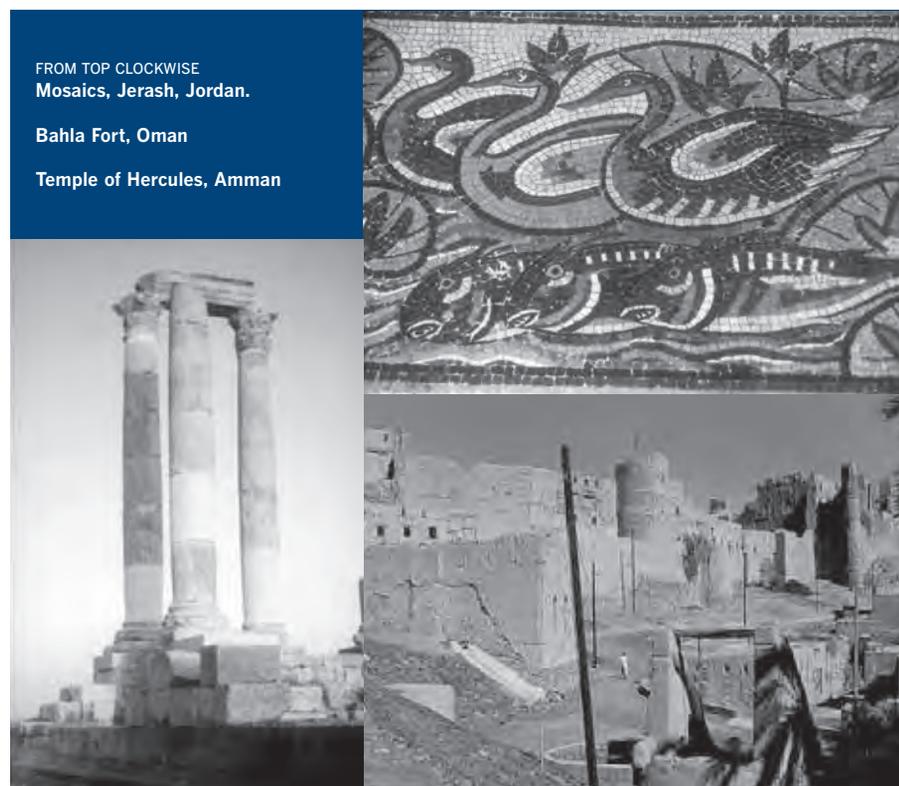
## WHY is heritage important?

It is the duty of people to take care of their cultural heritage because it:

- **conveys diverse messages and values (historical, artistic, aesthetic, political, religious, social, spiritual, scientific, natural, etc) that contribute to give a meaning to people's life**

Archaeological sites and museums tell us how men lived in the past: they carry a historical message. The Genbaku Dome at Hiroshima (Japan) testifies to the tragic effects of the atomic bomb and is a warning against war. Mosques, churches and temples are considered not only for their religious significance, but also for their artistic and architectural merit. Petra (Jordan) is famous not only for its tombs and hydraulic engineering but also for the beauty of its environment. Heritage can communicate more than one message or value. These depend on the socio-economic context in which the concept of heritage evolves and can vary in the course of time.

- **represents the identity of a social group**  
 People maintains their identity through their heritage, which is both tangible and intangible. Frequently a country is identified with a particular monument or site: Italy with the Tower of Pisa and with the cities of Venice or Florence; Egypt with the Pyramids, India with the Taj Mahal; United Kingdom with Shakespeare; and Turkey with Istanbul, just to give a few examples. Sometimes specific monuments or cultural sites are deliberately attacked with the aim of destroying the symbol of a people's identity; this happened during the war in former Yugoslavia.



- **represents a vehicle for understanding the diversity of people and developing a policy for peace and mutual comprehension**

Heritage is a way of understanding cultural diversity and recognizing the links that exist between peoples. We must not forget that every people has both given something to and taken something from another culture.

- **is a source of economic development**

Cultural heritage has always been among the main attractions for travellers since the 19th century. Heritage tourism has increased immensely and has become an important economic resource for many countries. If it is well managed, it provides jobs, attracts foreign currency, improves local infrastructures and promotes mutual understanding. On the contrary, an uncontrolled mass tourism can have a detrimental impact on local population by destroying its original context.

- **is unique and irreplaceable**

The deterioration or the disappearance of a cultural property and the messages it conveys is a loss for the humanity as a whole. A masterpiece cannot be replaced once it has been destroyed.

# Key words

## Archaeological site

Any place no longer inhabited where there are remains of the past human activity. Such remains might range from a single hearth where early man cooked his food to entire abandoned cities of the past civilizations. It can be either an excavated site or a standing ruin. It includes underwater, rock art and paleontological sites.

## Archaeology

The traces of our past are everywhere but frequently they are not evident and may be hidden. If this is the case, research, surveying and excavations are needed to find the clues. This is the task of archaeology, a science that interprets the past by studying its physical remains both above and below ground.

## Archives

A collection of historical documents or records providing information about a place, institutions and people. Archives are a rich source of information for understanding our past.

## Cultural landscape

A natural area or territory where man's intervention is visible in the form of traditional buildings or agricultural activities (olive or palm groves, citrus or cotton plantations, rice terraces, etc.). These plantations and clusters of spontaneous architecture become part of the landscape and mould the character of a region.

## Industrial Archaeology

Industrial archaeology is the study of the working life of past generations through the physical and documentary evidence that they have left. It studies questions such as "What machines and sources of power did our ancestors have?" and "What were the buildings like in which they worked?"

## Library

A building containing collections of books, manuscripts, periodicals and sometimes films and CD-ROMs to consult, borrow or refer to.

## Museum

A permanent non-profit-making institution in the service of society and its development, open to the public. It acquires, conserves, researches, communicates and exhibits material evidence of people and their environment for the purpose of study, education and enjoyment<sup>1</sup>. Museum collections include objects of archaeological, historical, artistic, natural, and scientific interest such as paintings, textiles, sculpture, shells, scientific instruments, coins, archaeological finds, ceramics, etc. The term "museum" can be applied also to science centres, planetaria, botanical and zoological gardens, aquaria and vivaria.

<sup>1</sup> ICOM definition

## ACTIVITY 1

## Worksheet - Types of heritage

**Objectives:** Help students understand the various types of heritage.

**Location:** Classroom

**Procedure:** Start by explaining the meaning and different kinds of *heritage* (historical or natural sites, monuments, statues, collections exhibited in museums, etc.). Give each student a photocopy of the worksheet and ask him/her to put a cross in the corresponding column, as in the first example.

Items	Movable Heritage	Immovable Heritage	Intangible Heritage
Carpet	X		
Fountain			
Medina of Tunis			
Perfume flacon of glass			
The Madrasa of Sultan Hasan			
Ceramic tile			
Kalila and Dumna			
The Mosque of Kairouan			
Music of Ziryab			
Incense-burner			
The Site of Palmyra			
The Arabian Nights			
Miniature painting			
The Cultural Space of Djamaa el-Fna Square (Morocco)			
Dervish dances			
Coins			

### Discussion

Ask students to describe an object belonging to their family that has been passed down from one generation to another (for example, from their grandparents to their parents). Does this object have a particular value for them? If so, why? Ask them to explain what they mean by “*value*”. Is it a monetary term, or symbolic, or some other?

## ACTIVITY 2

### Learning from objects

Objectives	<p>Develop students' ability of observation;</p> <p>Stimulate their curiosity and invite them to discover how objects are made;</p> <p>Make them aware that in the course of time objects can change their function.</p>
Location	Classroom
Equipment	<p>Photos (better in colours) of objects from different material (textile, glass, stone, ceramic, etc.). Some of them can be modern and of common use;</p> <p>Sheet of paper or notebook.</p>
Procedure	<p>Start by explaining to students techniques used in the past to create some materials such as ceramics, glass, wool, bricks, etc.;</p> <p>Divide students in small groups;</p> <p>Give to each group a photo representing a particular object;</p> <p>Ask each group to make a description of the object stressing the following points:</p> <ol style="list-style-type: none"> <li>Physical feature (what is it made of? What colour is it? Is it a natural or manufactured substance? Is it worn? Why?);</li> <li>Construction (How is it made? Is it handmade or machine-made? How was this material made?);</li> <li>Function (What is it made for? Is it still used today? Has the use changed?);</li> <li>Decoration (How is it decorated? Is it a simple or difficult work? How many time do you think it took to realize this work? Do you like the way it looks?);</li> <li>Value (What is it worth to the people who made it? To the people who used it? To you? To a museum? Has this object a value in monetary term? What kind of values do you think it has?).</li> </ol> <p>Ask students to imagine the object telling the history of its life (Where it comes from? In how many houses it was? Why is it now in a museum?) Make students use their imagination;</p> <p>Ask each group to make a presentation of its work in class.</p>

## ACTIVITY 3

**Discussion: the interrelationship between culture and nature**

The natural environment plays an important role in the local architecture and building style. Ask your students to note the differences (material, roof, colour, etc.) among traditional houses in different parts of the world. What has influenced this variety of styles? Here are some examples:



© ICCROM

**Norway**

Sloping roofs

Building material (wood)

Bright Colours

What factors have influenced the style of this house?



© ICCROM

**Oceania**

Absence of windows

Building material (cane)

What factors have influenced the style of this house?



© ICCROM

**Yemen**

Flat roof

Building material

Height and shape of building

What factors have influenced the style of this house?



© ICCROM

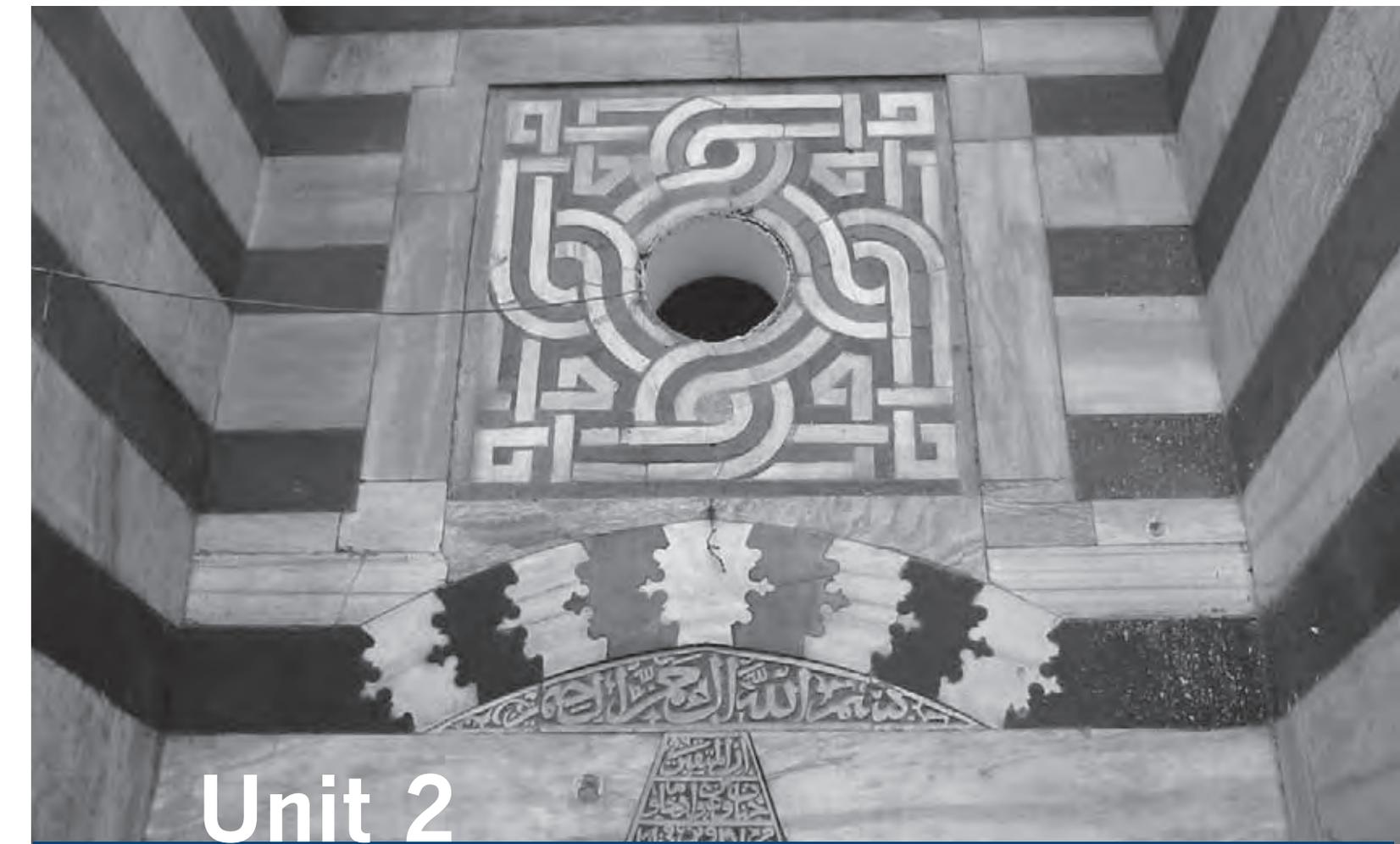
**Mediterranean area (Spain)**

Tile roof

White colour

Windows, shutters

What factors have influenced the style of this house?



## Unit 2

# Understanding a heritage place

### Learning objectives

At the end of the Unit, students will be able to:

- link historical knowledge learnt in class with aspects discovered on the site, either archaeological or urban sites;
- identify the different architectural styles and periods of buildings and other (archaeological) fragments on the site;
- understand the urban organization of an ancient or old town and recognize its links with the present.

# Guidelines for teachers

This unit deals with the organization of a site visit, either to an archaeological site or a quarter of the city (i.e. the old town), or a single monument. The choice depends mainly on:

- the availability of those responsible for the site/old town to assist teachers and students during the project;
- the possibility of organizing practical activities for students under specialist supervision;
- the proximity of the site to the school.

Teachers will meet the site manager to decide on the itinerary of the school visit and to select monuments that are significant for the historical understanding of the site and present particular problems of conservation. He/she will provide teachers with basic notions of conservation related to each monument as well as historical and architectural information to be studied before the visit. It is hoped that the site manager and/or his/her team will be able to assist teachers during the visit in order to clarify more specific conservation issues.

# Basic knowledge

## Historical analysis

The entire Arab region is rich in history. Many civilisations lived in the area before the Islamic rule, their vestiges laid one above the other, leaving evident signs of their past. Archaeological sites are therefore widespread throughout the whole region, testifying to the richness of its history. Each site has its own characteristics that depend on its history and culture. However, the Arab region is not only rich in ancient ruins but also in old cities. These contain invaluable treasures of art, and reveal a very particular urban organization that is at risk of disappearing because of continual economic changes.

Before the visit, teachers will provide students in class with basic information on the history and architectural features of the site. It can be an archaeological site or an urban centre. It is important to simplify the information and highlight the most important political events that influenced the evolution of the site.

Points of interest to underline may include:

- Time (Who were the first inhabitants and when was the site first inhabited?)
- Location (Where is the site located and why was it built there?)
- Function (Was it a religious, military, commercial or political centre?)
- Links with other sites in the surrounding region/s
- Organization of the urban space (areas devoted

to different aspects of the life such as religious, public, residential, funerary, etc.). These areas can also be illustrated during the site visit.

- Events that have affected the development of the site or caused its decay:
  - a) Political, economic or religious (e.g. the expansion of Hellenism, the Roman Empire, the advent of Islam, the Ottoman Empire, new commercial roads)
  - b) Natural events (e.g. earthquakes, floods, encroachment of marshes, drainage)
- Political organization
- Religion
- Funerary rituals
- Main buildings (e.g. boundary walls, gates, royal palaces, fortresses, temples, theatres, market places, public baths, stadiums, fountains, tombs, private houses, villas)
- New settlements emerging at the location or in the vicinity of the ancient site

## The Hellenistic City

During the Hellenistic and Roman periods a variety of cities flourished in the Middle East and around the Mediterranean Sea. It appears from historical accounts that Alexander the Great founded 70 cities in the course of his brief life (356-323 BC). This extraordinary development was due to the fertility of the territory and the strategic position on the main trade routes (e.g. Alexandria, Aleppo, Antiochia, and Palmyra).



The archaeological site of Byblos, Lebanon.



Qusayr Amra, Jordan



Example of an Arab city plan, Ghardaïa, M'zab Valley, Algeria

LEFT  
Plan of Hellenistic city of Dura Europos, on the Euphrate river. The plan is taken from *Urbanistica delle città greche*, by A. Giuliano, il Saggiatore, Milano, 1974, page 163.

The city of the Hellenistic and Roman periods followed a controlled and coherent plan. It was not the result of a gradual and unorganized extension, but was conceived as a complete whole. This plan was based on a rectangular scheme where the public buildings and the main squares were set within a grid system. According to the classical tradition, the invention of this chess-board system is attributed to Hippodamus (a Greek architect who lived in the fifth Century BC).

The Romans adapted the general idea, but stressed the importance of two main axes: the *decumanus* and the *cardo*, intersecting at the main cross-roads of the city. The principal buildings such as the forum (*agora* in Greek), the *basilica* (the place where the justice was administrated) and the temples were located along these two main roads, which intersected with the walls of four main gates.



A characteristic coffee shop. Old Damascus, Syria.



Suq of Tripoli, Syria



Interior of a house, Damascus, Syria.



A typical tile decorated courtyard of a house. Tunis, Tunisia.

## The Arab City

The propagation of Islam was accompanied by an extraordinary urban development. Even though the Arabs were originally settled in the desert of the Arabian peninsula, in the course of few decades they were able to create and organize urban centres that became the most important cities of the Mediterranean area; for example, Aleppo, Cairo, Baghdad, Cordoba, Damascus, Palermo, Tunis, and Fez.

In order to understand this phenomenon, it is important to remember that Islam spread over three great empires, which have in turn deeply influenced the Muslim culture:

- The Byzantine Empire (Syria and Egypt)
- The previously Romanized west (North Africa, Spain and Italy)
- The Sassanid Empire (Mesopotamia and Iran)

Most of these cultures inherited the Hellenistic way of life or cultural systems, which earlier had linked this whole vast region in an astonishingly close manner. Moreover, even before the advent of Islam, many nomadic populations of Arab origin had already settled in the area including Mesopotamia,

Syria and Jordan River, and were influenced by the Hellenistic urban organization. There are many examples of pre-Islamic cities that were inhabited by the Arabs: Petra in Jordan, al-Hira on the rivers of the Euphrates, and Tadmor (Palmyra) in Syria, and many others. Many pre-Islamic towns arose in South Arabia (Arabia Felix) along the caravan routes through which goods were transited from China and India to the Mediterranean Sea. These urban centres were provided with fortified walls, sanctuaries, public buildings, and had developed sophisticated hydraulic systems. Thus, these urban structures were adapted by Arabs, who also used many elements from previous cultures to create an original urban system that is distinguishable from any other.

There is no unique model of an Islamic city to refer to because no Arabic codex regulating urban development exists, as it does in other cultures (i.e. Vitruvius, a Roman architect who wrote an architectural treatise on the classical period). In spite of this, the Islamic city represents a way of organizing society that follows a recurrent scheme. This appears not only in the new cities founded by the conquerors, but also in the previous cities that were subsequently incorporated in the Islamic



FROM TOP LEFT CLOCKWISE

View of the old city  
of Damascus, Syria

General view of Jerusalem.

Cairo, Egypt, view of the old city



structure (e.g. Damascus and Aleppo in Syria, Meknès in Morocco, Bukhara in Uzbekistan).

What is specific about the Arab-Islamic city? What makes it different from other cities?

**A)** First of all, the organization of urban space which includes several elements:

- **The socio-religious centre.** It was the main nucleus of the city and included the Great Mosque (or Friday Mosque), the Koranic school (Madrasa) and the public bath (hammam). The Great Mosque was not only a place of prayer but also a meeting point (like the Hellenistic *agora* or Roman *forum*) where the city's news was exchanged, the justice administered, and the edicts proclaimed.
- **The political and administrative centre.** It was the place where the Caliph's or Governor's Palace was generally situated. At the beginning it was integrated to the centre of the city. By the 10<sup>th</sup> century, when the political conditions changed, it was transferred into a fortified place - the citadel - separate from the city.
- **The commercial area (suq or bazar).** It consisted of a myriad of streets flanked with shops that ran from the centre to the urban gates. Contrary to all appearance, the suq was a structure that did not grow haphazardly, but was harmoniously designed as background for a lifestyle. Shops were often disposed in homogeneous groups in conformity with the type of goods: perfumes, jewels, drapers, carpets,

hides, etc. This organization originated from ancient handicraft associations. Shops selling goods of lesser value were situated far from the central nucleus.

- **Residential areas inside the walls.** These were organized in quarters, with houses very close together (without space between each other), each quarter was provided with public services such as mosques, baths, fountains, wells, schools and a series of little shops.
- **Defensive system.** It comprised the city walls, towered gates, ramparts, and moats. The gates were closed during the night in order to protect the city from external attacks.
- **The area outside the city.** In this area were situated the livestock market and rural products, and all these activities that were malodorous, noisy or polluting (tanneries, slaughterhouses, craftsmen' forges, carpentries, oil presses, dye-works, etc.). It was also the seat of activities related to the caravan trade (customs,

storehouses, stables, *caravanserais*, etc.). There was a great area (*maydan*) devoted to equestrian sports, military maneuvers and parades. The cemetery usually was put outside the walls, except in some cities such as Rabat (Morocco) and Mahdia (Tunisia) where it was inside the walls.

The urban space of Islamic cities is discontinuous and differs from the Hellenistic one which was regular and based on a geometrical scheme (streets intersect in a right angle). On the contrary, the planimetry of the Arab town follows a labyrinthine design which seems not to follow any previous general plan. The public main roads (*shari*) linked the centre to the entrance gates; several lanes (*darb*) branched off on either sides of the main street and reached the habitations. Many of these lanes were blind alleys (*zuqaq*) and had a private use. They were provided with a gate which was closed during the night for security purposes.

- B) The concept of interior space opposed to the outside. A typical expression of this focus on



FROM TOP LEFT CLOCKWISE

Shibam, Yemen

Suq in Jerusalem

Façade of old urban houses,  
Amman, Jordan.



ABOVE  
Minaret of Al-Rifa Mosque, Cairo.

BELOW  
Great Mosque of Tripoli, Lebanon: examples of decoration, calligraphy and geometrical patterns.

inner space was represented by the Muslim house. Generally, it was a rectangular building organized around an inner courtyard. While the facade was not provided with decorative elements (it consisted of a high wall without or very few windows, interrupted only by a single low door), the interior could be richly decorated. Life developed around the courtyard, which had the function of protecting the family from wind and sun as well as from extraneous eyes. This arrangement of houses provided environmental conditions favourable in hot climates. Often these courtyard houses were clustered together into a

walled complex to serve the needs of extended families. The traditional Arab house was never a completed project. As family size increased, more rooms were built on the lot's unused land. This structure strongly conditioned the planning of the city.

- C)** A multi-ethnic society. The was characterized by the presence of several communities which had extremely varied religious, cultural and linguistic background. They often lived in separate quarters and carried on trades strictly regulated by Muslims. All of them enjoyed particular privileges granted by the Caliph or Governor. This cosmopolitan society contributed to circulate ideas, know-how, and reveals the religious tolerance that distinguished the Islamic society from other cultures.



Traces of Roman Decumanus in Bosra, Syria: past and present live together.

# Key words

## Ablution Fountain

Fountain found in mosque and used for ritual washing before prayers.

## Acropolis

Citadel or fortified part of an ancient Greek city, usually situated on the top of a hill.

## Aghani

Literally means “songs”. In architecture, this term indicates long corridors lined with seats and walled by mashrabiyyas, especially in Mamluk architecture. They are usually galleries on the upper floor and overlook the main reception area of the house.

## Agora

Public open space used in ancient Greek cities for assemblies and markets. The corresponding Roman word is Forum.

## Arabesque

One of the main decorative elements in Islamic art based on stylized plant motifs. It is basically a scroll of leaves and stems where the different elements create an interlacing geometric system. The pattern can be varied endlessly, and adapted to any object. As a general rule, the composition of the arabesque is strictly symmetrical, even if at time it can be more intricate and freely conceived.

## Architectural orders

An architectural system based on the proportion and style of columns, capitals and entablature above. There are five architectural classic Orders, three being Greek (Doric, Ionic and Corinthian), the other two Roman (Tuscan and Composite). Each order consists of specific relative proportions of each element (i.e. diameter and height of the column) and has its own distinctive style. The Doric is the earliest order. It developed especially in mainland Greece and in the western Greek colonies (Sicily and southern Italy); it dates back to the eighth century BC. Generally the Doric column was sturdy, had no base, and was fluted (around twenty flutes). The top (capital) was simple consisting of a square stone slab (named *abacus*) above a round mould slab. The Ionian order dates back to the sixth century BC and spread mostly in the eastern Greek colonies (Asia Minor, the



Architectural Greek Orders. From left to right: Doric, Ionic and Corinthian Styles. (Drawing of R. Canepa)

region corresponding to Turkey). The column, slender and elegant on attic base, usually had twenty four flutes separated by fillets. This order had a distinctive capital with two volutes scrolling in the shape of an animal's horn, and egg-and-dart in the centre. The Corinthian stile appeared in the fourth century BC and was mainly used during the Hellenistic and Roman periods. It is characterized by flared capitals with a row of acanthus leaves (a plant growing in the Mediterranean area), and fluted columns. The entablature is heavily decorated, with a particularly deep cornice, usually supported on modillions.

The Tuscan order derived probably from the Etruscan architecture and can be considered as an Italic adaptation of the Doric style. Very simple, this order is distinguished by unfluted columns, unadorned capitals and bases, and plain entablature. It was used by Romans in buildings presenting a superposition of architectural orders (i.e. the Flavius amphitheatre in Rome). The Composite order, instead, is a richer version of the Corinthian order and includes also elements of the Ionic style. Richly ornate, it was especially used during the Roman Empire.

## Bukkariyya

A decorative element that is usually of a round or oval shape and filled with patterns (arabesque), with *palmette* or *calice* decorating either end. It is used on all mediums of decoration, buildings, textiles, metalworks, woodworks, illuminated manuscripts, etc. The name is probably derived from the city of Bukhara in Uzbekistan.

## Calligraphy

The art of calligraphy, a word that means “beautiful writing”, has a very important place in Islam because it was strongly related with the Arabic language and the Koran. At the beginning, the Koran was handed down orally, but the demand for an unambiguous and correct rendering of God’s word, made it imperative to develop a script that was clear and at the same time beautiful. The Arabic script has been used much more extensively for decoration and as means of artistic expression. It developed many styles. One of the most famous script used for the Koran was the *Kufic style* (from the Iraqi town of Kufa where it arose), which spread over the whole Islamic world. It is an angular script that has very few downward strokes and a tendency to stretch out in a horizontal direction. Kufic became in time more elaborate, including leaves and flowers, and it was used also as decorative element in architecture. The introduction of paper, which came from China via Central Asia in the 8<sup>th</sup> century, was particularly important for the development of manuscripts. Calligraphy and miniature paintings combined to turn the manuscript into one of the most refined works of Islamic art.

## Capital

A broader section at the top of a pillar or a column (see classical architectural orders).

## Caravanserai (Khan)

A fortified building situated on a trade route. The word caravanserai is derived from the Persian “*carwan*”, which means a company of travellers (*caravan*), and *serai* (large inn). Originally it was an enclosure protecting a well; then it developed into a unique type of architectural complex. Its main function was to receive travellers and merchandise and offer food, water, baths and a place for sleeping and praying. The building, which testifies to the nomadic tradition of the Muslim civilization, included a courtyard to stable animals, rooms (in the upper floor) to lodge the travellers (*manzil* or *funduq*), and storage areas for a variety of goods to be traded. It survived until the beginning of the last century.

## Column

An upright pillar, usually cylindrical, supporting an arch, entablature or other structures. It was a typical element of the ancient architecture. Generally, the column includes three parts: base, shaft and capital (the top). The style varies in accordance with the region and time period (see classical architectural orders).

## Geometrical patterns and ornaments in Islamic art

Geometrical patterns are an important element in Islamic decoration. The general reluctance to use figurative representations led Islamic artists to develop decorative art and to favour abstract motifs, either geometrical or floral. The preference for geometrical patterns was in accordance with the religious interest for abstraction and the related doctrine of unity. Muslims recognized in geometry the unifying intermediary between the material and spiritual world. Thus, the circle and its centre are the point at which all Islamic patterns begin, and are the symbol



Muqarnas and tile decoration. Mosque of Kerbala, Iraq.

of a religion that emphasizes the existence of only one God. The circle has always been considered as a symbol of eternity. Geometrical patterns consisted of simple elements such as a cross or a star, but they are often made up of many varying polygonal shapes, which in turn can form stars, rosettes, etc. Muslim artists developed these motifs to a degree of complexity and sophistication previously unknown.

## Hammam

Public baths that derived from the Roman *thermae*. There is a close link between practice of religion and public baths. In fact cleanliness and hygiene are the basic prerequisites not only for the maintenance of good health, but also to have access to the mosque. During the Ottoman period a great number of these structures were built in all the Empire. One of the most famous establishments is the bath Hall complex of the Khirbat Al-Mafjar, which was built for the nephew of Calif Hisham.



Interior of a Hammam, Tripoli, Lebanon

### Hellenism

This term is given to the period of Greek history, language and culture from the death of Alexander the Great (323 BC) to the foundation of the Roman Empire (1st century AD). During this time, Greek culture flourished, spreading through the Mediterranean and into the Middle East and Asia. One of the most important centres of Hellenism was Alexandria in Egypt.

### Iwan

Arched openings or porches surrounding a central courtyard. The four-*iwan* (four-sided vaulted halls) is a structure that has been frequently used in Islamic architecture for palaces, mosques, schools, caravanserais as well as private homes.



The courtyard of the Great Mosque, Damascus, Syria.

### Kasba (Kalé)

Castle or fortress situated in the upper side of the city where the Caliph or his representative used to live, beginning from the 10th century. Generally the citadel was surrounded by towered walls in order to protect the political centre from external enemies and/or popular uprisings.

### Khutba

The sermon delivered by a religious leader in the Great Mosque on Friday.

### Madrasa

An institution for higher education, in which religious and juridical sciences were taught. This unique type of religious building has long been a part of Islamic civilization. The madrasa, usually situated near the Great Mosque, consisted of teaching halls and dormitories. Generally the madrasa is centred on a court with one or more *iwans* (in accordance with the importance of the school) used for teaching. In most cities, they were often flanked by an university where the studies of mathematic, philosophy, astronomy, literature, science, medicine flourished (eg. Fez, Cairo, Baghdad, Cordova, Timbuctu). These universities were famous across the world at that time. Madrasas were often magnificent buildings provided with minarets, elegant arches, and decorated portals such as the Sultan Hasan Madrasa, which is considered a masterpiece of cairene architecture.

### Maqsura

Prayer area reserved for the ruler or the governor. It was separated from the rest by a wooden screen.

### Maristan (Bimartisan)

Hospital. The term, derived from Persian, means “ place for the sick”.

### Mashrabiyya

Wooden screen that covers windows of medieval houses. It had the function of protecting the privacy of the house by allowing the family to see the street, while preventing the neighbors from viewing the inside. It was a good tool to minimize the heat caused by direct sunlight during summer days.



Example of a window-screen (Mashrabiyya) in Old Cairo.

## Medina

It is the second holiest city of Islam after Mecca. Its importance as a religious site is due to the presence of Mohammed's tomb. In pre-Islamic times the city, named Yathrib, was an important trading centre. In 622, when Mohammed established his headquarters there, the town took the name of "Medina", meaning "city". At present this term indicates the old fortified city, to be distinguished from the modern one (i.e. Medina of Tunis).

## Mihrab

Niche in a mosque or in any religious building, which indicates the direction of Mecca. The mihrab can be either flat or recessed in the wall (this is the most popular form). Most Mihrabs were decorated with stucco carvings, marble dadoes, glazed tiles or mosaic. Another type of mihrab is the portable one which flourished during the Fatimid period. This type was wooden, intricately decorated and could be moved from one place to another. Interesting examples can be seen in the Museum of Islamic Art in Cairo.



Some types of minarets. (Drawing of R. Canepa)

## Minaret (Manara)

The tower of a mosque from which the faithful are called to prayer. Originally it did not have this function, but served as beacon of light. In fact the earliest mosques were built without minarets; this element appeared the first time in Damascus (Syria) and Kairouan (Tunisia), 80 years after Muhammad's death. Probably the Great Mosque of Damascus, built in 705, was inspired by the Christian churches of the city. From then the minaret became the place from which the *muezzin* calls out the community to prayer (*adhan*). Today minarets are distinctive features of any Mosque; they are slim, elegant and generally taller than any surrounding support structure.

Minarets basically are constructed of three parts: base, shaft and gallery. The base was always fitted into a square; the central body, instead, can be either square, conical (tapering at the top), cylindrical (a circular shaft) or polygonal. The upper section is encircled by a balcony from where the muezzin calls to prayer. It is covered by a roof-like canopy and can be sumptuously adorned. The style and architecture varies widely according to the region and time period

## Minbar

Stepped pulpit in a mosque from where the imam pronounces the sermon of Friday (*Khutba*). Generally minbars were made of wood, however stone and marble were used as well. They were adorned by geometrical or floral patterns with mother pearl inlay and ivory.

## Monarchy

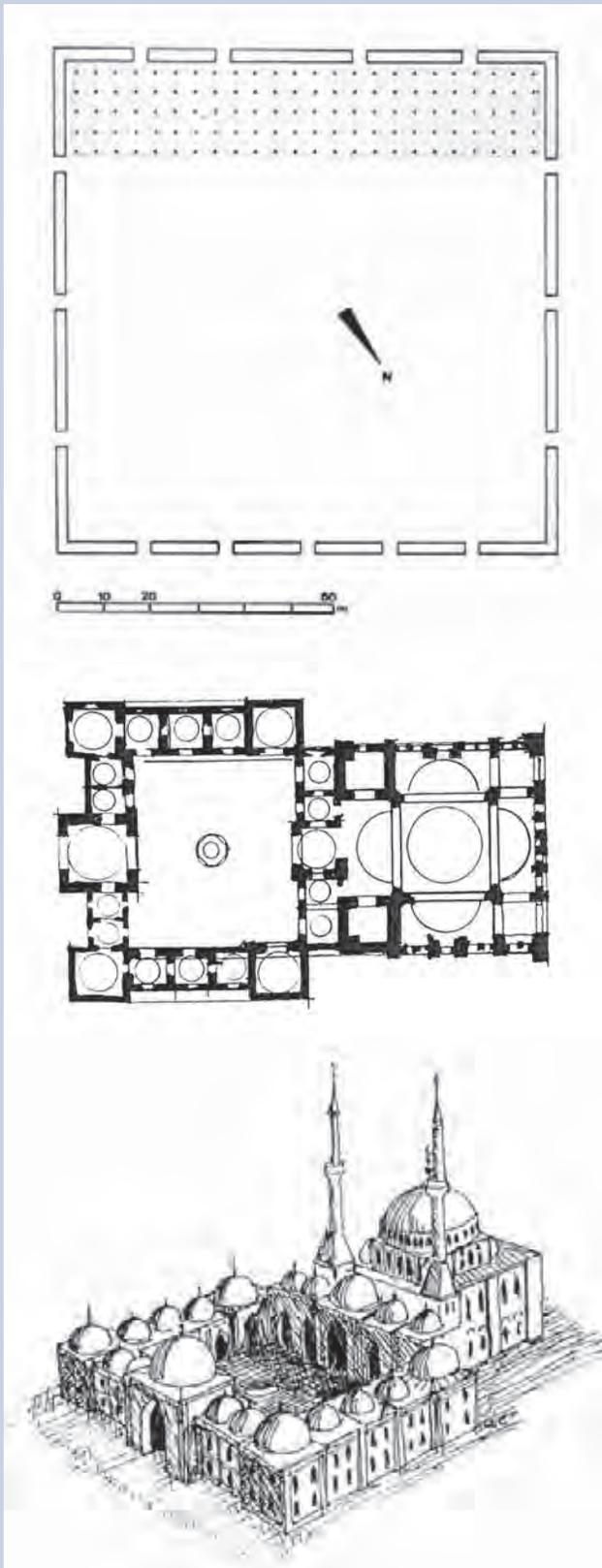
A form of government with a king as its head. The word means "the rule of one". Generally the king was identified with the divinity (i.e. the pharaoh in ancient Egypt).

## Mosque (Masjid or Jami)

It is the place where Muslims meet to pray. The term *Jam'* - from the Arabic root *jam'* - means "gathering things". This meaning explains its particular shape intended to gather as many faithful as possible. The first mosques were built in Mecca and Medina. The model of the early mosques came from the courtyard of Prophet Mohammed's house in Medina. This scheme, scarcely modified, was used in the earliest mosques built in military settlements (e.g. Kufa, and Basra in Iraq), which consisted of a prayer hall (*haram*) and a porched courtyard. Following the Islamic conquest, the mosque became the centre of worship and other activities. It was also an educational institution, a centre of political, juridical and social life. The shape and the style of the mosque came from a mixture of architectures of various territories and of original patterns. Two main



Suleymaniye Mosque, Istanbul. Interior: carpets and mashrabbya.



ABOVE  
Plan of the primitive Mosque of Kufa, Iraq. Image taken from *Islamic Art and Architecture*, by R. Hilienbrand, Thames and Hudson, London. (Drawing of R. Canepa).

CENTER  
Plan of a Seljuk Mosque. Notice the evolution from the primitive Mosque of Kufa (Drawing of R. Canepa).

BELOW  
Example of a Seljuk Mosque with four-side vaulted halls surrounding a central courtyard (Drawing of R. Canepa).

cultural areas influenced the architecture of the mosque: the Hellenistic-Roman world (especially in Syria and in the Mediterranean area) and the Sasanid Empire (mainly when the capital was transferred from Damascus to Baghdad under the Abbasid dynasty). The Muslim architects were able to combine all these patterns and create an original style. The mosque contains many elements such as minarets, mihrab, minbar, dome, courtyard, columns and pilasters that have either a religious or a structural function. Style and architecture are very varied and depend on the historical period and geographical area where the mosque was located. (e.g. the Great Mosque of Damascus ( Syria), the Great Mosque of Cordoba (Spain), the Great Mosque of Isfahan (Iran), the Dome of the Rock (Jerusalem), the Azhar Mosque (Cairo), the Suleymaniye Mosque (Istanbul, Turkey).

### Muqarnas

One of the most important and original decorative elements of Islamic architecture, also called stalactites or a honeycomb vault. They are composed of small arches carved of stone, wood, stucco and displayed on the top of each other forming a structure like a honeycomb. Muqarnas reached perfection during the Mamluk period and were used in the conches of portals, on facades with squinches and pendentives.



Example of muqarnas, Baalbek, Lebanon

### **Necropolis**

A cemetery, especially a large one, belonging to an ancient city. Ancient people used to bury dead people with objects they thought would be useful in the life after death. Necropolis is a mine of information for archaeologists because it contains all kinds of objects illustrating everyday life such as jewels, pottery, furniture, weapons, toys, etc. The tombs could be built in stone (sarcophagus, mausoleum, pyramid) or carved out of rocks. The magnificence of the monument demonstrated the importance of the deceased. Think of the magnificence of the pyramids, the royal tombs in Egypt. The Great Pyramid of Cheops at Giza (Cairo) was considered in antiquity as one of the Seven Wonders of the World<sup>2</sup>.

### **Pantheon**

All the gods of a people or religion considered collectively. In ancient Greece and Rome the term was referred to a temple dedicated to all the gods.

### **Pediment**

The triangular upper part of the front of a temple or a building in classical style, surmounting a portico of columns.

### **Peristyle**

An architectural space such as a porch or a court surrounded or edged by columns.

### **Polytheism**

The belief and/or worship of more than one god. Generally people of antiquity venerated more than one god.

### **Qibla**

It is the direction of Mecca that Muslims face when they carry out their prayers five times per day.

### **Riwaq**

Referred to a mosque, it means an arcade carried on columns or pillars. In a house, it means a living unit with all its elements.

### **Squinch**

It is an architectural element used to make a transition from a square to a polygonal or circular base for a dome. It can be composed of lintels, corbels, or arches

### **Stadium**

A rectangular space for foot or chariot races, having tiers of seats for spectators. Generally in ancient times it measured about 185 metres long. The term is used still today for designing a ground for athletic performances.

### **Temple**

A building devoted to the worship of a god or several gods or other object of religious reverence. The classical temple included an inner chamber (the *naos*), where the statue of the divinity was situated, and a treasury cell reserved for priest.

### **Theatre**

A semicircular or round unroofed building (in this case called an amphitheatre) used in Greek and Roman times for plays and dramatic performances, surrounded by tiers of seats for spectators.

### **Thermae**

Public baths in use during the Roman period. They inspired the Turkish *hammam*.

### **Tympanum**

A vertical recessed triangular space forming the centre of a pediment, typically decorated.

<sup>2</sup> The ancient Greeks too had the idea of creating a list of monuments (the Seven Wonders of the World) to be considered as the most important of the ancient world: the Pyramids of Egypt, the Hanging Gardens of Babylon (Iraq), the Temple of Artemis at Ephesus (Turkey), the statue of Zeus at Olympia (Greece), the Mausoleum of Halicarnassus (Turkey), the Colossus of Rhodes (Greece) and the Pharos of Alexandria (Egypt). The Pyramid of Cheops in Egypt is the only one of the Seven Wonders of the World that is still standing.

## ACTIVITY 1

### Visiting an archaeological site

Before the visit, teachers will provide students in class with a map of the site, explain the proposed itinerary, and give them the necessary information to understand the history and urban organization of the site. During the visit, teachers will underline all the elements of the past that survive today (e.g. architectural features, public baths, stadium, theatre)

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• teach students how to read a map and orient themselves on the site;</li> <li>• familiarize students with the historical and architectural context of the site.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> <li>• site</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• map of site (A3 format)</li> <li>• notebook/sheet of paper</li> <li>• pen/pencil</li> </ul>
<b>Procedure</b>	<p>During the visit:</p> <ul style="list-style-type: none"> <li>• ask students to indicate the itinerary and the main monuments they visit on the map.</li> </ul> <p>After the visit in class:</p> <ul style="list-style-type: none"> <li>• invite students to write down on a sheet what aspects of the site impressed them most (e.g. magnificence of the ruins, its history, beauty of the landscape, physical state of the site);</li> <li>• pin sheets on the wall and compare opinions about the site; Identify the most important aspects of the site together and discuss if it has a significance for them.</li> </ul>

## ACTIVITY 2

### A walk in the old town

Before the visit, teachers will provide students in class with a map of the old city (Medina), explain the itinerary, and give them the necessary information to understand the history and the development of the city

2

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• teach students how to read a map and orient themselves in the city;</li> <li>• familiarize students with the historical and architectural Islamic context.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> <li>• site</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• map of site (A3 format)</li> <li>• notebook/sheet of paper</li> <li>• pen/pencil</li> </ul>
<b>Procedure</b>	<p>During the visit:</p> <ul style="list-style-type: none"> <li>• ask students to indicate the itinerary and the main monuments they visit on the map.</li> </ul> <p>After the visit in class</p> <ul style="list-style-type: none"> <li>• invite students to write down on a sheet what aspects of old town impressed them most (e.g. magnificence of main monuments, the variety and liveliness of the suq, the narrowness of streets). What did they like or not? And why? Which buildings did they find interesting and why? Would they like to live in an old centre?</li> <li>• ask students to identify advantages and disadvantages in living in a historical centre;</li> <li>• pin sheets on the wall and compare the different opinions;</li> <li>• identify the most important aspects of the Medina together with students and which ones they would like to preserve most.</li> </ul>

## ACTIVITY 3

# Surveying and monitoring

Site managers in collaboration with teachers will suggest one or more monuments that are particularly significant and present problems of conservation. If possible students will be assisted by those responsible for the site/old town

<b>Objectives</b>	<ul style="list-style-type: none"> <li>stimulate students' power of observation;</li> <li>help students to recognize architectural elements of the monument and its state of conservation.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>site</li> <li>classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>camera</li> <li>folding rulers for measuring</li> <li>felt tip markers</li> <li>drawing book and paper</li> <li>pens/pencils</li> </ul>
<b>Procedure</b>	<p>On the site:</p> <ul style="list-style-type: none"> <li>divide students into small groups and ask them to survey the monument by taking photo or making sketches, measuring and drawing up an accurate plan;</li> <li>student will complete their survey by writing a text focusing the following points:             <ol style="list-style-type: none"> <li><b>History</b> (When was the monument built and by whom? How has it changed over the centuries?);</li> <li><b>Construction</b> (How was the monument constructed? What materials were used? What building techniques were applied?);</li> <li><b>Function</b> (What was it built for? Has its use changed over the centuries?);</li> <li><b>Style</b> (Which style influenced its architecture? What are the characteristic elements? How is it decorated?);</li> <li><b>State of conservation</b> (Is the monument damaged or not? Are there any visible trace of decay or restoration and if so, where? What are the main problem of conservation of the monument and its surrounding?);</li> <li><b>Value</b> (Has the monument a special value or meaning for them? If yes, which one?).</li> </ol> </li> </ul> <p>After the visit, in class</p> <ul style="list-style-type: none"> <li>Ask each group to make a presentation of its work.</li> </ul>

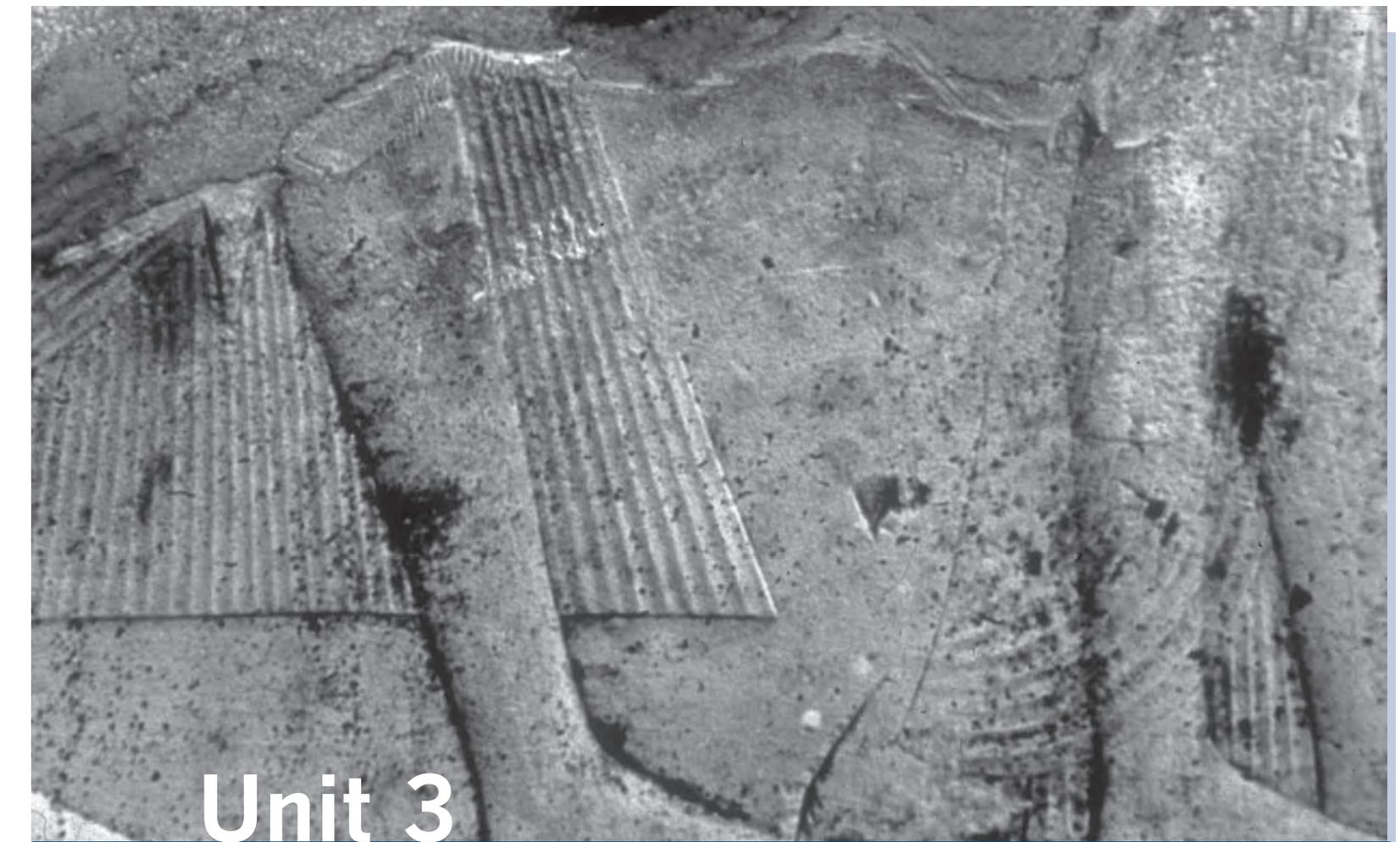
## ACTIVITY 4

### Learning to formulate hypothesis

One of the archaeologist's jobs is to collect clues to deduce what happened in the past. Often clues consist of fragments and objects of daily use. The proposed game aims to simulate the deductive method used by archaeologists, to some extent, to discover the past.

2

<b>Objectives</b>	<ul style="list-style-type: none"> <li>stimulate students' power of observation and investigation;</li> <li>help students to formulate hypothesis by analyzing collected elements.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>two dustbin bags. They will be used by the teacher to piece together information about the family who generated the rubbish (e.g. milk box, fragments of envelope, a lip-stick, a pricked balloon, a doll, cigarette-ends, written documents).</li> </ul>
<b>Procedure</b>	<p>first of all, think how the imaginary family may be composed (number of persons, the possible age of each component, what they do, what they eat, etc.). Then, taking in mind the family, fill the bags with all those elements that will give information about its way of life;</p> <ul style="list-style-type: none"> <li>divide the class in two groups and distribute the dustbin bags to each group;</li> <li>ask students to analyze the content of the bag and formulate hypothesis about the family based on the material found in the bag;</li> <li>invite them to pin the sheets on the wall and compare the solutions.</li> </ul>



# Unit 3

## Causes of decay

### Learning objectives

At the end of the Unit, students will:

- be aware that cultural heritage is fragile and needs to be protected;
- recognize and classify the main threats facing cultural heritage in general, and the form of decay affecting monuments in archaeological sites or urban centres.

## Guidelines for teachers

This unit aims to draw the students' attention to threats that affect our cultural heritage as well as materials at home.

During the visit to the site, they will underline, whenever possible, the aspects of deterioration and conservation of monuments. In this task they will be assisted by the site manager of his/her staff who will provide them with all the necessary information.

It is important to make students aware that all materials, both at home and outside, deteriorate as a result of physical, chemical and biological causes.

Practical experiments made in class will help students to understand some reactions such as crystallization, pollution, etc.

# Basic knowledge

## WHAT are the threats facing our cultural heritage today?

Our cultural heritage is not eternal. Its deterioration is an irreversible process that we can delay but not avoid. People do not recognize this fact. As heritage has survived for hundreds and even thousands of years, they think it will survive forever.

In actual fact, all materials comprising our cultural heritage, whether monuments or objects, are deteriorating as a result of physical, biological or chemical changes that occur over time.

The way a monument or an object deteriorates depends on the material it is made of and on the conditions it is kept in. Granite and porphyry, for example, are hard and extremely durable rocks. Sandstone, on the contrary, is relatively fragile and subject to wind and water erosion. As a general rule, deterioration is slower if the environmental conditions are stable, even if they are not ideal.

Heritage has been seriously threatened over the last hundred years not only by natural causes of decay, but also by social and economic changes such as urban development, increasing tourism and ethnic/religious conflicts.

The threats that menace our cultural heritage may be of natural and/or human origin. They jeopardize buildings, monuments, historical and archaeological sites as well as objects and works of art exhibited in museums. Here are some examples:

- **Climate** (frost, sun, rain). Frequent changes of temperature between night and day cause the water present in building masonry to evaporate and condense or freeze and thaw, when temperature cyclically changes around 0°. Stress caused by freeze/thaw cycles deteriorates the material over time.
- **Pollution** (industrial and exhaust emissions). Pollutants combined with rainwater (acid rain) produce effects such as blackening and erosion. Pollution is a major cause of deterioration in monuments, especially in the case of marble, limestone and lime mortar. Bronzes are also



Tutankhamen's Fan, Museum of Cairo, Egypt.



10 years after: discoloration and rupture of feathers caused by inadequate lighting.

seriously affected by pollution. Air inside buildings may also become polluted by internal sources such as heating, burning candles, open fires, etc.

- **Earthquakes, floods and volcanic eruptions**
- **Wars, vandalism**
- **Light.** Visible and ultraviolet light as well as heat from light causes fading and discoloration on objects of organic origin (paper, wood, textiles, photos, etc.).
- **Humidity, moisture and rising damp.** Excess humidity can produce diverse effects depending on the material. It can, for example, corrode metal, swell paper and expand wood. Water is one of the main elements responsible for the deterioration of building masonry. It facilitates the interaction of pollutants, encourages the growth of micro-organisms, moss and intrusive vegetation, and conveys soluble salts that produce erosion phenomena.

- **Animals** (pests, birds, rodents, etc.). Wood, leather, wool and paper are considered delicacies by mice, rats and a variety of insects. Bird and bat droppings contain acids that have a corrosive effect on stone or bronze.
- **Neglect and/or abandon.** Once a building becomes disused, its deterioration rate accelerates as nobody is interested in taking care of it any longer.
- **Lack of adequate legislation**
- **Clandestine diggers** as well as the use of metal detector by treasure hunters cause great damage to an archaeological site. By not excavating scientifically, they destroy many things and historical information. This makes it more difficult for archaeologists to interpret the past. It also encourages illegal trafficking of antiquities, which is a serious problem as it robs many countries of their history.
- **Urban development.** The increase in population and the need to expand lead to an uncontrolled urban development that causes the destruction of ancient and characteristic buildings. In the

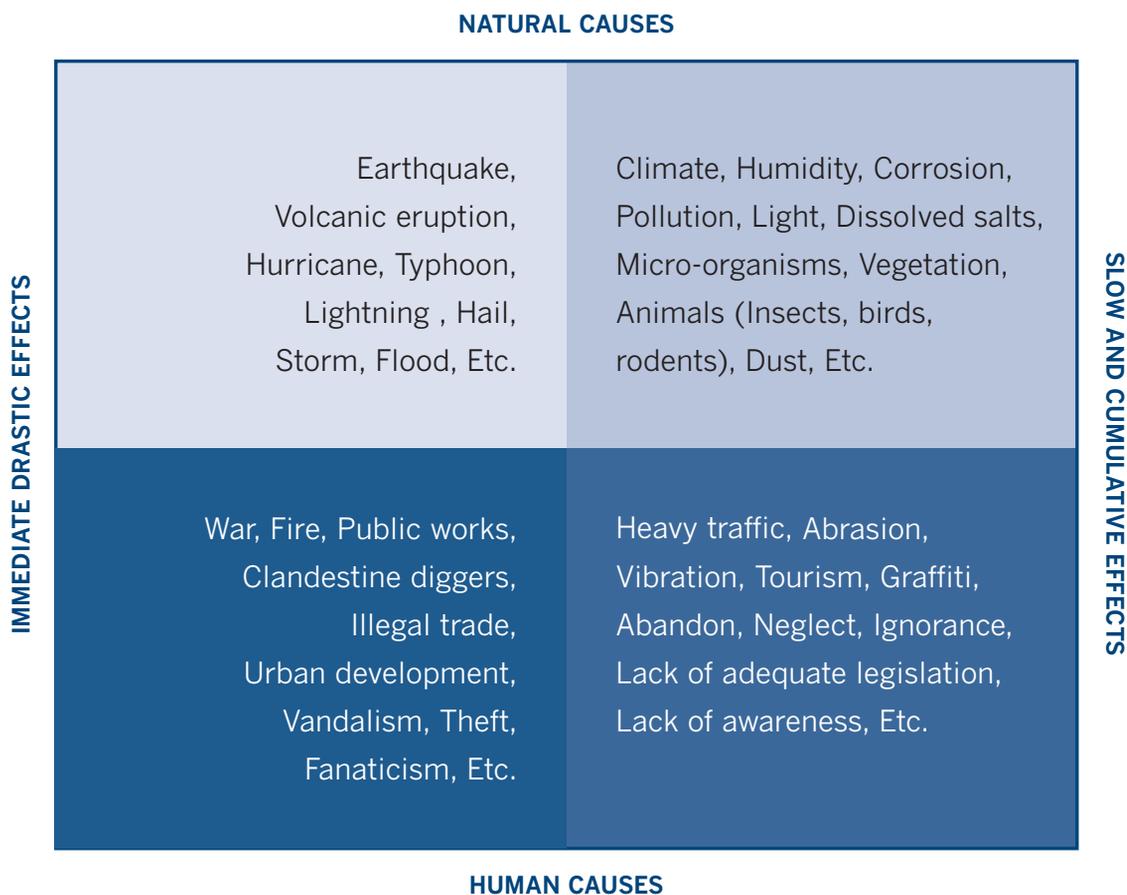
case of archaeological sites, urban development resulting from tourism threatens the integrity and beauty of the surrounding landscape, which often enhances the value of a site.

These agents do not have the same effect. Some of them damage heritage immediately and permanently, such as earthquakes, fire and war. Others work slowly and it is a long time before damage becomes really visible, as in the case of corrosion, moisture, light or pollution.

Archaeological sites are particularly exposed to climatic conditions, theft, vandalism, illicit excavations and tourism's negative impact, whereas historical centres are especially menaced by uncontrolled urban development (construction of new roads, parking, modern buildings, extra storeys, etc.), unsuitable modifications or changes of use, heavy traffic, pollution, tourism and lack of adequate laws.

To better understand the threats facing our cultural heritage, see the diagram below:

## Threats facing cultural heritage



# Key words

## Organic material

A term describing materials that originate from animals or plants (former living source) such as ivory, wool, leather, wood, paper, etc. Plastic materials, such as PE (polythene), used for mineral water bottles, or PVC (polyvinyl chloride) used for many household items, are also organic materials, but they are obtained from oil through complex chemical processes.

## Inorganic material

A term describing materials that originate from rock and minerals (non-living source) such as marble, gold, iron, pottery, bronze, glass, brick, etc. As a general rule, materials from inorganic sources are more resistant to decay than those of organic origin.

## Deterioration/Decay

A slow process of degradation due to chemical, physical and biological factors. Adequate measures can halt or slow down this phenomenon.

## Biodeterioration

This term refers to any undesirable changes in the properties of a material caused by the vital activities of micro-organisms and organisms such as bacteria, fungi, algae, lichens, mosses, higher plants (trees and intrusive plants) and animals. Some of these organisms attack material directly for nourishment (insects, mice, etc.). Other organisms cause damage indirectly by chemical action producing acid and corrosive substances. Yet others can damage material by mechanical and physical action (e.g. tree roots cracking underground pipes, creepers damaging walls). Environmental factors such as water, light, heat and wind are very important in determining the development of these organisms that play a role in the decay of both organic and inorganic materials.

## Porosity

A pore is an empty space within natural stone and artificial building material (such as mortar or bricks). Porosity is the total amount of these empty spaces in the rock or material (the volume that can contain fluids). Some types of rocks such as limestone and sandstone are very porous, other rocks such as granite or marble are not very porous. The interaction between water and porosity is one

of the main causes of stone decay. The water affects the material in different ways, it can freeze and thaw creating additional stresses, it can transport and deposit harmful salts (see crystallization below), or it can produce chemical reactions, especially in the case of pollutants.

## Crystallization

Crystallization is the process of forming crystals from a liquid. The crystallization of salts within the fabric of a building is a major cause of deterioration. The salts are present in the water, which, in turn, is either in the building material, or is drawn up out of the ground, or deposited out of the atmosphere. There are various sorts of soluble salts and the damage they produce may

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Egyptian bas-relief from Abydos in 1911, Metropolitan Museum of Art, New York.



The same bas-relief 70 years after: damages caused by crystallization of salts.



Example of deterioration of the stone, Petra, Jordan. Sandstone is a material particularly fragile and subject to wind and water erosion.

be different from one another. As soon as the water evaporates completely, the salts crystallize giving rise to phenomena such as surface efflorescence, cracks, corrosion, encrustation, chromatic alterations, etc. Each kind of salt produces a different form of reaction and deterioration that affect the building surfaces and structures.

### Stone and rocks

Stone and rocks are an aggregate of one or more minerals. They can be classified as follows:

- **Igneous rocks** are formed by cooling and solidification of magma (e.g. granite, basalt, porphyry). Generally, igneous rocks are resistant to the attack of acid substances and are highly durable.
- **Sedimentary rocks** are derived from the disintegration or chemical weathering of pre-existing rocks and deposited by wind, water and glaciers (e.g. sandstone, volcanic tuffs, limestone, travertine). Because of their composition, their physical properties are very different from one another and it is difficult to determine their durability and resistance to acid substances.
- **Metamorphic rocks** are derived from transformations of pre-existing rocks due to pressure and heat. The most well-known rock in this category is marble, which was widely appreciated in antiquity and used for prestigious buildings and monuments. Marble is sensitive to the attack of acid substances (pollutants).

## ACTIVITY 1

### Discussion: how materials deteriorate

Everyday we can see evidence of damage to materials we use and to those that surround us, both at home and outside, due to physical, chemical or biological causes. Carpets wear out, textiles fade, cars rust when the paint begins to flake off, and shoes are damaged by rain, etc.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• explore the main factors that cause damage to old materials, including those that surround us;</li> <li>• encourage students to investigate how the materials react to these factors.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• notebook/paper;</li> <li>• pen/ pencil.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• start by explaining how heat, water, light, animals and everyday use can cause damage to materials;</li> <li>• ask students to describe at least five examples of decay they have observed at home on different materials (textiles, paper, leather, metals, plaster, wood etc.), and to identify the elements responsible for their deterioration;</li> <li>• discuss with students what measures are taken at home to prevent these different forms of damage. Tell students to ask their parents about how they maintain the building fabric, furniture, textiles and objects of value in their homes.</li> </ul>

## ACTIVITY 2

### Practical example in class: crystallization and deterioration through capillary action

The presence of water-soluble salts in porous building materials is one of the major conservation problems. The following experiment illustrates the crystallization process.

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<b>Objectives</b>	<ul style="list-style-type: none"> <li>• help students to understand the phenomenon of capillarity and crystallization in building materials.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• 1 brick;</li> <li>• 1 basin big enough to stand the brick in;</li> <li>• 1500 ml water;</li> <li>• 540 g sodium sulphate or table salt;</li> <li>• a radiator or hot sunshine.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• fill the basin with warm water, ensuring that the water level does not exceed 10 cm;</li> <li>• add the sodium sulphate little by little and stir until the salt dissolves and you obtain a solution - common table salt (sodium chloride) may be used if sodium sulphate is not available;</li> <li>• stand the brick vertically inside the basin of water and leave it there for one or two days.</li> </ul> <p>What do you observe?</p> <ul style="list-style-type: none"> <li>• dry the brick in the sun or put it on the radiator for 24 hours;</li> <li>• immerse the brick totally in the solution for another 24 hours; remove it, shake off excess water and dry it in the sun again for a further 24 hours;</li> <li>• repeat this procedure at least three times or until some evident deterioration is visible.</li> </ul> <p>What has happened?</p> <ul style="list-style-type: none"> <li>• describe the different phases of the experiment, its purpose and results.</li> </ul>



A practical example to explain the crystallization process. In a few days it is possible to see the concentration of salts on the brick and the beginning of the crystallization phenomenon.

## ACTIVITY 3

**Practical experiment in class: grow your own mould<sup>3</sup>**

The amount of water in the atmosphere affects many types of materials. The problems caused by dampness are aggravated by heat. In hot and humid climates/environments, mould and fungi develop easily and attack organic materials such as paper, wood, leather, wool, natural textiles, and others.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• show how mould grows almost anywhere as long as there is heat and moisture.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• 3 bowls;</li> <li>• 3 table glasses;</li> <li>• 3 different types of organic materials (e.g. paper, cotton wool, wood).</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• place a piece of damp paper in one bowl with a small amount of water in it and cover the paper with a glass;</li> <li>• place a piece of damp cotton wool in another bowl with a small amount of water in it and cover cotton wool with a glass;</li> <li>• place a piece of damp wood in the third bowl with a small amount of water in it and cover wood with a glass;</li> <li>• after four to five days, look closely at your samples.</li> </ul> <p>What has happened?</p> <ul style="list-style-type: none"> <li>• ask students to describe how the different materials have reacted.</li> </ul>

<sup>3</sup> The idea of this exercise originated from Newbery, Elisabeth & Fecher, Sarah, In the Nick of Time, Newbery & England and Museum & Galleries Commission, page 22.

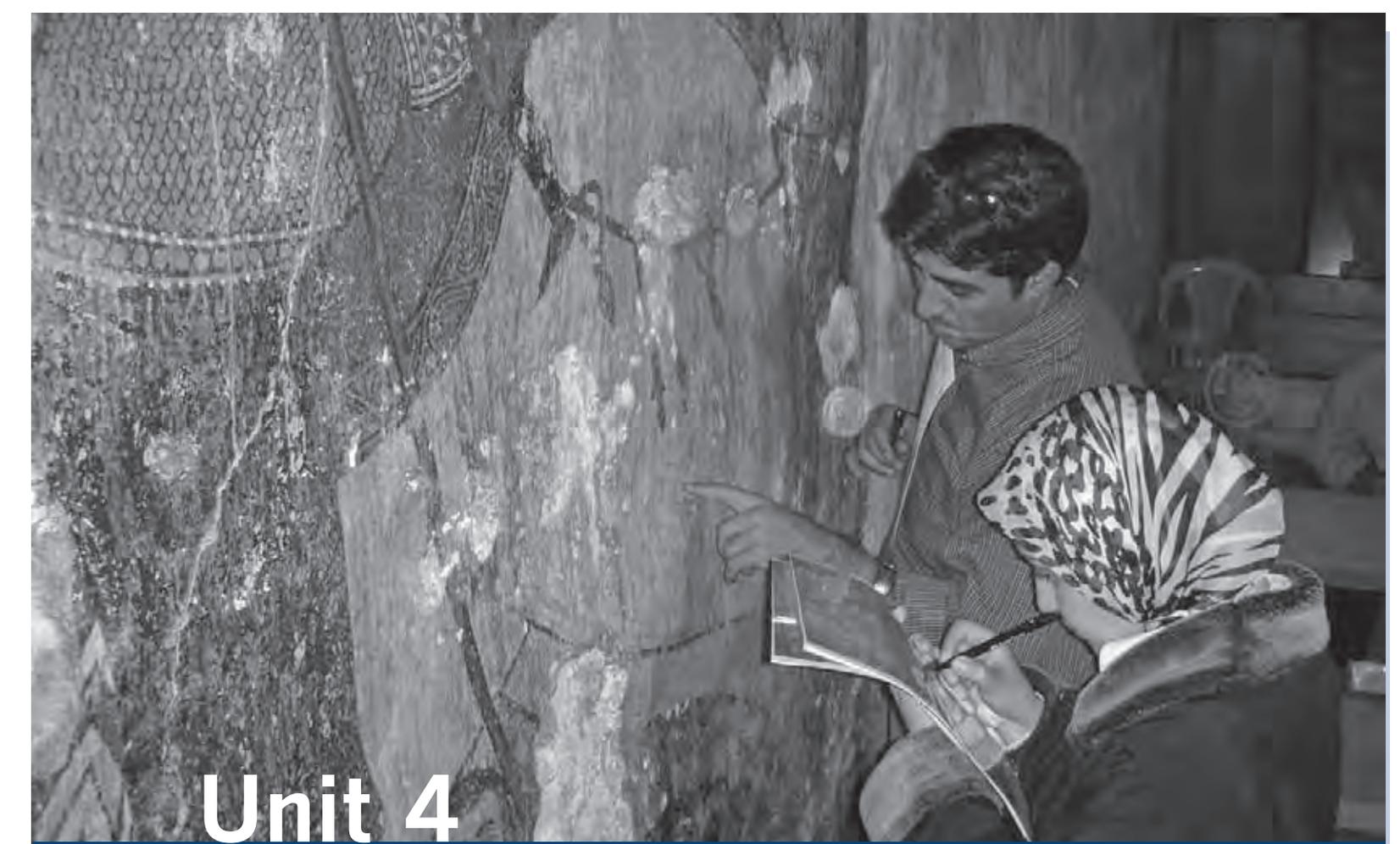
## ACTIVITY 4

# Brainstorming session: conduct of visitors on cultural sites

Archaeological sites are particularly exposed to climatic variations, theft, vandalism, illicit excavations, and the negative impact of tourism. Their survival concerns us all, and depends, in part, on our actions. How should we behave when we visit a cultural site?

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<b>Objectives</b>	<ul style="list-style-type: none"> <li>• focus students' attention on damage caused by man (visitors/local population);</li> <li>• encourage students to decide on what action/s to take in order to preserve the site.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• sheet of paper (big enough for one comment per sheet);</li> <li>• pen/pencil.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• divide students into two groups and ask them to answer the following questions:             <ul style="list-style-type: none"> <li>• who visits the site? (school children, local people, tourists)</li> <li>• how do visitors contribute to deteriorating the site they are visiting?</li> <li>• what should they avoid doing?</li> <li>• how could they contribute to safeguarding the site?</li> <li>• why are clandestine excavations harmful?</li> <li>• what is illicit trade and how is it encouraged?</li> <li>• do you know if there are adequate laws against trafficking antiquities?</li> </ul> </li> <li>• collect the worksheets and pin them on the wall</li> <li>• compare and discuss answers with students and identify what initiatives should be taken to protect the site from tourist-related impact.</li> </ul>



## Unit 4

# Conservation and Site Management

### Learning objectives

At the end of the Unit, students will:

- be able to understand the general process of conservation and various issues related to site management;
- be aware of the need to control urban and/or rural development where archaeological sites are located, and of some of the legal, administrative and planning mechanisms involved;
- have examined visitor-related issues concerning proper use of site, management of visitors and site presentation.

# Guidelines for teachers

As in previous units, teachers must meet the site manager to define the scope of activities in this unit. They will need to select jointly the monuments that are either undergoing restoration treatment or are in need of simple conservation measures such as consolidation, cleaning and maintenance. The site manager will provide teachers with information on the protection measures adopted at the site, visitor frequency patterns, conservation work in progress and/or plans to protect specific monuments. It is hoped that the site manager and/or his/her team will be able to assist teachers when students are engaged in practical exercises.

The choice to involve students in practical activities at the site will depend on:

- the availability of those responsible for the site to assist teachers and students in carrying out these activities, which must be closely supervised by specialists and/or conservators;
- the proximity of the site to the school; and,
- the availability of the necessary materials and tools in the area or on the site for practical conservation work.

In order to assess both the satisfaction and negative impact of tourists, it will be necessary to select times during the day when groups are visiting, so that students can interview them at an appropriate moment during their itinerary.

# Basic knowledge

In the previous unit, the various threats to heritage sites were explained. This unit concentrates on how to counter these threats through the systematic management of sites or individual monuments using conservation methods.

Protection and proper management of archaeological sites are essential for many reasons. Heritage sites and monuments record past human activities. Understanding the origin and development of these activities is of fundamental importance to humanity in identifying cultural and social roots, and in learning lessons from history for the benefit of present and future generations. These sites are irreplaceable and invaluable to humanity as sources of education and enjoyment that enrich the quality of daily life. For this reason, they represent a common heritage and should therefore be accessible to visitors from all parts of the world.

The safeguard of our historical and archaeological heritage is based on conservation and management principles that take many aspects into account and require a wide range of professional skills. Site management is the process of planning and implementing measures to protect the site and its values. In order to achieve these objectives, the planning process must include the following steps:

1. *Analysing and assessing* the characteristics of the site and its values, which may be aesthetic, architectural, historical, natural, religious, scientific and/or social. Understanding these



Assessing effects of mosaics reburial, Byblos, Lebanon



Consolidating wall plaster, Byblos, Lebanon.

- values represents the first step in establishing an adequate conservation plan.
2. *Documenting* the site by taking photographs, drawing detailed plans, making inventories, researching and recording historical information, etc.
3. *Analysing* the state of conservation of the archaeological remains or historical buildings and *identifying* the causes of deterioration in order to define priorities and schedule the necessary treatment.
4. *Identifying* people or institutions with an interest in the site (municipal authorities, urban planners, local residents, etc.) and getting them to co-operate in seeking viable solutions to protect the site.
5. *Examining* the financial and human resources available for daily care and maintenance of the site and the legislation governing it. In fact, legislation, urban planning and listing are vital in protecting our cultural heritage. Urban planners, for instance, may restrict or ban traffic from the area surrounding an archaeological site or an historical centre to protect it from pollution. Listing a building or monument ensures that it cannot be demolished, or altered without first considering the cultural implications.
6. *Devising strategies* to protect the site so as to meet the requirements/demands of the authorities and interested parties in the best possible way. Strategies may include ways of presenting the site to the public, checking the flow of visitors, providing facilities such as toilets, car parks, shops and restaurants without debasing the aesthetic value of the site.

# Key words

## Values and significance

Aesthetic, historical, scientific or social meanings and particular aspects of a heritage site inclusive of its surrounding environment and contents.

## Conservation

A series of actions undertaken to slow the rate of decay of both cultural and natural heritage. It also aims to communicate the messages held in a cultural heritage object.

## Prevention

A series of preventive actions to delay the eventual deterioration of a property before it develops, such as environmental monitoring, climate control, or biocide treatment to prevent insect attack. Remember that “prevention is better than cure”.

## Curative conservation

A direct action to ensure the survival of a cultural property/object when its integrity is threatened (e.g. consolidating a tottering wall, disinfecting a wooden statue, removing intrusive vegetation from ancient walls).

## Restoration

A direct and optional treatment to facilitate the legibility and understanding of a seriously damaged work of art (e.g. treating a lacuna, gluing broken shards of pottery together, replacement of missing parts of an architectural structure). Restoration may frequently be a traumatic operation, the reason why it is better to prevent damage rather than restore it.

## Maintenance

Continual active care to prolong the benefits of a restoration operation as long as possible or to prevent negative effects (e.g. biocide treatment against micro-organisms after restoring a mosaic floor, regular monitoring).

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Restoring the Treasury, Petra  
(Courtesy: Jordanian Department of Antiquities).

## ACTIVITY 1

# Site exercise: state of conservation and conservation treatments

Although many sites have undergone conservation treatments, others have been neglected. It is essential to understand the existing state of conservation of the selected site.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• stimulate students' power of observation in assessing the physical state of the site;</li> <li>• understand and illustrate the state of conservation of the site;</li> <li>• encourage students to suggest strategies to counter problems found;</li> <li>• introduce students to simple management processes and decisions that can benefit the site.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• class;</li> <li>• site (selected monuments).</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• overhead projector;</li> <li>• notepad/paper;</li> <li>• pencils/coloured pencils.</li> </ul>
<b>Procedure</b>	<p>In class before visit</p> <ul style="list-style-type: none"> <li>• give students a list (or show slides/photos, if possible) of examples of decay on the site caused by human factors, such as graffiti, vandalism, urban development, incorrect restoration.</li> </ul> <p>On site</p> <ul style="list-style-type: none"> <li>• arrange with site manager to visit parts of the site where the various types of decay are visible;</li> <li>• ask students to note any examples of decay they observe on a photocopied plan of the site and compare them with the list presented to them in class.</li> </ul> <p>In class after visit</p> <ul style="list-style-type: none"> <li>• ask students to give possible reasons for situations they found (e.g. absence of necessary staff/professionals on the site);</li> <li>• ask students to list possible solutions to the problems they found.</li> </ul>



Assessing conditions of fresco paintings, Bihdaydat, Lebanon.

## ACTIVITY 2

# Practical exercises: participation in or observing of ongoing conservation work

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<b>Objectives</b>	<ul style="list-style-type: none"> <li>• involve students in simple maintenance procedures at the site under the supervision of conservators and/or or site managers;</li> <li>• get students physically involved in the site and help them understand its physical needs and the various ways of conserving its structures.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• selected built features on the site;</li> <li>• class.</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• notebook/drawing pad;</li> <li>• pen/pencil;</li> <li>• cameras;</li> <li>• tools and equipment to be provided by site manager/conservator.</li> </ul>
<b>Procedure</b>	<p>Before visit</p> <ul style="list-style-type: none"> <li>• examine the possibilities of elementary field work on the site with the site manager and/or conservator;</li> <li>• arrange for a supervisor/conservator to show students different types of ongoing maintenance procedures and conservation treatment on the site.</li> </ul> <p>On site</p> <ul style="list-style-type: none"> <li>• divide the class into two or more small groups depending on its size (alternate groups when necessary);</li> <li>• introduce students to the works supervisor and ask them to take notes on his/her comments, to take photos of work in progress, and to list the tools and materials used.</li> </ul> <p>In class</p> <ul style="list-style-type: none"> <li>• ask students to illustrate one or more of the operations carried out on a poster with photos they have taken or drawings they have made;</li> <li>• ask students to comment on what they have learnt from practical exercises on site.</li> </ul>

## ACTIVITY 3

### Site exercise: assessing visitor satisfaction

Site presentation involves various media: drawings, signs, reconstructed models, introductory films, guidebooks, brochures, maps, etc. Presenting this information to visitors is also the responsibility of the site manager and his/her team.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• assess the effectiveness of current site presentation materials and methods by measuring visitor satisfaction and their understanding of the history, values and original architectural layout of the site;</li> <li>• make students aware of the need to present the site effectively to the public;</li> <li>• present a report of this survey to the site manager.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• class;</li> <li>• site (strategic areas).</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• notebook;</li> <li>• pen/pencil.</li> </ul>
<b>Procedure</b>	<p>Before visit</p> <ul style="list-style-type: none"> <li>• arrange times and location(s) on site to interview visitors (preferably towards the end of their itinerary) with site manager.</li> </ul> <p>In class</p> <p>Students devise a set of questions to ask visitors. These may include:</p> <ul style="list-style-type: none"> <li>• why did you visit the site?</li> <li>• how far have you come to visit the site?</li> <li>• what did you know about this site before coming here?</li> <li>• in your opinion, what are the most interesting features of the site?</li> <li>• why do you think that the site is important?</li> <li>• have you been provided with enough information about the site?</li> <li>• how did you get this information?</li> <li>• is the information well presented in your opinion?</li> <li>• do you consider that there is enough to do at the site?</li> <li>• what do you think of the condition of the site?</li> <li>• can you suggest any changes to improve the site?</li> <li>• do you have any particular comments to make?</li> </ul> <p>On site</p> <ul style="list-style-type: none"> <li>• ask students to work in pairs and interview three visitors per pair, writing down the visitor's answers on their worksheet.</li> </ul> <p>After the visit</p> <ul style="list-style-type: none"> <li>• students compare visitors' answers and decide what the positive and negative aspects of the survey are;</li> <li>• students could express results in percentages (e.g. 80% of visitors thought that they did not have enough information on the site);</li> <li>• students produce a report for the site manager based on the results of the survey, and make suggestions for possible improvements, including any useful suggestions made by visitors.</li> </ul>

## ACTIVITY 4

### Discussion: managing tourist facilities

<b>Objectives</b>	<ul style="list-style-type: none"><li>• help students understand that efficient tourist facilities and tourist satisfaction are fundamental to the success of a site, but striving for these goals must not threaten its integrity;</li><li>• develop students reading and note-taking skills and help them identify successful and unsuccessful initiatives in site management and protection.</li></ul>
<b>Location</b>	<ul style="list-style-type: none"><li>• site (main itinerary).</li></ul>
<b>Equipment</b>	<ul style="list-style-type: none"><li>• notebook;</li><li>• site maps or photocopies of a drawing of site and its surroundings;</li><li>• pencils, paper;</li><li>• camera, if available.</li></ul>
<b>Procedure</b>	<ul style="list-style-type: none"><li>• students indicate the normal visitor itinerary at the site on their maps;</li><li>• take photos if possible to illustrate a particular point (a positive or negative aspect);</li><li>• distribute the exercise sheet below to the students and ask them to answer the questions.</li></ul>

# Exercise Sheet

1. Locate the following on your maps and give them a reference number:
  - signs to the site
  - car parking
  - ticket office
  - guide services
  - guidebooks
  - information boards/panels (e.g. 6a, 6b, 6c, 6d, etc.)
  - souvenirs
  - snacks
  - toilets
  - litter bins
  - other facilities
  - unsafe locations, possible areas of risks
2. Decide whether the signs and information for visitors are sufficient to guide them successfully around the site. What would you suggest to improve visitor orientation? Indicate on your map where visitor information is lacking and/or where you would introduce any improvements.
3. In your notebooks, write down the reference numbers of the other facilities and decide whether you think they are adequate. If not, write down your reasons.
4. Note any visitor congestion at these facilities or at any stage of the itinerary. Count the approximate number of visitors at these locations if you consider they put any archaeological remains at risk.
5. Note any areas where irresponsible/improper conduct by visitors may be detrimental to the site.





## Unit 5

# Socio-economic and Tourism Development

### Learning objectives

At the end of the Unit, students will be able to:

- understand the relationship between the site and local socio-economic development;
- identify principal groups interested in a site and understand why they need to collaborate;
- recognize the benefits and dangers of tourism;
- understand that the lack of town planning can lead to undesirable development, which may damage or even destroy a site.

# Guidelines for teachers

This Unit must be based on a survey of the area surrounding the site to understand how the site has improved the economic, urban and/or territorial development and how many interest groups are involved. Before exploring the area, teachers will have to contact the municipal planning authorities in order to obtain as much information as possible on legislation/regulations protecting the site or controlling urban development. If available, old photos/drawings/maps of the site and its surroundings should be photocopied for use in class.

Teachers will also need to ask the site manager to provide them with a list of the main stakeholders in the area. During the survey, students must take note of all the activities that exist on or around the site, and assess how they may affect the site both positively and negatively.

In close co-operation with the site manager and/or his/her staff, teachers will arrange a meeting between students and representatives of key interest groups (e.g. tourist operator, shopkeeper, economic developer, archaeologist, conservator, urban planner). The meeting may take the form of an organized round table discussion (Activity 4: procedure 1) to be held at school so that students can understand the role of various bodies in planning and/or controlling the development of the area. This solution would help to establish links between schools and non-governmental bodies.

Alternatively, students may voluntarily embark on their own research by contacting interest groups and arranging individual meetings or interviews with their representative(s) (Activity 4: procedure 2). In the latter case, students will need help in devising a basic questionnaire to interview the various representatives. They should, however, be actively encouraged to prepare their own questions in a logical order, and draw their own conclusions on completion of the interviews.

This unit will form a basis for students to put forward their recommendations and devise the messages they want to communicate to the public in Unit 5.

# Basic knowledge

For many countries, tourism is one of the most important industries supporting economic development. Heritage plays an essential role in the expansion of tourism; both depend on each other. Visiting cultural sites, even today, represents one of the main attractions for travellers. Archaeological sites are particularly attractive to tourists and are seen today as sources of revenue for investors and the local population alike.

A cultural site (archaeological site as well as historical centre) generally fosters economic growth as it creates job opportunities for the local population, offering new services in and around the archaeological area such as hotels, restaurants, cafes, bookshops, souvenir shops, guided tours and transport facilities (car hire, buses and sometimes even airports).

All these activities contribute to the economic, urban and environmental development of the area or region where the site is located. While well-planned tourism may have positive effects on the region, uncontrolled mass tourism can have a detrimental impact on the site and even destroy its original ambience, which is often the reason why tourists wish to visit it in the first place.

In order to avoid this happening, tourist development must be considered within the context of a balanced urban plan that takes into account both the preservation of the site and its values, and the economic needs of the local population. This requires a collective effort involving representatives from all the different interest groups: site managers, archaeologists, urban planners, municipal authorities, tourist agencies and operators, investors, the local population and even the visitors themselves. Indeed, only

mutual collaboration between governmental and non-governmental institutions together with the local population can help primary decision-makers to protect the site. This is why it is essential to include cultural heritage in the municipal planning of the area.

An integrated approach must:

- impose rules and regulations that control urban development and specify maximum height, colours, and materials of buildings situated in the vicinity of the site; they may also establish a buffer zone around the site to protect it from the encroachment of new construction. Car parks,



TOP  
Camels, an attraction for tourists in historic environments.

BOTTOM  
Tourists facilities, restaurant in the site of Petra, Jordan.



Concert in the Roman theatre, Amman, Jordan. Ancient sites may be enjoyed today with careful management planning measures.

restaurants and other services must be planned as part of a global project in consultation with site managers as well as the local population;

- draw up specific plans to protect the environmental quality of the site and its surroundings, for example, by excluding any local industrial activity that could cause air pollution and limiting the construction of major roads to keep exhaust emissions and harmful vibration to the minimum;
- encourage the use of local goods and services.

Successful tourism at heritage places depends on understanding the different points of view of heritage managers, tourist operators, local communities, etc., and then establishing common ground with the aim of mutual collaboration. Only in this way can the negative impact of tourism be reduced and cultural sites sustained for future generations.

We must always take in mind that conservation precedes tourism.

Once conservation experts have approved the conditions for visitor access and the construction/ location of facilities in and around the site, tourist operators can begin their task of attracting visitors, and thereby generate income for the continued conservation, protection, interpretation, and future development of the site.

# Key words

## **Tourist**

A person who is travelling or visiting a place for pleasure or interest, especially abroad.

## **Tourism**

The theory and practice of touring and travelling for pleasure, as well as the business of attracting tourists and providing accommodation and services for them.

## **Cultural tourism**

Tourism that focuses on the cultural aspects of a destination (e.g. culture and lifestyle of local population, visits to museums and heritage sites, attendance at cultural events).

## **Nature-based tourism**

A range of tourist activities and experiences that occur in natural areas, or are based around experiencing and learning about aspects of natural heritage.

## **Sustainable**

Able to be carried out without damaging the long term health and integrity of natural and cultural environments, while providing for present and future economic and social well being. Sustainable tourism, in fact, can be sustained over the long term because it results in a net benefit for the social, economic, natural and cultural environments in which it takes place.<sup>4</sup>

## **Stakeholder**

A person or group of people (company, institution, local community) that has a personal or financial involvement in a business or an industry.

<sup>4</sup> Australian Heritage Commission and the Department of Industry, Science and Resources (eds.) (nd.) *Successful Tourism at Heritage Place, a guide for tourism operators, heritage managers and communities*.

## ACTIVITY 1

### Class discussion: benefits and dangers of tourism

<b>Objectives</b>	<ul style="list-style-type: none"><li>• understand the advantages and potential threats of tourism to historical sites.</li></ul>
<b>Location</b>	<ul style="list-style-type: none"><li>• classroom</li></ul>
<b>Equipment</b>	<ul style="list-style-type: none"><li>• whiteboard/large sheet of paper;</li><li>• felt-tip pens.</li></ul>
<b>Procedure</b>	<ul style="list-style-type: none"><li>• divide the class into two groups;</li><li>• ask the first group to make a list of the benefits tourism produces for a local archaeological site;</li><li>• ask the second group to make a list of threats caused by tourism to an old urban centre;</li><li>• invite one representative of each group to display the two lists written on a large paper sheet/whiteboard;</li><li>• ask students from one group if they can add any benefits/threats to the other group's list and vice versa;</li><li>• discuss and list ways to minimize these threats and gain further benefits.</li></ul>

## ACTIVITY 2

# How cultural sites contribute to economic development

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• help students understand that tourist and commercial facilities may be set up at and around archaeological sites to benefit the local economy, but at the same time must be carefully planned so as not to put the site at risk in any way or threaten its integrity.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• in and around the site by bus or on foot depending on its size.</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• map(s) of site and surrounding area, detailed site plans if available;</li> <li>• cameras if available;</li> <li>• paper, pencils.</li> </ul>
<b>Procedure</b>	<p><u>On site and its surroundings</u>            Students will visit the site and its surrounding area and list:</p> <ol style="list-style-type: none"> <li>1. all the commercial establishments present that benefit financially from the existence of the site (e.g. hotels, restaurants, bars, shops, souvenir stalls);</li> <li>2. all the infrastructure that has been built specifically to cater for tourists (e.g. new roads, car parks, ticket office and reception area, toilets, information panels, litter bins).</li> </ol> <p><u>In class</u>            After the visit students will</p> <ul style="list-style-type: none"> <li>• discuss the values of the site focusing on the visual and aesthetic aspects;</li> <li>• discuss the impact of development and construction in the area on these values;</li> <li>• list positive aspects (if any) of development on the site in order of priority;</li> <li>• list negative aspects of development on the site in order of seriousness;</li> <li>• suggest actions/provisions to mitigate negative impact and improve current situation.</li> </ul> <p>Students may illustrate their findings with photos or drawings.</p>

### ACTIVITY 3

## Role-play: who has an interest in the site?

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• make students aware of how many different groups of interest are involved in a site (it can be either an archaeological or an urban centre);</li> <li>• encourage students to decide on what action to take in order to ensure the integrity of the site.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• notebook / sheets of paper</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• start by asking students to write down their concerns about the values of the site and compare their answers;</li> <li>• imagine a discussion between different people concerned with the site and carry out a role-play stressing the objectives of each character. Students could play the following roles:             <ul style="list-style-type: none"> <li>• conservator</li> <li>• archaeologist</li> <li>• tourist operator</li> <li>• urban planner</li> <li>• shopkeeper</li> <li>• economic developer</li> <li>• illicit digger</li> <li>• tourist</li> <li>• local inhabitant</li> <li>• potential investor</li> </ul> </li> <li>• compare the different objectives. Are they compatible with the safeguarding of the site? What is the role of the site manager?</li> </ul>

## ACTIVITY 4

# Round-table or interview: analysis of interest groups related to the site

Teachers and students might investigate how many different groups have a vested interest in a heritage site. Its conservation may upset many people's plans. The challenge is to find a balance between protecting the site and satisfying the economic needs of the local population.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• get students acquainted with the various bodies or groups who have a stake in the site and its protection;</li> <li>• understand the role and needs of each group;</li> <li>• assess the impact of each group(s) needs particularly on the physical integrity of the site.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• at school in a meeting room (procedure 1), or</li> <li>• at a location chosen by the group(s) in question (procedure 2).</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• map of site and surrounding area;</li> <li>• pens, pencils, felt-tip coloured pens;</li> <li>• whiteboard.</li> </ul>
<b>Procedure<sup>5</sup></b>	<p><u>Procedure 1</u> (round-table discussion)</p> <ul style="list-style-type: none"> <li>• each invited representative explains his role and his/her group's needs with regard to the archaeological site;</li> <li>• students are invited to ask questions on anything in the presentation that is not clear and/or that they would like further information about;</li> <li>• students may use the sheet below as a basis for establishing dialogue and/or promoting discussion (a new sheet will be necessary for each interest group participating).</li> </ul> <p><u>Procedure 2</u> (interviewing representatives)</p> <ul style="list-style-type: none"> <li>• divide the class into three groups, ask each group to interview two or more stakeholders (selected by the teacher);</li> <li>• students may use the sheet below as a basis for establishing dialogue and/or promoting discussion (a new sheet will be necessary for each representative interviewed);</li> <li>• ask students to examine data from each representative and draw up a complete list on one whiteboard of all the interests threatening the site;</li> <li>• discuss in class how to reconcile the different interests with the protection of the site.</li> </ul>

<sup>5</sup> See below, "Petra, a case study", pages 98-99

# Questions Sheet

(STUDENTS MAY ADD OTHER QUESTIONS IF THEY WISH)

Name of Interest Group

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Name of speaker (procedure 1) or person/s interviewed (procedure 2)

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1. What are the values of the site which make it important?

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2. How do you think the site contributes to the economic development of the area?

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3. What are the benefits to your organization if the site is protected with long-term vision?

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4. How can your organization or group help?

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5.

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6.

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# Unit 6

## Awareness and Outreach

### Learning objectives

At the end of the Unit, students will:

- be aware of their own role in safeguarding heritage;
- be capable of conveying a clear message about the value and fragility of the site to the public;
- have undertaken actions aimed at enhancing and protecting the site.

# Guidelines for teachers

## THE NEED FOR RAISING PUBLIC AWARENESS

The aim of conservators is not only to preserve heritage for the future but also to create the best conditions in which to use and enjoy it, at the same time reducing risks of damage to the minimum. The challenge is to establish a balance between the need to enjoy and the need to preserve a site. To achieve this aim, conservators must ask the public to collaborate. Only by raising public awareness will they change people's attitude and obtain their collaboration in protecting the site. Involving the public in safeguarding cultural heritage is essentially a job of providing and communicating information.

Raising public awareness means:

- **recognizing the values of the site**

(What are the characteristics of the site? What is more important? Its history, the beauty of the landscape, its religious significance, the artistic value of the monuments or economic development as a result of tourism?);

- **explaining the reasons for and meaning of certain rules and regulations**

(e.g. do not touch, do not take photos, do not climb on monuments. Considerable damage is caused by innocent touching. One touch may seem insignificant, but a million touches can even seriously damage a bronze statue. The tiny traces of moisture from fingers can, in time, strip the patina from bronze and corrode the finest steel);

- **constantly underlining aspects of conservation whenever possible**

(It is important to teach people to observe and recognize the state of conservation of a monument so that they will take more care of it);

- **letting the public know about the costs of restoration treatment and maintenance**

(People must be informed that the preservation of their heritage requires substantial economic and human resources);

- **asking the public to collaborate in preserving heritage**

(The protection of heritage cannot only be left to professionals; it must also be accomplished with the help of the public);

- **promoting activities at all levels aimed at increasing awareness of heritage vulnerability**

(Only by making people aware that heritage is fragile, can we influence their behaviour and attitude).

# Basic Knowledge

## The preservation of heritage concerns us all

Despite appearances, all the elements that constitute our heritage are not imperishable. Historical sites survived earthquakes, wars, fires and the depredations of time. Moreover, they are still constantly exposed to climatic fluctuations, acid rain, atmospheric pollution, vandalism, theft, heavy traffic, urban expansion and economic changes.

The increasing tourist activities in recent years contribute to breaking a fragile equilibrium and pose serious problems of conservation and surveillance. Can you imagine the consequences of thousands of people treading on stones that are over thousands of years old? What would remain of the ruins if each visitor removed a fragment of marble or mosaic to take home as a *souvenir*, or scratched his/her name onto a column or wall?

Are you aware of the harm caused by the innocent gesture of touching a statue or climbing onto a monument to take a photo, when it is repeated

thousands of times? Do not think of it as a simple touch, but consider the damage caused by thousands and thousands of touches.

Do you realize how much effort is needed to maintain the site you are visiting in good condition and how much it costs? The heritage of the past is not an inexhaustible source and its preservation is not automatic. It requires specialized equipment and support as well as constant attention and preventive action against the risks of deterioration and destruction.

A collective effort is required. It concerns us all. It begins with you, your family and your friends. Of course, specialists will always be necessary, but without you, their efforts will be in vain. Ask yourself:

## WHAT CAN I DO TO PRESERVE MY HERITAGE?



ABOVE  
It might be more effective to explain the reasons for, and the meaning of, certain rules and regulations

LEFT  
How long monuments will survive, if tourists repeat actions causing "wear and tear"?

## ACTIVITY 1

### Discussion: reasons for and meaning of certain rules and regulations

The survival of the site depends partly on the conduct of visitors. Instead of prohibiting (do not touch, do not run, do not take photos, etc.), it might be more effective to explain the reasons for and meaning of these rules and regulations. In this way, people will take greater care of heritage.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• understand the reasons for and meaning of certain rules and regulations;</li> <li>• analyse the information provided on the site and check whether it is related to preservation issues.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom;</li> <li>• site.</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• notebook/ sheet of paper;</li> <li>• pen/pencil.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• start by discussing in class the importance of informing the public of the consequence of certain actions. What kind of information did students notice on the site? Did they consider it sufficient?</li> <li>• ask students to explain the reasons for the following regulations:             <ul style="list-style-type: none"> <li>• Do not touch</li> <li>• Do not climb on monuments</li> <li>• Do not remove fragments of marble or mosaic</li> <li>• Do not walk on the mosaics</li> <li>• Do not buy objects of doubtful provenance</li> <li>• Do not write or make graffiti on monuments and walls</li> </ul> </li> <li>• bearing in mind human causes of deterioration, ask students to draft a chart to distribute to visitors at the site entrance - the chart can be illustrated with drawings;</li> <li>• ask students not to use the expression "Do not".</li> </ul>

## ACTIVITY 2

### Designing a poster

Producing a poster is a good way of involving young people directly in safeguarding heritage. It stimulates their creativity and gets them to think about concrete problems. The theme of the campaign could focus on such topics as “Our past in peril”, or “The art of trafficking: how to rob a country of its history” and “Graffiti - art or vandalism?” or “Does heritage concern us all?”, etc.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• make young people aware of the threats facing heritage;</li> <li>• involve students in an awareness-raising campaign by producing a poster transmitting a strong message.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom;</li> <li>• site.</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• A1 or A3 sheets of paper;</li> <li>• pen/pencil;</li> <li>• felt tip markers in different colours, watercolours</li> <li>• scissors, glue stick, newspaper.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• start by discussing in class what message students want to convey and what the best way to present it is;</li> <li>• ask students to bring examples of advertisements that have captured their attention;</li> <li>• discuss what makes a good poster - the design, slogan, originality of idea or a persuasive image;</li> <li>• divide students into small groups;</li> <li>• ask each group to produce a poster expressing their concern for the future of the site;</li> <li>• encourage students to use bright colours and clear fonts (letters must be legible at a distance), and to think of an appropriate yet powerful slogan/ message;</li> <li>• organize a poster exhibition at school or on the site itself – in the latter case, the site manager and teachers should together decide on the campaign theme and organize a special event for local schools (e.g. Heritage Day or Awareness Day) with free entrance to the site.</li> </ul>



Some posters realized by school children for a raising awareness campaign aimed at heritage protection



## ACTIVITY 3

### Adopting a monument

This activity represents the conclusion of a preceding preparatory phase, which included the visit to the site and museum, and the development of topics proposed in the other units (heritage values, threats facing heritage, conservation principles, relationship with local inhabitants). When students have become familiar with all aspects of the site, they should be able to take care of it and involve their peers in its protection.

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• create a more intimate relationship between students and the site or their town by inviting them to take care of a particular monument (more than one class could be involved in the project).</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom;</li> <li>• site.</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• rubber gloves;</li> <li>• refuse bags;</li> <li>• peaked caps/badges bearing the school name.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• start by establishing a <i>Voluntary Day</i> with the site manager, during which students will take care of a particular monument - he/she will suggest activities for the students according to the site requirements - students will be assisted by the site team in their tasks;</li> <li>• divide students into groups and ask them to select the monument they would like to take care of;</li> <li>• ask students to collect information on the site and its monuments, and produce a written report. This could be in the form of a hand-made guide with drawings, anecdotes and recommendations (e.g. the chart for cultural site visitors);</li> <li>• during the <i>Voluntary Day</i>, each group will be responsible for keeping its own monument clean and/or carrying out some form of maintenance previously established by the site manager;</li> <li>• for the whole day, students will act as guides on the site - they will welcome visitors (tourists or students from other classes or schools), provide them with historical information, underlining the conservation aspects, whenever possible.</li> </ul> <p>It is important that student guides are recognizable, by their caps, for example, or badges bearing the name of their school. This will make them more conscious of their important role in protecting the site.</p>

## ACTIVITY 4

# How people may help towards saving endangered sites

In Unit 4, students have seen how many different groups have an interest in a heritage site. Its conservation may upset many people's plans. Legislation is often inadequate to protect endangered sites. How can we prevent private interest from prevailing over the preservation of the site?

<b>Objectives</b>	<ul style="list-style-type: none"> <li>• encourage students to decide on what action to take in order to ensure the integrity of the site;</li> <li>• understand the role of the media and the public in saving an endangered site.</li> </ul>
<b>Location</b>	<ul style="list-style-type: none"> <li>• classroom</li> </ul>
<b>Equipment</b>	<ul style="list-style-type: none"> <li>• notebook/sheets of paper;</li> <li>• articles from newspapers or magazines.</li> </ul>
<b>Procedure</b>	<ul style="list-style-type: none"> <li>• imagine that the tourist development policy has approved the construction of a huge hotel on or close to the site;</li> <li>• ask students to write down how this may affect the values of the site and compare and discuss their answers;</li> <li>• discuss what action should be taken to block this project (press campaigns, pressing for adequate legislation, etc);</li> <li>• ask students to give an example of a successful campaign undertaken in their country in favour of heritage and, if possible, to bring articles addressing the topic to examine in class.</li> </ul>





# Unit 7

## World Heritage

### Learning objectives

At the end of the Unit, students will be able to:

- understand the meaning of “outstanding universal value” related to cultural and natural heritage;
- recognize the role of the UNESCO World Heritage Convention in promoting and preserving cultural and natural sites of universal value.

# Guidelines for teachers

This unit mainly addresses the presentation of the UNESCO World Heritage Convention with particular reference to the meaning of the word “heritage”, considered in its double aspect of both cultural and natural.

Before beginning the activity, teachers are advised to contact the UNESCO Regional Office of their country to request any available material that may support their lessons such as World Heritage Sites maps, posters, leaflets, and possibly slides.

If material is unavailable, teachers can visit the World Heritage Centre web site (<http://whc.unesco.org>) where they will find all the necessary information. Using the Internet, moreover, offers students the opportunity of establishing direct contact with other schools around the world and sharing their concerns about heritage issues.

# Basic knowledge

## The UNESCO World Heritage Convention

During the first half of the last century, many historical towns were destroyed by the two world wars, and important monuments were seriously damaged or disappeared. In response to this destruction, the League of Nations, which later became the United Nations, appealed for worldwide co-operation in protecting cultural heritage. The United Nations Educational, Scientific and Cultural Organization (UNESCO) was thus established in 1945 to accomplish this task. Since then, UNESCO has drafted several international conventions<sup>5</sup> and recommendations to protect heritage all over the world.

The concept of “World Heritage” appeared during the construction of the Aswan High Dam in Egypt. This dam would have completely submerged some of the most famous monuments of ancient Egypt in the Nile River Valley: the Abu Simbel Temples. UNESCO launched an international campaign to save Abu Simbel, which prompted the international community to finance their preservation. Fifty countries responded to the appeal donating the sum of 80 million US dollars to save the temples. They were dismantled stone by stone from their original site and reassembled on the nearby island of Agilkia, safe from the risk of the Nile floodwaters.

The immediate international response to Abu Simbel showed that certain sites in the world are considered to be of outstanding universal value. Their safeguard concerns not only the country in which they are located, but also the international community as a whole. This concept gave rise to the Convention Concerning the Protection of World Cultural and Natural Heritage (more commonly called the *World Heritage Convention*).



Archaeological site of Palmyra, Syria.

The *World Heritage Convention*<sup>6</sup> is an international agreement, adopted by the General Conference of UNESCO in 1972, to protect both natural and cultural heritage (tangible heritage) threatened by population explosion, urbanization, pollution, deforestation and tourism.

The Convention is a legal instrument that deals with the conservation of nature and culture.

This link is expressed in the World Heritage Emblem: a circle surrounding a central square. The emblem symbolizes the interdependence of the world’s natural and cultural diversity.



<sup>5</sup> e.g. *Convention for the Protection of Cultural Property in the Event of Armed Conflict (1954)*; *Recommendation on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Heritage (1964)*; the *UNESCO Convention on the Protection of the Underwater Cultural Heritage (2001)*

<sup>6</sup> While efforts to safeguard humanity’s tangible heritage are guided by several international conventions, intangible heritage (oral traditions, customs, music, dances, etc.) is still at risk of disappearance. These forms of cultural heritage represent a vital source of identity especially for minorities or indigenous populations. Intangible heritage is particularly fragile and exposed to the effects of globalization, environmental degradation, and also inevitable evolution in people’s lifestyles. The *Convention for the Protection of Intangible Heritage* was signed on 3 November 2003 and the text was adopted by the General Conference at its 32nd session. The intangible heritage encompasses complex and diverse forms of living heritage in constant evolution such as carnivals, traditional performances, social practices, rituals, festive events, cultural spaces, etc.



LEFT  
A street in the Medina of Tunis, Tunisia.

ABOVE  
Al-Deir Tomb, Petra, Jordan.

While the central square represents the results of human skill and inspiration, the circle celebrates the gifts of nature. The emblem is round, like the world, a symbol of global protection for the heritage of all human kind.

Nature and culture are intimately linked; this is the reason why World Heritage includes both cultural and natural heritage, as inseparable elements of the human life.

Countries (known as States Parties to the Convention), through this legal instrument, voluntarily commit themselves to safeguarding heritage sites that they nominate for inclusion in the World Heritage List.

The main goals of the *World Heritage Convention* are to:

- define the world's heritage by compiling a list of sites whose outstanding universal value should be preserved for all humanity (the World Heritage List);
- ensure their protection through close co-operation among nations;
- ensure at national level the commitment by State Parties in protecting their sites.

Please, bear in mind that:

**Even if a site or a monument is not inscribed in the World Heritage List, it does not mean that it is of no interest. All countries have sites, buildings and museum collections of local and**

**national significance that must be protected by adequate care and legislation. There is not one standard of conservation care for World Heritage sites and another for the rest.**

## The World Heritage List

The World Heritage List gets longer every year as new nominations are accepted and more countries sign the Convention. At present (2005), the List includes 812 properties in 137 States Parties, as follows:

- 628 cultural sites;
- 160 natural sites;
- 24 mixed sites.

The following Arab countries have signed the Convention:

Algeria, Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria, Tunisia, United Arab Emirates, and Yemen.

Currently, sixty sites in these countries are inscribed in the World Heritage List:

- twenty eight historical centres;
- twenty seven archaeological sites and/or monuments;
- four natural sites;
- one mixed.

The inscription of a site in the World Heritage List is a long process requiring many steps. The first step is to sign the Convention and become a State Party.

The latter then prepares a tentative list of cultural and natural sites within its territory that it considers of outstanding value and selects the site/s to submit to the World Heritage Centre for the nomination on the List. In the meantime, the State Party has to demonstrate that the proposed site is properly managed and its authenticity adequately preserved. Once a year, the World Heritage Committee meets to assess the nominations and select future sites to be inscribed.

When a listed site is seriously endangered, it is then inscribed in the *List of World Heritage in Danger*, which entitles it to special attention and emergency action.

In order to be included in the World Heritage List, a cultural property must satisfy at least one of the following selection criteria adopted by the Committee. It should:

- i) represent a masterpiece of human creative genius (e.g. the Egyptian Pyramids; the Acropolis in Athens, Greece); or
- ii) have exercised considerable influence at a certain period or within a cultural area of the world (e.g. the historical centre of Cordoba, Spain; the medieval city of Rhodes, Greece); or

- iii) provide exceptional evidence of a culture which is living or have disappeared (e.g. Al Qal'a Beni Hammad, Algeria); or
- iv) illustrate a significant historical period (e.g. the historical city of Meknes, Morocco; the Sassi of Matera, Italy); or
- v) be an outstanding example of a traditional way of life that risks to disappear under the impact of irreversible changes (e.g. the old city of Sana'a in Yemen); or
- vi) be directly associated with events, living traditions, ideas or beliefs of outstanding universal significance (e.g. the Hiroshima Peace Memorial - Genbaku Dome - Japan; Auschwitz concentration camp, Poland; the Island of Gorée, Senegal, Ancient City of Damascus, Syria).

The World Heritage List is made up of a variety of properties that include natural sites, cultural landscapes, architectural masterpieces, historical or archaeological sites as well as industrial complexes, botanical gardens, a concentration camp and even a ruin that survived the atomic bomb.

All these sites have a special significance for humanity and transmit different messages that we must not forget. The word "monument" derives from the Latin verb *monēre*, which means to remind.

RIGHT  
Temple of Bacchus, Baalbek, Lebanon.

BELOW  
Petra, Jordan: natural and cultural landscape.



## ACTIVITY 1

# Worksheet -World Heritage Sites in the Arab Region

- Objectives:** Help students identify World Heritage Sites in the Arab region and understand the reasons for selecting them (selection criteria).
- Location:** Classroom
- Equipment:** Several copies of the World Heritage map
- Procedure:** Start by explaining the meaning of *outstanding universal value* and the concept that conservation of World Heritage depends on *international co-operation*.

Divide students into small groups and give each group a copy of the World Heritage Sites map. Ask them to consult the map and identify ten World Heritage sites located in their country and/or in the Arab region. Ask them to mention whether they are cultural, natural or mixed natural/cultural sites.

Name of the WH site	State Party	Type of site

### Discussion

Ask students to find out how many sites on the World Heritage List are in Arab States. Why have these sites been inscribed in the List? Who decides what is important to be designated as a World Heritage Site? Is it an advantage to be inscribed in the List? In their opinion, is the region well represented? Are there other, either natural or cultural, sites that they would inscribe in the List? Does the local population play a role in this decision? Do they think that young people should have a role in such a process?

## ACTIVITY 2

# Worksheet - The World Heritage List

- Objectives:** Make students aware of the variety of sites inscribed on the List
- Location:** Classroom
- Equipment:** Several copies of the World Heritage Sites map
- Procedure:** Divide the class into small groups and ask them to examine the World Heritage map. Ask students to find three sites per region for each selection criteria. Compare the lists and discuss the selection criteria together.

Geographical region	Criterion i	Criterion ii	Criterion iii	Criterion iv	Criterion v	Criterion vi
Africa						
Arab States				Historical City of Meknes		
Latin America						
Europe				Hanseatic city of Lubeck		
Asia & the Pacific			Agra Fort (India)			
North America						



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- De La Torre, M. (1997), *The Conservation of Archaeological Sites in the Mediterranean Region* (An international conference organized by the Getty Conservation Institute and the J.Paul Getty Museum), Los Angeles, J. Paul Getty Trust.
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- ICOMOS *Charter for the Protection and Management of the Archaeological Heritage*, 1990.
- Management of World Heritage Sites*, ICOMOS Seminar Papers, 1991.

# Organizations involved in raising young people's awareness of the safeguard of cultural heritage

## **Council of Europe**

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Founded in 1949, the Council of Europe seeks to promote European unity by protecting and strengthening pluralist democracy and human rights and by working out common solutions to social problems. Another of its aims is to encourage awareness of a common European identity. The European Cultural Convention establishes the framework for the Council of Europe's work on education, culture, heritage, sport and youth. One of the missions of the organization is to develop mutual understanding among the people of Europe.

Since 1989, the Council of Europe has been promoting education in heritage and activities for young people. Among the activities, the "European Heritage Days" - in which all the 48 countries of the Council of Europe's European Cultural Convention are taking part - make more direct communication with European citizens possible, with particular attention to the younger generations and raising awareness of the multicultural aspects of their heritage and their common cultural identity.

The "European Heritage Classes" aim at familiarizing young people with their heritage as well as arousing their curiosity. "Europe, from One Street to the Other" is the most recent heritage education pilot project geared to children aged 9 to 11 to encourage pupils, through the street and its multi-coloured universe, to discover other people. In seeking to bring together the people of Europe, the project reflects one of the Council of Europe's fundamental tasks and can provide an ideal means of promoting tolerance, citizenship and peace, and preventing conflicts.

## **Council of Europe**

Cultural Heritage Division, General Directorate IV - Education, Culture and Heritage, Youth and Sport  
Palais de l'Europe - 67075 Strasbourg, France  
Tel. +33 388 41 2000/2172  
Website : [www.coe.fr](http://www.coe.fr)

## **EPA (Ecole du Patrimoine Africain)**

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The Ecole du Patrimoine Africain (EPA), located at Porto-Novo in Benin, came out of the PREMA Programme,

a programme of renewal of African museums through education, launched in 1990 by ICCROM. Its area of activities extends to 26 French and Portuguese-speaking African countries.

In 1990, it carried out an exhaustive investigation into relations between schools and museums in Africa in 28 cities: out of 2.3 million children attending primary schools in these cities, fewer than 5% visit museums. The enquiry not only revealed the structural weakness of African museums, but also the extraordinary educational potential of these institutions, if even a minimum amount of attention were devoted to it.

African cultural heritage, unlike that of other continents, is still an integral part of the daily life of Africans. They must be made aware of the value of this heritage and must be encouraged to protect it (this is true especially for young people). For the decade 2000 - 2010, EPA has set up a major programme called PREMA 2. It aims at devising actions to integrate better museums with schools, to use them for didactic support in an approach towards sustainable development, especially on behalf of a culture of peace and public-spiritedness within the African continent.

## **Ecole du Patrimoine Africain**

Director: Alain Godonou  
B.P. 2205 Porto-Novo, Benin  
Tel. +229 214838; Fax +212109  
E-mail: [epa@epa-prema.net](mailto:epa@epa-prema.net)  
[www.epa-prema.net](http://www.epa-prema.net)  
Website of Abomey museum: [www.epa-prema.net/abomey](http://www.epa-prema.net/abomey)

## **English Heritage**

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English Heritage was created to protect and encourage people to understand and enjoy England's architectural and historical heritage. English Heritage gives advice and grants for conservation and is the government's principal expert adviser on the historical environment. It is also responsible for over 400 of England's greatest historical properties that are open to the public. The Education Service of English Heritage aims to help teachers at all levels make better use of the historical environment as

a resource. It has produced a large number of resources for them including books, videos, posters and slide packs. It encourages the organization of awareness raising activities of the environment.

### **English Heritage**

Head of Education: Tine Corri  
23, Savile Row - London W1S 2ET, U.K.  
Tel. + 44 20 79733384; Fax + 44 20 79733443  
E-mail: tine.corri@english-heritage.org.uk  
Website: www.english-heritage.org.uk

### **Fondo per l'Ambiente Italiano (FAI)**

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The private foundation FAI (Fondo per l'Ambiente Italiano) promotes the conservation of heritage within the domains of art, history, landscape and nature (monasteries, castles, large country estates, frescoes and collections, gardens, coastal habitats, etc.). The foundation acquires its properties through funding or donations, restores them and opens them to the general public. All these activities of conservation of cultural heritage are especially aimed at young people and have therefore become an integral part of the FAI programmes. FAI's initiatives involve schools: it arranges "Sundays for children" for the very young, special occasions, workshops, and promotes events for the apprenticeship and amusement of the younger set. For special opening days of certain monuments, the foundation offers schoolchildren the possibility of participating as guides, for which they have to prepare their explanations at school in advance.

### **Fondo per l'Ambiente Italiano**

Settore Scuola-Educazione  
Viale Coni Zugna, 5  
20144 Milan, Italy  
Tel +39 02 4676184/85; Fax +39 02 48193631  
E-mail: scuola@fondoambiente.it  
Website : www.fondo-ambiente.it/fai.htm

### **Getty Conservation Institute**

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The J. Paul Getty Trust is an international cultural and philanthropic institution devoted to the visual arts and humanities that includes an art museum as well as programmes for education, scholarship and conservation. Through its museum and work in conservation, education, research, information technology and funding by providing grants, the Getty provides opportunities for people to more fully understand, experience, value and preserve the world's artistic and cultural heritage. Part of the Getty Trust is the Getty Conservation Institute,

which is committed to the preservation of the world's cultural heritage. The Institute conducts conservation research and shares its findings through training courses, conferences, publications and a worldwide database. It undertakes field projects at important sites worldwide, and works to raise public awareness of the importance of conservation.

### **The Getty Conservation Institute**

1200 Getty Center Drive  
Los Angeles, CA 90049, USA  
Tel. +1 3104406717; Fax + 1 3104407714  
Website: www.getty.edu/gci

### **ICCROM**

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The International Centre for the Study of the Preservation and the Restoration of Cultural Property (ICCROM) is an intergovernmental organization founded by UNESCO in 1956 and established in Rome. It is the only institution with a worldwide mandate to promote the conservation of both movable and immovable heritage in all forms. ICCROM achieves this task through five main spheres of activity: training, information, research, co-operation and advocacy. For the latter, ICCROM has devised a large number of programmes since 1990 devoted to making young people aware of the fragility of heritage and the need to protect it for the future. By involving the largest possible number of institutions and countries, ICCROM hopes to encourage initiatives in order to involve young people in safeguarding cultural heritage.

### **ICCROM**

ATHĀR Programme, Project Co-ordinator: Zaki Aslan  
Via di San Michele, 13 - 00153 Rome, Italy  
Tel +39 06 585531; Fax +39 06 5855349  
e-mail: za@iccrom.org  
Website: www.iccrom.org

### **ICOM-CECA**

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CECA is the Committee for Education and Cultural Action, one of the largest committees of the International Council of Museums (ICOM). It is made up of museum educators and other museum professionals with an interest in education, and is particularly concerned with all aspects of museum education, research management, interpretation, exhibitions, evaluation, and media. The activities of ICOM-CECA consist of exchanging information about

museum education at an international level, ensuring representation education in the policy and programme of ICOM, advocating the educational museum worldwide, and promoting high professional standards in museum education. It offers support to institutions for projects aimed at raising young people's awareness of cultural heritage for example, "Melina Project" in Greece and the European programme "All Roads Lead to Rome".

### **ICOM - CECA**

Director : Mr Ganga S. Rautela

Nehru Science Centre

Dr E. Moses Road, Worli, 400018 Mumbai - India

Tel./Fax +91 22 4932668

E-mail: nscm@giasbm01.vsnl.net.in

### **ICOMOS international**

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ICOMOS, International Council on Monuments and Sites, is an international non-governmental organization of professionals, dedicated to the conservation of the world's historical monuments and sites. The organization was founded in 1965, as a direct result of the international adoption of the Charter for the Conservation and Restoration of Monuments and Sites in Venice in 1964. Today the organization has National Committees in over 90 countries. ICOMOS is UNESCO's principal adviser in matters concerning the conservation and protection of monuments and sites. It plays an important role in selecting the sites to be inscribed in the World Heritage List.

ICOMOS contributes to increasing public interest in conservation by encouraging media coverage and the celebration of the "International Day for Monuments and Sites" (April 18). Some committees have collaborated with other youth awareness raising programmes (in Costa-Rica, for instance).

### **ICOMOS**

45-51, rue de la Fédération -75015 Paris, France

Tel. +33 1 45676770; Fax +33 1 45660622

E-mail: secretariat@icomos.org

Website: www.icomos.org

### **UNESCO**

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The key concept behind UNESCO's new strategy is to work with and for youth. The decision to make young people a priority target group for UNESCO action means recognising both their needs and potential for contributing to peaceful and democratic development of their societies and of the world. The participation of youth both in evolving and implementing projects is

thus indispensable. This means the physical presence of young men and women in UNESCO bodies as well as in workshops, conferences and all events organized by UNESCO. One of the points underlined in the Strategy for UNESCO's Action with and for Youth is the participation of young people in the preservation and management of cultural heritage. The comprehension of their own cultural heritage as well as that of others is an important step in helping young people define their identity. The UNESCO Special Project "Young People's Participation in World Heritage Preservation and Promotion" was launched in 1994 by UNESCO in coordination with the UNESCO Associated Schools Project Network (ASPnet) and the UNESCO World Heritage Centre to involve young people around the world in the protection of natural and cultural heritage from local to global levels. Since then, students, teachers and heritage specialists in more than 171 countries have become actively engaged in developing World Heritage Education.

### **Associated Schools Project Network (ASPnet)**

UNESCO

7, Place de Fontenoy - 75352 Paris 07 SP, France

Tel. +33 1 45681080 - Fax + 33 1 45695622

E-mail: aspnet@unesco.org

Website: www.unesco.org/education/asp

### **World Heritage Centre**

UNESCO

7, Place de Fontenoy - 75352 Paris 07 SP, France

Tel. +33 1 45681571 - Fax + 33 1 45685570

E-mail: wh-info@unesco.org

Website: www.whc.unesco.org

# Acknowledgements

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## EGYPT

Mr. Ahmad Jamal El-Din Imam (Muharram Baik School, Alexandria), Ms. Muna Salah Abdel Maksoud (ASPnet Coordinator, Al-Nasr School, Cairo), and Mr. Mahmoud Farouk Mohammad (al-Fayyoun School, Al-Fayyoun)

## JORDAN

Ms. Khawater Uthman Sha' er (Umma' Abed School, Amman), Mr. Ali Salameh Odibat (Jerah School for Boys, Jerash), and Mr. Odeh Salem Al-Ja'afreh (Hammoud Secondary School, Kerak)

## LEBANON

Ms. Bahia Joseph Najjar (Al-Ashrafiyah, First Official School for Boys, Beirut), Ms. Eva Habish Roussa (German-Lebanese School, Jounyeh), and Mr. Abdel-Razzaq Slambouli (Lebanese-French Lycée, Tripoli)

## LIBYA

Ms. Zainab Yousef Al-Azzabi (Asbaha Al-Subh School, Tripoli), Ms. Nouriah Al-Na'as (Al-Takadum School, Tripoli), and Ms. Fthia El-Arabi (Al-Bina'a School, Tripoli)

## PALESTINIAN TERRITORIES

Palestinian National Authority, Ms. Nida'a Abdeen (Hajj Ishaq Al-Qawasmi School for Girls, Hebron), Mr. Monir K.M. Saleh (Bashir Al-Rayes Secondary School for Girls, Gaza)

## SYRIA

Ms. Qamar Sbeini (Sate's Al-Hosari School), Mr. Tallal Nassleh (Ibn Khaldoun School), and Mr. Mahmoud Al-Sheikh (Jawdat Al-Hashemi School, Damascus)

## TUNISIA

Mr. Lofti Ammar (Collège Secondaire Khezama Ouest, Sousse) and Ms Chaker Latifa, General Inspector, Ministry of Education, Tunis

Their evaluation and suggestions were precious in encouraging us to implement the second edition:



ABOVE  
Exchange of opinions and experiences among teachers during the workshop held in Tunis, February 2005.

RIGHT  
A classroom, involved in cultural heritage issues, welcomes workshop participants, Tunis, February 2005.





ABOVE  
Teachers during the visit to Dougga, Tunisia.

LEFT  
Teachers who participated in the meeting in Tunis

- The Teachers' Manual is useful and worthwhile developing a new edition.
- Generally, the information in each Unit is clear and comprehensive.
- Relative to the objectives of the Manual, the activities and exercises proposed are useful.
- Generally, the content of each unit should not be modified.

Nevertheless, the teachers suggested the following for the new edition:

- Give more focus on the Arab/or Islamic Heritage (old cities, Islamic art and architecture, etc.).
- Add in the glossary terms related to the Islamic architecture.
- Enhance the graphic presentation with regards to colours, maps, and drawings.
- Make the publication available in CD format and/or as an e-doc on the Internet.
- Minimize contents dedicated to introductions made by UNESCO and ICCROM.
- Mention in the manual the names of those who participated in the workshop in Tunis and contributed to the evaluation of the Manual.

Furthermore ICCROM and UNESCO would like to thank Ms. Sémia Yaiche Akrouf, Director of the Association pour la Sauvegarde de la Médina de Tunis, and her team, Ms. Faika Béjaoui and Mr. Zoubeir Mouhli, for the kind hospitality and assistance in the preparation and implementation of the Regional Workshop in Tunisia, held in February 2005.

Warm thanks also go to Mr. Mustapha Khanousi, Director of Restoration of Monuments and Sites of the Institute National du Patrimoine (INP), who guided the visit to Dougga and illustrated the conservation problems of an archaeological site to the workshop participants and school teachers from the Arab Region.



# Petra

## A Case Study

20-25 April 2002  
Petra, Jordan

Photo: Al-Deir (the Monastery), Petra, Jordan

## General information and evaluation

Sixteen 14-16 year-old students and five teachers, from Jordan, Lebanon and Syria, participated in the Sub-regional World Heritage Skills Development Training Course organized by the UNESCO Amman Office, in collaboration with the Jordanian National Commission for UNESCO and the Department of Antiquities, in close consultation with the UNESCO World Heritage Centre, the UNESCO Associated Schools Project Network (ASPnet) and ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property).

The aim of the workshop, which was held in Arabic, was to set a model of co-operation between schools and site heritage managers and develop new educational approaches, methods and materials to introduce World Heritage education into the curricula.

The four-day course, under the patronage of Queen Rania of Jordan, was inaugurated by the Jordanian Minister of Education, Mr Khaled Toukan, and the Director of the UNESCO Amman Office, Ms Ndèye Fall. It included six units that focused on the following issues:

1. The role of the World Heritage Convention in the promotion and preservation of cultural and environmental heritage.
2. The history of Petra and of the Nabataean culture.
3. The dangers threatening cultural heritage, with particular reference to Petra.
4. The conservation process: principles and methods.
5. Socio-economic values and definition of principal stakeholders and interest groups.
6. Communication and raising awareness.

Each "Unit" included practical exercises on site such as taking measurements of monuments, surveying their state of conservation, participating in restoration activities such as wall consolidation and stone cleaning under the supervision of specialists, and observing demonstrations of mosaic restoration. Pupils were provided with a questionnaire to test their comprehension and knowledge. The final day was devoted to creating a poster about the vulnerability of Petra with a persuasive message to convey to visitors.

Prior to course implementation, the instructors contacted site managers. They then together decided on the itinerary of the student visit and selected monuments that presented particular problems of deterioration and conservation. The site managers also

participated in selecting suitable locations for student activities to be carried out, and provided the organizers with further assistance (staff support, authorizations, guided visits, etc.)

Though the time to develop such an ambitious programme was limited, the course proved very satisfactory, given that it was the first of its kind designed for Arab schools. Students showed great interest and enthusiasm, and were delighted with the practical exercises conceived to explain the role of conservator. The course gave young people the opportunity to understand the problems involved in preserving cultural heritage and to voice their concerns about the future of heritage sites in Arab countries. It permitted the instructor to monitor student reactions, which were very positive and encouraging.

The workshop demonstrated that:

- Heritage can be an important educational resource. It contributes to developing students' analytical capacity and power of observation. It promotes class discussions on fundamental problems, and stimulates the search for solutions.
- It is possible to establish co-operation between educators and site managers. The Petra Archaeological Park and the Department of Antiquities gave their invaluable support to the project.
- Students are able to understand complex subjects such as deterioration and other conservation issues if they are presented in a simple way.
- Young participants can become aware that the preservation of heritage is also their responsibility.
- The recommendations that students drew up at the end of the workshop proved that young people, if adequately prepared, could become the best defenders of their own heritage.

## Organizers

**UNESCO Amman Office**, in collaboration with : the **Jordanian National Commission for UNESCO** and the **Department of Antiquities**, in close consultation with : the UNESCO World Heritage Centre and Associated Schools Project Network (ASPnet) in Paris.

Course Instructors and Preparation:

**ARDEMAGNI, Monica** (ICCROM Project Manager, Collections Unit)

**ASLAN, Zaki** (Conservation Architect & Consultant in Heritage Conservation and Management, Jordan - ICCROM Consultant)



Observing the state of conservation of mosaics in the Byzantine Church, Petra, Jordan.

**YAICHE AKROUT, Sémia** (Architect, Director of the Association for the Safeguard of the Medina of Tunis, Tunisia - ICCROM Consultant)

## Acknowledgements

The course instructors wish to express their gratitude to the team of the Petra Park Management Authority, the Petra Regional Council, and various local NGOs who gave them assistance. In particular, sincere thanks are due to Mr Suleiman Farajat, Mr Hani Falahat, Mr Qays Tweissi, Mr Dakhlallah Gublan, Mr Shehadeh Abu-Hdeib, Ms May Shaer, Mr Vaniah Steinbrok, and Mr Mahmoud Ireinat.

## Course participants

### Teachers:

Mohamed Naser Abu Hjailah (Zeid Bin Haritha Secondary School for Boys -Jerash, Jordan), Ziad Ahmad Mousa Al-Twissi (Wadi Mousa Secondary School for Boys - Wadi Mousa, Jordan), Nadia Tbeishat (Queen Rania Al-Abdullah Secondary School for Girls - Amman, Jordan), Muwafak Meksosa (Jawdat Al-Hashimi School - Damascus, Syria), Nabil El-Hage (Al-Leesa School - Tripoli, Lebanon)

### Students:

Ma'an Mamdouh Al-Shunnaq (Prince Hassan Secondary School for Boys – Irbid, Jordan), Saleh Naef Al-Karaki (Al-karak Secondary School for Boys – Karak, Jordan), Mahammed Saleh Shilab (Zeid Bin Haritha Secondary School for Boys – Jerash, Jordan), Ola Zakaria Al-Shomali (Queen Rania Al-Abdallah Secondary School for Girls – Amman, Jordan), Ala' Al-Khateeb (Queen Rania Al Abdallah Secondary School for Girls –Amman, Jordan), Mohammed Adel Abu Lubad (Zeid Bin Haritha Secondary School for Boys – Jerash, Jordan), Firas Mohammad Bisher Al-Amarat (Wadi Mousa Secondary School for Boys – Wadi Mousa, Jordan), Iyad Mohammad

Mousa Al-Khalaifeh (Al-Tayyba Secondary School – South Tayyba, Jordan), Mohammad Ja'far Hasan Al-Twissi (Wadi Mousa School, Wadi Mousa, Jordan), Shuruq Ali-Fahed Al-Farjat (Wadi Mousa Secondary School for Girls – Wadi Mousa, Jordan), Amani Khaled Haroun Al-S'eidat (Al Tiba Secondary School for Girls – Petra, Jordan), Sana'Atef Moisa Al-Hlalat (Asma'Bint Baker Secondary School for Girls – Petra, Jordan), Hani Abou Hadba (Ibn Khaldoun Secondary School for Boys – Damascus, Syria), Arij Maklouf (Sate'Al-Housary Secondary School for Girls, Damascus, Syria), Nizar Al-Merr (Al-Leesa School – Tripoli, Lebanon), Nour Al-Nahas (Ras Beirut Secondary School for Girls – Beirut, Lebanon)

# Course Description

## Learning objectives

At the end of the course, students will be able to:

- describe the site and understand its historical and socio-economic values;
- identify the principal interest groups and stakeholders of the site;
- recognize the dangers threatening cultural heritage and the alternatives available for its conservation;
- understand the benefits and dangers of tourism;
- understand the links between the historical and natural environment;
- appreciate that preservation of heritage is also their responsibility.

# Unit 1

## FIRST DAY

# The World Heritage Convention

### Learning objectives:

Understanding the role of the UNESCO *World Heritage Convention* as a tool for the preservation and promotion of cultural and natural heritage

#### Activity 1

Brief presentation by facilitators of the *World Heritage Convention* (selection criteria, projection of slides illustrating World Heritage Sites in the Arab regions and other parts of the world)

#### Activity 2

Discussing the concept of World Heritage based on a set of questions (Exercise Sheet 1.1 – Set of questions on World Heritage issues)

#### Activity 3

Presentation by each group of their perception of their World Heritage

#### SUGGESTED READING:

UNESCO World Heritage Convention - Properties inscribed on the World Heritage List.



Petra, Jordan, geological formations.

## Exercise Sheet 1.1

### SET OF QUESTIONS AND DISCUSSION ON WORLD HERITAGE ISSUES

1. There are both cultural and natural heritage sites. Which of them can be found in your country? What are the names of these sites?
2. Why do we save and protect these sites from damage?
3. Have you heard of the World Heritage List? Do you know how heritage sites are listed at a World Heritage level?
4. Can you name the World Heritage sites in the following pictures? (a selection of large photographs and projected slides were shown by course instructors)
5. Several criteria are applied in order to select World Heritage sites. Which ones were used to include Petra? (criteria shown on slide)
6. Name one (other) site in your country and say why you think it was listed as a World Heritage site?
7. How many sites on the World Heritage List are from the Arab States? Is this region well represented? (World Heritage map displayed)
8. What is the meaning of the World Heritage emblem? (emblem displayed)
9. Some World Heritage sites are in danger. These three sites from the Arab World are on this List (pictures presented). Discuss the dangers associated to them.
10. How do you think we can monitor the state of preservation of World Heritage sites?
11. Have you ever looked at any other World Heritage sites on the Internet?
12. If yes, which Internet site provides information about World Heritage sites?

# Unit 2

## FIRST DAY

### Petra - Historical issues

#### Learning Objectives

The history of Petra and the characteristics of the Nabataean culture

#### Activity 1

Guided visit to site (Itinerary: Obelisk tomb, Siq entrance, canalisation, Treasury tomb, tombs 825, theatre, “cardo, market and royal tombs”, Great Temple, Qasr el Bint and Byzantine Church).

#### SUGGESTED READING:

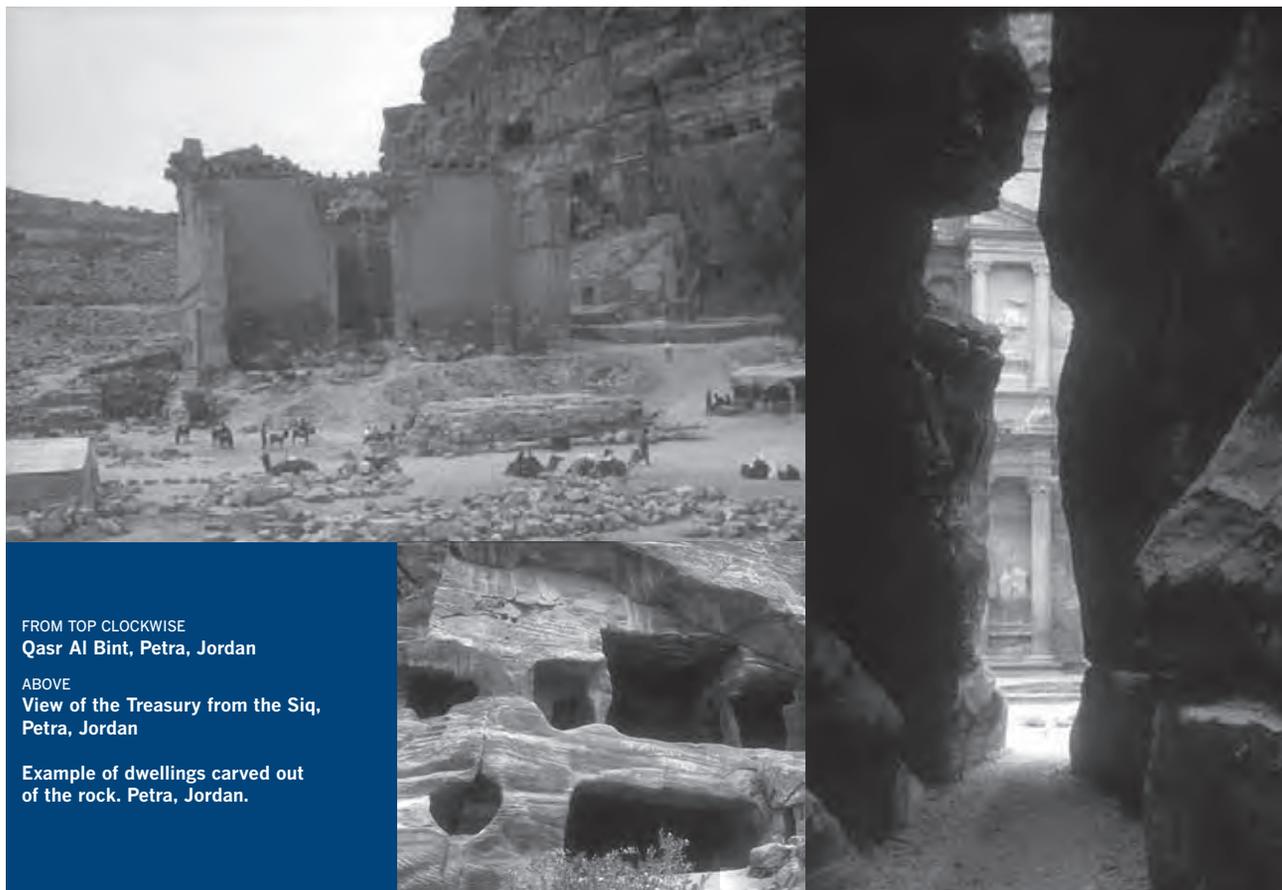
Take time to read Information Sheet 2.1 (Historical issues) before visiting the site.

#### Activity 2

Group exercise based on a set of questions about the history of Petra. Exercise Sheet 2.1 (Set of questions) and Exercise Sheet 2.2 (True or False).

#### ADDITIONAL READING:

- *Petra, the Rose-Red City* by Christian Auge & Jean Marie Dentzer
- *Petra* by Jane Taylor
- *Teachers' Resources: Petra, Nabataeans, and East-West Trade*



FROM TOP CLOCKWISE  
Qasr Al Bint, Petra, Jordan

ABOVE  
View of the Treasury from the Siq,  
Petra, Jordan

Example of dwellings carved out  
of the rock. Petra, Jordan.

## Exercise Sheet 2.1: Comprehension Questions

1. How long have people been living in the Petra region?
2. Where did the Nabataeans originally come from?
3. In which century did the first Nabataeans start arriving in the Petra region?
4. Petra used to be called “*Rekmu*”. What does it mean? What does the name “Petra” mean?
5. How many perennial springs provided the city with water?
6. What irrigation and water systems were used by the Nabataeans to collect and transport water?
7. What were the two main activities of ancient Petra?
8. What kind of goods did the Nabataeans trade?
9. When did the Nabataeans become settled?
10. What event in the 4<sup>th</sup> century BC modified politics in the Middle East?
11. What is Hellenism?
12. How did Hellenism influence the Nabataean culture?
13. Did the Nabataeans disappear as a people during the Roman rule?
14. What caused the decline of Petra?

## Exercise Sheet 2.2: True or False

Please circle the correct answer

1. The Nabataeans were an ancient people coming from Syria.  
TRUE FALSE
2. Petra is situated on the top of a hill.  
TRUE FALSE
3. Petra was famous for trade and hydraulic engineering systems.  
TRUE FALSE
4. Petra was a city full of fountains, public pools and gardens.  
TRUE FALSE
5. The Nabataeans did not develop agriculture because of the desert climate.  
TRUE FALSE
6. The Roman Emperor Trajan brought Hellenistic culture to the Middle East.  
TRUE FALSE
7. The Nabataeans were strongly influenced by Hellenistic culture.  
TRUE FALSE
8. Nabataean women could neither inherit nor own property.  
TRUE FALSE
9. The façades of typical Nabataean tombs are a little ornate, but simple.  
TRUE FALSE
10. The tombs carved in the rock are the only dwellings of Petra.  
TRUE FALSE
11. The urban space of Petra follows the classical scheme of ancient Greek cities.  
TRUE FALSE
12. The Nabataeans had a monotheistic religion.  
TRUE FALSE
13. The Nabataeans used to practise human sacrifice.  
TRUE FALSE

## SECOND DAY

# Causes of deterioration, damage and decay

### Learning objectives

To encourage students to recognize the different architectural elements and the state of conservation of selected monuments, and make them aware of the dangers threatening the monuments at Petra.

#### Activity 1

A brief slide presentation by the facilitators of the main causes of deterioration.

#### SUGGESTED READING

Take time to read Information Sheet 3.1 (What threatens Petra?) and Information Sheet 3.2 (Some causes of deterioration)

#### Activity 2

Visit by groups to selected monuments (Treasury tomb, Theatre and Tell ez-Zantour). Survey and analysis: taking measurements, drawing, taking photos, and particularly recording aspects of deterioration and conservation.

#### SUGGESTED READING

Take time to read Information Sheet 3.3 (Description of selected monuments)

#### Activity 3

Group exercise based on a set of questions related to each monument.  
(Exercise Sheet 3.1 -Treasury Tomb)

## Exercise Sheet 3.1: Comprehension Questions

### THE TREASURY

N.B. Students were first required to take some measurements and photos of the monument, and then describe it in writing. They later presented their research in the form of a poster and had to answer the following questions about this monument to stimulate their analytical skills.

1. Why is this monument named “The Treasury”?

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2. For whom was this monument built?

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3. Which style has influenced its architecture?

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4. Which figures adorn the façade?

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5. What is the meaning of these images?

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6. Which typical elements represent Hellenistic architecture?

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7. What is the current state of conservation of the monument?

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8. In your opinion, what are the most serious threats facing the Treasury?

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9. Where did you notice signs of vandalism?

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10. In your opinion, why has the funerary chamber been closed to visitors?

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# Unit 4

## THIRD DAY

# Conservation processes, principles and methods

### Learning Objectives

Understanding the process of conservation and the meaning of key words such as prevention, conservation, restoration and site management.

#### Activity 1

A brief presentation with slides by the facilitator on conservation issues.

#### SUGGESTED READING

Take time to read Information Sheet 4.1 (WHY do we take care of Petra?) and Information Sheet 4.2 (HOW can we preserve Petra?)

#### Activity 2

Visit by groups to the Great Temple, the Mosaics Laboratory and Tomb 8/25. Practical exercises on site: wall consolidation (mortar preparation), mosaics restoration and stone cleaning. Students will be assisted during these activities by specialists (site manager team, restorers and archaeologists).

#### Activity 3

Group exercise based on a set of questions related to conservation issues. (Exercise Sheet 4.1)



LEFT  
Students preparing mortar to consolidate a wall. Petra, Jordan.

ABOVE  
Students, assisted by conservation specialists, take part in stone cleaning. Petra, Jordan.

## Exercise Sheet 4.1 – Comprehension Questions

1. You were involved in restoring archaeological walls and mosaics. What other materials are in need of preservation at the site?
2. Mosaics make a site. Apart from restoring them, how can we protect them from the weather?
3. Archaeological walls need to be consolidated. Can any mortar do the job? Why/why not? Give examples of bad restoration.
4. Some restoration treatments have been carried out at tomb 825. How are they different from the wall consolidation that you worked on?
5. What are the components of mortar for good mortar restoration?
6. Can we lift mosaics whenever we find them? What is the best way of restoring them?
7. Tourists often pour water onto mosaics to take clearer photographs. Do you think this damages the mosaics? How can we make sure they are not damaged?
8. Simple daily maintenance may be necessary at archaeological sites. Give examples of some simple maintenance procedures that are needed at the site?
9. Before we restore monuments, we need to record their previous state. Why?
10. What did you learn from the two exercises you did in terms of good practice? How can good practice be encouraged at the site in your opinion?

# Unit 5

## FOURTH DAY

### Socio-economic and environmental issues

#### Learning objectives

Understanding the links between the historical and natural environment. Recognizing the benefits/dangers of tourism. Identifying the principal groups interested in the site and reasons for collaboration.

#### Activity 1

A brief presentation by the site manager of the impact of urban development on the environment.

#### Activity 2

Round table and open discussion on this topic between students and various representatives from interest groups (stakeholders) involved with Petra (conservators, archaeologists, urban planners, tourist representatives, local residents and tourist guides)

#### Activity 3

Discussion and questions related to socio-economic development (Exercise Sheet 5.1)

## Exercise Sheet 5.1 – Set of Questions

In your opinion

1. What is important about the site?

- The environment

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

2. How does the site contribute to the economic development of the region?

- Hotel development

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

3. Could you identify a list of stakeholders for Petra?

- Archaeologists

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

4. Referring to question n° 3, state how they are interested in the site?

- Archaeologist: digging to discover new information about the past

- Site manager: \_\_\_\_\_

- Tourist operator: \_\_\_\_\_

- Local population: \_\_\_\_\_

- Ecologists: \_\_\_\_\_

- Tourists: \_\_\_\_\_

5. Which of the above-identified interests could threaten the site?

- The large number of tourists

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

# Unit 6

## FOURTH DAY

### Awareness – Delivering a message

#### Learning Objectives

Making students aware of the fragility of heritage and of their role in safeguarding it. Involving them in the preservation of the site by producing a poster with a persuasive message or other means to be conveyed to the public through the media.

#### Activity 1

Discussion on how visitors contribute to the deterioration or protection of the site. What kind of messages should be conveyed to make them aware of the fragility of Petra?

#### SUGGESTED READING

Take time to read Information Sheet 6.1 (SOS Petra at risk) and Information Sheet 6.2 (What should we avoid doing?)

#### Activity 2

Formulation of the message/slogan to be transmitted to visitors and young people and production of an awareness tool (a poster expressing their concern about the future of the site).

#### Activity 3

Formulation of recommendations on the part of students. Group photo and conclusion.

## Historical Issues

### The Petra region

Petra is the ruin of an ancient city in southwest Jordan, 260 km from the capital Amman. The city is hidden within a fissure in the mountainous desert of Wadi Rum, which was produced by a terrible cataclysm that took place millions of years ago. The site, unique for its environmental beauty and historical value, was proclaimed a National Park comprising an area of 264 sq. km.

For the past 10,000 years the Petra region, easily defensible and rich in springs, has been the site of many human settlements. One of the most remarkable peoples who lived in Petra were the Nabataeans, who built a sophisticated and brilliant civilization based on commerce and agriculture.

### The Nabataeans

The Nabataeans were an ancient people coming from the Arabian Peninsula. It seems they established their nomadic encampment inside the Valley of Wadi Musa around the 6th century BC. This encampment was the beginning of the city that the Nabataeans named “*Rekmu*” - “multicoloured” - in reference to the extraordinary range of colours of its sandstone. Later the city was called “*Petra*”, a Greek name that means “stone”.

The principal activity of the Nabataeans was commerce. Petra was a caravan centre located on the axis of a network of ancient trade routes. They controlled the trade of frankincense, myrrh, bitumen, silk and spices coming from the Arabian peninsula, India and China. These products were highly appreciated for various uses (medicines, beauty products, cooking, religious rituals, etc.) and were in demand throughout the whole Mediterranean area. This explains the growing wealth of the Nabataeans and their progressive expansion on the caravan routes.

During the period of Hellenistic monarchies, following the death of Alexander the Great, the Nabataeans were able to maintain their independence and political autonomy. Even if Hellenism greatly influenced their culture, affecting

all walks of life, they maintained a high level of cultural independence, as can be seen by their art, architecture and hydraulic technology. An original element of their culture was the status they accorded to women: they could inherit and own property in their own right.

During the period of maximum splendour (1st Century AD), Nabataean power stretched from Damascus southward to northern Arabia. It was not military power, but a trading empire, dealing with luxury goods, which linked the Mediterranean world with China, India and Arabia.

In 106 AD, the Emperor Trajan annexed the Nabataean kingdom to the Roman Province of Arabia. The city nevertheless survived and flourished until the 3<sup>rd</sup> century AD. Great urban projects attest to its prosperity during the long period of tranquillity called *Pax Romana*, or Roman Peace.

When the Romans re-routed traffic through Palmyra, Petra lost its pre-eminent position as a major caravan centre. Little by little the city began a slow and irrecoverable decline, hastened by violent earthquakes.

Then the city vanished in the rising tide of Islamic rule in 636 AD. In the early 12<sup>th</sup> century, Petra was captured by crusaders who built a string of fortresses in the surrounding mountains. After the surrender of the Christians to Salah ad-Din, the castles were abandoned and Petra was forgotten for centuries.

Johann Burckhardt, a Swiss traveller, discovered the ruins of Petra in 1812. The news of this extraordinary discovery spread all around Europe and many archaeological missions were undertaken during the 19<sup>th</sup> and 20<sup>th</sup> centuries. Thanks to current scientific technology available to archaeologists, the daily life of the Nabataeans is slowly being uncovered even though many questions still remain unanswered.

In 1985, the site of Petra was inscribed in the UNESCO World Heritage List.

## Anatomy of a city

In Petra the urban space is discontinuous and differs from the model of traditional Mediterranean cities. In classical cities, the inner areas were devoted to political, religious and judicial life, and can easily be distinguished from outer areas. Petra's dwellings are scattered all over the area, without a precise plan such as a central square and parallel or converging streets. A classical city was generally situated in an elevated position; Petra, on the contrary, lies at the bottom of a natural basin, surrounded by mountains. In a classical city, houses are built in stone; at Petra, most of them are carved out of the rock.

The haphazard plan of Petra does not only depend on the geology of the site. It dates back in part to its origins. Petra, in fact, was not created as a city in the classical sense. It was the refuge of a nomadic tribe who used to live in tents and needed a secure place to store its goods. Only when the Nabataeans became settled at the end of the 2<sup>nd</sup> century BC, did Petra assume the aspect of a real city.

Today Petra looks to visitors like a vast cemetery due to the magnificent dominating tombs carved on the surrounding hills. The imposing temples and stone buildings, which were located on either side of the Wadi Musa, were more exposed to earthquakes than the carved monuments. They collapsed over the centuries. The basin seems empty, but a whole city of houses, markets, streets and temples lies under a layer of dust, stones and sand.

## The mastery of water

Four perennial springs were the main sources of water for Petra. However as the city population grew, it became necessary to devise ways to collect and distribute water. This was a problem in this semi-arid desert climate where rain was infrequent. So, the Nabataeans developed a complex system of dams, runnels, diversion channels, reservoirs and cisterns to collect sufficient water to meet their domestic needs and irrigate their fields and gardens.

Another impressive public project was the protection of the narrow Siq passage from the violent flooding to which it was exposed. The terrain of Petra is impermeable and absorbs very little water. When rain falls violently, water will amass in a few hours in considerable and dangerous quantities, especially along the Siq. To counter this threat, the Nabataeans built a tunnel to divert the overflow of the Wadi Musa to a tributary.

## Agricultural development

This abundance of water allowed the Nabataeans to develop agriculture also in a desert land. Traces of typical cultivated terraces dating from the Nabataean period are visible all around Petra. The inhabitants probably cultivated cereals, barley, wheat, fruit trees, vines (the ancient historian Strabo writes of wine being drunk from golden goblets), and palm trees. Also in this activity, the Nabataeans revealed remarkable ability to adapt the land to their needs in order to ensure the survival and prosperity of an important urban centre.

## The tombs

Petra is famous for its funerary architecture. The façade of the tomb showed the importance of the deceased and his/her family. Two types of façade can be distinguished by their decoration: one is in the eastern tradition, the other Hellenistic.

The first type is a little ornate, but simple. It is called a Hegra-type tomb. The decoration consists in one or two rows of merlons or corbie-steps. Some of them have a cornice or a double entablature adorned with pilasters.

The Hellenistic façade retains the classical style with a triangular pediment, double pilasters and columns. Generally these tombs are richly decorated with floral capitals, friezes and statues. This form was used in the most spectacular royal monuments such as the famous El Khazneh or ad-Deir.

## Religion

The Nabataeans had a polytheistic religion of Arabian origin, whose pantheon was dominated by Dushara, the protector of the Royal dynasty, and al-Uzza, a goddess linked with the Egyptian goddess, Isis. The principal divine image was the "baethyl", a cult object characteristic of the pre-Islamic Arabian belief system. It consists of a standing stone that was not the representation of a divinity, but the sign of the presence of the divine. The Nabataeans had temples built with stone or carved out of the rock. They used to make animal sacrifices to the gods burning incense; the ritual culminated in a shared feast in honour of divinities.

## Key words

Nomadic people – settled people

Hellenism - Roman Empire

Monotheism – Polytheism - Pantheon

Christians - Islamism

Crusaders

Desert climate - Irrigation

Façade

Capital (Corinthian capital)

Pediment

Nabataean and Hellenistic style

Discussing Point: What can we learn from the Nabataean civilization?

Causes of deterioration

# What threatens Petra



**NATURAL FACTORS**

Earthquakes, Floods,  
Fire, Wind & water erosion,  
Climatic variations,  
Soluble salts,  
Animals, Vegetation,  
Micro-organisms.

**HUMAN FACTORS**

Clandestine excavations,  
Theft, Vandalism,  
Abandonment, Lack of care  
& maintenance (neglect),  
Tourism,  
Uncontrolled urbanization,  
Incorrect restoration.

### Causes of deterioration

#### SOME CAUSES OF DETERIORATION

One of the causes of the decay of Petra was the abandonment of the hydraulic systems developed by the Nabataeans. In ancient times, they were able to maintain the level of groundwater within acceptable limits for building preservation.

Today the hydraulic systems no longer fulfill their function. Rainwater and drainage penetrate into the subsoil of Petra under the foundations of the monuments. Through the effect of heat and evaporation, this salt-bearing water rises by capillary action and permeates the stones of the monuments. When the water evaporates, the salts crystallize on the stone surface causing deterioration. The constant and corrosive action of wind and sand exacerbates this work of destruction.

The inscription in the UNESCO World Heritage List increased the number of tourists at Petra. This led to the urban development of Wadi Musa, the village that has sprung up to accommodate tourists visiting Petra. Since 1990, Wadi Musa has doubled in size and lacks any form of urban planning. Its buildings, which are visible from the centre of Petra, have seriously affected the integrity and beauty of the site, which is unique for its historical and environmental values. It is necessary to establish a sensible balance between the need for developing

## Selected Monuments

### The Treasury (al-Khazneh)

Petra's most famous monument appears suddenly to visitors arriving from the narrow, shaded Siq. The name Treasury comes from the legend that it was used for hiding a Pharaoh's treasure.

The richly decorated composite architecture of the façade reflects the Hellenistic influence. The treasury's original purpose remains unclear. Probably it was a royal tomb dating from the 1st century BC. Some scholars believe it was a temple, pointing to its temple-like façade. Others suggest it was a mausoleum, perhaps for the cult of a deified king.

The façade is divided into two distinctive sections. The upper part bears a circular architectural feature, which used to contain the statue of al-Uzza, the great goddess of Petra, holding a cornucopia. The lower part, the entrance to the tomb, is preceded by a porch of six columns with Corinthian capitals (peristyle), surmounted by a triangular pediment.

The whole façade is decorated with figures representing deities from the Greek myths, eagles, Medusa heads and various mythical creatures. These images are funerary symbols, confirming the theory that the monument was a tomb. The pediment, friezes and capitals are decorated with exquisitely carved flowers, leaves and fruit.

The funerary chamber is a large, meticulously square room carved out of the rock, without any decoration or painting. This is typical of the tombs in Petra: the interiors are as plain as the exteriors are richly decorated.

#### CONSERVATION PROBLEMS:

**Erosion** - Although the figures are very eroded (compare with copy of David Robert's watercolour of the Treasury in the mid-19th century), all the other decorative elements are in good condition.

**Vandalism** - Some graffiti are visible on the columns of the porch.

**Conservation issues** - The funerary chamber has been closed to the public for conservation reasons.

### The Theatre

The theatre, located in the middle of the central necropolis, was entirely chiselled out of the rock. It was built during the reign of Aretas IV in the 1st century BC and subsequently enlarged and modified several times. The theatre was an important civic building. It could hold 6,000 to 7,000 people and was probably used for both plays and public meetings.

During the Roman period, the stage and the back wall were richly decorated with columns and marble statues that later collapsed as a result of earthquakes. A lot of the rubble was used for new constructions. The overall design is Roman, but the floral capitals and the construction techniques are Nabataean.



The Treasury Tomb, Petra, Jordan.

## Information sheet 3.3

The Nabataeans conceived an elaborate system of drainage channels above and around the theatre to divert rainwater to cisterns. Disuse and earthquakes clogged up the channels and now the theatre often becomes flooded.

### CONSERVATION PROBLEMS:

**Earthquakes** – Several earthquakes over the centuries caused the collapse of statues and columns.

**Erosion** – Stones are eroded by the natural and constant action of wind

**Water** – Through the effects of heat and evaporation, the salts deposited by water during heavy rains, cause the stone to deteriorate.

**Tourists** – 350,000 visitors per year walking, often with unsuitable shoes (such as wooden clogs or

hob-nailed boots), on the tiers of the theatre, which is carved out of soft rock, accelerate the process of deterioration.

### Tomb of the Fourteen Graves (825)

This is a typical tomb in the Nabataean style. The façade is a little ornate, but simple. The decoration consists of narrow bands of the so-called “Assyrian crow’s-foot”. Inside there is only a funerary chamber entirely carved out of the rock. The highly deteriorated façade is currently being restored.

### CONSERVATION PROBLEMS:

**Erosion** – The façade exposed to wind and water presents serious problems of erosion. Inside the consequences of bird droppings are visible.

**Conservation issues** - It has been necessary to reconstruct the decorative elements that have been lost.



Petra, restoration of the tomb 825.

### Discussion Points

# Why do we take care of Petra



Because

- Petra is unique and irreplaceable
- Petra belongs to humanity as a whole
- Petra is rich in values and messages
- Petra is fragile and vulnerable
- Petra is an important economic resource for the local inhabitants and the nation itself

### Discussion Points

# How can we preserve Petra?



- Call for and introduce adequate legislation to protect the site
- Encourage the various organizations (stakeholders) with an interest in Petra to develop a common policy to preserve the integrity of the site
- Regulate the growth of the adjoining communities
- Ensure continuous and appropriate maintenance
- Ensure the control of water inspired by the Nabataean hydraulic system to combat flooding
- Check the flow of tourists
- Raise awareness of the vulnerability of the site at all levels

### Raising awareness

#### S.O.S. - Petra at risk

Despite the appearance, Petra was once a lively city with public monuments, houses, markets and noisy, crowded streets. Today most of the stone buildings are in ruins or have disappeared under layers of stones and dust. You need to make a great effort to imagine their original size and splendour.

The ruins you are visiting have survived earthquakes, wars, fires and the depredations of time. The monuments carved into the rock seem to be indestructible. However, they are threatened by the natural erosion of wind and rain and by centuries of neglect. The sandstone rock in which they are carved is very fragile. More than 80% of the chiselled and decorated façades have been lost forever. Decay is an accelerating process: the fact that some monuments have survived for almost two thousand years does not guarantee that they will survive for an equally long period.

The large number of visitors (350,000 per year – 1,000 per day) further contributes to the deterioration of the site and poses serious problems of conservation and surveillance to combat theft and vandalism.

Can you imagine the consequence of thousands of people treading on stones that are over two thousand years old with unsuitable shoes? What would remain of the magnificent tombs if all the visitors climbed onto the monuments to take photos or engraved their names on columns or walls? Are you aware of the harm caused by the simple gesture of touching a statue or removing a piece of rock or mosaic as a souvenir, when it is repeated thousands of times? Do you realize how much it costs and how much effort is necessary to maintain the site you are visiting in good condition?

The heritage of the past is not an inexhaustible source and its preservation is not automatic. It requires specialized equipment and support as well as constant attention and preventive action against the risks of deterioration and destruction.

A collective effort is required. It concerns us all. It begins with you, your family and your friends. Of course, specialists will always be necessary, but without you, their efforts will be in vain. Ask yourself

# What can I do to preserve my heritage



### Discussion Points

The survival of Petra concerns us all.  
It depends on our actions.  
What should we avoid doing?



- wearing unsuitable shoes;
- climbing on monuments to take photos;
- engraving your name on columns and wall surfaces;
- cutting plants;
- leaving rubbish at the site;
- picking up fragments of stone or mosaic as a souvenir;
- buying archaeological items from illegal diggers.

Bearing in mind that Petra is fragile,  
can you suggest any other actions  
that would preserve and protect the site?

# Appendix 1

## Students' Recommendations from the Petra Training Course

1. Repeat this course in other countries in order to share this experience with other Arab students.
2. Invite the Ministries for Education in the Arab countries to introduce the theme of World Heritage/ heritage in school curricula.
3. Encourage the organization of similar training workshops in order to promote interest in the safeguard of World Heritage in the Arab region.
4. Invite the Ministries of Information to disseminate the video documentation in order to introduce the theme of heritage protection within the framework of their various initiatives.
5. Establish a "Heritage Day" and launch an awareness-raising campaign addressing particular themes for young people.
6. Invite each school near a site to adopt a monument in order to make the local population aware of its value and fragility.
7. Request the Park Management Authority in Petra to provide mobile sanitary facilities in appropriate places for pedestrians.
8. Invite the national institutions concerned with providing adequate signs to display historical information for visitors at the entrance of the site and at important monuments to facilitate understanding and orientation.
9. Propose that the above-mentioned institutions install information display boards for tourists clearly illustrating how not to behave on the site and explain the reasons for these instructions.

# Appendix 2

## Equipment and stationery used at Petra

Stationery	
Disposable cameras	20
Metre rulers	4
Coloured cardboard	4 or 6 different colours
Stick glue	8
Box files	26
Writing pads	20
Writing paper	
Note pads	20
Rulers, rubbers, sharpeners	30 or more of each
Pens	30 or more
Pencils	30 or more
Watercolours (at least 8 colours)	4 packs
Pencil colours (at least 8 colours)	4 packs
Markers	4 (4 different colours)
Highlighters	4 (3 different colours)
Stickers "white"	100
White cardboard	16
Cutters + scissors	8 each
Video film on Petra "culture and history"	
Equipment	
Data show equipment	2
Slide projectors	2
Overhead projectors	2
Flip charts	(Board & 2 + 6 rolls paper)
Electric cable extension	2
Video cameras	3

# Appendix 3

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## **ICCROM**

ICCROM, the International Centre for the Study of the Preservation and Restoration of Cultural Property, is an intergovernmental organization (IGO), and the only institution of its kind dedicated to the protection and preservation of cultural heritage worldwide, including monuments and sites, as well as museum, library and archive collections.

ICCROM fulfils its mission through collecting and disseminating information; co-ordinating research; offering consultancy and advice; providing advanced training; and promoting awareness of the value of preserving cultural heritage.

## **ATHĀR**

ATHĀR is a long-term programme with a focus on the archaeological heritage of the Arab region. The overall goal of the programme is to protect and promote the rich cultural heritage in the Arab region, and broaden access, appreciation and understanding of its past. It addresses three core areas: applied knowledge in heritage planning and management; professional development in conservation methods and techniques; and, public support and outreach.

The programme is carried out in collaboration with official and training institutions working in the field of cultural heritage in the region, for the benefit of heritage managers, professionals (architects, archaeologists, etc), and the general public.

## **ASPnet (Associated Schools Project Network)**

Founded in 1953, UNESCO's Associated School Project Network, is a global network of some 7900 educational institutions in 176 countries (ranging from pre-schools and primary to secondary schools and teacher training institutions) who work in support of quality education in practice.

From 1994 ASPnet collaborates with the UNESCO World Heritage Centre in the project "UNESCO's Young People's World Heritage Education Project" to raise awareness among students and teachers around the globe about World Heritage conservation

