

# ARCHAEOLOGICAL TEACHING AND RESEARCH CENTRE, UNIVERSITY OF QUEENSLAND, OUTREACH ACTIVITY WORKSHEET

## Solid Pathways 2014

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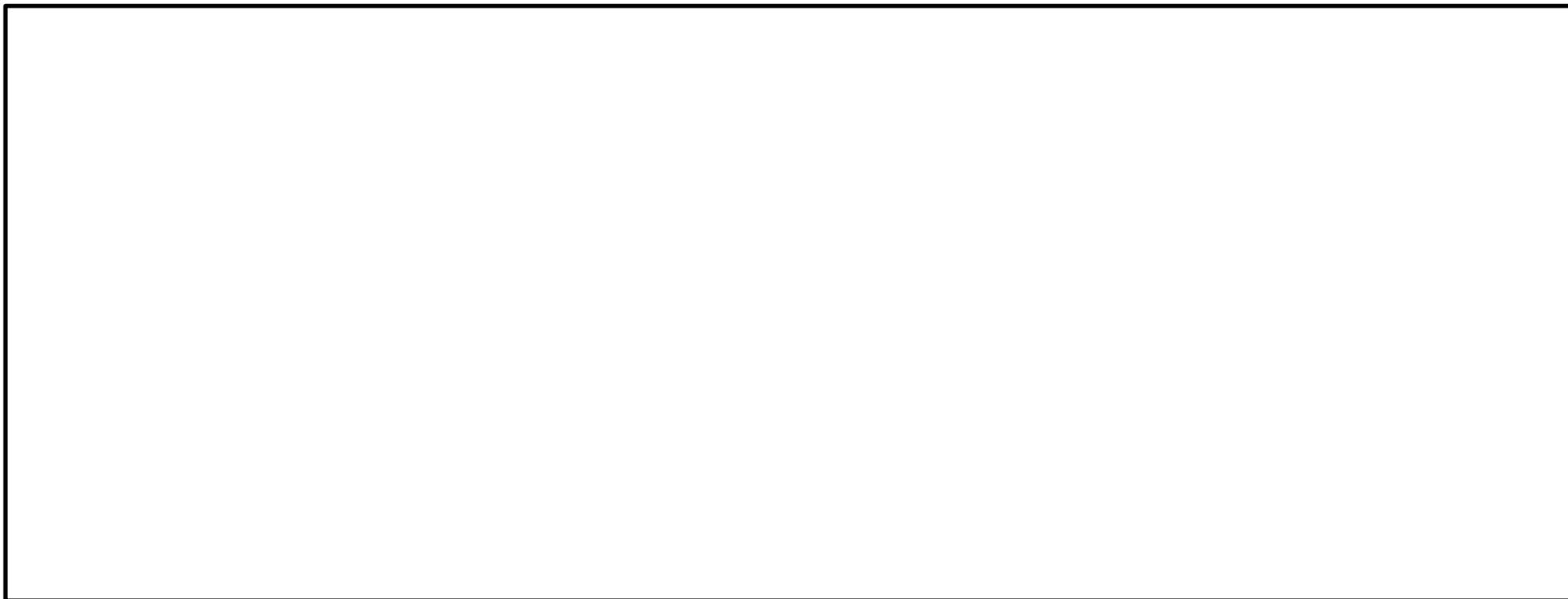
**Directions:** Introduction-10 mins; Activity-Break into six groups with each group performing a different activity every 12 mins; Conclusion-10 mins

- a. *Mapping* – Field sketching of burial and areas that have been excavated earlier. Note north, pit measurements, description of burial goods.
- b. *Digging* – Using safety equipment (gloves), uncover artefacts using a trowel and brush. Note artefacts and when each stratigraphic layer begins. Bucket soil.
- c. *Sieving* – Pass each bucket of soil through the sieves and collect all artefacts. Discuss wet and dry sieving.
- d. *Sorting and cataloguing* – Sort the artefacts by material and type. Discuss change through time. Discuss artefact analysis and use material catalogues.
- e. *Profile* – Working with the aquarium dig, noting the entire site through time.
- f. *Knapping* – Using safety equipment (gloves, glasses, knapping leather), making stone tools in knapping pits. Participants will make flakes from cores.

**MAP**

Recorder:..... Date: .....

**N**





## **SIEVE**

What is the difference between dry and wet sieving?

DRY-

WET-

Why is sieving a very important archaeological recovery technique?

## **SORT**

What are the raw material types identified?

What is your favourite artefact? What is it made from?

What time period is it from?

## **PROFILE**

How many levels of stratigraphy do you find?

What is the sand intrusion level? Why type of event does it suggest?

How do the ceramics change over time?

## **KNAPPING**

**USE SAFETY GLASSES, GLOVES, and KNAPPING LEATHER**

What are cores and flakes?

# What is debitage?

## **PERIOD BACKGROUND**

### *Modern Period*

The modern period refers to the last 200 years beginning with the Industrial Revolution. The modern period saw the increasing role of science and technology, mass literacy and proliferation of mass media, the spread of social movements, the start of democracy, increased urbanization, and various revolutions (e.g. the Russian Revolution). The modern period saw the two World Wars and the emergence of socialist countries that led to the Cold War. The period is characterised by the explosion of research and increase of knowledge known as the Information Age. Today's era is often called the digital age due to the all-pervasive use of computers and information technology. Artefacts from this period represent the broadest possible range, and include new materials such as plastics, synthetic fabrics, new alloys, industrial ceramic and metal products, computer chips, insulated wire, etc

### *Early Modern Period*

The early modern period follows the late Middle Ages (c. 1500) and ends with the modern period (c. 1800 - present). The most important feature of the early modern period was its globalizing character —exploration and colonization of the Americas and interaction with previously isolated parts of the globe. The historical powers became involved in global trade of goods, plants, animals, and food crops, affecting almost every society on Earth. It also saw the European colonization of many continents and the spread of Christianity around the world. Other notable trends of the early modern period include the development of experimental science, improvements in transportation and communications, increasingly rapid technological progress and secularized politics. Artefacts from this period cover a very broad range, and include the first mass produced industrial products (cloth, ceramics, metals, etc). Artefacts also reflect increasingly globalized trade and include many new artefacts and foods from the New World, Asia and Africa.

## *Medieval Period*

The Middle Ages lasted from the 5th to the 15th century AD. It began with the collapse of the Western Roman Empire and saw many barbarian invasions (Vikings, Magyars, Saracens). Islamic Empires also grew. The Byzantine Empire clung on and remained a major power. In the West, monasteries were founded as Christianity expanded. After AD 1000 the population of Europe increased greatly as technological and agricultural innovations allowed trade to flourish and crop yields to increase. Kings became the heads of centralised nation states. Peasants were organised into villages and owed rent and labour to the nobles. Knights and lower-status nobles gave military service to the king in return for income from lands and manors. The Crusades started in 1095 and were military attempts by Western European Christians to regain control of the Middle Eastern Holy Land from the Muslims. Intellectual life was marked by the founding of universities. The Late Middle Ages saw calamities such as the Black Death, and war, which much diminished the population of Western Europe. Cultural and technological developments transformed European society, concluding the Late Middle Ages and beginning the early modern period. Artefacts from the medieval period show increased refinement in pre-industrial metal working, faience glass, high quality ceramics with lead glaze.

## *Roman Period*

The Roman Empire was the period of ancient Roman civilization. The Romans conquered and ruled over vast areas of the Mediterranean, Europe, Africa, and Asia. After Julius Caesar, the Empire saw a period of unprecedented stability and prosperity known as the Pax Romana ("Roman Peace"). It reached its greatest expanse during the reign of Trajan (98–117 AD). Christians rose to power in the 4th century, during which time a system of dual rule was developed in the Latin West and Greek East. After the collapse of central government in the West in the 5th century, the eastern half continued as the Byzantine Empire. Because of the Empire's vast extent and long endurance, the institutions and culture of Rome had a profound and lasting influence on the development of language, religion, architecture, philosophy, law, and forms of government in the territory it governed, particularly in Europe, and by means of European expansionism throughout the modern world. Artefacts of the Roman period are diverse and show trade across the circum-Mediterranean, into Northern Europe and western Asia.

## *Bronze Age*

The Bronze Age is a period characterized by the use of copper and its alloy bronze and proto-writing, and other features of urban civilization. It begins around 6000 years ago and ends at different times in different places, but Iron begins to appear in the Near East around 3000 years ago. An ancient civilization can be in the Bronze Age either by smelting its own copper and alloying with tin, or by trading for bronze from production areas elsewhere. Worldwide, the Bronze Age generally followed the Neolithic period, but in some parts of the world, the Copper Age served as a transition from the Neolithic to the Bronze Age. Bronze Age cultures differed in their development of the first writing. According to archaeological evidence, cultures in Egypt (hieroglyphs), the Near East (cuneiform), China (oracle bone script)—and the Mediterranean, with the Mycenaean culture (Linear B)—had viable writing systems. Artefacts from the bronze age include some of the first metals (copper, tin, bronze, gold and silver), complex stone tools such as flint daggers, arrowheads and refined blade technology, and the common use of decorated hand made pottery. Artefacts also include those associated with the production of metal – forges, moulds for casting, crucibles for melting metal etc. The Bronze Age was a time of the birth of civilisations (Egyptian, Etruscan, Hittite, Mesopotamian, Minoan etc) and the origins of large city states. Bronze casting technology evolved enormously throughout the Bronze Age, from single open cut stone moulds in the Earliest period, to bivalve clay and stone moulds in the middle period, to bivalve bronze and lost wax casting in the late Bronze Age.

## *Neolithic*

The Neolithic, or New Stone age, was the period when people gradually gave up hunting and gathering and relied more and more on plant cultivation and domesticated animals. It began about 10,200 BC in the Near East and ended between 4,500 and 2,000 BC. The period commenced with the beginning of farming, which produced the "Neolithic Revolution". It ended when metal tools became widespread (in the Copper Age or Bronze Age; or, in some geographical regions, in the Iron Age). By 10,200–8,800 BC, farming communities arose in Israel, Turkey, Syria and Jordan and spread to the west and to North Africa and North Mesopotamia. Early Neolithic farming was limited to a narrow range of plants, both wild and domesticated, which included einkorn wheat, millet and spelt, and the keeping of dogs, sheep and goats. By about 6,900–6,400 BC, it included domesticated cattle and pigs, the establishment of permanently or seasonally inhabited settlements, and the use of pottery. Unlike the Paleolithic, when more than one human species existed, only one human species (*Homo sapiens*) reached the Neolithic. *Homo floresiensis* may have survived right up to the very dawn of the Neolithic, about 12,200 years ago. Artefacts from the Neolithic are made from stone, bone, clay and plant and animals products. No metals were habitually used in this period. Farmers began to form settled communities and more organised religions. Life was hard in the Neolithic as farming generated much hard labour, crops were prone to famine, pestilence and drought, and settled communities suffered more from disease and warfare.

## *Upper Palaeolithic*

The Upper Paleolithic (also known as Late Stone Age) is the third and last subdivision of the Paleolithic or Old Stone Age as it is understood in Europe, Africa and Asia. Very broadly, it dates to between 45-50,000 and 10,000 years ago, roughly coinciding with the appearance of fully modern human biology and cognition, and preceding agriculture. The Upper Palaeolithic sees the first colonisation of Europe and Asia by modern humans and the extinction of Neanderthals and other archaic human species. People lived hunter-gatherer-fisher lifestyles in small semi-sedentary or nomadic groups. The UP sees a marked increase in the diversity of artifacts, including projectiles, engraving tools, knife blades, harpoon heads, flutes, more elaborate clothing and sewing equipment, and drilling piercing tools and house structures and formal segregation of space and the first clearly recognisable and highly ornate art. The new technology generated a population explosion of modern humans which may have led to the extinction of the Neanderthals. The first modern humans in Europe, commonly referred to as the Cro-Magnons, left many sophisticated stone tools, carved and engraved pieces on bone, ivory and antler, cave paintings and Venus figurines. They clearly had well-developed long-distance interactions with other groups, had mastered water crossings, and quickly colonised most of Eurasia and had probably reached Australia by 50,000 years ago.

## *Middle Palaeolithic*

The Middle Palaeolithic (also known as Middle Stone Age) is a subdivision of the Palaeolithic, or Old Stone Age, as it is understood in Europe, Africa and Asia. The Middle Palaeolithic began around 250,000 to 45,000 years ago. There are considerable dating differences between regions. During this time period Neanderthals thrived in Europe between and the earliest anatomically modern humans appeared around 195,000 years ago in Africa. Additionally, according to the Out of Africa Hypothesis, modern humans began migrating out of Africa during this period around 100,000 or 70,000 years ago and began to replace earlier pre-existent *Homo* species such as the Neanderthals and *Homo erectus*. The Middle Palaeolithic artefacts are made from stone, bone, wood and animal and plant products. Stone tools included projectile points,

prepared cores (such as Levallois), and many simply shaped flake tools known as scrapers. Humans were exclusively hunter-gatherers with some early signs of the use of marine foods. In many places humans and Neanderthals hunted large game and lived nomadic lifestyles without house structures.

### *Lower Palaeolithic*

The Lower Palaeolithic is the earliest subdivision of the Paleolithic or Old Stone Age. It spans the time from around 2.5 million years ago when the first evidence of craft and use of stone tools by hominids appears in the current archaeological record, until around 300,000 years ago, spanning the Oldowan and Acheulean periods. The Lower Paleolithic is followed by the Middle Paleolithic, which sees the appearance of the more advanced prepared-core tool-making technologies such as Levallois. Whether the earliest control of fire by hominids dates to the Lower or to the Middle Paleolithic remains an open question. Various tool-making human species existed at this time, including *Homo habilis*, *Homo erectus*, *Homo ergaster* and *Homo heidelbergensis*. The earliest stone tools from the Oldowan period consisted of simple cores and flakes and choppers. The Acheulian began around 1.6 million years ago and saw the appearance of finely made handaxes flaked on both sides (bifaces), cleavers and some fairly crude scrapers. Both *Homo erectus* and *Homo heidelbergensis* left Africa sometime after 1.9 million years ago and reached as far as SE Asia. There is some debate over whether *erectus* evolved into species like *Homo floresiensis* ('the Hobbit') or whether that was a different species and a separate dispersal. *Homo heidelbergensis* likely evolved into both modern humans in Africa and Neanderthals in Europe.

## **FOLLOW UP QUESTIONS**

1. What are the main changes you noticed in artefacts in each layer over time?
2. What do these changes in artefacts tell us about human society, economy (diet and food acquisition), technology, wealth, status and complexity?
3. Why were some artefacts fragmented and broken and not others?
4. What types of artefacts were missing from the site?

5. Why do some layers contain lots of artefacts and other layers not as many artefacts?
  
  
  
  
  
  
  
  
  
  
6. What do you think archaeology contributes to the understanding of the human past?
  
  
  
  
  
  
  
  
  
  
7. What aspects of human history interest you and how do you think archaeology could help you find out about those?

## QUIZ

Q1: What are an archaeologists' most important tools?

- a) trowel, shovel, jackhammer, sieve, compass
- b) trowel, brush, sieve, stringline, bucket, notebook, tweezers
- c) shovel, pick, wheelbarrow, crowbar, toothpick
- d) hat, sunscreen, pen knife, boots, sunglasses, compass, notebook
- e) whip, hat, machete, sack, rope and grappling hook

Q2: How can archaeologists work out how old a site is?

- a) by looking at the changes in colour and texture in the soil
- b) by radiocarbon dating stone tools
- c) by sieving and counting the artefacts
- d) by looking at the size and crudeness of the stone tools
- e) by using distinctive time-sensitive markers or a dating technique like radiocarbon

Q3: Why is pottery so useful when found in archaeological sites?

- a) it can tell us about style and whether people had good taste
- b) there is so much of it that archaeologists are guaranteed of finding some
- c) it can tell us how old a layer is and about people's diet
- d) it can be refitted to reconstruct old pots and sold to museums
- e) it is more interesting than stone tools and old bones

Q4: How did metalworking change ancient societies?

- a) it created new and valuable goods that gradually replaced stone tools in many parts of the world
- b) hunger for metal led to the colonisation of new continents
- c) the need for charcoal to operate smelters led to widespread deforestation and land degradation
- d) it triggered the industrial revolution
- e) it did not change societies very much

Q5: What were the main materials used to make tools long before metals were invented?

- a) clay, wood, leather and string
- b) wood, grass, leaves and wire
- c) coal and native copper
- d) stone, bone, wood, pottery and hide
- e) string, stone, feathers and ochre
- f) pottery, charcoal and bone

## NOTES