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ARCHAEOLOGY IN EDUCATION IN THE U.K. 2000

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The UK government strategy for improving standards in education is currently based around the identification of key skills and thematic areas of content for each major discipline. In the early years of secondary schooling this is tested at regular intervals so that the success and failure of the strategy and of individual schools can be evaluated against a background of nationally agreed norms. The blocks of a child's progress through the British educational system are known as 'key stages' and the tests in which they culminate are 'SAT's'. Key Stage 3 and its associated test come at age 11 as children graduate from primary to secondary schools while Key Stage 4 with its associated G.C.S.E's marks the end of the first phase of secondary schooling before children move on to preparation for university. Pupils will often be taking eight subjects at this level which then narrows down to a set of 4-5 interrelated and complementary subjects in AS at age 17 and a degree of specialization is achieved at age 18 as candidates concentrate on 3 subjects in their final year studying for the A2 examination. Such an approach does bring a measure of transparency, comparability and accountability to the business of delivering consistently excellent educational provision but at the same time it also tends to simplify complex issues and exclude many worthwhile subjects simply because they do not fit the current model of what constitute appropriate areas of study.

Since teachers are hard pressed to keep up with the volume of work generated by the new scheme that they are often unwilling to take on new challenges or to broaden their horizons beyond what is centrally prescribed as constituting the 'core' of each 'recognized' subject laid out as a set of skills related to specific content and tested in a consistent, formulaic manner. A casualty of this situation is inevitably Archaeology for a complex and interlinked set of reasons but perhaps particularly because as a discipline it has traditionally been linked with History in the UK despite the huge differences in sources, methodology and philosophy which divide the two subjects into quite distinct traditions at British universities.

The current thinking in History at school level emphasizes themes, within the context of an evidence based approach, which are seen to have a universal

relevance and which can be employed to link similar topics from different chronological periods. Perhaps the most celebrated of these is 'Invaders and Settlers' which is most frequently used to explore the Roman and Anglo-Saxon periods from a perspective that is almost entirely historical despite the huge contributions that have been made during this century by Archaeology to the study of these two topics.

A recent TV series by Simon Schama exemplifies the problem: in a ten part series of fifty minute programmes the whole of British prehistory and history up to the Norman invasion in 1066 is dealt with in one programme!

The opportunities offered by the Bronze Age or the transition from hunting and gathering to farming in the Neolithic are largely ignored despite their huge potential for supplying powerful didactic examples that are capable of conveying crucial 'historical' ideas every bit as effectively as document based approaches. This is not simply a lack of knowledge or expertise on the part of teachers, indeed there has never been a time when more energy has been expended in producing suitable materials for schools, such as the Sheffield initiative in setting up 'Archaeology in Education'. Government agencies have not been slow to contribute either and there is a wealth of worksheets, slides videos and museum access days, which cater for teachers at all, levels in both prehistoric and text-aided archaeology. On television the impact of the 'Time Team' programmes has been enormous with a following of over 2 million viewers at peak weekend times. The colourful characters of Tony Robinson, Mick Aston and Phil Harding have contributed enormously to public awareness of archaeology's aims and methods despite the artificial nature of the format of their investigations.

The heart of the problem is an unwillingness to see archaeological sources as equivalent to historical evidence, an unspoken but real prejudice that somehow archaeology is not a rigorous academic pursuit.

Archaeological evidence is treated as an exotic adjunct, a peripheral curiosity not to be over-used lest it encourage children to question the nature of received wisdom too deeply and to realize that there are no easy answers. The situation in secondary schools is scarcely any better despite the valiant efforts of a few teachers to take pupils out of the classroom to take part in fieldwork and to encourage a physical interaction with the 'history' in the landscape around them.

" It is ironical that the years which have seen the greatest progress in the comprehension of human cultural development since the work of Charles Darwin have coincided with most historians' withdrawal from the greater part of the period in which it took place. At a time when access is on everyone's lips, much of History is being locked up."

Richard Morris, English Heritage Conservation Bulletin, July 2000.

Sadly British history, as experienced by the average child, remains a subject which appears in a puff of smoke from which emerge Julius Caesar, sundry Druids, Roman villas, soldiers and recently gladiators courtesy of the latest Hollywood blockbuster movie. From age 13 most UK schoolchildren have little further contact with their early heritage unless they are fortunate enough to be taking the G.C.S.E. Archaeology course but even here the prevailing trends have resulted in a syllabus which neatly parcels the past into discrete temporal units which are assessed in a very predictable and stereotypical manner.

"Archaeology is the study of past human societies from the investigation of material remains. The definition of material remains is not restricted to those objects dug out of the ground; it includes any physical evidence, which is below the surface of the ground or water as well as above ground. Archaeologists use written evidence to help in their research as well as comparative modern material." AQA SPECIFICATION 2001

The new specification aims to provide an approach to archaeology, which allows teachers a wide choice of elements, which, together, will form a coherent study of the past. Candidates will be required to study both the techniques of modern archaeological research and its place in society, and 'themes', which are wide-ranging in both time and space.

The specification builds on the knowledge; understanding and skills established by the GCSE but also accommodate the needs of candidates who may not have studied Archaeology before. It promotes progression through the AS and A2 levels and provides a suitable foundation for study of the subject or related courses in further and higher education but, at the same time, provides coherent and satisfying courses of study for candidates who do not wish to progress to further study in the subject.

The specification encourages candidates to develop their capacity for critical thinking and to see relationships between the different aspects of Archaeology in its broader perspective and its relationship with other academic disciplines.

During their course of study, candidates have the opportunity to develop their key skills, for example, in the application of number or in the use of information technology. However, the assessment of candidates' communication skills is integral to this Archaeology specification as they read and consider written materials and produce their written responses.

The specification also provides opportunities for independent study and facilitates an understanding of aspects of spiritual, moral and cultural issues by enabling the individual to consider the nature of past societies, human achievements, religious beliefs, moral values and attitudes and their impact on

individuals, groups and whole societies as reflected in material remains.

The new specification is also intended to support environmental education, the European dimension in education and health education in connection with the report, *Environmental Responsibility: An Agenda for Further and Higher Education*, (HMSO, 1993) and the *Resolutions of the Council of Ministers*, (EC, 1988).

The aims set out below describe the educational purposes of a course in Archaeology. Some of these aims are reflected in the assessment objectives; others are not, because they cannot readily be translated into measurable objectives. All, however, are essential aims for this Archaeology course. Schools and colleges are encouraged to provide courses, which match these aims and build on the foundation of knowledge, understanding and skills established by the GCSE, where appropriate. The aims are not listed in order of priority and aims

The aims of the syllabuses are to stimulate interest in and to promote the study of archaeology by

- ✓ developing a sound knowledge of (i)sources;

(ii) methods;

(iii) concepts used in archaeologytoday;

(iv)people and their activities in material culture and technology, economics, settlement, social organization and religion and ritual.

(a) promoting understanding of (i)the nature of archaeological evidence and its limitations; (ii)the archaeological time scale;(iii)methods of recovery of archaeological evidence; (iv)the process of interpretation of archaeological evidence; (v)the place of archaeology in the modern community.

(c) developing the skills of investigation, understanding and communication.

(d) providing a sound basis for further study, employment, and for the pursuit of appropriate personal and leisure interests.

and in addition, at A2 level, by the candidate

(e) undertaking personal investigative work.

UNIT 1: AS

- 1 HOUR 15 MINUTES

35% TOTAL AS MARKS

17.5% TOTAL A LEVEL MARKS

WRITTEN PAPER: ARCHAEOLOGICAL SOURCES & METHODS: SURVEY & EXCAVATION

2x5 PART COMPULSORY QUESTIONS

2+4+5+6+10 = 56 MARKS

While study for Unit 1 could be largely based on one of the many excellent textbooks available currently we feel that teachers would be missing an opportunity if this route were followed to the exclusion of other approaches, even though one textbook in particular (Greene: Introduction to Archaeology) has seized the initiative in offering an internet companion which provides direct links to sites which exemplify aspects of the methodology discussed in each chapter. We advocate a site and artefact based approach which at once familiarizes pupils with the conventional forms of data presentations in the literature, which they will encounter in Units 1 & 2, and provides later opportunities for pupils to capitalize on their existing competence by using these same sites as examples for Themes B and C when appropriate.

Teachers and pupils are encouraged to approach this section from a heuristic standpoint wherever possible.

- even simple surveying exercises based on limited equipment and resources can be very useful and encourages pupils to undertake more ambitious exercises as part of their Personal Study for A2. Where a level is available simple profiles can be measured and graphed in 'Excel' to produce a line or ribbon trace - a very satisfying experience that need take only an hour to complete.

- Copies of older site reports are available from Oxbow Books at very reasonable prices and it is a simple matter to obtain SMR printouts of local sites from county archaeologists - addresses for all of them are to be found in the CBA resource book for teachers.

- Aerial photographs may be acquired as laser copies from the RCHME in Swindon at a modest cost and they have produced a sample pack, which contains specimens and details for searches and ordering further copies.

- Fieldwalking really is best done as a practical exercise, which at least has the merit of being relatively inexpensive. Many archaeological units are willing to give out examples of their pro-forma recording forms or contact sheets for this purpose while appropriate methods for this and other field techniques in this section are well covered in Wass' book: 'The Amateur Archaeologist'.

- Access to magnetometers and resistivity meters will not be an easy matter but there are many good books on the subject and several useful Web sites. English Heritage has produced a series of diagrams of recent work at Stanton Drew. These methods are especially well demonstrated in the Time Team programmes for which

there are two new companion volumes in addition to the pamphlets, which accompany each series.

- Ordnance Survey maps at various scales provide rich material for discussion of site location and spatial patterning of settlements, industrial activities and communication. Geography textbooks can be useful here too. The Domesday Book may be used to assess the advantages and problems associated with documentary evidence or rental and other property documents may be available from the local Records Office which are linked to early maps of towns or an estate.

- Pupils should be made aware of potential local sensitivities to the work of archaeologists in contexts varying from survey work in local cemeteries, through the opinions of interested parties about the treatment of new discoveries such as 'Seahenge' off the Norfolk coast to opportunities to involve local primary school children in archaeological fieldwork.

    - Meaningful practical environmental work can be technically difficult but collecting a modern reference collection of animal bones can offer many opportunities for practical work in the classroom in terms of determining species, age and sex of individual specimens. In a similar way sets of molluscs can be readily identified with the help of a textbook and tabulated to produce simple species frequency graphs, which can be related to real situations such as clearance episodes in the early Neolithic in the Avebury area.

It must be emphasized that actual excavation is beyond the remit of the specification unless undertaken as part of a bona fide training programme. Again Time Team provides many examples, albeit in a truncated timescale, of current approaches which tend to feature minimum intervention and maximum mitigation. Most units are amenable to allowing their work to be recorded on video and this can be used as a spur to experimental work using 'sand-pits' where various scenarios are enacted or set out by one group of pupils and then buried to be excavated and recorded by another group with a video record as control; as pioneered by the U.A.B. at Flor de Maig on a grand scale.

- An appreciation of site formation processes helps pupils to understand the complexities of stratigraphic profiles before tackling a series of exercises which present simplified relationships before graduating onto real published examples.

Explanations of sections should be linked to an understanding of both horizontal and vertical components of the site and how these are recorded, including the use of context sheets and Harris matrices, to sum up the relationships between contexts. The various approaches are well explained in Barker.

- The principles and methods of environmental work are clearly set out in Renfrew and Bahn and illustrated in numerous programmes such as Time Team at Stanton Harcourt and Winterbourne Gunner or Mark Roberts' work on voles at Boxgrove.

EXEMPLIFICATION FROM SPECIMEN MATERIAL:

Question 1 picks up some of the themes from the G.C.S.E. course but approaches them from a different perspective where the emphasis is on interpretation of sources as much as accurate observation. Application of methodologies to the context presented in the paper is also required together with an ability to appreciate and exploit the complementary nature of sources.

Question 2 requires extrapolation from known evidence and in section e) an appreciation of the nature of the archaeological record and of the transformation processes that produce the evidence that is presented in sections and plans.

UNIT 2: AS

- ✓ *1 HOUR 15 MINUTES*
- ✓ *35% OF TOTAL AS MARKS*
- ✓ *17.5% OF TOTAL A LEVEL MARKS*
- ✓ *WRITTEN PAPER: ARCHAEOLOGICAL SOURCES & METHODS:POST-EXCAVATION, DATING AND INTERPRETATION*
- ✓ *2x5 PART COMPULSORY QUESTIONS*

Analysis.

The technical details for this part of the specification are well covered in the major textbooks but it is good practice to relate these methods in all cases to specific examples:

- processing and classification of fieldwork finds (ideally the pupils' own)
- typological analysis of automobile styles, gravestones or bronze axes
- pollen analysis in the Copan Valley or at Avebury
- physical and chemical analysis of Otzi's clothes, copper axe and hair.

Computer and quantitative data analysis should be an integral part of the course not an optional add-on and every opportunity is taken to manipulate data sets, drawn from the literature or from practical exercises, from one form to another to produce pie-charts of pottery types, species spectrum graphs, mollusc and pollen diagrams and graphical presentations of survey data.

Dating

Simple exercises in stratigraphy might form the basis for teaching this topic progressing to consider coins for example as 'terminus post quem' sources of dating evidence. The main chronometric techniques are given good coverage in the textbooks but teaching them in abstract is to be avoided. Limitations and applications are better discussed through case studies:

- Reask A Level Paper 1995 where the paucity of samples for C14 assay severely limited interpretation.
- Boxgrove for faunal dating of elk and voles set against the mollusc clock provided by amino acid racemization.
- East African sites containing tuffs for Potassium Argon
- obsidian hydration as a tool in assessing the rate of decline of Mayan civilization at Copan
- dendrochronology at Chaco Canyon
- The ' Archaeology Workbook' also provides useful, albeit fictional, opportunities to assess the problems of putting data into sequences by both relative and absolute methods.

Interpretation

There are many possible approaches to teaching the study of survival of evidence; rooted in taphonomic perspectives of processes at work in the burial environment or in studies of particularly well preserved evidence such as the Altai Ice Maiden or the Inca Capacocha children as well as the more familiar bog bodies of northern Europe.

Limitations can be addressed as problems or opportunities to draw in other approaches to the past perhaps best exemplified by ethnoarchaeology at 'Millie's Camp', Binford's studies of use of space among hunter-gatherers or Ligabue and Toth's work on relating contemporary stone axe production in New Guinea to similar technologies in the past.

Reconstruction and experiment have received much attention from the media focusing either on economy, as at Butser Farm, or on technology of stone transport at Stonehenge and the dramatic effect of now vanished megaliths on astronomical phenomena at Avebury. The standard work on presentations

remains English Heritage's 'Visitors Welcome' and much of their other educational output has a relevance here too alongside study of material produced by groups such as Wessex Trust, MOLAS, Jorvik and the Temple Bar project in Dublin to promote their own commercial activity or to present work done for clients. Pupils' own experience on sites and in museums should also be useful to weigh against current best practice.

Mature consideration of styles of presentation should lead seamlessly into ethical debate about the rights and wrongs of recent thought and action in regard to actual sites, monuments and artefacts:

- Should the Elgin Marbles remain in Britain when the Greeks claim they are an inalienable and intrinsic part of their national identity?

- Should the Benin bronzes be returned to Nigeria?

- Is it right that Peru's 60,000 sites should be left at the mercy of looters because the country cannot afford to protect them adequately?

- Was it right for Glasgow to return *their* 'ghost Shirt' to the Sioux?

- Was it appropriate for skeletal material from the Spitalfield crypt to be studied at all?

- What should archaeologists do with the thousands of skeletons, which have come to light as a result of recent work at Spitalfield Market?

- Should new roads and buildings take precedence over burial sites?

Hunter and Ralston have assembled most of the relevant material for Britain but perhaps the most comprehensive example is that of Otzi where not only the ethics of his undignified 'excavation' but also the debate about his place of origin and ultimate 'tasteful' display in Bolzano provides scope for personal opinion. From here discussion can be expanded to take in commercial exploitation. Major issues such as repatriation of indigenous remains also raise huge and intriguing questions and the Web support in terms of documents and photographs is voluminous.

EXEMPLIFICATION FROM SPECIMEN MATERIAL:

Question 1 builds on material covered at G.C.S.E. but requires that techniques be discussed in the light of the case study presented. Choices must be made on the basis of evaluation of the evidence. Judgements about the nature of the sources should inform selection of the most appropriate methodologies for their analysis.

Question 2 calls for handling of statistical data in various formats together with an evaluation of ethical

issues surrounding the handling and ultimate disposal of human remains.

UNIT 3: AS

- ✓ *1 HOUR*
- ✓ *30% OF TOTAL AS MARKS*
- ✓ *17.5% OF TOTAL A LEVEL MARKS*
- ✓ *WRITTEN PAPER ON THEME A: RELIGION AND RITUAL*
- ✓ *FORMAT AS UNITS 1&2 BUT MARKED OUT OF 45 NOT 56*

THEME A: Religion and Ritual

(including knowledge of available archaeological information relating to mortuary practices, art and symbolism, ritual structure and locations, beliefs, religious and ritual organizations. In all these cases, interpretation should follow on from knowledge of the chosen examples.)

Religion and ritual focus respectively on belief systems and on actual activities related to such **beliefs**. For example, there may be belief in a journey to an afterworld, which demands that **mortuary practices** and their **related structures** (such as cremation and inhumation) include the provision of food for the deceased during such a journey or the construction of elaborate **funerary monuments**. Rituals may be a personal affair or may be a highly organized group activity, with a clear **structure** of performance at special locations, often in the hands of specialist **religious** and **ritual organizations** (such as priesthood). Rituals can often be shown to take place at particular **locations** and/or in specific **structures**, which often demonstrate association with the surrounding **landscape** and act as a focus of belief. (Such locations and structures might include lakes, peat bogs, rivers, caves, henges and other built structures.) These locations are often long-lived and adopted by successive cultures. Religious belief and ritual practice are often associated with symbolic expression, very often linked to **art** works, making use of **symbols** which allow differing interpretations according to the differential knowledge of the observer, but capable of conveying strong messages through the images employed.

Mortuary Practice

Mortuary practice may be tackled at several levels and on different scales according to the choice made from those cultures offered in the specification. An exploration of variations in Neolithic tomb type and difference in grave goods or the disposition of bodies may be the preferred option in the Prehistoric Britain and Ireland option or teachers may opt to concentrate on Late Bronze Age or Iron Age barrows and the significance if inhumation or cremation. A large corpus of well-known material is available in all these spheres from the Boyne Valley through the Avebury ritual landscape to the recent excavations at Westhampnett in Sussex.

In the Egypt option teachers may focus on particular tombs or a tomb type. Where the degree of resolution is much finer it will be appropriate to concentrate on an in-depth coverage of a more restricted range of evidence provided that these examples are chosen from several periods. The Memphis/Saqqara complex offers many suitable case studies such as the Pyramid of Unas, the Step Pyramid of Zoser or the tombs of Horemheb and Ramose. The Valley of the Kings with its elaborately decorated tombs holds sufficient detail to cover all of the topics in this theme by judicious selection of a range of types. The recently reorganized Egyptian galleries in the British Museum are also ideal for this purpose especially the sarcophagi and grave goods and the education officers there are producing support material aimed at 'A' Level.

The Roman World equally offers an unparalleled richness of potential examples from the Baker's Tomb near the Appian Way in Rome through Augustus' own mausoleum with its solemn and substantial state architecture and iconography to the familiar reconstructed monument to Classicianus in the British Museum or the recently revealed lead coffin from Spitalfield Market in London. There is so much scope for analysis of cemeteries and their location and for study of tombstones supported by detailed documentary evidence.

The Maya world presents us with dramatic temple-tombs such as that of Pacal at Palenque which are embedded in a tightly woven fabric of iconography and ritual that is echoed by the complex designs on Mayan textiles. There is rich symbolism here in the location of graves, in the use of jade and cinnabar and in the clear links between living people and mythology that are so prevalent on the images on vases, temples and sarcophagi. Lower down the social scale we can see commoners' graves below household patios accompanied by equally rich symbolism connected with the ancestors and the great cycle of heaven and earth.

Landscape ritual and belief.

All four prescribed cultures offer ample opportunity to discuss the orientation of ritual locations in the landscape, relationships with natural features and the built environment as a recreation of a society's view of the cosmos. In Prehistoric Britain and Ireland this might take the form of astronomical alignments and special effects at Newgrange or Godmanchester, ritual landscapes with settings of stones and processional avenues such as Avebury with the newly re-discovered Beckhampton Avenue. For the later prehistoric period bog bodies lend themselves to discussion here.

In Egypt attention might focus either on recent fringe theories about the significance of the position of the Giza pyramids in relation to the stars or concentrate on the interpretation of rituals depicted in the great temples such as Karnak and Edfu.

Pompeii provides a set of appropriate structures for study which have the merit of being consecrated to particular identifiable cults both domestic and foreign, while in Britain the temple at Bath or the mithraea in London and on Hadrian's Wall have scope for comparison. The sequential nature of the buildings at Palenque, Tikal and Copan, where one ritual structure is ceremonially decommissioned and another built on top, where each new structure is physically and iconographically related to its predecessors, where the whole complex of a city's Acropolis represents a microcosm in stone of that society's beliefs about the gods and how mortals relate to them, gives a wonderful opportunity to study the interconnectedness of the secular and the religious and the continuity of ideas and their physical expression over time.

Art and Symbol

Despite the absence of documentary evidence Prehistoric Britain and Ireland provide a wealth of art and symbolism such as the designs on megalithic tombs and in their layout on pottery associated with ritual sites, and in Iron Age art such as the Battersea Shield or in the symbolism of votive depositions at Lindow and in the Thames.

The other three cultures all offer a richly text-aided archaeology so that we can study, in the case of Egypt or the Maya the symbolism of individual glyphs, the nature of glyphs as a medium of communication and the ideological messages that they were intended to convey both in words and ideas when viewed collectively as a part of a system of iconography. One might exemplify these approaches by a study of Structure 26 at Copan, the 'Hieroglyphic Stairway' which holds the longest inscription in Precolumbian America, and its associated royal scribe burial and attendant symbolism. In Egypt the temple of Karnak offers key insights with the physical symbolism of the building such as the representation of the original swamp of creation by the Hypostyle Hall or the notion of purity represented by the Sacred Lake and the depiction of shaven priests. Particular rituals are depicted here like the journey of Amun's sacred boat from Karnak to Luxor with attendants singing and dancing.

In the Roman World one may choose a small or large scale study, private or public art and symbol from the domestic lararium in the House of the Vettii or the 'genius loci' now embedded in a church wall at Tockenham to the elaborate state symbolism of the forum which is as much to do with projection of earthly power as religious.

The Roman Gallery in the British Museum contains many pieces that are suitable for this theme from the Christian symbols on the Water Newton treasure to the glorious pagan Roman and Celtic 'melange' represented on the Mildenhall dish.

It will be clear from the previous discussion that the divisions in the specification are for convenience and that in reality many of the suggested

examples will give coverage of several if not all of the sub-topics in their theme. Careful choice of case studies will yield an internally consistent, comprehensive and flexible set of data that can be brought to any question set on this theme.

EXEMPLIFICATION FROM SPECIMEN MATERIAL:

All of the questions in this unit follow the example set in Units 1 and 2 in requiring detailed observation and interpretation of sources against the background of a topic area that is prescribed by period and geographical location. The same kind of appreciation of context and of what is permissible within the parameters of that context is also needed. Evaluation and judgement lie at the heart of what is sought.

UNIT 4: A2

- ✓ *1 HOUR 30 MINUTES*
- ✓ *15% OF TOTAL A LEVEL MARKS*
- ✓ *WRITTEN PAPER ON THEME B: SETTLEMENT AND SOCIAL ORGANISATION*
- ✓ *1 COMPULSORY STIMULUS RESPONSE QUESTION & 1 ESSAY FROM A CHOICE OF THREE*

THEME C: Settlement and Social Organization

(including buildings, settlement types, landscapes, territory, settlement status, population, gender, warfare, status, social change, social control, specialists.)

Buildings comprise all structures found on a settlement site, whether domestic (tent, house, etc.) agricultural (barn, granary, cow-house, dovecote, stable), public (forum, courthouse, town hall), or ritual (church, shrine, temple). **Settlement types** may include caves, farmsteads, villages, towns, religious houses or crannogs. **Landscapes** include the physical environment of settlements, how a settlement interacts spatially and in terms of resources with its surroundings, and the way in which activities connected with a settlement modify the landscape. This topic also includes the overall pattern of settlement within a landscape. **Territory** involves an examination of the area under the control or influence of an individual settlement, or a group of settlements, often revealed by physical boundaries between settlements or areas (such as banks and ditches, walls, lines of fortifications) or changes in material culture or resource sources. **Settlement status** includes the examination of relationships between settlements of different size and function, identifying the presence or absence of hierarchies.

Population involves studying the ways of reconstructing the size and nature of population groups, while **gender** studies and examines the assumptions about

male and female roles in society as reflected in the literature and compared with available archaeological information. Evidence for the nature of **warfare** in a given society, as reflected in, for example, weapons; armour and fortifications can document regional relationships and societal stress. Personal **status** as suggested by burial or settlement data may be achieved or inherited, and examination of the ways in which status is inferred by archaeologists is part of this topic. **Social change** may be implicit in visible changes in personal status, settlement hierarchy, industrial organization (for example, from local to regional, dispersed to centralized production or vice versa), and the organization of burial and other rituals. **Social control** may be demonstrated through the limitation of access to prestige goods, for example, through a controlled agricultural system such as feudalism, or by manifestations such as centralized storage. **Specialists** imply an organization of production which allows time set aside for a single pursuit, and may involve social and economic control if attached to high status groups or to a state organization (e.g. the Roman army); specialists may, however, function within dispersed and independent networks.

SETTLEMENT AND BUILDINGS

Study in this theme must be rooted in detailed work on particular sites. There is no prescription in this Unit as to area or period and teachers may therefore exemplify the topics from a range of cultures or stick to one to suit their background and special areas of expertise.

Palaeolithic sites such as Pincevent, Molodova and Dolni Vestonice provide opportunities for discussion of structures and their reconstruction and also their relationship to the landscape. Later prehistoric sites such as Catal Huyuk, Trethellan Farm and Danebury offer more complex interaction within and between sites and an appreciation of their role as part of a system. Landscape and territory may be studied through a variety of techniques of spatial analysis at various scales from the use of space within a site, as at Guila Naquitz and Cueva Blanca in the Oaxaca Valley or in Clark's classic study of Glastonbury, through studies of hunter gathers' use of space, such as Binford's work at the 'Mask' site or Foley at Amboseli. At the other end of the scale fruitful opportunities are offered by studies of landscape management systems such as Fleming's study of the Dartmoor 'reaves' or of overtly defensive systems such as Hadrian's Wall or Offa's Dyke.

Despite this concentration on the physical evidence there should also be an awareness that not all boundaries and access restrictions are necessarily physical and 'real'. Zones of exclusion and taboo should also be discussed.

Later nucleated and often walled settlements such as Pompeii and London are also profitable sources for discussion of settlement status in terms of complexity of structure, and social and

political organizations present, quality of materials and presence of exotic items, indications of social stratification and position in the landscape.

ORGANISATION AND POPULATION

Gender studies may be approached through analysis of the social use of space as Flannery and Marcus have demonstrated at Guila Naquitz in attempting to identify men's and women's work areas. Works of art can suggest gender issues such as the interpretation of 'Venus figurines' from Palaeolithic Europe while the status of women may be examined through mortuary evidence from high profile burials such as 'The Princess of Vix' or Queen Pu - abi at Ur. A different kind of status may be visible in the female graves at Khok Phanom Di where craft specialization seems to have played a role in achieving higher social ranking. The Pazyryk 'Ice Maiden' also suggests high status based on a particular talent.

In addition to the physical evidence of weapons and fortification the sources for warfare sometimes include special cases where actual battles become visible such as the 'war grave' at Maiden Castle with its famous iron arrowhead embedded in a defender's spine or the mass grave at Towcester recently subjected to detailed analysis in terms of the sequence of events and the injuries visible on each individual.

Personal status is often suggested on the basis of grave goods with individuals at Varna, Hochdorf, royal burials in Egypt and Mesoamerica, such as those of Tutankhamun and Yax K'uk Mo. Other approaches look at whole cemeteries and assign values to types of grave goods to establish differentials, which may be interpreted in terms of gender and age. Such work is exemplified by Shennan's studies at Branc and those of Peebles at Moundville. Clearly status is linked to economic and religious factors in many societies and anthropological parallels such as the 'Big Man' system in Papua New Guinea offer a useful alternative approach. Status may of course be inferred from the circumstances in which past people lived their lives, from the quality of construction of their houses and how long they took to build, from this sophistication of architectural and artistic detail and from associated iconography which will in some cases give direct evidence of status such as the Palace Tablet at Palenque which explicitly depicts Pacal receiving the crown from his mother Lady Zac - Kuk or the monument associated with Egyptian pharaohs where the kingly titles usually accompany their names and are marked out in cartouches and emphasized by particular icons such as the white and red crowns of upper and lower Egypt. The white crown or 'hedjet' and the red crown or 'deshret' are both depicted on the famous Palette of Narmer, now in Cairo Museum, as early as 3,000 B.C.

Social control is manifested in many ways from the organization of labour for large communal monuments in Neolithic 'Wessex' or in Egypt through religious control exerted by Maya

shaman-kings and illustrated in the Yaxchilan lintels, some of which are available for study in the Mexican gallery of the British Museum. A study pack targeted on this specification, produced by a joint AQA - British Museum initiative will be available soon. Explicit examples abound in Egyptian art from 'smiting scenes' on artefacts and temple walls, to images of bound captives and similar depictions occur among the Maya at Bonampak for example.

Specialization and its links with complex society requires careful explanation perhaps in the context of attached specialists at Copan or in Morris' work at Huanuco Pampa. Earle who has studied incipient specialization in Hawaii and in the Inka Empire has done much useful work in this area.

At the other end of the scale there are many examples of independent market specialists in Roman London, where a sandal-maker's workshop has been excavated, and in Viking York. Models from Egyptian tombs show many specialists at work and there is a fine collection of them in the British Museum.

EXEMPLIFICATION FROM SPECIMEN MATERIAL:

The questions in Units 4 and 5 require the candidate to build on the qualities required at AS but to substantiate their findings in greater detail and to argue their case in a more sophisticated style. Issue which arise from the study of status and gender in question 1 will provoke complex interrelated ideas about social structure which also require the candidate to be aware of bias and androcentric views which may cloud interpretation. This clearly represents a step up in demand from AS Level.

The essay questions in Section B of Units 4 and 5 require a candidate to marshal complex arguments, select judiciously but in detail from their knowledge base in support of those arguments and reach reasoned conclusions. The development of this sort of answer which requires an expansive and yet closely focussed style is very different from the shorter more directed questions typical of the AS Units.

UNIT 5: A2

- ✓ *1 HOUR 30 MINUTES*
- ✓ *15% OF TOTAL A LEVEL MARKS*
- ✓ *WRITTEN PAPER ON THEME C: MATERIAL CULTURE, TECHNOLOGY AND ECONOMICS*
- ✓ *1 COMPULSORY STIMULUS RESPONSE QUESTION (2 PART) & ONE ESSAY FROM A CHOICE OF THREE*

THEME C: Material culture, technology and economics

(including art, materials, production, products, specialization, extraction,

trade, transport and communications, subsistence, intensification, storage, exploitation of plants and animals.)

Material culture includes all artefacts made by humans – those, which are purely functional in intent as well as those which may be decorative or considered works of **art**. The study of material culture involves the understanding of how artefacts were made (**production**), from the nature of the **materials** used, and from where they derived (**extraction**), to the techniques used to fashion them (**products**). Analysis of material culture should also focus on the ways in which artefacts might have been used, possible reasons for their adaptation, the social and economic positions of manufacturers, and whether the techniques involved were common knowledge to all in the society or reflected restricted skills in the hands of **specialists**.

The **exploitation of plants and animals** involves the study of food resources available to human groups and the ways in which they are used, from hunting and gathering, to fishing and farming. As part of individual, community-based or state-controlled operations, the theme looks at the **subsistence** base for the society studied, in its widest context. The study of **storage**, both the physical structures designed for storage and the reasons for individual or centralized storage, helps towards an understanding of the functioning of social relationships and the concepts of planning and strategies for survival. **Intensification**, which may be identified in the visible, increasing control of the land (for example, enclosure, regulated field systems) and in the use of storage, can show both population pressure and changes in social control. **Transport and communications** (by track and road, animal or vehicle, boat, sled, ski, canal and railway) show the relationship between groups, both neighbouring and distant, while a study of **trade** as revealed by archaeology may show down-the-line or directional trade, markets and money, high-status control or individual enterprise, state organization or near isolation. All these reflect social organization.

MATERIAL CULTURE AND ECONOMY

Studies of art for this theme concentrate on the technology of their execution rather than on the interpretation of their meaning. This if the context of study is Palaeolithic cave art the focus should be on skills of draughtsmanship, materials used for paint, such as manganese and ochre, and on styles of painting with the fingers or 'brushes' or more indirectly by blowing paint through tubes or stencilling.

Pupils should be able to define what they understand by the term 'material culture' and be aware of the primacy of learned behaviours, which vary from one culture to another both spatially and temporally, in creating the archaeological record. They should also have a good understanding of the processes involved in the production of several artefact types, such as the Levallois prepared core technique for the production of Mousterian flakes and paints, copper metallurgy at Batan

Grande in Peru or pottery in prehistoric or Roman Britain. Beyond this they should be familiar with at least one example of diachronic change and development of technology such as the production of bronze axes from initial flat types to later socketed axes or indeed the gradual improvement in the efficiency of stone tools from Oldowan pebble tools through Acheulean and Mousterian types to the 'creative explosion' of Upper Palaeolithic types. Heidi Knecht's study of bone and antler projectile points is a useful case study of one type showing the relationship between raw material, available technology, environment, conceptual ability and sensorimotor skills.

Extraction sites such as Grimes Graves, Great Langdale and Great Orme should be studied to appreciate the technology of extraction and the scale of production which will often involve specialist labour. An awareness of the materials habitually exploited by the societies studied is essential together with an understanding of the effort involved in acquiring and working them such as obsidian at Franchthi Cave which would have to be brought from the island of Melos or working of jade in Maya society where metal tools were not available.

ECONOMICS

The study of subsistence ought to include examples of both simple and complex societies, of food gathering as well as food production. Such studies will demonstrate how food acquisition is often at the heart of other aspects of society such as gender relationships, social structure, whether egalitarian or hierarchical. Ideally case studies would cover hunter-gatherer societies as well as pastoralists and sedentary farmers. An appreciation of the potential and limitations of animal and plant evidence is required - this should be susceptible of being elaborated from material covered in the A/S course as part of Units 1 & 2.

Hunting of animals at Boxgrove, Stellmoor and Tell Abu Hureyra provides one type of scenario which may be balanced by study of farming examples either from the Neolithic Near East where species spectrum change can be demonstrated in PPNB levels at sites like Jericho, 'Ain Ghazal and Tell Abu Hureyra alongside physical signs of domestication in wheat, barley and ovicaprids where human interference has resulted in genetic change. In later periods study might focus on sites like Danebury or on Roman Villa systems to illustrate large-scale production and storage of cereals along with culling and management of a range of species. Danebury with its huge bone sample is especially useful here.

Intensification of agricultural production often leaves significant traces in the landscape such as the drainage ditches at Kuk Swamp or the Maya and Aztec 'chinampas' at Pulltrouser Swamp and Tenochtitlan. Recent satellite imagery techniques have revealed huge complexes of 'bajos' in the lowland Maya region now shrouded in vegetation but sufficient to demonstrate that huge areas of rainforest were

cleared and intensively cultivated while in Mesopotamia complex canal systems watered the land between the rivers at urban sites such as Mashkan Shapir. In the Oaxaca Valley there are canals in the piedmont zone and a huge dam at Arroyo Lencho Diego. This concentration on agriculture should not lead us to ignore the potentially harmful effects on the environment of over-cultivation nor the equally important increase in the intensity of exploitation of stock animals which resulted in the construction of elaborate field systems and land divisions at sites such as Behy-Glenulra and the Dartmoor 'reaves'. Pollen and other types of environmental evidence can often be key in establishing the ebb and flow of human impact as both pollen and mollusc data has shown at Avebury and Stonehenge by tracing cycles of forest clearance and later regeneration in association with fluctuations in the intensity of agricultural exploitation.

Evidence for storage ranges from suggested 'pemmican' made from surplus reindeer meat at Stellmoor through many types of storage facility such as pits at Danebury, large pithoi at Knossos, Roman military granaries at Housesteads and Corbridge, circular warehouses for freeze-dried potatoes at Huanuco Pampa, to remains of the actual stored product carbonised in pits, preserved in amphorae or attested by indirect evidence such as the presence of grain beetles.

Transport and communication is evidenced by remains of tracks and roads, such as the Sweet Track or Roman and Inca road systems with their ancillary structures, or of actual vehicles from the four-wheeled carts in burials at Ur, also depicted in art, through a range of shipwreck evidence, which demonstrates the evolution of shipbuilding techniques from the Kyrenia ship which was constructed hull-first in about 300 B.C. to the Serce Liman ship built from first around 1100 A.D.

We should not ignore the use, and absence, of animals for riding and draught purposes beginning at Dereivka with evidence of bit-wear. The lack of draught animals in Mesoamerica had a profound effect on long-distance communication and trade.

The anthropological theory and geographical techniques that often underpin studies of trade are an important aspect of study in this area and pupils should be familiar with the terms set out in the specification together with some of the important anthropological studies of exchange mechanisms such as Malinowski's work on the 'Kula'. Equally important is an understanding of the main archaeological approaches to trade through fall-off analysis, distribution maps, characterization of raw materials and actual trade items. Case studies might include Roman pottery imports from the Continent into Britain, shipwrecks as evidence of Mediterranean trade, obsidian in Turkey, turquoise in Mesoamerica, store areas in Neolithic Britain and Aztec trade and markets as evidenced in the Codex Mendoza and by Spanish documentary sources concerning the

'pochteca' system and its staple currency of quetzal feathers and cacao beans which is underlined by the images of merchants and their backpacks from the rather earlier site of Cacaxtla, studies of the 'Swahili Corridor' based on sites like Shanga, of Assyrian outposts like Assur and of the large-scale production and distribution of amphorae and their contents of wine and garum by the Sestius family based on the site of Cosa provide examples which pull together many of the strands of this theme.

While the themes are separate, it will be clear from the explanation of the topics that they interlock and overlap and relate to Theme A (Religion and Ritual) which is studied as part of the AS syllabus. For example, an examination of specialization within Theme C (Material culture, technology and economics) cannot ignore the specialists and ideas of status and social control which are topics belonging to Theme B (Social organization), as well as production of artistic material, a topic again belonging to Theme C. However, candidates must ensure that they draw on contexts with geographical distribution and on period(s) of sufficient breadth and depth. In this way a variety of changes, similarities and differences can be exemplified with specific reference to time and place. Candidates must not narrowly restrict their coverage to very limited timespans or ignore the subject matter of Theme A (Religion and Ritual), that would deny them the breadth and depth required by the questions in the A2 units. They should also root their studies firmly in archaeological evidence in order to ensure that interpretation is based on knowledge and understanding.

UNIT 6: A2

- ✓ *PERSONAL STUDY*
- ✓ *20% OF TOTAL A LEVEL MARKS*
- ✓ *3500-4000 WORDS*
- ✓ FOCUS ON LOCAL FIRST-HAND INTERACTION WITH ARCHAEOLOGICAL MATERIAL

The Definition and Nature of the Personal Study

Candidates are required to submit a Personal Study based on fieldwork or personal research on an archaeological topic to be approved by the Board, and to present the results in the appropriate media. Such fieldwork may be based on surviving evidence whether in situ or in museums from any period or area of the past. Evidence is required of first hand experience of sites and/or artefacts, and the use of primary and secondary sources. In choosing a topic for the Personal Study, candidates normally focus on their local environment. The Personal Study must involve a degree of reflection on archaeological methodology thus it will enhance and reinforce their study of the AS and A2 specification. There must be evidence of interpretation and joint projects are **not** accepted from groups of candidates. Candidates are instructed that in no

circumstances should individuals or groups of candidates take part in archaeological excavation except under proper professional supervision.

The purpose of the Personal Study is to test the candidate's ability to undertake independent investigation and enquiry by

(i) acquiring, selecting and organizing relevant knowledge;

(ii) using and understanding appropriate skills in the analysis of archaeological questions;

(iii) evaluating material and reaching appropriate conclusions.

The candidate is therefore required to

(a) identify an archaeological topic;

(b) carry out an investigation of the topic;

(c) report the results of that investigation in 3500–4000 words.

The Personal Study must involve an element of first hand investigation and observation by the candidate. The syllabus encourages candidates to show individuality in their choice of topic. However, the study must **not** comprise an account of time spent on an excavation. If the candidate takes part in a properly supervised excavation, and uses material from the excavation (with the Director's permission) to help elucidate the topic which is being investigated, then that is acceptable. The selection of a topic for investigation should be related to the amount of material available, to the scope for personal and individual investigation in the field chosen, and to the amount of time which can reasonably be allocated to the study.

Candidates are to be encouraged to reflect on archaeological methodology and to set their work in its appropriate research context.

The following list is given to indicate the range of topics that have provided a suitable basis for a Personal Study.

The topic investigated in the Personal Study could be based on

- a landscape study of a given area - either rural or urban;
- a study of a site or a limited group of sites;
- the investigation of material deposited in a museum, e.g. stone artefacts or a range of pottery styles;
- a critical appraisal of the state of knowledge of the archaeological record in a limited area;
- the identification, planning, carrying out and evaluation of an archaeological experiment or reconstruction;
- a critical appraisal of the methodology of a pioneer archaeologist in a given area.

CONCLUSION

It will be clear from the previous discussion that there is a considerable amount of useful work being done in

schools and colleges, supported by national and local agencies in addition to the help received from professional archaeologists in Units and in University departments. Upwards of a thousand students are expected to be taking the new A2 examination by 2001; all of whom will be looking to find meaningful assignments in the field in order to meet the coursework requirements of the specification. We must work together in the U.K. to satisfy this demand and to utilise not only the labour potential that it represents for tackling marginal projects that might not be undertaken by professionals under time and financial constraints but also capitalize on their huge enthusiasm and energy by encouraging them to pursue their studies at a higher level. This has to be in the interests of universities teaching archaeology but all too often they are at least ignorant of developments in secondary education and at worst project the impression that everything achieved before the age of eighteen is only peripherally relevant to what happens thereafter. This applies to teachers as well as pupils: on so many occasions I have been asked by lecturers at a conference, " So what do you do?" When they realize that I am *only* a teacher their expressions glaze over and they hasten off in search of someone more profitable to mine for information and contacts. We must work harder to inform tutors at university of what is happening in schools and they in turn must recognize the potential that is being sent in their direction.

Professor Peter Ucko, who was chief midwife at the birth of the ideas that gradually coalesced to become the framework of a modern approach to archaeology in schools, prophesied in 1988 that the impact of this new course would be such that universities would have to consider modifying their first year course to cater for students who arrived having just taken the A Level examination. The alternative is to squander the enthusiasm of these young people by forcing them to repeat much of what they have already learnt and perhaps drive them into pursuing other courses. Many of my ex-pupils have found this a problem and have ultimately veered towards anthropology rather than pursuing their first love of archaeology. The problem is compounded when they encounter disinterested or positively off-putting experiences at the hands of lecturers who take no responsibility for what their students learn or indeed whether they even find the lecture interesting. With all due respect to British lecturers in the room I find this a distressingly common experience, judging from comments received this term and in previous years. I am aware that university is meant to be different and that we cannot spoonfeed students if they are to develop ideas and critical faculties of their own; yet I am sad to see cynicism with the adult world set in so early in the course of their tertiary studies.

On the other side of the fence we teachers have a responsibility to ensure that the information we impart in the classroom is of a quality and accuracy that will be welcomed by our counterparts at university. We will not be taken seriously by the archaeological profession or by researchers until it is clear that we are supplying them with

students who are au fait with current philosophy and methodology in our discipline, in practice in the field as well as in abstract, who are aware of the constraints and limitations under which archaeology operates and who are beginning to be able to make intellectual connections and grope towards original ideas of their own. I we can do this consistently I believe that our contribution will be welcomed more and more. If we fail then we will be open to the suggestion that we should leave it to the 'big boys' who know what they are doing. All of my current efforts as Chief Examiner in this discipline are aimed at providing the support for teachers and pupils that will enable this dream to take a few steps nearer reality.

- A Specification book and Specimen Materials book have already been produced.
- A support book for teachers is due by the end of November
- In collaboration with my fellow examiners I am writing an archaeology coursebook which aims not to supplant the many excellent textbooks already in print but to guide students through the basic techniques of study required up to undergraduate level in the context of suggested approaches to both methodology and to interpretation through a series of carefully chosen case studies.
- Meetings have been held in regional centres around the U.K. to disseminate information about the new specification and to create a forum for discussion among teachers about the most fruitful approaches to delivering the course, given the huge range of possible contexts in which it may be taught.
- Links with the British Museum are very active. They are hosting special archaeology days targetted on specific areas of the examination and one of their Education Officers who used to teach archaeology is helping me to produce packs of information relating various galleries to the needs of the specification in areas such as Ancient Mexico and the Iron Age. His curatorial colleagues are also involved in this initiative.

Two of my proudest moments in the last twenty years of teaching archaeology were firstly when an ex-pupil received a First in Archaeology at Edinburgh, going on to be awarded his Ph.D. by Cambridge where he has subsequently done some teaching, and secondly when an ex-pupil came back to school to direct our first full-scale excavation of a limekiln site that he had identified while doing his A Level course. He is now in the final year of his postgraduate course at Sheffield University.