THE EGYPTIAN DIG PROJECT

This document is best used at school for pre-dig or follow-up activities.

ABBEY MUSEUM
OF ART AND ARCHAEOLOGY

THE EGYPTIAN DIG PROJECT

To the Teacher (Senior Archaeologist!),

Welcome to the Abbey Museum of Art and Archaeology.

Recent discoveries within the Museum grounds have indicated the possible existence of an Egyptian burial site, probably dating from the 18th Dynasty and the reign of king Amunhotep III. Because of the considerable historical importance of the find, the Museum has decided to excavate the site. There is certain urgency in this operation, as a new building is planned for the area.

This is rescue archaeology! The urgency of the situation requires that the dig must continue regardless of the weather and comfort. We encourage you and your team to come prepared. The dig is covered with a tarp to protect the students from the sun. Please inform your group that ***suitable clothing (old), hats, covered shoes***, sunscreen and insect repellent is advisable.

The dig site covers an area of approximately 4 metres square, and will be divided into 1 metre square grids.

Because the site has been partially destroyed we recommend **a limit of 25-30 students**. They will be divided into groups of three with each member taking turns to undertake specific roles of excavator, data recorder and soil sifter. This will allow each student to experience hands-on digging. One student will be carefully excavating a 1 metre square grid; another sieves the excavated soil and cleans any finds while the third records the data.

Included with this letter is a Teacher's Resource Kit containing useful and relevant information that we hope will assist you and your students to prepare for this exciting experience. Thank you for assisting us with this project.

Sincerely

Michael Strong
Director

PS. Please make cheques payable to: ***Abbey Museum of Art and Archaeology Inc.***

Abbey Museum of Art and Archaeology, 1 – 63 The Abbey Place, Caboolture, 4510
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Introduction to the Dig

Archaeologists are people who study the past. The word *archaeology* comes from ancient Greek and means the science of antiquity. Archaeology is distinct from the study of written documents – although these can be of great value – and is inseparable from objects. More than most sciences, archaeology arouses considerable excitement, particularly when the discoveries are linked to some famous person, place or event.

The buried city of Pompeii, the treasures of ancient Egypt, the death pits of Ur, the painted cave of Lascaux or the terracotta army of a Shang Chinese emperor, all capture our imagination. But equally important can be those sites where a few bones or pottery shards tell us about the course of history. Archaeology can bring to life the past, or in Mortimer Wheeler's immortal words, *"put flesh on the dry bones of history"*.

Archaeologists are like detectives. They are given a number of clues and then have to sift the evidence for proof that allows them to reconstruct events. Each clue must be evaluated and placed in context like pieces of a jigsaw.

It has been said that under our feet is a buried museum. Most objects found by archaeologists have become buried over the centuries under debris or were buried deliberately. Sometimes, whole towns became buried, as at Pompeii, but more often archaeological sites are merely a scatter of shards or flint tools where careful excavation is required to reconstruct the story.

To do this, archaeologists use an immense number of skills and techniques.

Pollen analysis, dendrochronology and **carbon dating** are but a few of a host of new dating techniques that include thermoluminescence and potassium-argon dating. But basic dating is still provided by **stratigraphy** during an excavation.

Field excavation is one of the fundamental techniques used by archaeologists to excavate sites and find objects. One of the crucial things in excavation is to recognise the stratigraphy which can help interpret the location of objects to each other and establish a firm dating **chronology**.

Stratigraphy can best be visualised as a series of layers put down over different periods of time. Generally, the lowest layer or '**spit**' is the oldest and successive levels above are progressively younger. But sometimes an '**intrusion**' will occur when, for example, a posthole is dug through several layers, a post inserted and then the surface evidence is destroyed. Each level is given a special number (e.g. 'Spit 5'), which identifies the level where an object is found.

Rather than excavate everything at a measured level, some archaeologists prefer to use a different technique which excavates a **cultural feature** regardless of whether it intrudes into another spit. Features may be represented by a stone wall, a foundation,

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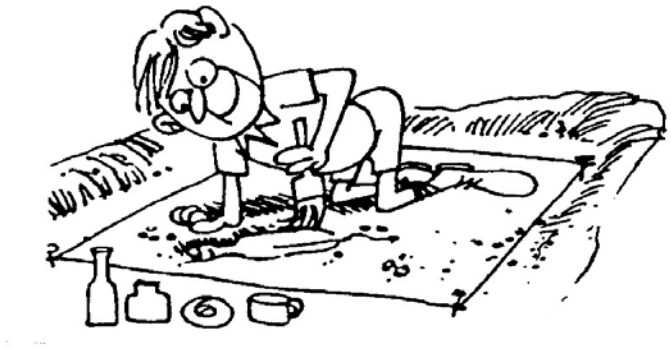
a row of post holes, or other large element.

Each object is carefully **mapped** onto a master plan and the data written into a field **notebook** or laptop computer, and if possible, drawn in relationship to other items above and below. **Photographs** are taken so an exact record is kept. All soil from the excavation is weighed and sifted or in some cases **floatated,** using water to separate out tiny artefacts from the soil. Often these are so small that they can only be seen using a microscopic lens. Objects are put into separate plastic bags clearly marked with a **registration number** identifying each object uniquely, together with the level and grid square.

The relationship of one object to another can provide our archaeological detectives with special clues. To make sure that objects are recorded *in situ*, archaeologists often use a numbered grid. Each object can then be easily identified where in the excavation it has been found.

Back at the laboratory or field hut, the items are measured, weighed and drawn and sent to the conservator for preservation and packing.



The Field Trip: Uncovering the Evidence

Archaeologists have found evidence that an ancient Egyptian site is located in the grounds of the Abbey Museum. Your school has been invited to excavate the site and reconstruct the evidence. This will require excavation, analysis of the finds, investigation of any possible written historical evidence that might have indicated the presence of an archaeological site in antiquity (such as mounds, dykes or ditches) and creation of a likely hypothesis to be tested back in the classroom.

All of the tools needed are provided by the Museum. You will need old clothes, hat and sunscreen to wear, and a camera to record the action.

First the archaeologists peg out the site with wooden stakes and grid the area with string lines at one metre intervals, using a string level to ensure the line is exactly the same height across the site. When finished the site should have a neat grid of 1 metre squares which are numbered using the metal labels provided.

Most archaeologists work in teams of three, taking turns to dig out their square, sieve each bucket of soil and record the information and draw in the items as they are found.

Archaeologists on this Egyptian site have decided to excavate at 10 cm spits. Measure carefully down from the string line, making sure the tape is absolutely vertical, numbering each 10 cm as a separate level.

Excavating requires patience and care. Using a trowel, the archaeologist gently scrapes a small section of the surface into a dustpan and puts the soil in the bucket provided. If an object is found it must be measured and recorded while in position (*in situ)* and then carefully removed.

The important thing is to find out in which level the object is located and, if possible, leave it *in situ* until this particular spit or level of the excavation is complete so a full picture can be established. Measure and draw the item on to the graph sheet. Photograph it if possible.

Buckets of soil must be sieved to make sure no small objects are missed. Artefacts like coins and beads and seeds can easily be overlooked. Excess soil is put on the soil heap so the site can be returned to its previous state once the excavating team has finished.

Even if no items are found in a grid, it should be recognised that this is equally important data and provides a fuller picture of the site.

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Equipment checklist

The Museum provides all of the equipment you will need. Please ensure it is looked after and returned after the day's digging.

- The **hammer** is used to knock in the pegs.
- **Hardwood pegs** anchor the grids.
- **String lines** and **tape measures** mark out the grids.
- **Line levels** make sure that the string lines are absolutely level.
- **Plastic buckets** are used to carry the excavated soil to the **tubs**.
- **Trowels** and **dustpans** are the main tools used to excavate.
- A **brush** is used when an artefact is exposed.
- Sometimes you will need a delicate **paintbrush** to clean small items.
- **Sieving** is hard work but the rewards can be great.
- Use the **trays** and **plastic bags** to store artefacts.
- Record any finds on the **clipboard sheets**.

Happy digging!

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Ammomes, Scribe of Malkata

The scribe Ammomes greets you and wishes you life, health, prosperity and the favour of Amun-Rê, King of the gods.

I, Ammomes am scribe to the great Amunhotep, son of Thuthmose, the fourth of that name. I have brought great honour and fortune to my family for I have risen beyond all expectations in the service of our lord Pharaoh.

Though my family was poor, at the age of seven, they sent me to the local school. Here the priest taught us basic inscriptions. I showed an aptitude for the letters and with the blessing of our supreme god Amun-Rê, was noticed by a priest from the great temple of Amun at Karnak. He requested that my parents allow me to be taught at Karnak. They were poor and could not afford such education for me. I was in great despair for Karnak had the best school in all the lands of Egypt. However, the priest of Karnak made all things possible.

Many a time I regretted going to Karnak. The priests were very strict. A papyrus, '*A Warning to Schoolboys'* told us, 'The ears of a boy are in his back: he listens when he is beaten.' It is so! The task of learning the hundreds of hieroglyphs ***and*** their shorthand was often very boring. Hour after hour we would copy texts on pieces of stone or broken pottery called ostraca, or on to wooden boards covered with wax that could be smoothed and reused. Time after time we would do the letters until we did them correctly, perfectly!

Only when the hieroglyphs had been mastered, were we taught how to compose letters, do accounts and draw up legal documents. There was much to learn. I was diligent in my studies for I meant to rise to great heights within the service of the great Amunhotep. And so I did. The priest saw that I also learnt the ways of numbers, the history of our people, and the plan of our country. I learned to speak the languages of the people called Hittites and those from the city of Babylon. I will go there one day as emissary of our Pharaoh.

When my school was finished I was appointed as scribe in the royal palace at Malkata. But for years I did nothing but write lists, keep records, compose letters and draw up simple legal documents. Child's play! Was all my hard work for nothing?

But no! At last my talent was acknowledged and I was promoted to supervise the collection of the taxes. A worthy task for one of my capabilities. But I will not stay in this position

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forever…

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Gods & Goddesses of Egypt

AMUN: Originally a primeval god and later the god of Thebes. From the New Kingdom he was identified as Rê or Amun-Rê.

ANUBIS: The god of embalming, the dead and cemeteries. He is depicted as a jackal or jackal-headed man.

APIS: The Sacred Bull, herald of the god Ptah of Memphis.

ATEN: Physical disk of the Sun and an aspect of Rê.

ATUM: Primeval deity of Heliopolis and creator god, later identified as Rê. Shown in human form**.**

BAST OR BASTET: The Cat Goddess of grace and joy. Depicted as a cat or cat-headed woman.

GEB: God of the earth. He is usually represented as a man lying down.

HAPY: God of the Nile, depicted as a fertile man with a papyrus plant on his head.

HARAKATY: The morning sun, Horus of the Horizon. Frequently depicted as a falcon headed man.

HORUS: Horus was the warrior Falcon Sky God who became a deity of the sun and king. .

ISIS: Goddess and protector of the dead and magic. Isis was considered a Mother Goddess. As the mother of Horus she is often depicted suckling him.

KHEPRI: The scarab beetle, creative form of the sun god Rê, depicted either as a scarab or as a scarab headed man.

MAYET OR MAAT: The goddess of truth and justice. The daughter of Rê and his divine order. Depicted often simply as an ostrich feather.

MIN: The god of fertility and desert paths. In predynastic times his sign was the thunderbolt.

MUT: Goddess from Thebes thought to be the great and mighty Divine Mother; shown as a vulture goddess.

NEPHTHYS: Protector of the dead shown as a woman with a hieroglyphic sign on her head. .

NUN: Primordial deity of waters of chaos. Depicted in human form.

NUT: Goddess of the sky and represented as a cow or woman.

OSIRIS: God of fertility and ruler of the dead. Depicted in a mummiform figure with the attributes of a king.

PTAH: A creator god of Memphis and the deity of craftsman. Usually depicted carrying a sceptre.

RÊ: God personifying the Sun and often represented as a falcon headed man. His main cult was at Heliopolis.

SEKHEMET: Goddess of war, and wife of Ptah. She is represented as a lioness or a crocodile.

SET: God of wind and storms, married to Nephthys. He is represented by a number of animal forms, including the hippopotamus and the crocodile.

SHU: God of air represented by a lion and symbolised by an ostrich feather.

TEFNUT: Goddess of moisture and dew.

THOTH: God of Hermopolis; a creator moon god. As a divinity of wisdom and scribe of the gods, Thoth's sacred animals are the ibis and the baboon

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Egyptian Mummies

The term 'mummy' is used to describe a naturally or artificially preserved body that resists putrefaction. It is most probably derived from the Persian word *mumia,* meaning pitch or bitumen.

Mumia was a substance that flowed down from mountaintops (e.g. the Mummy Mountain in Iran), and coagulated like mineral pitch. Credited with great healing and medicinal properties it was prescribed by doctors for their patients, from about 1100 AD (and possibly earlier).

Because of the huge demand for this substance, mummified bodies of ancient Egyptians with their blackened appearance were credited with similar healing properties and broken up to satisfy the market. Thousands of mummies were destroyed before Egyptian authorities took steps to stop this trade.

In pre-dynastic Egypt (c.5000–3100BC), studies confirm the existence of religious customs which emphasised a requirement to bury the dead, and to preserve bodies in as lifelike a state as possible The body would normally be buried naked in a shallow pit-grave in the desert sand, crouched or in a foetal position with the head pointed south and the face turned towards the setting sun.

Egypt's dry sands combined with the sun's heat to preserve the body tissues before decomposition set in, while the surrounding sand absorbed body fluids. Examples of such bodies showing a remarkable degree of preservation with skin and hair still present can be seen in some museums.

During the Archaic or Early Dynastic Period (c. 3100–2686BC), graves and tombs became larger and more elaborate. While this allowed a larger variety of food, drink, personal effects, and religious items to be interred with the deceased, preservation of the body was far less successful. The Egyptians became obsessed with finding a suitable artificial method of preservation.

There was also an expansion in religious funerary customs. To the early Egyptians, the spirit or soul consisted of three distinct entities — the *akh,* the *ka,* and the *ba.* The *akh,* meaning "glorified or transfigured spirit," was a term applied to the dead.

The *ba,* means "the soul" or "animation". The *ba's* home was the body in the tomb, yet it was free to leave the tomb and travel the earth during the day, bringing back life for the body before dark. The *ba* was depicted in funerary adornments as a bird with a human head.

The *ka* was the "life force" or "spiritual twin" and was born with the individual. While the *ka* remained part of a person's life, at death it left the body, and the funerary ceremonies and the ritual of the *Opening of the Mouth* were designed to reunite the deceased with their *ka.* The *ka* then dwelt within the mummy or *ka* statue, a spare body in case the corpse was destroyed. It was the *ka* that needed to be sustained with food, drink, and all good things.

During the Archaic or Early Dynastic Period, many unsuccessful experiments were attempted to preserve the body, including the *stucco mummies.* The deceased was covered in fine linen and then enclosed in stucco plaster. This preserved the body shape and features of the deceased admirably, but did little to prevent decay.

Successful artificial preservation was practiced from the Old Kingdom (c.2686-2181 BC) to the Arab conquest in 641AD. Herodotus, a Greek historian from the 5th century, claimed that three methods of mummification were available according to cost.

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The most expensive method involved removal of the brain and viscera, and the use of natron for dehydration. The deceased would be washed and the body wrapped in bandages fastened with gum. Resins, unguents, oils, spices would be used in the process and accompanied by elaborate funerary rites. In the second method, 'cedar oil' was injected into the body *per annum*, and it was then treated with natron. The cheapest method involved the injection of an unspecified liquid into the body, and treatment with natron.

An embalming process took seventy days from the time the body was taken to the *Per-Nefer (*the House of Mummification*)* to the funeral.

The brain was removed using an iron hook inserted through the left nostril and by breaking the ethmoid bone. The cavity was then probably sluiced out with liquid. The brain was discarded, considered of no value. The mouth was washed and packed with resin-soaked linen, and a paste was applied to the face. Linen pads were inserted over the eyes as false eyes. In the 21st and 22nd Dynasties, artificial eyes were inserted.

The next stage was making an abdominal incision in the left flank and removing the organs (viscera) with an implement described as a *'sharp Ethiopian knife'*. The heart was left *in situ*, being the essential physical part of the person and the seat of the intellect and the emotions. The organs were washed with palm wine and spices, treated with natron and hot resin, bandaged, and packed in four canopic jars. The lids of these jars represented the four sons of Horus: Amset, human-headed, guarded the liver; Hapy, ape-headed, guarded the lungs; Duamutef, jackal-headed, guarded the stomach; Qebehsenuef, falcon-headed, guarded the intestines. In the 21st and 22nd Dynasties, the viscera were made into four parcels, decorated with a wax image of the appropriate deity, and replaced in the abdominal and thoracic cavity. In later years the viscera was wrapped in one large parcel and placed on the legs of the mummy.

The body cavity was washed out with palm wine and spices, then stuffed with temporary packing. Dry natron was used to desiccate the body which was left for about forty days. After delivery to the *Wabet* (House of Purification), the body was washed with Nile water. The cranial cavity was packed with resin-soaked linen, and the body cavity was emptied of temporary packing, stuffed with linen bags of sawdust or myrrh soaked in resin and the incision closed. The surface of the body was rubbed with a mixture of cedar oil, wax, natron and gum and dusted with spices. The nose was plugged and the whole body coated with molten resin to close its pores and protect the surface. Finally, the body was encased with layers of linen bandages. Amulets were placed within the layers to provide magical protection to the deceased. In a second anointment the mummy, its coffin, and the viscera, were covered with a liquid resinous substance. Then the mummy and the funerary goods were taken to the family to arrange the burial ceremony.

Drawn on a sledge, the coffin was transported by ferry to the Nile's west bank. The grave goods were carried by servants behind a second sledge carrying the canopic chest. The coffin was placed upright facing the mourners, held by a priest wearing the jackal head of Anubis. The *Sem*-priest, as 'the son whom-he-loves', touched the mouth with ritual instruments to perform the important 'Opening the Mouth' ceremony.

Finally the mourners enjoyed a lavish feast, with musicians and dancers performing songs of praise for the dead. Meanwhile, the mummy was installed in the burial chamber, and the floor was swept of all footprints. Now the deceased's *ba* and *ka* could take their rightful place.

Many animals were also accorded the respect of mummification. Some animals were regarded as sacred, and over forty species had their own religious cult. One of the best known of these are the Apis Bulls, considered to be the reincarnation of the god Ptah. Cats, represented by the goddess Bastet, hold a special place in Egyptian religion because of their importance in keeping down plagues of rats. Crocodiles and frogs were other species found mummified in large numbers.

Bibliography

Adams, Barbara. 1984 *Egyptian Mummies*, Shire Egyptology, Princes Risborough, UK.
David, Dr. A.R. & Tapp, Dr. E. (ed) 1992 *The Mummy's Tale*, Michael O'Mara Books Ltd, London

GUIDE TO DIG GRID SHEETS

The pre-dig pack contains four forms to be used by the students for recording the information gathered from the excavation.

These are:

- Individual Grid Record Sheet
- Individual Item Record Sheet
- Master Site Plan

Individual Grid Record Sheet

Used for recording the finds in each grid square. The grid is named according to its placement in the dig site (ie. B2, C1 and adjacent grids are indicated.) Each grid is 1 metre square and the form is marked every 20cm for ease of recording. Next to the grid is a vertical section for recording artefacts to establish the stratigraphy.
This form can be used for assisting in the compilation of the Master Site sheet and help students in using the evidence in reconstructing the site.

Individual Item Record Sheet

Used for recording ***individual finds in a grid***. Each item is named and measured and given a registration number. The first artefact found in Grid A2 at 200mm depth (Spit level 2) would be registered as A2/2/1. It is then sketched in the space provided and the location indicated in the grid excavated (surrounding grids marked) and finally its position in the overall Dig Site is shown.

Master Site Plan

Used for recording the location of <u>all</u> artefacts discovered on the site. This will include any architectural features, weapons, pottery, skeletal remains and any other artefacts. It may be completed from information gathered from the individual grid forms on return to school or recorded by the site supervisor (teacher) throughout the day.

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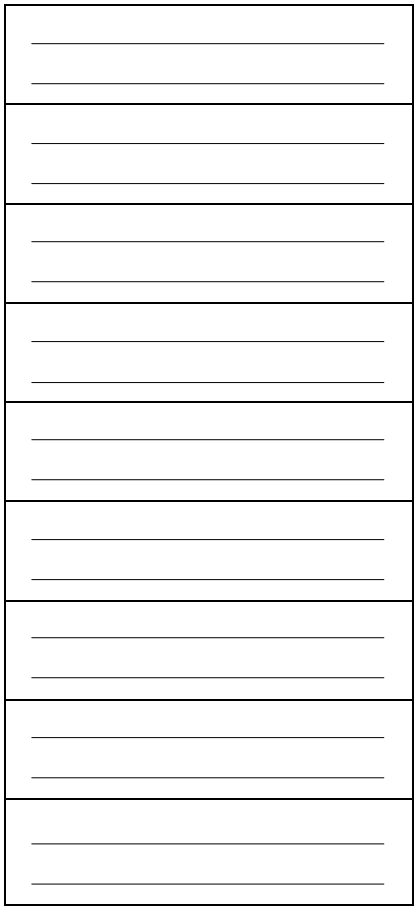
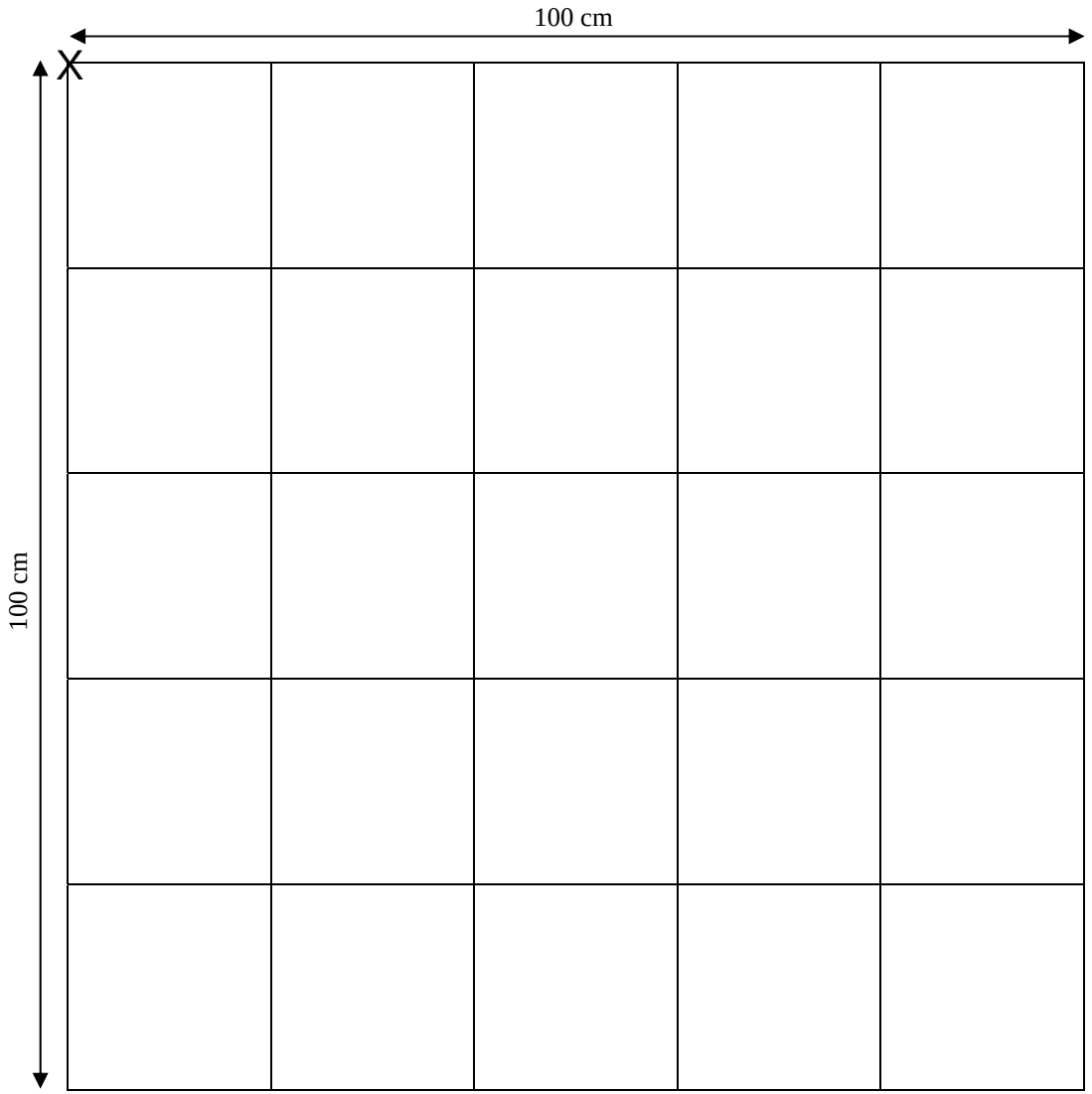
INDIVIDUAL GRID RECORD SHEET

DATE: _____

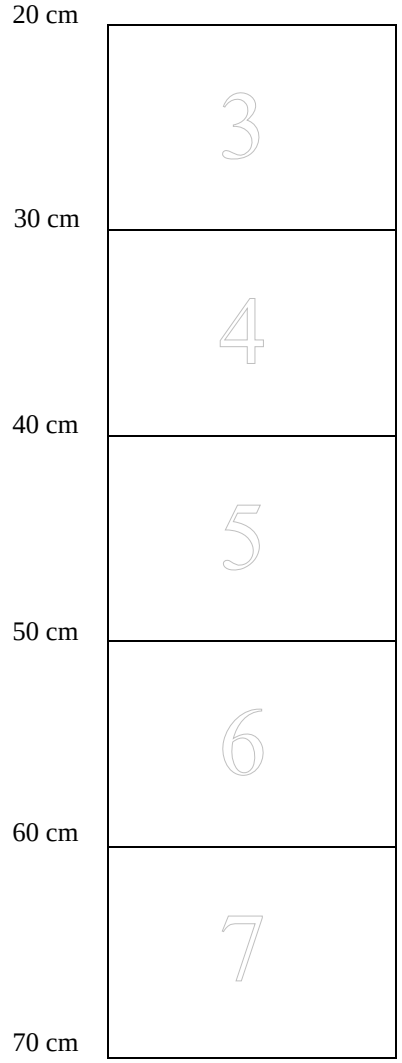
GRID NO:

ARTEFACT REGISTER:





SPIT NUMBERS:



GROUP MEMBERS: _____

_____

_____

SITE NAME: _____

Grid # / Spit Lvl / number of artefacts recorded in that spit level

Artefact Register Formula

13

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INDIVIDUAL ARTEFACT RECORD SHEET

NAME OF ARTEFACT:

_____

DESCRIPTION:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

GRID NO: _____

REGISTRATION NUMBER:

_____

HEIGHT: _____

WIDTH: _____

SKETCH OF ARTEFACT:

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MASTER SITE PLAN

For recording placement of all artefacts found

SITE NAME:

DATE:_____

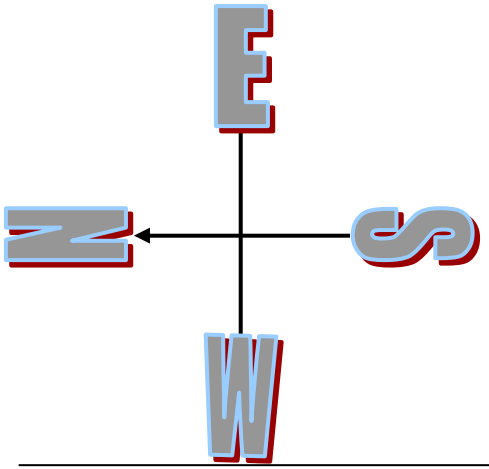
SCHOOL:

_____

_____

TEACHER:

_____



X	A	B	C	D
1				
2				
3				
4				

15

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