Discovering the Past
Historical Background

Ask a group of schoolchildren what an archaeologist does, and you are likely to get as many answers as you have students.

It is often easier to begin by talking about what archaeologists do not do. Contrary to popular belief, archaeologists do not study dinosaurs or fossils—that is the job of paleontologists. They do not look for lost treasure like Indiana Jones. In fact, archaeologists more closely resemble Sherlock Holmes, the detective, than a swashbuckling adventurer like the fictitious Dr. Jones.

This is not to say that archaeology is not exciting! By definition, archaeology is the study of people and cultures of the past through objects they left behind. It can also be thought of as spying on people who lived hundreds of years ago. What did they eat? Were they rich or poor? What were their bad habits? What kinds of houses did they live in? How were those houses built? What kinds of activities took place in the backyards? What was it like to be a child in the seventeenth, eighteenth, or nineteenth century? Were the people who lived on these sites healthy, or did they suffer from diseases? Were they slaves or free? Archaeology can help answer all these questions. It is the only way to find an answer to some questions.

There are several types of archaeology. Some, such as prehistoric archaeology and classical archaeology, identify the culture under investigation. Others, such as underwater archaeology, describe the manner or conditions under which excavation is done. This electronic field trip will focus on historical archaeology, or, more specifically, eighteenth-century historical archaeology.

Technically, historical archaeology is the archaeological study of people who left a written record in addition to a physical, or artifactual, one. In the United States, however, the term is understood to mean the archaeology of all people after European contact. Different regions of the country were settled by non-natives at different times. On the East Coast, historical archaeology begins in the late fifteenth or early sixteenth century and continues to the present. Remember that historical archaeology delineates a period of time after an event (European contact) rather than a group of people, and it therefore encompasses the archaeology of European immigrants, enslaved and free Africans, post-contact Native Americans, and others.

Historical archaeologists work with a larger body of information than prehistoric archaeologists. In part, this is because people living in the seventeenth, eighteenth, nineteenth, and twentieth centuries simply had more material possessions than the Native Americans who preceded them did. As a result, most historic period sites produce more artifacts than prehistoric sites.

A variety of documents—deeds, inventories, wills, diaries, account books, letters, maps, newspapers, and other printed sources—exist for historic period sites. They complement what can be said about people from excavations alone. Historical archaeologists begin projects by consulting the written records and asking questions about what is already known about a site. Is there a map that shows where the house and outbuildings were located on the property? Do existing deeds tell who lived there? Are there census records indicating the makeup of the household? Do baptismal records indicate
the number of children or slaves in the family? Was a household inventory completed at the time of death?

Even if no records exist, some information is available to archaeologists. Although it might take longer, evidence of the house and outbuildings could be found in the ground even without a map or written records.

Some information comes only from archaeology. Since few people wrote down what they ate from day to day, information about diet is found through excavations that turn up bones or seeds. Even more importantly, archaeological evidence can be less biased in that it provides data about people—enslaved African-Americans, poor farmers, women, and others—who often left no written records. When written and archaeological records are combined, a much more complete picture of how people lived in the past emerges.

HOW ARCHAEOLOGICAL SITES ARE FORMED

One of the questions most frequently asked of archaeologists is “how do artifacts (or foundations, walkways, etc.) become buried so far underground?” The answer is not that the artifacts sink, but that the ground builds up in layers, or strata, over time. In cross section, the soil resembles a layer cake, with the oldest layers on the bottom and more recent deposits on top. The accumulated layers of soil are the site’s stratigraphy.

The accumulation of soil is a natural process that results from the disintegration of organic material such as grass and leaves, and the deposit of blowing dust. Cultural activities also play a role in creating soil layers. Household waste such as ashes from kitchen fires, food remains, and broken glass and ceramics contribute to the accumulation of stratigraphic layers. Activities that move earth around, such as the construction of a cellar hole, have a significant effect on a property’s stratification, quickly adding many feet of fill dirt. The more activity that has occurred on a property, the greater the soil accumulation is likely to be.

Why is stratigraphy important? Soil layers are the most basic tool available for measuring the passing of time because the deepest layers of soil are older than the layers on top. For this reason, archaeologists excavate stratigraphically, or one layer at a time, removing all soil from one time period before excavating the layers that preceded it.

ARTIFACTS: WHAT ARE THEY? WHAT ARE THEY GOOD FOR?

An artifact is any object that people made, used, or altered. In addition to manufactured items such as buttons, bottles, and keys, artifacts can be stones worn by grinding corn, or trees on which landowners carved their initials. Neither stones nor trees were manufactured, but they show evidence of human use.

Artifacts wind up in the ground in a variety of ways. The most common is as discard. Regular garbage collection is a modern concept. Not very long ago, most people disposed of their trash in their own backyards. There was probably little effort to bury trash in the eighteenth century; broken bits of drinking mugs, chicken bones, potato peelings, and oyster shells undoubtedly created quite a stink on a hot summer day. As people walked on this trash, they broke it down into smaller bits that they eventually ground into the soil.

Open holes on the property—ravines, abandoned wells, or privy pits—became prime locations for
depositing kitchen refuse. Discarded materials tended to collect in low spots on the landscape. Archaeologists suspect that some of the features identified as “trash pits” were not intentionally dug at all, but were simply depressions in which trash collected. Artifacts deposited in protected holes such as wells, privies, or ravines tend to be much larger and can often be reassembled into nearly complete objects. This is because the fragments were never walked on or kicked around.

Artifacts also make their way into the ground through loss. Buttons and buckles separate from clothing, coins are dropped, and keys fall out of pockets. Objects may be hidden from sight so well that they are eventually forgotten.

Disaster does not contribute to the archaeological record as often as people think. Pompeii is probably the best-known example of an archaeological site (in this case, a whole town) created by a natural disaster. Fortunately, few such dramatic episodes have occurred in North America. Here, a site-creating disaster might be an intense house fire that caused the homeowner to abandon everything in place.

An artifact is any object that has been made, used, or altered by people and has made its way into the ground through discard, loss, or disaster. Most artifacts are simply someone’s garbage, and garbage is not very glamorous. Archaeologists use garbage to learn about people from the past because everyone—rich or poor, black or white, male or female, old or young—creates garbage that contributes to the archaeological record. Because people don’t expect their garbage to be scrutinized, the archaeological record is a more “honest” reflection of what people did than is the written historical record, which includes only those with the time and ability to write about themselves, often in a self-consciously positive way.

There are some drawbacks to using the archaeological record for information. Not everything archaeologists want to know about people is answered by their trash. For example, it is tricky to determine ethnic origin through archaeology. Preservation is another problem. Not everything that is thrown away is preserved in the ground. Paper and cloth decompose quickly, as do leather and many organic materials that are preserved only when submerged in water at the bottom of an abandoned well or in a privy pit. But for the most part, what people throw away is extraordinarily informative. The skill is in learning to make the garbage talk, to make it tell things about the past.

During the last twenty years, some archaeologists have begun to study ecofacts, natural objects that can be used to understand humans and their surroundings. Ecofacts include seeds, pollen, and parasites, which can suggest the environment people lived in, the foods they ate, and the diseases from which they suffered. Although ecofacts may not have been altered by people, they had a profound effect on the way people lived.

What do archaeologists expect to learn from artifacts and ecofacts? One of the most basic things is dating information. Occasionally, they find an artifact with a date marked on it. A coin or a dated bottle seal is a good example. More commonly, artifacts and the layers that contain them are dated by their known dates of manufacture. This is where historical documentation comes into play. Manufacturers’, importers’, and merchants’ records indicate when various material goods became available. Using this information, archaeologists can establish a starting date for each artifact and, by extension, each soil layer. The following example may make this idea easier to understand.

Creamware is a white ceramic first produced in England in 1762. We know this from eighteenth-century manufacturers’ records. In 1779, the tremendous popularity of creamware was eclipsed by pearlware, an even whiter ware that could be decorated more attractively. Soil layers that yield creamware (but no pearlware) can be dated after 1762 and, with some confidence, probably before 1779. A layer that yields hundreds of creamware shards and just one pearlware shard must still be dated after 1779 since it would have been impossible for even that single shard to have been there prior to 1779, the date when pearlware was first manufactured. That would be like asking you to drop a penny dated 2030 on the ground today.

The date assigned to each layer or feature is called a Terminus Post Quem (TPQ), which is most
easily defined as the date after which that layer or feature was deposited. The TPQ for a creamware-only layer is 1762 (i.e., the layer was deposited sometime after 1762). The TPQ for the creamware and pearlware layer is 1779. Each layer will produce hundreds—if not thousands—of artifacts with different dates of manufacture. It is important to remember that every layer and feature is dated by using the most recent artifact it contains.

Artifacts can also help archaeologists understand more about the status of people who lived on a site. For example, if records indicate that porcelain was extraordinarily expensive during the early eighteenth century and a soil layer dating to that period contains a lot of porcelain, the occupant of the site was probably quite wealthy. If, in a privy dating to that same time period, seeds or pollen from imported (and therefore expensive) spices are discovered, the case is further strengthened. Conversely, if food bones found on the site indicate that the occupants were eating mostly stews rather than individual cuts of meat, it might suggest that they were attempting to stretch their meat as far as possible (the Hamburger Helper approach to cooking!). Less expensive ceramics and well-worn utensils are additional indications that the site was occupied by poorer people. Of course, not everyone spends money in the same way. Someone with very little money and a love for exotic spices might scrimp and save to buy spices to satisfy that craving. It is possible that a poorer person had been given spices as a gift. For this reason, it is important that archaeologists never depend on only one type of artifact to indicate the status of individuals.

Artifacts also help to identify activities. The *artifact assemblage* resulting from household activities looks very different than an assemblage excavated from a blacksmith’s shop. Artifacts from a household site usually include primarily wine bottle glass, nails, ceramic shards, animal bones, oyster shells, and tobacco pipe fragments. Artifacts from the site of a blacksmith’s shop would include lots of iron (much of it unidentifiable, since it never made it out of the shop). There would also be fewer artifacts relating to cooking or eating, since a blacksmith’s shop is a workplace, not a site where people lived. Dairying, brickmaking, gardening, tavern keeping—just about any activity you can imagine—had some impact on the artifacts found on a site.

Diet—what people ate in the past, day in and day out—is a question that archaeology is particularly helpful in handling because other sources provide little information. Although few people kept records of exactly what they ate each day, they did leave evidence of nearly all of those meals. One way archaeologists study diet is through the examination of food bones recovered from sites. Animal bones provide information regarding the species of animals present, how much meat the animal provided, and how old it was when it was slaughtered. *Zooarchaeologists* are the specialists who probe for answers to these questions. People of the past ate more than just meat. *Paleobotanists* study seeds and other plant remains recovered from archaeological sites to understand what part fruits, vegetables, and grains played in the eighteenth-century diet. Archaeologists also have access to this kind of information through pollen that has been preserved.

**HOW TO APPROACH AN ARCHAEOLOGICAL SITE**

**A word of caution for teachers:** Archaeological sites are non-renewable. Once excavated, they can never be reexamined. Digging a site is like tearing out and destroying each page as you read a book. If you realize in the middle of the book that you did not understand an earlier twist in the plot, there is no way to go back and reread the story. This is why archaeologists are very protective of sites. They never excavate a site simply because it would be exciting to see what goodies are buried there. Sites are excavated because a clearly defined research question about that particular site or time period has been asked, or because the site is threatened by development or erosion. Sites that do not fall into these categories are preserved, or banked, until there is a good reason to excavate them.
An archaeological site is a place where people lived for a length of time. A prehistoric campsite may have been occupied by Native Americans for a single night or for nearly 300 years.

Archaeologists locate sites in a variety of ways. In remote or undeveloped areas, they start by surveying. Excavators line up and dig small shovel holes at specific intervals, such as every 40 feet. Once a concentration of artifacts is identified, they mark it on a map. By returning to a marked area and testing, or digging larger holes closer together, archaeologists can determine how well the site is preserved, what time period it represents, and whether it was a house site or served some other function.

Sites in urban areas where there has been continuous occupation are easier to find. Testing is not necessary in Williamsburg because, in most cases, house sites, lot lines, and boundaries are in about the same location as they were in the eighteenth century.

Once archaeologists identify the boundaries of a site, they establish a grid over the area they intend to excavate. Each square in the grid is assigned a set of coordinates that locates each square in relation to the others. The purpose of the grid is twofold. First, it provides a convenient way to map the site. Each 2 x 2-meter square might be represented by a 2 x 2-centimeter area on a piece of graph paper. Second, a grid establishes horizontal control over the site. All artifacts from each square on the site and from each layer within that square are always kept together in a bag marked with the square’s coordinates so that interpretation of what happened on a specific part of the site is possible.

Once the grid has been established, excavation can begin. Archaeological excavation is the process through which a site is exposed by removing accumulated soil layers, which differ from one other in color, texture, or composition, in the reverse order they were deposited. “Last in, first out,” is how archaeologists describe the process. The most recent layer, which was deposited last, is removed before the earlier layers.

While the concept of stratigraphic excavation, or removing one soil layer at a time, is fairly straightforward, the process is complicated somewhat by features. Archaeologists excavate two things, layers and features. Layers of soil build up horizontally and gradually. Features represent
**events** that interrupt the layers. A trash pit created by digging through a layer or layers is called a feature, while the act of digging the pit is called an event. A well is also a feature formed when someone dug it. Because features represent events, they don’t have to be holes. A brick foundation is a feature (marking the construction of a wall), as is a shell walkway (laying the shell).

What does a feature look like? The reason archaeologists can see features at all is because each soil layer has a slightly different color and composition. When a hole is dug through multiple soil layers and the fill is tossed back into the hole, the feature is *mottled* with multiple soil colors instead of being one solid color like the surrounding layer. A trash pit, well, or hole that was left open for a long time looks different from the surrounding soil because it was filled with soil from another source.

Archaeologists remove one layer at a time. Within each layer are features that must be removed as well. Archaeological sites are rarely flat. Instead, there are excavated holes and ditches throughout the site. The holes are where features have already been removed.

How do archaeologists know when to stop digging? They dig until they reach a sterile layer known as **subsoil**. Subsoil looks different in various parts of the world (in Williamsburg, it is yellow clay), but all subsoils share the characteristic of containing no evidence of human occupation. Once subsoil is reached, there is no reason to dig deeper. How deep is subsoil? Again, this varies depending on where you are. Deep in the woods where no one has ever lived, subsoil may be just a few inches under the surface. In Williamsburg, subsoil typically occurs at a depth of 18 to 24 inches, indicating that the soil has built up at a rate of roughly 1 foot every 100 years.

Layers and features below topsoil are removed with a small **trowel** and dustpan. Collected as they are discovered, artifacts are placed in bags marked for each square or unit. The soil is collected in metal buckets. Before the soil is discarded, archaeologists sift it through a one-quarter-inch **screen** to recover small items that could not be seen while troweling. Progress is very slow, and archaeologists are often asked why they don’t trade in trowels for something bigger—a shovel or worse. The answer is that it’s hard to dig carefully (not to mention horizontally) with a shovel, and too much might be
missed. Once a site has been excavated, it can never be examined again.

For an archaeologist, recording what is found on a site is just as important as finding it. Archaeology is inherently destructive. In the process of excavation, even a trained archaeologist destroys what he or she is examining. For this reason, careful records must be kept for each layer and feature that are encountered. Recorded information includes soil layer depth, the shape and depth of each feature, soil color, inclusions (brick chips, charcoal, etc.), and the relationship between one soil layer or feature and another. In addition, maps are made of each layer and the features that cut it. Careful and accurate recording enables archaeologists to visualize the site later as they write a report of the excavation. It also enables someone who has never been present on the site to reanalyze the information in the future.

LAB WORK

Once the field work has been completed, artifacts are taken to the lab where they are washed, identified, and numbered to identify where each came from. A permanent computer record is created for each artifact so it can be located and tracked, and an approximate date is confirmed for each soil layer.

Various kinds of analysis are performed on each artifact, the level and type depending on the questions that need to be answered. Ceramic pieces are mended, or glued back together for a better sense of their original form and to help archaeologists understand what parts of the site are related. For example, if a ceramic shard from a layer in a well can be cross-mended to another shard from a particular soil layer, that soil layer was exposed when the well was being filled.

Soil samples taken from the site can be processed via flotation, a process that allows seeds, fish and rodent bones, and other small finds to be skimmed off for later identification. Soil samples can also be sent to a special laboratory where pollen types are identified.

Animal bones may be analyzed by a zooarchaeologist, who is trained to understand dietary information and animal husbandry practices. A zooarchaeologist answers questions such as “what kinds of animals did the colonists consume? Were cattle eaten young as calves or allowed to mature to provide more meat and perhaps milk?”

If excavation is time-consuming, lab work is even more so. Excavation can be thought of as gathering information. The story of what happened on a site continues to take shape in the lab. This process takes time. It takes an estimated three hours of work in the lab for every hour spent excavating.

Conservation is another specialized laboratory function. Not all artifacts survive well in the ground. Some, like paper and fabric, usually decompose before archaeologists find them. Other artifacts such as ceramic shards survive relatively unscathed. Metals, sometimes leather, and other unusually fragile objects require stabilization. Rust or corrosion can be carefully removed from metals, and they can be sealed against further corrosion. Leather can be soaked in a special wax to strengthen it and prevent further disintegration. Some objects can be carefully mended or reassembled. The goal of archaeological conservation is not to make objects look as they did when new, but to stabilize them and prevent further deterioration.

ARCHAEOLOGICAL REPORTS

Archaeological excavations culminate in written reports that make the information gathered from each site available to the public. Reports combine the known history of an area or site with what was found archaeologically and draw conclusions that increase our understanding of the past. Often, reports are very technical and difficult for the layman to understand. Lectures, museum exhibits, publications, pamphlets, and electronic field trips make archaeological information more accessible.
Glossary

animal husbandry — how humans manage and care for animals

archaeology — digging to uncover information about people in the past

artifact — any object made or used by humans

artifact assemblage — a collection of all of the artifacts found on a site or a particular part of the site

artifact inventory — a list of all of the artifacts found on a site or a particular part of the site

ecofact — natural objects like seeds, pollen, or bones that tell something about the way people lived

event — an activity that disturbs the layers of the site, e.g., digging a post hole or laying a foundation

excavate — to dig on an archaeological site

feature — physical evidence of an event in the past

flotation — the process by which seeds, fish bones, and small artifacts are removed from soil

grid — a system of squares placed over an archaeological site that helps archaeologists keep track of where artifacts were found

historical archaeology — the archaeology of people who have left written records such as deeds, wills, letters, and diaries

mending — putting fragments of pottery and glass back together

paleobotanist — a scientist who studies seeds found on archaeological sites to learn about plants that grew there or fruits and vegetables eaten there

screen — a wooden frame lined with a sheet of wire mesh used to collect small artifacts

site — a location that contains evidence of human activity

strata — the layers of soil that build up over time

stratigraphy — the study of soil layers and what they represent
subsoil—an undisturbed layer of soil containing nothing made or used by humans

survey—the process by which archaeological sites are located

tavern—a place where early Americans could drink, eat, or spend the night

terminus post quem (TPQ)—Latin term that means the “date after which.” Archaeologists date layers or features by using the date of the most modern artifact found in a layer or feature.

testing—the process of digging square holes in an area thought to contain an archaeological site

trowel—a hand tool used to scrape away soil layers

zooarchaeologist—an archaeologist who studies animal bones found on archaeological sites

* Definitions are from Archaeology for Young Explorers: Uncovering History at Colonial Williamsburg, 1995, published by and available from the Colonial Williamsburg Foundation.
We at Colonial Williamsburg would very much enjoy receiving copies of some of your students’ work from any of the lesson plans in this packet. If you would care to share examples of their work, please send them to:

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