

Teacher Guide; Stone age to Iron Age

The curriculum requirements;

Key points;

- Understanding changes in Britain, from the Stone Age to the Iron Age. Including Environment (which you can study in geography) society (from nomadic hunter gatherers, to small semi permanent villages, to hillforts etc.) , art, houses and settlements.)
- This topic sets the scene for their future explorations of British History. It is important to understand the basics of how we can come up with an accurate picture of the past. What is a reliable source, and what is not.
- Understanding chronology, and the relative ages (and lengths) of the different ages. This can be tricky, the numbers involved are enormous! Below are some ideas for representing a time line visually.

Putting up a timeline;

The trouble with a lot of timelines is that they don't show the relative lengths of the different eras. What I have tried to do is provide materials so that if you want you can assemble a timeline that shows things properly! You could also scale the measurements up to the length of a playground to really show scale and make it a practical activity.

I've given measurements in cm for the different eras- so you can literally put up a 3m long piece of string and make it into a timeline. You can also use our display materials to illustrate the eras- the children can colour them in, or even use real fabric and leather scraps to add clothing in 3D! the Lower Paleolithic was so long that it will make your display hard to fit onto the average school wall, so I suggest tailing it off and only showing from around a million years ago when the first human ancestors arrived in Britain.- its where most of the really interesting things happen anyway! Or 2.5million years ago, when the first tools were invented.

If you use a bit of string 2.5m long, that will show as far back as the invention of 'chopper cores- the first tools. 1mm represents 1000 years....



Historical era	Date range(specifically for Britain/ europe where appropriate) mya= million years ago.	1000 years = 1mm for a classroom display	(1cm =100 years.)
Lower paleolithic	4 or (Or 7!) million years ago -300,000 years ago. But lets ignore some of it, and start from 2.5 million years ago.>	249cm long (at this measurement the dinosaurs ended with the asteroid 62.5meters ago! the first life on earth 3,700km ago.. that's further than from London to New York! And the earth began 13,700 km away! or from London to new Delhi and back!	24.9metres (from the first proper tool use 2.5 million years ago until the end of the lower paleolithic) 6.25km back to the dinosaurs! 137,000km , which is about 3 times around the earth!
Middle Paleolithic	300,000-30,000	27cm	2.7m
Upper Paleolithic	30,000-12,000	18cm	1.8m
Mesolithic	12,000-5000	0.7cm	70cm
Neolithic (and short copper age in parts of the world)	5000-2300	0.27cm (2.7mm)	27cm
Bronze age	2300 BC-650BC	0.16cm (1.6mm)	16cm
Iron age (and the birth of Christ- year zero)	650BC-AD43 (Roman invasion!)	Less than 1mm	



Cross curricular activities

There are loads of possibilities for cross curricular study- after all prehistory was the origin of all the clever subjects that help to define us as humans.

Art;

Homo sapiens weren't the first hominins to produce art, there is evidence of Neanderthals making abstract cave art and attaching symbolic meaning to things such as beads and particularly Cave bear bones which seem to have been sacred. **Cave art** is a great subject. We supply Cave painting as an extra activity alongside our outdoor workshops.



Paint onto brown paper, using earthy colours of poster paints, sponges and brushes. When the paint is dry, the pictures can be given texture by screwing them up then flattening them again. If you have a suitable corridor, collage the pictures together up the sides, and over the ceiling to make a cave tunnel!



There are **sculpture** possibilities too- making models of animals, and Venus figurines out of modelling clay. **Neolithic rock art** is a very different style, very intricate, but abstract. Look up the '**Towie petrosphere**'

Science

Studying the stone age relies heavily on science. Carbon dating, Geology, stable isotope analysis etc. but it is also the origin of science.

You could look at the process of **fossilisation**, and the geological processes that allow scientists to work out how old something is, by what layer of soil it's in. (for instance some of the oldest Hominin remains can be dated by the layer of volcanic ash above them- we know the date of the eruption, so the bones must be older.

Neanderthals used **medicinal plants** such as Willow bark, which contains salicylic acid (Aspirin), later, people learned to tan leather and even preserve foods (and human bodies!) using tannic acid from tree barks and bogs. You could look at the uses of plants in your school grounds

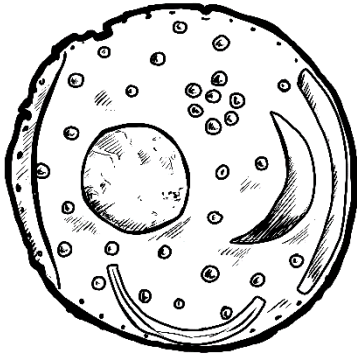
You could look at the **rocks and minerals that were used to make paints** (iron oxide, manganese dioxide). Fire was being used at least a million years ago, though we aren't sure whether they were making fire, or just using natural fires. You could look at **how friction creates heat** which is one way of lighting fire.

Geography – You could look at **world geography and different sea levels during prehistory** and how this affected the spread of humans- i.e. the Mediterranean was much smaller, and during most of prehistory, Britain was joined to Europe and Scandinavia. Britain became an island after a tsunami caused by a landslide off Norway during the Mesolithic.

You could also look at **glaciers**, the enormous mile thick ice caps and how they altered the worlds weather. (The ice chills the air above it, which cools, sinks and any precipitation falls directly on the

glacier, which gets even bigger! The area south of the glacier was dry, which meant grasslands, not forests. That in turn had an impact on the sorts of animals available to early hunters. You could also look at how this relates to local geology- for example, my old home town stood in the Stour Valley in Suffolk- that valley was carved out by glaciers. The gravels laid down at that time can still be seen in the ground.

There are also some really interesting examples of **early trade**- for example the **copper** for the 'Nebra sky disk' came from the UK, even though it was found in Germany! Beads from the middle east were found at Must Farm, a very well-preserved bronze age site near Peterborough.



You could also look at the **locations of Prehistoric** settlements and identify the factors that let ancient people to choose the place. (south or East facing caves were favoured over north facing ones. Early villages were often near rivers which were the equivalent of major roads etc.

Drama/ music Dancing and making music was very important to stone age people. **Flutes were invented in the middle Palaeolithic.** Neanderthals made a bone flute from a cave bear bone. (there is a video of a replica being played in the cave where it was found, it is haunting! (**Search youtube for 'Neanderthal bone flute' or Divje Babe flute**) Others were made from hollow bird bones and mammoth ivory! They may also have made **drums** from mammoth bones and skulls as well as wood and animal skins that have not survived for archaeologists to find. **Voices** are an important instrument as well. People have different styles of singing from different parts of the world e.g. Kulning, and Joiking (Scandanavia), throat singing, yodelling and many others. **What might stone age music in Europe have sounded like?**

Sherlock Holmes on Music: 'Do you remember what Darwin says about music? He claims that the power of producing and appreciating it existed among the human race long before the power of speech was arrived at. Perhaps that's why we are so subtly influenced by it. There are vague memories in our souls of those misty centuries when the world was in its childhood.'

Invent a stone age song, Enact a hunt, or hunting dance to thank the Earth Mother for a good hunt. You could combine this with DT and make and try out basic drums and percussion instruments.

ICT

If you have access to a basic editing programme, it is fairly easy to record the children trying various vocalisations, drum rhythms and simple flute/recorder melodies and overlay them to create a fantastic piece of stone age music. (all the into music on my videos is made like this!)

There are various research opportunities- research a stone age animal, Prehistoric geography etc. There are also opportunities for the children to develop their word processing skills, by focusing

their 'factual writing' on a stone age topic and writing a report. Stop motion animations of stone age life, or of a mini roundhouse being built.. endless possibilities!

Mathematics-

You could look at early methods of counting i.e. tallies. There are theories that some of the abstract dots and lines in cave paintings were actually early forms of counting, maybe to count the members of a tribe.

Its also quite fun to work out stone age themed maths challenges;

- Work out how long it took to make the beads in the **Sunghir** burial. Assuming each bead took 3 hours (there were over 2000) how many hours in a day could be used for making beads.. how many days would it have taken.

or

Hunters have killed a wild boar. It weighs 100kg. They gut it and carry it back. Everyone helps cut it up; by the time it has been gutted and skinned it weighs 75kg.

Everyone helps to cut up the meat and dry it. By the time it is dried, it weighs $\frac{1}{4}$ of what it weighed before. How much does the meat weigh now it is dry?

or

the hunters are packing to go off on a hunting trip. They have made the boar meat, and its fat into travelling food called pemmican. Each hunter needs 300- to 350g of pemmican for each day while they are hunting. There are 6 hunters, and they think the hunt will take 4 days, how much pemmican do they need to carry?

The hunters kill a mammoth, they need to get it back to camp before the bears and wolves eat it! The mammoth weighs 4 tonnes. (luckily it's not fully grown or it might weigh 5.5 tonnes! They can cut the mammoth into pieces, and leave some bits behind but it is still heavy...they have . The hunters work together in pairs to carry big chunks. There are 10 hunters, and each time they can carry 200kg of mammoth meat between the pair of them

How many trips does each pair need to make to get the whole mammoth back to camp?

Or

You could look at methods of telling the time, i.e. if you hold your fist out at arm's length, That is how far the sun moves in an hour, 2 fingers is about 20 minutes.

Or

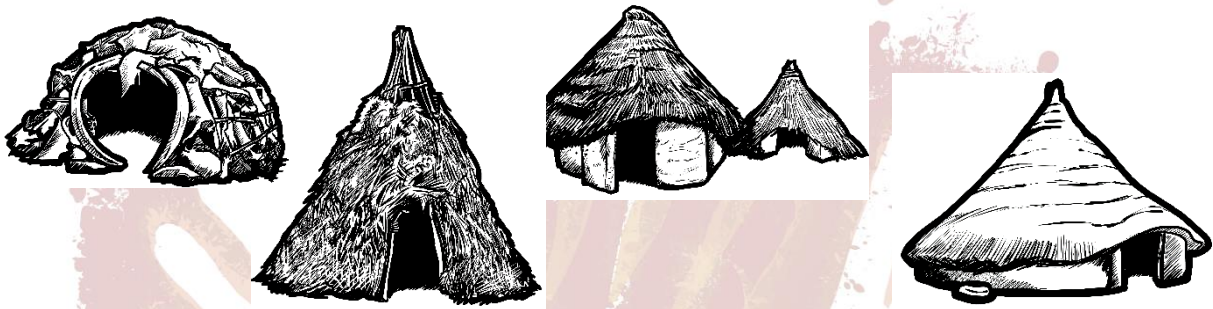
The fibres from one stinging nettle make 75cm of string. We need to make 500m of string to make a fishing net. How many stinging nettles do we need?



Design technology

Wood/metal/plastics or 'resistant Materials'

Have a go at making prehistoric houses; there are several to choose from- In the Paleolithic people were not just living in structures inside caves, there is fantastic evidence for dwelling made from mammoth bones and tusks. During the Mesolithic we see the beginnings of longer term houses (comparable to rainforest tribes who build a camp for several seasons) These were probably similar to a 'wig wam' (i.e. a bark covered conical structure, not a Tipi tent) or thatched with reeds, or moss- whatever was about! Later on, in the Neolithic we see round houses and long houses. This develops on in the Bronze age where we sometimes see them built on stilts in shallow water, or lake edges(pile dwellings, Crannogs). In the Iron age we see defence taken even more seriously, with earthworks and fortified settlements.



Scraps of slate can be 'knapped' into axe like shapes and fixed into slots in hazel (or other) wood handles using string. (wear goggles, possibly gloves, and do the knapping outside to keep the dust problem to a minimum)

Have a go at making prehistoric instruments- rattles from shells, shakers made of beans or rice, or drums by stretching card/ glue covered fabric or leather over a hoop or frame or plastic container.

Ceramics

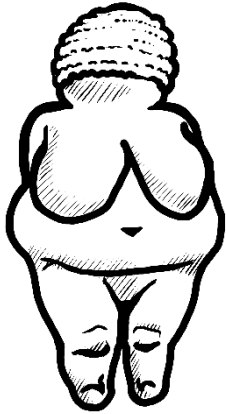
You could look at prehistoric sculpture and pottery. Ceramics for art go back to the Mesolithic/ upper Paleolithic, whereas pottery for vessels is far more recent. (see Dolni Vestonice, 25-29,000 years ago)

Textiles You could provide Fabric scraps and have the children make a prehistoric outfit for a doll or teddy (or to clothe some of the line drawings on our Time line)

Food Technology is tricky without a fire, but it is a great opportunity to show the children how to prepare fish from scratch and understand where food comes from. You can also look at nutrition and how our ancient ingrained drive to seek fatty sugary food was helpful in the past when these resources were hard to get, but isn't quite as useful now!

Religious studies

The stone age is where we first see evidence of religion. Neanderthals made 'alters' and shrines from cave bear bones. When modern humans arrived and spread to Europe. The art left behind shows that in some way Early people revered women, or at least women's ability to 'create new life' there are lots of beautiful carvings of stylised women. Cave paintings also show that early people had an intricate relationship with the animals they hunted. You could look at shamanism and **how different religions treat our relationship with nature.**



Another aspect is that **how we look at stone age man says a lot about how we think about ourselves.** For example early representations of 'cavemen' depicted them as ape like, brutal, savage. Some of this can be linked strongly to European attitudes to people from other countries and the disgusting view that any early human from outside Europe must be 'less human' – it holds a



mirror to racism in past centuries. When scientists announced that the DNA of 'Cheddar man' (the oldest modern human remains found in Britain) showed

he probably had ' Dark to Black' skin, there was outrage from certain unpleasant sections of society which reveal serious racism. The Picture above is from a beautiful painting by Artist Tom Bjorklund. I suggest looking at his work; beautiful representations of ancient people. He can be found on Facebook.

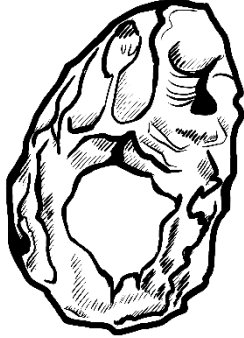
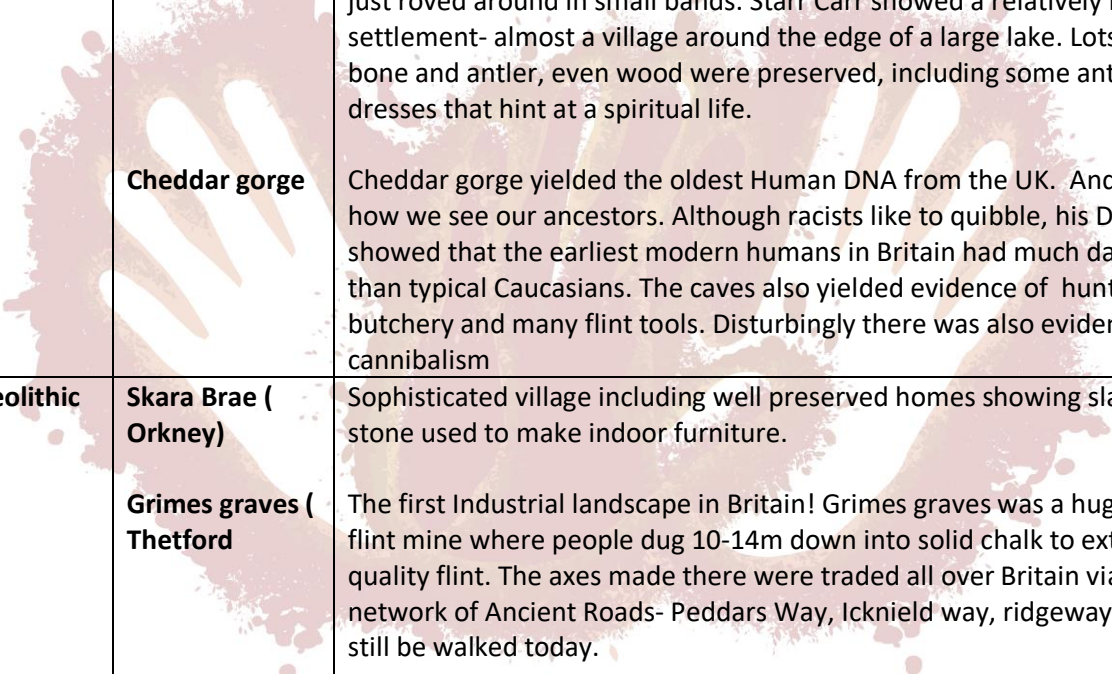
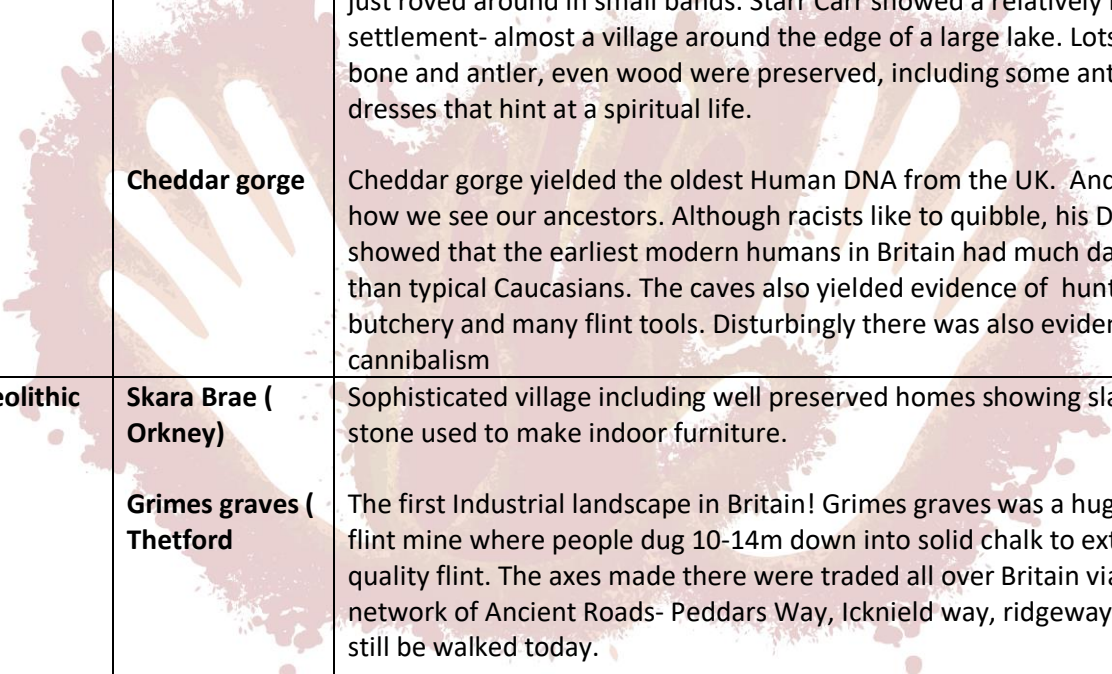
It can all lead to really interesting discussions about 'What makes us human'. There are examples of animals grieving for their dead, caring for their sick. Making and using simple tools...even using fire! (a bird in Australia spreads bushfires to scare animals onto roads where it can catch them, and a monkey in a zoo recently knapped a rock and used it to break his glass enclosure!)

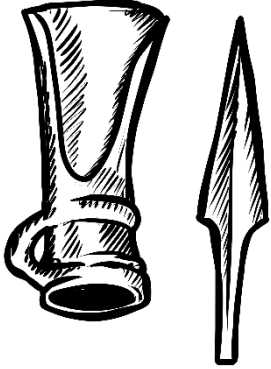
There are scientists who still refuse to acknowledge that Neanderthals were not as stupid, savage and 'primitive' as we used to think- there is evidence that they made simple art, music, cared for their sick(even carried out surgical amputations!- checkout "Shanidar 1"), buried their dead, were capable of speech, used medicine (aspirin from Willow bark has been found in dental plaque) Why is that? Maybe they just don't want to change, maybe they do not think there's enough evidence.

Sites for study UK

Britain has more than its fair share of Prehistoric sites. Below are some of the best, that illustrate key features of the respective ages

	sites	importance
Paleolithic	<u>Middle (and lowerish) Paleolithic</u> <u>Box grove</u> Swanscombe	

	<p>Happisburgh Pakefield</p> <p>Lyndford</p> <p><u>Upper Paleolithic-</u> Cresswell Crags</p>	<p>Butchery site (hand axes and bones)</p> <p>Butchery site, nearly a million years old!</p> <p>Preserved lower Paleolithic footprints! As well as lots of hand axes, probably made by Heidlebergensis.</p> <p>Butchery site.</p> <p>Most of the upper Paleolithic (the time when the fabulous cave paintings were being done in France, The UK was under ice, or generally inhospitable. Cresswell Crags is our only real 'cave art' and though it is not in the same league as sites in mainland Europe, it's worth knowing about</p>	
<p>Mesolithic</p>	<p>Starr Carr</p> <p>Cheddar gorge</p>	<p>Mesolithic village- previously it was believed that in the Mesolithic people just roved around in small bands. Starr Carr showed a relatively long lived settlement- almost a village around the edge of a large lake. Lots of finds of bone and antler, even wood were preserved, including some antler head dresses that hint at a spiritual life.</p> <p>Cheddar gorge yielded the oldest Human DNA from the UK. And changed how we see our ancestors. Although racists like to quibble, his DNA showed that the earliest modern humans in Britain had much darker skin than typical Caucasians. The caves also yielded evidence of hunting and butchery and many flint tools. Disturbingly there was also evidence of cannibalism</p>	
<p>Neolithic</p>	<p>Skara Brae (Orkney)</p> <p>Grimes graves (Thetford</p> <p>Stone Henge/ Durrington walls</p>	<p>Sophisticated village including well preserved homes showing slabs of stone used to make indoor furniture.</p> <p>The first Industrial landscape in Britain! Grimes graves was a huge Neolithic flint mine where people dug 10-14m down into solid chalk to extract top quality flint. The axes made there were traded all over Britain via a network of Ancient Roads- Peddars Way, Ickniel way, ridgeway which can still be walked today.</p> <p>Stone Henge is Iconic. It will probably always be a bit of a mystery, but there was no doubt it was an important place. It was not built in one go, the stones were added to and moved over more than a thousand years from the Neolithic into the bronze age. It had something to do with the seasons, particularly the Equinoxes and solstices. There seems to be evidence of feasts and processions and a link to Durrington walls via the river Avon.</p>	
<p>Bronze age</p>	<p>Amesbury archer</p>	<p>The Amesbury archer was found in a burial not far from Stonehenge. He was not from that area (central Europe, alpine area), and one suggestion is that he had travelled there looking for a cure for his chronic tooth pain caused by an abscess, or the knee injury that had left him with a bone infection and missing knee cap! He died in the early Bronze age and was buried with arrowheads, pottery and flint tools. The 'cushion stone' found in his grave suggests he may have been a Goldworker. He had two gold hair ornaments in the grave with him. He was alive at the time some of the</p>	

	<p>Must farm</p> <p>Flag fen</p>	<p>building at Stonehenge was going on. See also Oetzi the Iceman, who is a little earlier.</p>  <p>Must farm is a very well-preserved Bronze age 'pile dwelling' (roundhouses on stilts, like a Crannog) village which was recently excavated near Peterborough. The village had not been long established when it was destroyed by fire. The roundhouses collapsed into the shallow water they were built in, and were covered up quickly which preserved all sorts of organic remains. Only one human skull was found, but archaeologists found linen cloth and the tools to make it, pots with food in (!), woven mats and wall hangings made of plant fibres, beads, a wooden wheel, log boats and Bronze tools and weapons that were so well preserved, they were still shiny! Because it was only recently excavated, archaeologists are still trying to interpret what they found and learn from it. It was so pristine that we now have an idea of how people laid out furniture inside their roundhouses!</p> <p>This site (again near Peterborough) was a wooden raised walkway and artificial island . Finds range from bronze age to iron age and include a wheel, log boats and eel traps swords, wooden bowls, and some incredible iron age shears in a wooden box!</p>
<p>Iron age</p>	<p>Lindlow moss- (Bog body)</p> <p>Maiden castle</p>	<p>Lindlow man is a bog body. He was in his 20's at time of death and it appears he was ritually killed. Marshes and bogs appear to have been special to people in the Iron age and the bronze age- 'offerings' of swords and other valuable objects were often deposited into them. There are a lot of mysteries about bog bodies- why were they killed- was it punishment? Or an honoured sacrifice! Were they slaves, or prisoners of war? A lot of bog mummies were fed similar meals before death which hints at a common ritual element, even between the UK and Scandinavia. They were then killed gruesomely, often by several different methods- i.e. hit on the head, strangled, then throat cut.</p> <p>Maiden castle is a huge, ornate Iron age Hillfort in Dorset. The rings of ditches and ramparts were dug into the chalk and would have stood out white against the green landscape. It was a defended village and the nearby cemetery contained many bodies that showed signs of violence. There are hillforts all over the country- why not look at your local one!</p>