Contents and background information

Stone Bronze & Iron Age Life 1

Stone, Bronze and Iron Age Collection

This collection is designed to illustrate the materials, tools and weapons that our ancient ancestors who peopled this land, as far back as the last Ice Age, had at their disposal.

Important: pupils must be helped to understand that:

1. The only differences between us and people from the Neolithic period (latest part of the Stone Age) are the resources and technology that were available to them. They were *homo sapiens* and their hopes, fears, dreams and aspirations were exactly the same as ours. They wanted themselves and their families to be safe, warm, dry, healthy, well fed and happy.
2. Most 'stone age' materials would continue in use through the Bronze and Iron Ages and beyond.

Deer pelt and antler (unknown species)

The earliest peoples who came to these islands after the last Ice Age were hunter gatherers. Whilst mega fauna, such as mammoths existed up to the end of the Ice Age, they soon became extinct due, it is thought, to rising temperatures. But Britain would still have been home to aurochs (huge wild cattle, much larger than today's), bears, wolves, and beaver as well as the deer and wildlife we still have today.

Having expended the energy and time to track and successfully kill an animal, they would use as much of the animal as possible; meat for food, pelt for clothing shelters, bones/teeth/antlers for implements and sinew as cordage or thread. For example, antler lends itself to use as a digging tool or pickaxe and jaw bones, sometimes with teeth, as saws.

Palaeolithic flint hand axe and flint knife

modern interpretations

Flint tools are probably the items we most identify with Stone Age life. They are so prevalent because flint was a readily available resource which was easy to split by hitting it with, or against another stone, resulting in razor sharp edges or slivers (our hand axe has been deliberately blunted). Flint tools could be shaped to perform all sorts of tasks; butchering animals scraping their pelts, cutting wood etc. Hafting flint tools into antler or wooden handles, like our knife, makes them more efficient or easier to use. Hafted axes for example, can exert more power than a hand axe so can cut thicker tree trunks more quickly. They would have been tied or glued into the handle with sinew or glue made from a mixture of beeswax and tree resin (like ours) or pitch.

Flints can be re-sharpened if they become blunt just by applying a few sharp blows and since they are so easy to make they can be made at the point of need and disposed of when no longer required e.g. at the scene of a kill to butcher the animal for transportation home.

For these reasons flint continued to be used throughout all three periods… and well beyond into very recent times.

Agate arrow heads
modern interpretation

Flint was not the only stone used, any available readily shaped stone would have been used to make tools and weapons. Arrows were probably used both in hunting and as defence weapons. As time went on specialist makers of specialist tools developed, some of which would become status pieces rather than just utility items.

> Pupils could research when items such as jadeite axes or amber and jet objects became available and where they came from.

Firebow/bow drill modern interpretation

> If you demonstrate using this kit to make fire, you must ensure all necessary precautions and a risk assessment are in place beforehand.

The ability to make and control fire is one of the main attributes that separates Man from other animals. We do not know for sure when Man gained the knowledge to do this, but it was long before the end of the last Ice Age.

The fire bow creates heat by friction between the fire stick and hearth wood. The use of a bow allows the fire stick to be spun faster than by hand. Tinder such as fine wisps of dry grass are held close to the point of friction and it is this that ignites.

For drilling whatever was to be drilled was held down (by another person or stuck by tar to a small block of wood as supplied and then a drill made from a strong short stick with either a flint, or later, metal tip was spun by use of the bow.

The drills can also be worked by hand:

- Start the drill off by tightly holding and turning the wooden shaft slowly until a small depression is formed in the item being drilled.
- Then rub the drill bit between both hands to make it turn more quickly until the hole deepens. For deeper drilling use the bow.

Fire fungus (in skin bag) Mystery objects

These charred mushrooms make excellent tinder but also allowed our ancestors to take fire with them when they moved about! They could be kept smouldering at the edge of a fire, then removed and taken elsewhere wrapped in leaves. They would keep smouldering for hours so could be used to light a new fire when the people bedded down again later.

Neolithic boiler stones Mystery objects

These were heated in a fire then dropped into a clay lined hole or pot or to heat water, the larger the amount of water, the more stones were used. The crazed surface is caused by the constant heating and sudden cooling such use entailed. Although pottery was being made in the Neolithic, it could not be heated on a fire without cracking. These stones were found in Wiltshire.

> Pupils could discuss/research what other cooking methods were possible in the three periods, how did the advent of metals change things?

Bone needles modern interpretation

Bone or antler was another popular material for making tools. Small shards could be used for items such as these needles or fish hooks and harpoon points. From found needles we know they sewed skins to make clothing, shelters and even small boats (probably similar to coracles). Saws and axes could also be made by fitting rows of sharp tooth-like shards of antler or bone into wooden handles.

Using metals – copper and bronze

The first use of metals marks a huge step in our history. People had worked out that some rocks contained material that magically transformed into liquid when heated – this was probably just accidental, maybe by trying to burn such rocks as fuel or by lighting fires on ore bearing surfaces. What's more, the liquid magically set solid again when cool, no longer within the rock but as nuggets of mainly solid metal. At some point one of our ancestors must have realised that if this liquid were channelled into a shaped mould, that is the shape it would set in. It is hardly surprising the people that had metal working skills were given high status at this time.

The first metal to be smelted was copper (2500-2100BCE) but an alloy mixing copper and tin or lead soon followed – this was bronze. In order to perfect smelting people must also have discovered that charcoal (charred wood) burned hotter than raw wood and that furnaces (enclosed fires) kept the temperature consistently high enough to melt the ores more successfully.

Bronze items were cast, that is the ores (copper and tin) were melted together in a charcoal furnace and then poured into a mould fabricated from crushed stone, dung and clay. As soon as the ability to work metals developed, metals replaced some stone or bone tools and weapons, as well as being used for decorative of ritual items. However, knowledge to make metals took a long time to spread right across Britain.

Bronze reaping hook modern interpretation

This item would have been used to cut grass (for animal feed or bedding) and harvest crops.

Bronze axe head modern interpretation

Replica of a middle Bronze Age axe head from around 1500BCE. Axe heads would have been tied or glued into ash or yew handles.

Bronze spear modern interpretation

Replica of late bronze age item (c 1000 – 700BCE) attached to a truncated hazel shaft with copper rivets. Ash was also commonly used for spear shafts. The item is attached to an oak board to avoid mishaps!

Bronze spear or javelin head

This spear head from the late Bronze Age (c 1200BCE) was found in an urnfield burial East Germany. It is probably a votive item (a type of offering) as it has never been sharpened.

Using metals – iron

Haematite **Mystery object – How did this strange substance change the World?**

This is haematite, a form of iron oxide. Discovering what happens when it is heated allowed people to begin making iron.

On the British Isles, the Iron Age lasted from about 800BCE until the Roman Conquest (until the 5th century CE in non-Romanised parts). Iron made an enormous difference because it could be **forged rather than just cast**. Ingots of iron could be traded to be reheated in a furnace and turned into all sorts of tools and weapons just by hammering the metal whilst it was still hot. This also made it stronger than bronze so it became the metal of choice for practical objects, whilst bronze continued to be used but mainly for decorative or status items. Iron could also be reshaped and mended simply by reheating and hammering damaged items. More importantly, it could be **sharpened** more easily to make better axes and swords etc.

Iron reaping hook modern interpretation

The marks from forging this item can clearly be seen and you should draw attention to them if pupils do not see the difference between this and the smooth cast bronze items.

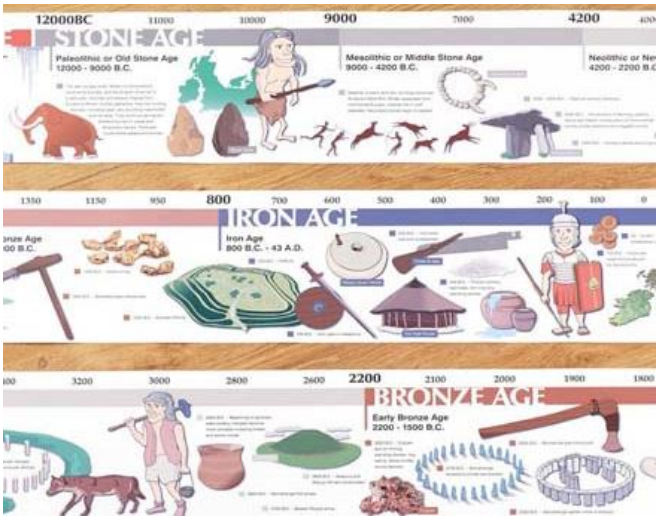
This item would have been used to cut grass (for animal feed or bedding) and harvest crops. Iron was important in helping agriculture improve and develop.

Iron penannular brooch modern interpretation

Such brooches were a common form of fastening for garments – male and female. Although iron is considered as an industrial material today, at this point in time it was a status commodity and so was used for jewellery as well as tools, weapons etc.

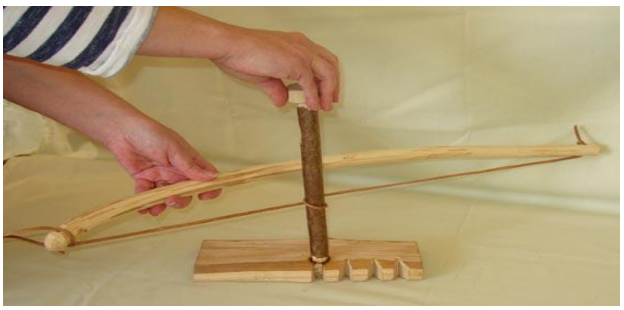
Other resources

Stone – Iron Age timeline



Using the fire bow illustration

Use to illustrate bows were used to create fire and to 'power' drills. Drilling could assist the construction of wooden items like shelters, or boats by allowing different pieces of wood to



be tied, laced or pegged together. It also enabled holes to be drilled in stone, eg for making stone beads.