

LESSONS FROM THE MIDDLE STONE AGE

The Mesolithic is a strange and remote period of human history. It doesn't have any impressive monuments. Its people left us no writing. But, it was an important phase in the human story. When we study it, we can learn useful lessons to help us both live better lives today and understand the world we live in.

Here we will explore six of these lessons:

1. Change is inevitable;
2. The living environment;
3. Healthy eating;
4. What makes us happy;
5. The origins of ourselves;
6. Humans can be different.

Each of these can be the subject of a classroom project. The children could develop a museum display, or create a website, write a newspaper, or make a TV programme. This would involve research, discussion and writing.

Museum display

This would involve finding images that illustrate the theme and writing captions that explain the theme to visitors. Images should be of both Mesolithic and modern finds, sites or illustrations.

Website

This is similar to creating a museum display except that the images and text would be designed for a webpage. You could copy the layout of a favourite webpage.

Newspaper article

This is an exercise in writing skills. The way journalists write is to use a headline, state the main point of the article then give the details. They like strong motifs, such as oldest, best, most important, rarest etc. They also like controversy, so quoting someone who disagrees with the theme.

TV programme

This could involve creating storyboards, a bit like cartoons. They would show the presenters and what they would say with the images they are talking about.

How to write like a journalist or museum curator.

Ask a set of questions and use the answers as the basis for the story or display. You will need a headline for the article or a title for the website, programme or display.

The headline or title

Who are they? A girl called Neska

What did they do? Fell in the lake

The story

Who are they? Neska

What are they? A 9 year-old girl

When were they? 11,000 years ago in the Mesolithic Age

What did they do? She fell from a boat into the lake

How did they do it? She was rocking the boat from side to side

Why did they do it? She thought it would be fun and scare her father

What was the result? She is now afraid of the spirit of the lake

CHANGE IS INEVITABLE

Key lesson

That people lived in a changing world and had to adapt and change to it over time. Ways of life and culture never stay the same. The Star Carr families will eventually have to move elsewhere.

Key question

How would the lives of Neska and Lagun's descendants been different to theirs?

FACTFILE

Climate change

The last ice Age was at its height from around 22,000 to 17,000 years ago when thick ice sheets covered northern Britain and the south was too cold for plants or animals to survive. The climate began to warm up slowly from 17,000 years ago. Summer temperatures averaged 7° C. As the ice melted, plants and animals returned to Britain: grass, dwarf birch and dwarf willow, with horse and reindeer, and later also mammoths and bison.

There was a sharp increase in temperature around 14,700 years ago. Average summer temperature increased to 19° C and winter averages to -1° C. This enabled a birch forest to grow. Animals like mammoth, horse and reindeer were replaced by forest loving animals such as red deer, wild cattle and elk. This when people returned to Britain. The earliest evidence is from Gough's Cave in Cheddar Gorge at 14,800 years ago. The people at this time had an Upper Palaeolithic culture.

Then, suddenly, at 12,900 years ago, the climate got much colder again. Summer temperatures remained high at an average of 10° C, but the winter average fell to -20° C. Ice sheets began to grow in the mountains. The forests were replaced by grassland, with horse and reindeer (much like the modern Siberian tundra). We are not sure whether people still lived in Britain at this time. Perhaps they came only in summer, hunting the horse and reindeer.

Again, very suddenly, the temperature got warmer, at 11,640 years ago. It probably rose during one person's lifetime to a summer average of 12.5° C and a winter average of -5° C. The Ice Age was now definitely over. Birch forest began to spread again, and red deer, wild cattle, wild boar and elk came back to Britain, followed by people who developed a new Mesolithic culture. The melting ice had left behind a lot of lakes, by which people could live.

By 10,500 years ago, there was a thick woodland of birch, pine and hazel trees. Hazel slowly took over and average temperatures rose to 17° C in summer and 4° C in winter. The lakes slowly filled in and dried out to become marsh. People had to find others places to live.

Around 8,200 years ago, a huge North American lake lost much its water into the north Atlantic and the climate began to get much wetter. Temperatures still rose, to a summer average of 17.5° C and 5°C in winter (around 2° C warmer than today). The forest changed into the dense woodland of elm, oak, alder, hazel and lime trees.

This warm and wet climate lasted until around 6,300 years ago when temperatures began to cool and the climate became drier. Shortly after this, farming was introduced into Britain and a new Neolithic culture replaced the Mesolithic.

Sea level

At the height of the Ice Age, there was so much water locked up in the

ice that the level of the ocean was 120 metres lower than today. The sea level rose as the ice melted and by the end of the Ice Age it was only 60 metres lower than now. This was still low enough that Britain was connected to the rest of Europe by a large land mass across the southern half of the North Sea. Archaeologists call this lost land Doggerland. A person could have walked from modern Scarborough all the way across to Copenhagen in Denmark.

Sea level continued to rise, and at some point Doggerland was submerged under the new North Sea and Britain became an island. We are not sure exactly when this was. Contact across Doggerland may have been lost by 8,400 years ago. Then at 8,100 years ago there was a massive underwater landslide off the coast of Norway (the Storegga Slide) which caused a very large tsunami (tidal wave) which hit the coast of the North Sea and probably submerged whatever islands were still left in it at the time. The tsunami was between 3 and 5 metres high.

Sea level after the tsunami were probably less than 5 metres below the modern level and Britain's current coastline was established by a slow rise in the levels by around 4,000 years ago.

How do we know

The ice sheets left behind some tell-tale signs in the landscape when they melted. These include large areas of hummocky gravels and sands, some of which form long ridges. Some of these ridges have been identified in the Vale of York. Ice also carves the sides of valleys in the upland to create wide U-shaped valleys, such as those on the Lake District or Snowdonia.

The ice sheets that still exist preserve a record of snow fall since the Ice Age onwards. The ice sheet in Greenland has been cored and analysed. Each layer of ice that fell as snow can be counted to go back

year by year. Snow and ice are forms of water. Water consists of hydrogen and oxygen. The oxygen has different forms. Most of it is O16, but some of it is O18. The amount of O18 in the snow that becomes ice depends on the temperature. So we can measure the amount of O18 in old ice and tell what the temperature was in the year the ice formed.

We can find ancient animal bones as well as the remains of plants which can tell us about what was living in the landscape in the past. The pollen of plants, especially of trees, can be studied in ancient soils under the microscope so that we can tell how thick the forest was and what trees were growing in it. The plants and animals on archaeological sites can tell us which ones people were using for food or to make tools.

Differences between the Early and Late Mesolithic

The Mesolithic lasted a long time; from around 11,200 to 5,800 years ago (a total of 5,400 years). During this time, the climate and the landscape changed a great deal. The Mesolithic way of life also changed as it adapted to the newer climate and environment. Some of the key changes were:

- loss of contact between Britain and the continent as Doggerland was submerged under the sea
- people spread north into the whole of Britain, reaching modern Edinburgh by 10,500 years ago and the Highlands of Scotland by 9,700 years ago;
- different foods being eaten, such as hazelnuts which became plentiful in the Later Mesolithic;
- changes in the size and shapes of flint tools, with microliths becoming much smaller and with a wider range of geometric

shapes in the Late Mesolithic;

- there may have been more people living in Britain over time and the territories they inhabited may have become smaller, so that they may have moved over smaller areas;
- people might have begun managing the landscape more intensively, to get more food from a smaller area, for example, by gathering fodder to feed animals or by managing the growth of woodland through the use of fire to burn off vegetation and create clearings to attract animals and plants.

People had created a viable way of life in the Mesolithic that lasted a long time, but the climate was always changing and the plants in the landscape changed. Early Mesolithic people had to change too to adapt to it. Their new Late Mesolithic way of life was just as good.

ACTIVITY	THE STORY	
What changes have you seen?	The headline or title	Example
Make a note of the weather you have seen over the last year. Does it seem hotter or colder, drier or wetter than you remember it being the year before? What things would you have to do differently (or how would you dress differently) if you had a cold and wet summer or a warm and dry winter?	Who are they?	The descendants of Neska and Lagun
Find out how many of the class have always lived where they live now, and how many have moved to the area from elsewhere. Here are some questions that can be used to think about changes in our lives.	What did they do?	Moved away from Star Carr to find a new home
Why did they move, was it by choice, or did they have to move?	The story	
What did it feel like having to get used to a new place to live?	Who are they?	The descendants of Neska and Lagun
Was the food any different between your new place and your old one?	What are they?	A Mesolithic family
What did they like about the place they left, and what do they like about where they live now?	When were they?	During the Mesolithic, around 10,500 years ago
	What did they do?	Moved away from Star Carr to find a new place to live
	How did they do it?	They knew their land and could see better places with more food
	Why did they do it?	The lake had shrunk and disappeared and the forest around them changed
	What was the result?	Star Carr was abandoned, and the family changed their way of life to include the harvesting of large amounts of hazelnuts
	How do we know this?	Archaeologists find no-one living at Star Carr after 10,500 years ago

THE LIVING ENVIRONMENT

Key lesson

Mesolithic people had a close relationship with their environment, based on a deep knowledge of plants, animals and weather. They saw it is alive, animated by spirits and gave it respect in return for taking what they needed from it.

Key question

How could Neska and Mutil's family show respect to the spirits of nature?

FACTFILE

Elements of nature

The world that Mesolithic people lived within was one that gave them everything they needed for living: water, food, materials to build houses and make tools, materials for clothing etc. They had to look after their world and only take what they needed from it.

Plants

- food from leaves roots, seeds, nuts and berries
- wood from trees for buildings and tools, and firewood
- birch bark for containers, tar and lighting

- stems for weaving into baskets or fish traps, making string and roofing houses

Animals

- food from meat
- skins for clothing and bags
- bone and antler for tools and handles
- sinew for string
- teeth for decoration, necklaces and pendants

Stone

- flint for making tools
- ochre for colouring
- amber and shale for beads and pendants
- pyrite for sparks to make fire

Water from lakes or rivers

- for drinking
- for washing
- for softening antler to make it easier to shape into tools

Alive or not?

It's obvious that people and animals are alive. But what about the rest of nature? What makes something alive? Some hunter-gatherers believe the following shows something to be living:

- moving by itself;
- changing from one state into another;
- having breath;
- having an effect on something else.

People and animals move, they grow and change, and they breath and so are obviously alive. Plants are alive because they change from a seed to plant and grow leaves, fruits etc. and then die away changing colour. Water is alive because it moves from place to place and can change to ice or snow. Fire is alive as it moves and dances as flame and changes into smoke. Weather is alive because it breathes as the wind and moves through the trees, and affects the world through sun, rain, snow and lightning.

If nature is alive then it makes sense to believe it is made alive by spirits and that we can talk to these spirits to make be nice to us. They will then continue to give people everything they need. Most hunter-gatherers have a very spiritual relationship with the environment.

What can go wrong

Nature is not always good. It is often unpredictable and there are many ways that nature can harm people:

- bad weather can make it hard to hunt and gather;
- sudden catastrophe can strike at any time like the tsunami that hit northern Britain in the Late Mesolithic;
- animals can be very fierce and may turn on and injure a hunter;
- it may be a poor year for the plants or animals, not being abundant or not being where they were last year;
- lightning can cause a forest fire which burns everything in its track;
- water can drown those who fall into it.

Also, people can catch diseases. No one knew where these came from and many people in the past used to think they were caused by bad spirits or by bad people using the spirits against someone.

ACTIVITY

What in the modern world might you think had spirits? And how might they be dangerous?

Add your own objects to the list.

Object	Move	Change	Breathe	Effect	Spirit?	Dangers
motor car	yes		yes		yes	knock you down
computer		yes			yes	lose your work
microwave				yes	yes	burn your food
escalator	yes				yes	trip you up
electricity	yes			yes	yes	electric shock

What parts of nature can be dangerous to you today?

Add your own ideas to the list.

Nature	How it can be dangerous	How you can calm its spirits
weather	a very hot summer causing sunburn and skin cancer	show it respect by wearing good clothes and a hat
animals	eating processed meat that makes you ill	respect the animal by eating it properly
plants	their pollen causing hay fever	don't crowd the plants to make them jealous of each other
water	flooding after heavy rain	allow the water to go where it wants to go, into the earth
earth	an earthquake toppling buildings	stay away from the bad spirits!

THE STORY	
The headline or title	Example
Who are they?	Ama and Aita
What did they do?	Treat their red deer with respect
The story	
Who are they?	Ama and Aita
What are they?	Mother and father of Neska and Mutil
When were they?	During the Mesolithic, around 10,500 years ago
What did they do?	Showed respect to the deer they killed, ate and used
How did they do it?	Thanked the deer after hunting it, carefully placed the parts they did not use in the lake to return them to the spirit world
Why did they do it?	So that the deer would let themselves be hunted again
What was the result?	The spirits were pleased with them
How do we know this?	This is the kind of thing that modern hunter-gatherers do

HEALTHY EATING

Key lesson

That the hunter-gatherer diet was well-balanced and nutritious, and avoided many of the foods that can cause health problems for modern people. The principle of eating local, seasonal and fresh foods is one we could follow ourselves.

Key question

Did Neska and Mutil eat better than us?

FACTFILE

What foods give us

The foods we eat give us various things that our body needs:

- proteins for making the body's tissues like muscle and skin;
- fats as a way of storing energy and protecting the body's organs;
- carbohydrates (starches and sugars) that the body burns for energy;
- fibre which is essential for a healthy digestive system;
- minerals which are essential in small amounts for how the body functions;
- vitamins which help the chemical processes of the body.

The government recommends a balance of different types of food, call the eat-well plate (Public Health England 2016 *The Eatwell Guide*, <https://www.gov.uk/government/publications/the-eatwell-guide>). This divides foods according to the type of nutrients the foods contain.

Food type	Nutrients
Starches	carbohydrate fibre vitamins (B) minerals (Fe, Ca)
Dairy	protein fat vitamins (A, B) minerals (Ca, Zn)
Fats and sugars	fat sugar
Meats, seeds and nuts	protein vitamins (A, B, D) minerals (Fe, Zn)
Fruit and vegetables	fibre vitamins (A, C) minerals

The food we eat today depends heavily on farming and on factories to turn farmed foods into processed foods like burgers, pies, fish fingers, puddings, ice cream etc.

The types of modern food that belong to each category on the Eatwell plate are given in the table below.

Food type	Examples
Starches	roots: carrots, parsnips, potatoes, swedes other: bread, rice, pasta
Dairy	milk, cheese, yoghurt
Fats and sugars	butter, cream, oil (fried foods) honey, sugar, chocolate, jam, sweets cakes, pastries, puddings
Meats, seeds and nuts	eggs fish: cod, haddock, salmon fowl: chicken, turkey mammal: beef, lamb, pork shellfish: clam, cockle, mussel, oyster, scallop, whelk other meats: crab, crayfish, lobster, prawn nuts: chestnuts, hazel, peanuts seeds: beans, peas, lentils
Fruit and vegetables	berries: blackberry, blackcurrant, gooseberry, raspberry, strawberry fruit: apple, grapefruit, orange, pear leaves and salads: broccoli, cabbage, lettuce, spinach fungi: field mushroom

Most people eat too little starch, too many fats and sugars and not enough fruit and vegetables (Defra 2015 *Food statistics pocket book 2015*, London: National Statistics).

Food type	Recommended	Actually eaten
starches	33%	19%
dairy	15%	21%
fats and sugars	8%	22%
meat, seeds and nuts	12%	13%
fruit and vegetables	33%	24%

Mesolithic foods

The range of foods available to Mesolithic people was very different to ours. They did not farm animals or plants and so had no dairy foods, no cereals and no foods like potatoes, chocolate or tomatoes. The only milk they had was their mother's milk when they were a baby.

Mesolithic people lived on the wild foods found in nature. Many wild foods can still be collected today, although there are strict laws about which plants and animals can be taken, and when. Good guides to wild foods are:

Richard Mabey 2007 *Food for Free*, Collins Publishers (first published in 1972 and a classic of the wild food movement)

Ray Mears and Gordon Hillman 2007 *Wild Food*, Hodder & Stoughton

The River Cottage Handbooks, published since 2007 by Bloomsbury Publishing

The TV series, *Wild Food*, presented by Ray Mears and Gordon Hillman (BBC 2007) is still available on Amazon.

Examples of the different Eatwell food types that they could have had (important possible staple foods in **bold**) are:

Food type	Examples
Starches	roots: bog bean, bulrush, burdock, cattail , celandine, dandelion, parsnip, sea beet, sea kale
Fats and sugars	honey
Meat, seeds, nuts	fish: cod, eel, haddock, pike, saithe, salmon, stickleback, sturgeon, turbot fowl: crows, ducks, geese, grouse, pheasant, swans, wood pigeon mammal: badger, beaver, elk, hare, hedgehog, red deer , red squirrel, roe deer, wild cattle, wild boar sea mammal: dolphins, whales shellfish: clam, cockle, limpet , mussel, oyster, razorshell, scallop, whelk other meats: crab, crayfish, lobster, prawn, snail nuts/seeds: acorn , hazel , yellow water lily
Fruit and vegetables	berries: bilberry, blackberry, crowberry, elderberry, gooseberry, juniper, raspberry, strawberry fruit: crab apple, sloe, wild pear leaves and flowers: chickweed, dandelion, dock, fat hen, mint, nettle, sea kale, sorrel, wild garlic seaweed: bladder wrack, carrageen, dulse, kelp, laver, sea lettuce fungi: beefsteak fungus, blewits, boletes, brittlegills, cep, field mushroom, morel, puffball

The nutritional value of these foods varies a lot. The rough amount that they have of each nutrient (CHO = carbohydrate) is given in the table below (adapted from Public Health England 2015). The scale used is:

4 = highest

3 = high

2 = moderate

1 = low

0 = none or minimal

Eatwell plate	Foods	Protein	Fat	CHO	Fibre	Vitamins	Minerals
starch	roots	1	1	3	2	0	0
fats & sugars	honey	1	1	4	0	1	0
meat, seeds, nuts	eggs	2	2	0	0	3	0
meat, seeds, nuts	fish	3	1	0	0	1	3
meat, seeds, nuts	fowl	3	2	0	0	0	1
meat, seeds, nuts	mammal	4	2	0	1	1	1
meat, seeds, nuts	shellfish	2	1	1	0	0	4
meat, seeds, nuts	nuts	2	3	3	3	3	3
meat, seeds, nuts	seeds	3	4	1	0	1	0
fruit & vegetables	fruit	1	1	3	2	3	1
fruit & vegetables	fungi	1	1	2	1	1	1
fruit & vegetables	leaves	1	1	1	1	3	1
fruit & vegetables	seaweed	1	1	1	4	4	0

We measure the energy that foods give us in calories (strictly speaking kilocalories, Kcals). The the calories recommended by the NHS for the average person are:

- men 2,500
- women 2,000
- boys aged 7 1,700
- girls aged 7 1,600

(Defra 2015 *Family food 2014*, London: National Statistics).

How many foods would they have to eat for their daily calories? We don't know how many calories Mesolithic Europeans needed but we can use the modern recommended amounts as a minimum.

Food	Man	Woman	Boy	Girl
honey	900 gms	700 gms	600 gms	600 gms
crab apple	139	111	94	89
mushroom	625	500	425	400
nettles	6 kgs	5 kgs	4 kgs	4 kgs
kelp	6 kgs	5 kgs	4 kgs	4 kgs
duck egg	17	14	11	11
haddock	12 fish	10 fish	8 fish	8 fish
mallard	1300 gms	1000 gms	900 gms	800 gms
deer	1560 gms	1200 gms	1080 gms	960 gms
limpets	417	333	283	267
hazelnuts	385	308	262	246
yellow water lily	700 gms	600 gm	500 gms	400 gms
Cattail roots	500	400	340	320

Today we can buy almost any food at any time of the year. Mesolithic people could only get what was available locally in the right season. See the separate information sheet [Seasonal_foods.pdf](#).

Mesolithic people collected their food from the animals and plants that lived and grew in their local landscape. Different places had different foods. Most of Britain was covered in woodland, but there were also lakes, rivers and coasts. Star Carr was by Lake Flixton and surrounded by woodland, so they had two landscapes with food they could collect.

Food type	lakes/rivers	woodland	coast
starch	bog bean, bulrush, cattail	burdock, celandine, dandelion, parsnip	sea beet, sea kale
sugars		honey	
meat, seeds, nuts	eggs pike, salmon ducks, geese, swans beaver, elk water lily seeds	eggs pigeons badger, hare, deer, wild boar, wild cattle snails nuts	eggs fish sea birds dolphins, whales shellfish crab, crayfish, lobster, prawn
fruit and vegetables		berries fruits leaves fungi	sea kale seaweeds

Comparing Mesolithic and modern

The Mesolithic diet was low in sugars and fats, and they had a wide variety of food they could eat: fruit, vegetables, seafood, nuts and meat. It was fresh, local and seasonal.

But, it was also unpredictable. Bad weather – too cold, too hot, too wet, too dry – could mean that some plants or animals would be scarce. Being hungry was not something that could be solved by reaching for a packet of biscuits.

According to anthropologists who study modern hunter-gatherers, our basic biology conflicts with our modern lifestyle. This leads to the development of the chronic modern illnesses of cancer, diabetes and heart disease. The healthy diet and exercise that doctors now recommend resembles that of hunter-gatherers.

We are now told to eat less fat, less dairy foods and eat leaner cuts of meat. We should get our carbohydrates from fruit and vegetables not cereals or sugar, and we should eat more fibre. Our diet should have more vitamins and minerals but far less salt.

Hunter-gatherers tend to be more active during the day and are often fitter and stronger than modern city dwellers. The popularity of running and exercise at the gym is an attempt to return to a more active lifestyle.

ACTIVITY

What you eat

Keep a diary for one week of everything you eat. Add up the totals for each food and place them in a table under each food type on the Eatwell plate.

Do you think you have eaten healthily?

Look at the Mesolithic foods in the Eatwell plate and compare them with yours. Many of your foods will not have been there in the Mesolithic.

What would you eat instead of your modern foods?

Which foods would you miss most?

THE STORY		WHAT MAKES US HAPPY
The headline or title	Example	<i>Key lesson</i>
Who are they?	Neska and Mutil	That having a lot of material things is not essential for making us happy. Instead, what is important is to be valued by family and friends and know that you are contributing to their happiness in return.
What did they do?	Found a new patch of crab apple trees for their family	<i>Key question</i>
The story		What makes Neska and Mutil really happy?
Who are they?	Neska and Mutil	FACTFILE
What are they?	A Mesolithic boy and girl	Contrast the lives of Mesolithic people with ours today. Look at the possessions they had and their social life.
When were they?	During the Mesolithic, around 11,000 years ago	Possessions
What did they do?	Found a new patch of cattails for their family	Their houses were simple compared to ours: around 5 metres by 4 metres in size, no separate rooms, only a fire for heat and light, no windows, little furniture other than beds. They had no television, no computers, no kitchen gadgets or washing machines and no water supply through taps. They also had no bathrooms!
How did they do it?	They searched new parts of the woodland they had never been to before	To travel anywhere, they either walked or went by boat. They had no bicycles or cars.
Why did they do it?	They were hungry as it had been a very dry summer and plants had withered	Neska and Mutil wear leather clothes. We are not sure what, but probably a tunic of some kind (a bit like a dress), a cloak for warmth,
What was the result?	Their family had more food to eat and would be less hungry	
How do we know this?	We know they would wander in search of food and try new areas if the old ones were no longer good	

leather shoes. They might have had trousers or leggings of some kind. A hat could be made of leather, fur or birch bark. They probably only had one set of clothes. Each of them might have worn a necklace of shale beads, or a pendant made of shale, amber or an animal tooth. To carry things, each would have had a leather bag worn on a long shoulder strap.

The most prized possessions of their family would have been their essential tools for hunting, gathering, fishing, wood-working, hide-working, cooking and eating.

- hunting: bow and arrows, spears, knives, nets, traps;
- gathering: digging stick, bags, baskets;
- fishing: hook, lines, nets, fish traps;
- wood-working: axes, adzes and others tools for scraping, cutting and boring;
- hide-working: pegs for stretching skins on the ground, flint scrapers;
- cooking and eating: birch bark or wooden bowls, containers, sticks as skewers, flint knives (they would have mostly eaten with their fingers).

Social life

We can only guess how many people lived in one settlement and how they were related. The study of modern hunter-gatherers give us clues.

They probably lived in small family groups. Each house being for two parents and their children. The families of siblings and cousins might have lived together in smalls groups of a few houses. Relationships with wider family would be important. It would be your relations who would help you when life was hard because of illness or hunger.

They would have links with other people who spoke the same language or lived in the same region. People might belong to different clans depending on that of their father or mother, and there might be strict rules about which clans could intermarry. Meeting with strangers outside the group could be dangerous. There is evidence for fighting and violence on Mesolithic skeletons in Europe. People who were related to you, or who belonged to the same clan were people you could trust. Anyone else would be strangers and would be treated very carefully.

Members of the family and the settlement would all help each other. Different people would go off and do the hunting of large animals, or the fishing from boats, while others would gather the plant foods or check the traps for small animals. Each would have a lot of knowledge about how best to do their task. Among modern hunter-gatherers, men commonly did the big game hunting and women tended to be the experts in gathering plant foods. However, this division of work by gender might not have been absolutely rigid. Women would often hunt much of the small game and men would often help in plant collection. In any case, the contribution of men and women to the health of the family was equal. Everyone depended on the skills of the others.

Everyone would probably help in looking after the babies and the elderly. There would be those who need more help than others. Anyone with poor eyesight would find it hard to carry out tasks like the others. There were no opticians or glasses to be worn.

Most Mesolithic people probably never met or knew more than a few people in their whole lives. Their camp might have from one family up to 4 or 5 families at any one time. They might get together for wider group meetings and celebrations from time to time and meet up 20 or so families (less than 100 people). Their wider group of clan members and relations might number up to 200 to 500 people, many of whom they might never meet.

Mesolithic had only had stone tools, and everything they had was taken from the plants and animals around them. They depended on each other to live, but, they led rich social lives. They sang, danced and told stories. They lived close together and their families meant everything to them. Meeting their relations or clan member at times during the year would be a time for celebration and partying!

ACTIVITY

Things or people

Make a list of all the things that belong to you: your clothes, any tools or equipment you have and your toys.

Then make a note about which you think Neska or Mutil might also have had (or had an equivalent of). Have you got more or less than them?

Which of your belongings makes you really happy, and how many of your belongings could you live without?

Now, make a list of all the people you know: at home and in school.

Which of these people makes you happiest? Why do they make you happy?

Think hard, which is more important to you: your belongings or the people you know?

Would Neska and Mutil be any happier than you or not?

Happy days

Describe what makes a happy day for you.

Make a list of all the things and events involved.

Now imagine what makes a happy day for Neska and Mutil.

How does their day compare with yours?

THE STORY		THE ORIGINS OF OURSELVES
The headline or title	Example	
Who are they?	Neska and Mutil	
What did they do?	Help with harvesting plants and berries	
The story		
Who are they?	Neska and Mutil	
What are they?	A Mesolithic boy and girl	
When were they?	During the Mesolithic, around 11,000 years ago	
What did they do?	Help with harvesting plants and berries	
How did they do it?	Go out gathering with the adults, searching in places they know	
Why did they do it?	The whole family has to eat, and food needs to be gathered every day	
What was the result?	They found a new place with berries and leaves. Their parents were very happy them, and they were happy they had contributed to the family's meal.	
How do we know this?	We assume they did this because we see how modern hunter-gatherer children help in food collecting.	
<i>Key lesson</i>		
That Mesolithic people are the earliest ancestors in Britain of people living here today, but they are not our only ancestors. The British people are the result of various migrations of people mixing together ever since.		
<i>Key question</i>		
Are Neska and Lagun the ancestors of us?		
FACTFILE		
Changing climate and settlement		
A thick sheet of ice covered all of northern Britain at the height of the last Ice Age. The south of Britain was too cold for humans and no one lived there.		
Around 16,000 years ago the climate began to warm and the ice to melt. This took a long time. The earliest evidence for people coming back to live in Britain is at 14,800 years ago.		
But, the climate suddenly got colder again at 12,900 years ago. Small ice sheets began to grow again in the high parts of Britain. We are not sure if people still lived in Britain then, but we think probably not.		
The Ice Age finally ended at 11,600 years ago when the temperature		

got suddenly a lot warmer. Human settlement has been found at a site called Three Ways Wharf at Uxbridge in London at 11,580 years ago.

The early settlers slowly had to get used to a new landscape as trees began to grow again. Britain was covered with birch forest by 11,200 years ago and people had changed their way of life to cope with the new plants and animals within it. These early settlers had become Mesolithic.

Britain has been permanently settled ever since by the descendants of these early settlers.

Tracing our ancestors

All humans contain in their body tiny chemicals which tell the body how to grow. They tell the body its colour, shape and other things. These chemicals are called 'genes' and the material they are made of is called 'DNA'.

We inherit our genes from both our parents. Our father's and mother's genes exist side by side. For example, we might have the same colour hair as our father but the same colour eyes as our mother. Genes are very complicated and contain patterns which are unique to particular ancestors. All of us have genes from more than one ancestor.

One very rare Mesolithic human burial is Cheddar Man from Gough's Cave in Cheddar Gorge in Somerset. He was buried 10,250 years ago. Archaeologists have analysed the DNA that he inherited from his mother. His genetic group is called U5. The scientists also looked at

the DNA of people living today in the village of Cheddar and found the local school history teacher was also a member of group U5. This teacher in 1997 and Cheddar Man 10250 years ago both share the same ancestral mother!

Migrations to Britain

The settlement of Britain after the Ice Age was not the only time that people have come to settle in Britain. These did not replace the original settlers but added to them and mixed with them. Here are some of the other migrations to Britain that there have been since then.

Neolithic farmers

Archaeologists argue about this but it is likely that farming was brought to the south-east of Britain 6,000 years ago by people from the other side of the Channel. Some of these may have moved into the north and west of Britain, while farming was also copied by the Mesolithic already living here.

Bronze Age warriors

Archaeologists have not really explored this, but at some point a new people came to Britain bringing a new language, the Celtic language which the Romans found the natives speaking when they conquered Britain. This language may have been brought in the early or late Bronze Age by people who used bronze swords and spears, and may have been warriors.

Roman conquerors

The Roman Empire conquered southern Britain in 43 AD and had taken it all up to the line of Hadrian's Wall by 79 AD (over 1,900 years ago). The Romans brought many people from all over their empire as governors, soldiers, merchants and servants. They would be a small number of people but some of them would stay, and some would marry local people.

Anglo-Saxon and Scottish kings and settlers

Roman rule ended in 410 AD. The local Celtic speech had evolved into Welsh and Cornish and the British people were ruled by their own kings. Some of these invited German speaking Anglo-Saxons from northern Germany and Denmark to settle and be soldiers for them. Many came with their families and settled in eastern Britain. Irish speaking Scots came over from Ireland and settled in parts of western Britain. These Anglo-Saxons and Scots rebelled and conquered most of southern and northern Britain between around 550 and 650 AD, leaving the Welsh and Cornish in parts of the west.

Vikings raiders

The Vikings came from Denmark and Norway. They attacked Britain and elsewhere looking for gold, silver and slaves. Some of them chose to try and conquer and settle instead of going back home. Vikings took over parts of England between 865 and 954 AD. They also settled in Orkney and Shetland in Scotland, which remained part of Norway until 1472.

Norman conquerors

The Normans from northern France conquered England in 1066 and replaced the main landowners with French speakers. They also began to conquer Wales. Norman barons remained a small minority and they slowly became English speaking and married into English and Welsh families.

Huguenot refugees

The Huguenots were French Protestant Christians. In 1685, the French government was Catholic and began to persecute the Huguenots. Many fled France, and 50,000 came to live in England. They settled mostly in Canterbury, London and Norwich.

Peoples from the Empire

The British Empire was created in the 1600s and lasted until the 1960s. It covered large parts of Africa and most of India as well as parts of Asia. Many Africans, Indians and Chinese ended up moving to Britain. A lot of Africans had been taken and sold into slavery in America. Slavery was declared to be illegal in England in 1772, the trade in slaves was abolished in 1807 and the owning of slaves was abolished in the Empire in 1833. Many former slaves worked in the Royal Navy in the 1700s, and many settled in Britain. Most people from the former Empire settled in Britain after 1945.

ACTIVITY		THE STORY
Who are you?		The headline or title
<p>All these migrations have added to the people who now live in Britain. Look at your class and make a record of where each of you was born, and where each of your parents was born. Then look at all your surnames and research where they come from. Your class will be a mix of people with different ancestors. This is just like at any time in the past.</p>		<p>Who are they? What did they do?</p>
<p>Now count back how many parents, grandparents and great-grandparents you have. You have gone back three generations and have 8 ancestors from three generations ago. How many ancestors came from the same place? The farther back in time you go the more ancestors you have, and the more places they are from.</p>		<p>The story Who are they? What are they? When were they?</p>
<p>Try placing the migrations on a timeline and count back how many generations ago they were. Allow 25 years to each generation.</p>		<p>What did they do? How did they do it? Why did they do it? What was the result?</p>
		<p>How do we know this?</p>

HUMANS CAN BE DIFFERENT

Key lesson

That Mesolithic people may have had a different way of life, but are really just like us. People can live with different ways of life and belief, and still live successful and meaningful lives. It is normal for human beings to build different cultures and each is worth treating with respect.

Key question

What would Neska and Mutil think of our way of life?

FACTFILE

Our ancestors led very different lives to ours but were just as clever. Neska and Mutil and their family are just like ourselves, needing food, shelter and companionship. They had no farms, no towns and only stone tools but they created a way of life that lasted for more than 5,000 years.

How Mesolithic people lived

Mesolithic houses were mostly a circular or oval shape and averaged around 5 metres long by 3½ metres wide. They were made with wooden posts set into the ground and the walls of horizontal branches woven or tied onto the poles and then covered with turf, rushes or birch bark. The poles could meet at the top to make a house a bit like a

north American wigwam or teepee. Or, they could have been bent over to make a domed roof. Inside would be a central hearth. There were no separate rooms and the whole family would have slept together in beds around the hearth. There would be no windows and only one door. They might have had rules on who slept where in the house, for example, men and women on different sides of the hearth or adults and children separately, or some people farthest away from the entrance.

Their clothes would be made of leather from animal skins. The skins would have been cut and sewn together. People probably owned only one set of clothes. The clothes would have been made by hand by the family themselves. Decoration of the clothes would be by adding things like animal teeth in patterns.

Only by looking at modern hunter-gatherers can we see their life span. There is a lot of variety among them but on average children will become treated as adults at around the age of 13-15. They will get married in their late teens and have children from then into their mid-30s. They may have around 6 children in all, but 1 or 2 of these will die within 12 months of being born. At least 2 will die before they reach adulthood. If they survive to be adults then around a third of them will 60 years of age. Very few will live to be as old as 80. Men will be around 5 feet 6 inches tall (1.67 metres) and women will be around 5 feet 3 inches (1.6 metres).

People in the Mesolithic took all the food they needed directly

themselves from the landscape in which they lived. They had to catch the animals and fish or go out collecting shellfish and plants, nuts and berries every day. The food they ate was very fresh, local and only available at the right season of the year. They had to eat what was available at that time of year. To preserve food for the future they would have had to dry it (if it was meat or fish) or roast it (if it was hazelnuts). The only way they had to cook things was on or by an open fire. They could not collect milk or make cheese. They had no sugar apart from occasional honey from a beehive, and no chocolate. There were no cereals like wheat, so no bread, and no potatoes, so no chips. There would have been times of year when they might have gone hungry if they could not catch or find enough food.

To move around, Mesolithic people had to walk on foot or use boats. They did not ride horses and had not other means of transport. This would have kept them quite fit and healthy, walking every day. Walking any distances would have taken a long time.

Most hunter-gatherers believe that the whole of nature is animated by spirits of some kind. Humans are part of nature, not separate from it. They have to take care of the spirits to make sure that nature will continue to give them food and materials to live by.

How modern people live

Modern houses are built with brick or stone walls and with slating roofs covered in tiles or slates. They have separate rooms inside for living, eating, sleeping and washing. Each room has windows and there are

usually two doors at the front, back or side. Most houses have central heating for warmth and electric lights for the evening and night. There is a lot of furniture like beds, tables, chairs, cupboards, shelves and a lot of gadgets like a cooker, washer, television and computer. Many houses have their own gardens. Parents and children will sleep in separate rooms.

We buy our clothes from shops rather than make them ourselves. They are made from all kinds of natural and artificial materials, and in many types of colours and patterns. We own a lot of different clothes.

Today, children become adults at 18. Most people get married in their early 30s and have just two children. Very few children now die in childhood. Adults will commonly live to be around 80 and a few may live to around 110. Men will be around 5 feet 10 inches tall (1.78 metres) and women will be around 5 feet 5 inches (1.65 metres).

The food we eat is bought from shops and supermarkets. It comes already prepared for us, and we also buy food already cooked from take-aways and restaurants. We eat a lot of cereals like wheat, mostly as bread. Our diet is high in sugar and sweet foods (including a lot of chocolate). We also eat a lot of dairy foods like milk and cheese. One of the commonest vegetables we eat is the potato. There is enough food in the shops that some people can avoid eating meat and be vegetarian. The food we eat can affect our health. Many people have diabetes from eating too much sugar. Some people have to avoid eating gluten which is common in wheat. Others cannot digest milk.

Some cancers and heart disease are now being linked to particular types of food.

Most families have a motor car, sometimes more than one. We have buses and trains, and can travel easily abroad on aeroplanes and ships. When we walk, it tends to be short distances around our home. We can now travel quickly over long distances.

Many people have religious beliefs in a supreme god, such as Christians, Jews and Moslems. Others believe in many gods like Hindus or in a spiritual world that offers us a better way of living, like Buddhists. Modern religions involve set places to worship and rituals, and ways of behaving. Other people do not believe in any gods or spiritual world, such as atheists, but look to science instead to explain the world.

Contrast the two

To us, the house is our home. To Mesolithic people the home was the family and the whole settlement, of which the house was only one part. A house was where they slept and sheltered.

We now live longer lives and we are much taller. Fewer children die in childhood. However, hunter-gatherers are physically stronger and are not prone to some modern illnesses like diabetes or heart conditions.

Their food had less sugar and less harmful fats than modern foods. It was fresh and local, a well balanced between different types of food. But, it was not always plentiful and there times when they would have

gone hungry or even starved.

Their known world was a small one. Going from York to Leeds (25 miles or 40 kilometres) would have taken around 8 hours to walk. Now we can do the same journey in 25 minutes by train. They would have known their local area in great detail but only have a hazy knowledge of other places or people.

Mesolithic people were part of nature, paying respect to the spirits of the natural world in return for what it gave them in food and materials.

Could we live like our ancestors? The short answer is no. We don't have the skills or knowledge of the plants and animals and would struggle to survive without our modern gadgets and comforts.

Mesolithic people did more than survive. They lived a successful lifestyle for more than 5,000 years.

ACTIVITY

How does your life compare to theirs?

Fill in the following grid and see how your life compares to that of the Mesolithic.

Theme	Mesolithic	Modern
Houses	one room sleep together fire for warmth and light no windows	many rooms sleep separately central heating and electric lights many windows
At home	sleep shelter from rain talk	sleep eat cook play talk watch TV use computers
Day time	up at dawn: 3:30 am in summer, 8:30 am in winter to bed after 8:30 pm in summer, 3:30 pm in winter	up at (what time do you usually get up?) to bed at (what do you usually go to bed?)
Clothes	leather only a few made by yourself decorated with animal teeth	many materials lots to wear bought in a shop lots of colours and patterns
Life	have many brothers or sisters grow to 1.6 or 1.7 metres tall die of diseases, accidents or violence no allergies physically strong	have many, few or no brothers and sisters grow up to 1.7 or 1.8 metres tall illnesses like cancer, heart disease, diabetes have allergies

Food	hunted and gathered local seasonal fresh variety of meat, leaves, roots, nuts, berries, fish, shellfish, seaweed, mushrooms cooked by yourself	bought in a shop or take-away from all over the world all times of year pre-cooked or preserved bread, cereals, pasta, cheese, milk, potatoes, chocolate, meat, fish, vegetables cooked by yourself or pre-cooked
Travel	on foot by boat only go short distances in a day	on foot by car, bus, train, aeroplane or ship go long distances
Belief	spirits of nature – animals, plants, water, wind or sky, sun worshipped outdoors in nature	God or gods, organised in religions at churches, synagogues, mosques or temples

Now find three things about the modern world you think are better than the Mesolithic and three things that were better during the Mesolithic than in modern times.

THE STORY	
The headline or title	Example
Who are they?	People in the Mesolithic
What did they do?	Had a way of life different to ours
The story	
Who are they?	People in the Mesolithic
What are they?	Hunter-gatherers
When were they?	11,000 to 6,000 years ago
What did they do?	Lived close to nature by hunting and gathering all their food and materials
How did they do it?	By knowing the plants, animals and stones where they lived in great detail and being able to make their own tools
Why did they do it?	It was the only way they knew how to live
What was the result?	They created a way of life that lasted for more than 5,000 years
How do we know this?	Through archaeology and ethnography