

Scary Smilodons

Outline plan – for adaptation as required by schools

Enquiry title	How did prehistoric people tell each other about meeting Smilodons?
Context and learning aims	<p>This investigation focuses on the Smilodon or sabre toothed cat, a full sized wooden replica of which has been positioned in the Quaternary area of the Geoplay Park. Smilodons were the fiercest and most powerful of all the 'large cats' that ever roamed the Earth. It is known from remains found at Kent's Cavern that Smilodons were around in Torbay around 400,000 years ago. But did people and Smilodons ever meet face to face? Whilst the oldest remains of people in Torbay date from 40,000 years ago and Smilodons were believed to have died out 200,000 years ago it could still have been possible as the earliest human remains of people in Britain date from 900,000 years ago. So they could have encountered each other. It's just that we have not yet found the evidence in Torbay of people living here more than 40,000 years ago. Elsewhere in the country we know that people and Smilodons did encounter each other. This enquiry asks the question: What if? What if people and Smilodons lived at the same time in Torbay? The investigation begins with understanding what a Smilodon was and how it lived. It then supports the children to consider how people may have told each other about Smilodons in the style of cave paintings. No cave paintings have been discovered at Kent's Cavern...yet! Children are encouraged to imagine that they discover a new cave at Kent's Cavern where early Man drew pictures including Smilodons. What would they show? How would the Smilodon have been represented?</p>
Learning and teaching activities and curriculum progression	<p>Key Question 1: What was a Smilodon?</p> <p>Tell the children that a very long time ago their lived an animal in the land that is now occupied by Torbay called a Smilodon. Today there are no more. A Smilodon was a 'big cat' about the same size as an African lion is today. Explain to the children that in a moment you are going to show them pictures of what palaeontologists (people who study rocks and fossils) think Smilodons looked like but no one is quite sure as all we have to go on today are bones of dead Smilodons found in places such as Kent's Cavern. So, what the children are going to do first is to draw their own artist's reconstruction (using their informed imagination) of the animal from the following pieces of information:</p> <p>Smilodons:</p> <ul style="list-style-type: none">- Were about 1.5m long and 1m high- Weighed about 200kg- Had a head 30cm long- Had large jaws that opened very wide – twice as wide as the jaws of a modern day lion- Had two huge canine teeth at the front of their mouths at least 20cm long

- Had short legs but the front legs were slightly longer and very powerful
- Had a 'bobbed' tail

Support and encourage the children to draw their own image of what they thought the animal looked like and to share with the group. Generate discussion about what we could not know about Smilodons from their bones? What would our bones not tell someone about us? What about the colour of our eyes, hair; skin; sound of our voice etc. So what would the bones of the Smilodon not tell palaeontologists about them? We can't know precisely whether they had fur or just skin and what colour it was. Ask the children to think about modern day 'big cats' such as lions; cheetahs and leopards. What colour are they? What markings do they have? Why do they have these markings – so that they are camouflaged and not easily seen in the places where they hunt? So it was with the Smilodon. It is believed that Smilodons pounced on their prey such as deer and baby mammoths from the branches of low trees or by suddenly springing out of long grass. They were not very good runners so relied on stealth and surprise.

Next show the children the outline sketch in **Resource 1**. This is what palaeontologists believe the general shape of Smilodons was. How does it compare with what the children drew? What did we get 'right' and what is a surprise perhaps? But the general shape sketch does not suggest anything about colour or fur. There is a beautifully carved wooden full size replica of a Smilodon (popularly called a Sabre Toothed Cat (not tiger) in the Quaternary area of the Geoplay Park (**Resource 2**). This is to recognise and commemorate the fact that 400,000 years ago there were definitely Smilodons roaming the land area of what is today Torbay because bones that age of Smilodons have been found at Kent's Cavern.

Next project the images of Smilodons in **Resource 3**. Smilodon actually means knife tooth. They were very fierce some and were the 'top predator' of all the animals that lived in Britain at the time. **Resource 4** is the BBC film Walking with Beasts – Saber Tooth. It's worth judging exactly how much of and which extracts of the film to show the children but it is an excellent reconstruction of the animal and the life that it led a million years ago. It also provides a fascinating insight into other long extinct animals that lived alongside the Smilodon. Ask the children to look out for what the palaeontologists thought covered the Smilodon. How its covering is adapted to the environment through camouflage? How did the Smilodon hunt? Why was it important to hunt in packs? What happened when two rival males confronted 'half tooth'? Why was having the two huge canine fangs a real disadvantage? Not only were they comparatively fragile and easily broken they meant also that the Smilodon could not bite and chew anything tougher than the very softest flesh and certainly not bones so most of the kill was wasted.

The most important thing in all of this is for the children to realise that 400,000 years ago there were Smilodons (the most powerful big cat the world has ever seen) walking around the land that is now Torbay – perhaps land that is now the street where they live; the park in which they play or the car park of the supermarket where the family shops!

A fun exercise after emphasising this point could be for the children to draw 'Secret Smilodons' hidden away in photographs of familiar places in and around Torbay such as those in Resource 5 just to emphasise the point once again that the land that is now Torbay once had Smilodons walking around and hunting over it. The Smilodons could be waiting in hiding to jump out and grab the people!

Key Question 2: Were Smilodons and people around at the same time?

Show the children the pictures in **Resource 6**. It shows an artist's reconstruction of how the very earliest humans might have lived when they arrived in Britain about 900,000 years ago. These very early human beings were called Neanderthals. These very earliest people would certainly have lived alongside Smilodon and would have probably tried to have hunted the same food such as deer. In Torbay a jaw bone 40,000 years old has been found in Kent's Cavern but that doesn't mean that people were not living in and around the area before that – it's just that no one has found any evidence such as bones yet. Smilodons probably died out in Britain about 200,000 years ago although some palaeontologists think they might have survived a lot longer. So, it is not out of the question that people and Smilodons met in the land which is now Torbay! Just imagine what that might have been like?

Key Question 3: How would people have told each other about seeing Smilodons?

The first humans living in and around Torbay would not have been able to write and may not have even have had a common language but they did communicate via drawings on cave walls in which they lived from time to time e.g. taking shelter during the cold of winter. If people saw Smilodons they would have drawn pictures to tell others. Show the children the 40,000 year old paintings that have been discovered in Spain and France in **Resources 7** and **8**. Ask the children to try to work out what the pictures show? How incredible to see the hand print of a 40,000 year old ancestor!

Resource 9 shows the caves at Kent's Cavern in Torbay where the jawbone of a human living 40,000 years ago has been found. There are no cave paintings at Kent's Cavern and very few in Britain as a whole because of the damper climate compared with Mediterranean locations. But just imagine ... *You are an archaeologist working at Kent's Cavern and discover the entrance to an undiscovered cave. What are you going to name it? You squeeze through a small space between rock boulders into a cave which no one has seen for thousands and thousands of years. You have a powerful torch but even so your eyes take a while to become accustomed to the darkness. As they do so you see on the walls of the cave pictures drawn by the cave dwellers and several of them show Smilodons!*

As a final activity for this enquiry the children can draw their own Kent's Cavern cave paintings of people encountering Smilodons. Before drafting their own pictures spend time with the children revisiting the cave paintings in **Resources 7** and **8**.

It is important for the children to paint their pictures in the style of real cave paintings – think about things such as size and where colours would have been sourced from? How did the cave painters have enough light? What kind of surface would have been best? Did the painters incorporate nooks and cracks in the rock into their paintings? What exactly would the people have wanted to communicate about Smilodons in their pictures? Where they were encountered? If so then familiar landscape features might need to be incorporated into the picture. How many there were? What animals they were hunting? How the people protected themselves from the Smilodons? Create a really impressive wall display and call it: *Cave paintings of Smilodons in Torbay*.