

Postcards from the past

Outline plan – for adaptation as required by schools

Enquiry title

What was Torbay like during deep time?

Context and learning aims

In this learning enquiry the children initially explore the concept of change; firstly at a personal level and progressively at different scales and in different contexts. This provides the foundation for them to progress to considering changes that have occurred in history (recorded time) and prehistory (times in which we know people lived but there is no written evidence).

Through a number of practical learning outside the classroom activities the children finally are able to explore the concept of deep time or deep history; this being everything older than prehistoric times. Finally the children investigate life in Torbay during the Devonian, Carboniferous and Permian periods of deep time. The enquiry culminates in the children writing postcards from these three times in the past to members of their family and friends living in Torbay today.

Learning and teaching activities and curriculum progression

Key Question 1: How and why do things change?

To begin this enquiry spend time with the children investigating aspects of change over time which will be accessible and understandable to them such as bringing in photographs of themselves as babies; toddlers and 'grown up'. How have they changed? Why have they changed? As they have got older so physically they have got larger and taller. It's what happens when we grow up. Teachers can do the same of course with pertinent (and probably a greater number) of photographs of themselves over time to illustrate the key point!

Another way to illustrate the concept of change is to have photographs (or ideally the real things) of tools or instruments such as telephones; irons; computers; music players e.g. *gramophone – record player – tape recorder – cassette recorder – Walkman – CD player – i pod* that have demonstrably changed in appearance over time. All of these things were designed to play music. How have they changed e.g. got a lot smaller and more compact. Why have they changed – because technology and engineering have got more advanced? It is the age now of the microchip rather than the transistor.

Next show the three short silent films in **Resource 1**. These were made in London a hundred years ago in 1914. They provide an amazing glimpse through a window into the past. Ask the children to study them carefully. What do they recognise? What is different? What is missing? Now encourage them to look at **Resource 2** which contains two films of modern day London. How does it compare? What has changed? Why has it changed? What are the main differences in London between 1914 and 2013? Think about the modes of transport; buildings; electricity

wires etc.

Key Question 2: What is historic time?

Give each child one of the cards in **Resource 3**. Each of these cards records an historic event in British and World history and says how long ago it happened. Read the information on the cards with the children and then go out into the playground or field and have them stand in a line which represents the correct order of time in which the events occurred – most recent first – oldest last. Then go down the line and support the children to read out their event. Which events do they remember – probably only the first one or two. Which events would their parents or carers remember? What about their grandparents? Explain to the children that *history* begins when things began to be written down i.e. recorded. The Romans were the first people in Britain to do this and so British history begins with them. Nothing that happened in Britain before then has been written down and can't therefore be considered as *history*.

What is pre-historic time?

Now give out the cards in **Resource 4**. These all belong to pre-historic times in Britain because although we know that these people existed and can scientifically work out how long ago it was e.g. from bones; huts and burial mounds; we do not have anything written down about them. In the same way as previously get the children to read out their cards to the group.

Where am I on the world's timeline?

On the playground or field get the children to pace out 100 paces (or measure 100m with a tape) and mark the beginning and end with a stake or bollard. Tell the children that each of the 100 paces (or meters) represents 500,000,000 years (500 million) making the whole line 5,000,000,000 years (5 thousand million or 5 billion years). Tell the children that the far end of the line is 5 billion years ago when the Earth began to form in space from cooling hot gas. The near end is today. Now get the children to stand along the line in the correct position in terms of how many years their event was ago from the present. Remind them that one pace equals 500,000,000 years!! What will happen now is that the children will quickly realise that they will all have to squeeze in to a tiny space very close to the marker showing "today". It will be a crush! Even 500 million years ago will only be one pace backwards and everyone is going to have to fit within it.

What is deep time?

Deep time is everything older than *prehistoric* time. This is time before humans made an appearance. It also includes times when nothing lived on Earth except bacteria. Point out and emphasise how much of the Earth's timeline is still left – most of it except a tiny portion where the children are standing. Now give out the last set of cards in **Resource 5** and have the children read the information and then stand in the correct position on the world timeline. Now there will need to be some pacing

out or measuring. Now we go back in *deep time* to times hundreds and thousands of million years ago. This is time defined by the type of rocks and landscape that existed – *geological time is deep time*.

What was Torbay like in deep time?

Back in class tell the children that the land that is Torbay now has existed for most of deep time but has moved around the globe! Print off and mix up the maps of the world in **Resource 6**. Divide the children into pairs and challenge them to arrange the maps in the correct order – oldest to youngest. The maps of the world show how the land masses of the Earth have moved around the globe – sometimes combining and sometimes separating and moving apart. The short film in **Resource 7** summarises this movement.

So as the land masses of the Earth moved around so did Torbay! We know from the rocks below Torbay that for 50 million years during the Devonian period Torbay was a warm, tropical sea as can be seen in the artist's impression (**Resource 8**). Encourage children to identify and discuss what they can see.

For 60million years during the Carboniferous period Torbay was mostly lush green and warm swampy forest (**Resource 19**) whilst in the Permian it was a desolate hot desert environment (**Resource 10**).

So what a contrast – warm shallow sea – dense swampy forest – hot desert. Torbay has been all three. How do we know – from the rocks here!

To gain some idea of what Torbay would have been like during these three periods of *deep time* the children can be shown the following three short films:

Resource 11: *The Great Barrier Reef*. During the Devonian time Torbay would have been south of the equator and there would have been reefs of sponges and early corals not too dissimilar to what the Great Barrier Reef is like today.

Resource 12: *Tropical Forest*. Much of the tropical forest in the world today would have been similar to the wet, warm and swampy forests of the Carboniferous time in Torbay.

Resource 13: During the Permian time Torbay would have been in similar latitude as the Sahara Desert is today. It was a hot desert and very dry except when there were rare floods.

Postcards from the past

Show the children examples of postcards and tell them that before people owned telephones or could rely on *Facebook* it was very popular when away to send messages home to friends and loved ones about travels and adventures via postcards. In fact, along with letters, it was the only way of getting messages home. On one side there was an

attractive and inviting scene, often of holiday places. Messages were written on the left hand side on the back and they would be addressed on the right hand side. For the price of a stamp, postcards were sent from anywhere in Britain to anywhere in the World. In this day of instant digital photo sharing via mobile telephones and the Internet, sending a postcard is becoming a lost art.

It is important for the children to know that there are text and language conventions associated with writing a postcard. Model a message that might appear on a holiday postcard such as:

Tuesday August 12th

Dear Charlie

We arrived at our hotel in Torquay on Saturday and we are already having a great time. The journey was boring but after we unpacked we went straight to the beach to play and swim. My cousin Wayne is staying in the same hotel. I am very excited because tomorrow we are going to visit a famous donkey farm where you are able to go on rides.

Derek

P.S. I'm here until Saturday but should be home on Sunday afternoon if you want to come over.

Conventions:

Tuesday August 12th

Dear Charlie (salutation)

We (written in first person) arrived (past tense to locate event in time) at our hotel in Torquay (proper noun to identify places and people) on Saturday and we are already having a great time (abstract noun to convey thoughts and feelings). The journey was boring but after we unpacked we went straight to the beach to play and swim. (sequence of events) My cousin Wayne (proper noun) is staying in the same hotel. I am very excited because tomorrow we are going (shift in tense) to visit a famous donkey farm (use of adjectives to describe nouns) where you are able to go on rides.

Derek (signing off)

P.S. When (temporal connective) I (first person) get home on Saturday why don't you come over? (Post script adds information)

Having modelled how to write a postcard, provide the children with a blank standard conventional postcard which has no picture on the front and has the reverse divided into two halves with a small rectangle for the stamp. Now ask the children to think about the artist impressions of what Torbay would have looked like during the Devonian, Carboniferous and Permian and the films that they have watched about places in the world which are a lot like those times.

As a final exercise encourage the children to imagine that they are in Torbay during the Devonian, Carboniferous and Permian times. Their task is to write a postcard home either to a relative, friend or teacher; describing what they are doing and seeing and any adventures they might be having? What are the dangers to be avoided? What things will be really enjoyable? What is the most exciting thing that they have

done? On the front they can draw and colour an evocative (but accurate) picture.