

How did it get like this? Ice Age Britain!

Look at the past to understand the present

Student Introduction

- ▶ This exercise will look back to the prehistoric past to understand what the future might hold.
- ▶ Observe the Solent area and understand how it was formed.



TASK 1 - Pre-Visit

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The study of the past can explain how things are now, and gives us clues how things might look in future.

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Before you visit the Solent area - as it is now, in the present - look at the information below. Geology (the study of the history of the Earth) and Archaeology (the study of pre-historic people) help us understand what life was like for our ancestors.

Around 10,000 years ago ("pre-history"), modern humans (Homo Sapiens) already existed. They were **hunter-gatherers** and lived by hunting wild animals for meat, skin and bones (all of which they used) and by gathering wild plants for fruit and vegetables. They had not invented reading and writing yet, so we have **no written records** of this time. We have to guess quite a lot!

Geological and archaeological data helps us understand roughly what life was like. The archaeological evidence we can find are their **stone tools** (that's why this period is known as the Stone Age), **bones of animals and people**, and occasionally their **artwork**, which may have had **religious importance**.

Understanding the geology of that time allows us to imagine what their world might have looked like. The world 10,000 years ago was quite different to the one we live in now.

Remember that all of the processes mentioned here all took place over a long time. For humans the change would have been gradual.

Look at the timeline to the right which is a **rough guide** (and not to scale) which shows **how far back in time** you have to go and what happened before that time.

The most recent Ice Age lasted from c.110,000 years ago to c.11,000 years ago and in that time the **River Solent** and the **Channel River** were created.

FUTURE

Birth of Jesus Christ

c.10,000 years ago

Climate changes significantly:

- ice ages end
- sea levels rise
- stone tools improve
- farming begins to develop



c.70,000 years ago

Humans (Homo Sapiens) spread into Europe



c.190,000 years ago

Homo Sapiens first appear in Africa



c.2 million years ago

The Ice Ages begin

c.63 million years ago

Dinosaurs become extinct



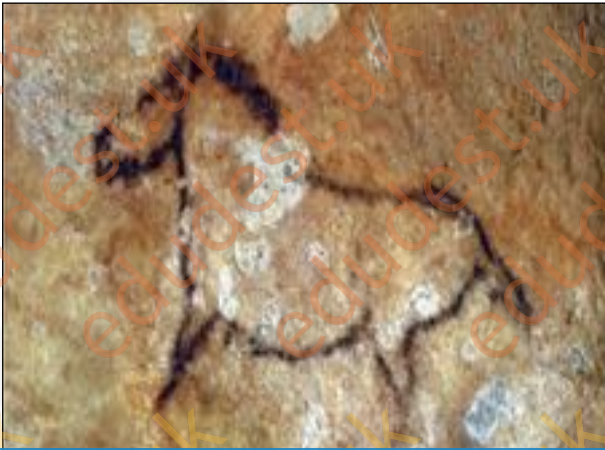
PAST

ICE AGES

TASK 2 - Pre-Visit

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The life of Palaeolithic (Stone Age) people may have looked like these images. Give a summary of what each of these images conveys (there are clues in the previous text!).



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TASK 3 - Pre-Visit

Look at these two maps and answer the questions which follow.

Europe during the last Ice Age (c. 20,000 years ago)**KEY**

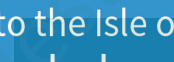
Land under ice during ice age



Outline of present day countries



Land which disappeared when ice melted



Extent of the ice cap

Outline of present day countries which was unaffected by ice



Extent of the ice cap

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Q1. Was YOUR local area covered with ice? _____

Q2. What do you notice about Britain and the continent of Europe at that time?

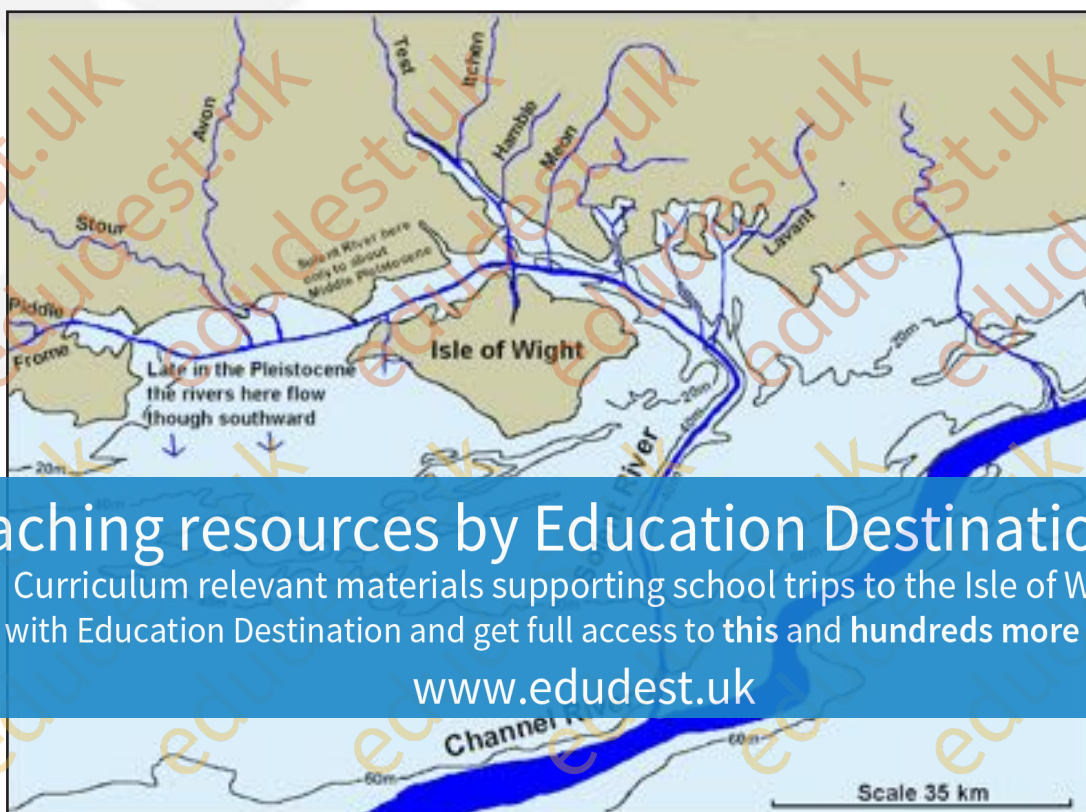
Q3. What do you think life was like with so much ice around?

Q4. What would have happened as all the ice melted slowly over time?

TASK 3 (continued)

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Use the previous map whilst also looking at this one, and answering the questions:



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This map gives you an idea what the Solent area looked like before the end of the last Ice Age c.10,000 years ago, before the land between Europe and Britain became flooded. It shows the prehistoric River Solent, its tributaries and how it joined the Channel River.

Q5. What would life have been like for people and animals **before the ice melted**?

Q6. If the Solent and the Channel were once rivers, **what would have been in between Britain and the European continent**? What do the contour lines on the map suggest?

Q7. Use facts and maps provided about the time before the ice melted c.10,000 years ago. Reconstruct the route a hunter-gatherer clan might have taken from mainland Europe to Britain whilst following the annual migration of mammoths and other big game. Consider the geography and possible difficulties: e.g. where would have been a good place to cross the Channel River? **Draw this on the image above.**

TASK 4 - On the Ferry

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Whilst you are sailing on the Red Funnel ferry from Southampton to East Cowes on the Isle of Wight, you are travelling along the “drowned valleys” of the ancient rivers Test and Solent. You will be able to see in the distance the vast flooded area where once the Channel River flowed (now known as the English Channel).

Since the last Ice Age, water has flooded much of the once dry land and separated the Isle of Wight from the English mainland.

However, nature’s influence did not stop 10,000 years ago. Nature - and increasingly human - activity is still changing the geography around us. We try to protect ourselves from these changes by erecting structures designed to slow down or stop change from happening.

TASK: Whilst on the ferry, look around you and try to **spot as many features** (physical or human) as possible that show the changes that are happening around us, despite our best efforts to stop or delay them.

Physical Change / Processes

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Weathering & Erosion

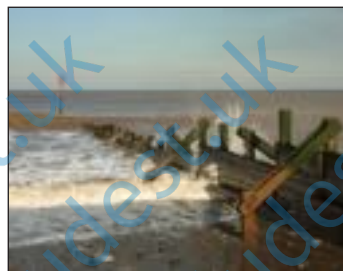
Transportation & Deposition



Human Reaction / Activities



Sea Walls & Defences



Groynes



Rocks or “Rip-Rap”



Breakwater





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TASK 5 - After your trip

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The Solent area today - consequences of physical change and human adaptation.

Work through the following questions providing detailed answers based on your observations during the ferry crossing.

Q1

a) Use the marks and annotations from your map and look for patterns. Where have you seen the most evidence for physical change?

b) What type of physical change is it? (Processes of erosion/weathering/transportation/deposition/other)

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c) Why do you think that is?

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Q2

a) Where have you seen most evidence for human reaction/activity, building sea defences, groynes etc.?

b) What is the reason for that?

Q3

a) Do you think that the methods to slow down or stop physical change are working? Explain...

b) Think about the enormous changes 10,000 years ago. The Hunter-Gatherers adapted and survived. How do you think we modern humans will react to the sea level changes predicted for the future?

TASK 6 - After your trip

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The Solent area in the future.

Work through the following questions providing detailed answers based on your observations during the ferry crossing.

1. Visit the following web page: <http://goo.gl/ADBoSw> to see how an increasing sea level would change the Solent area in the future.
2. Use an OS map of the Solent area (Landranger 196) to follow the contour lines and predict how much land would become submerged if the sea level rose by e.g. 13 metres.
Mark on a new copy of the base map how the Isle of Wight and the mainland would change.
3. Re-read the information you collected on your trip to see what kind of impact the physical changes and the human defences/adaptations you noticed are likely to have on the Solent area.
Use the evidence and information you collected to describe and explain your view.

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4. Where are the “drowned valleys” and new islands of the future?

5. What could people do to protect themselves from the rising sea level and its consequences?
Make some suggestions here:

6. How are we going to deal with such great changes to our environment, compared to our Stone Age ancestors? Better or worse? Why? Discuss, describe and explain your opinion, using the evidence and information you have gained throughout this exercise.

