



**NATURAL
HISTORY
MUSEUM**

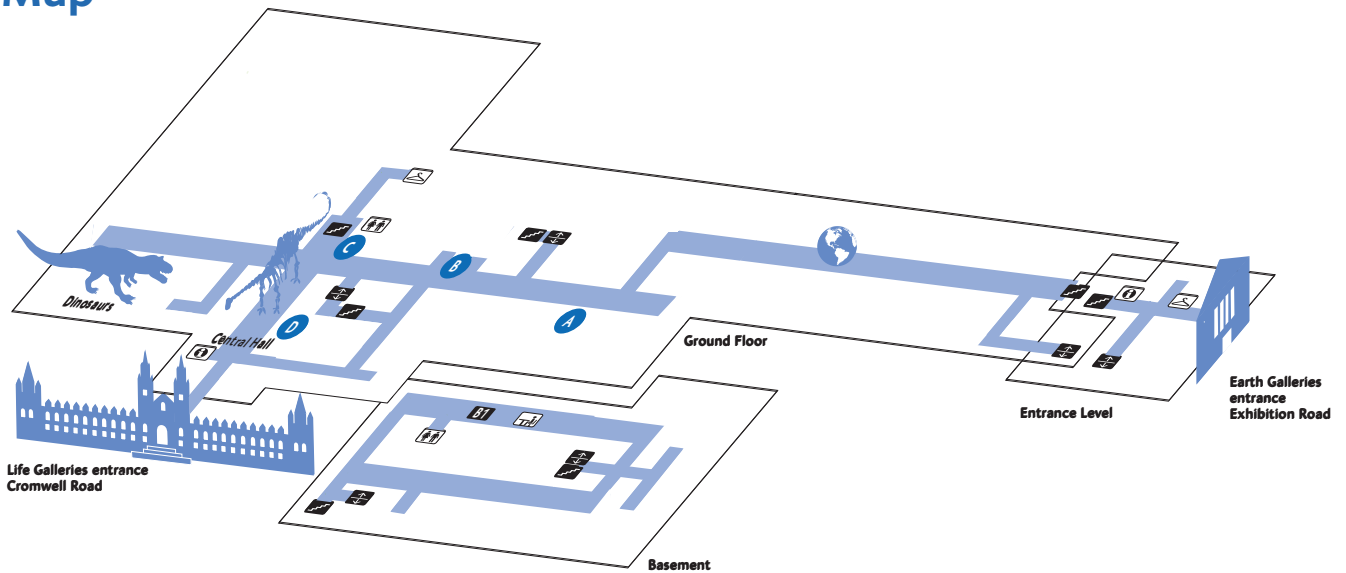
Dino-Scientists

The Natural History Museum Dino-Scientist Challenge

Notes for group leaders

Lead your group to the specimen chosen by the teacher:

Map

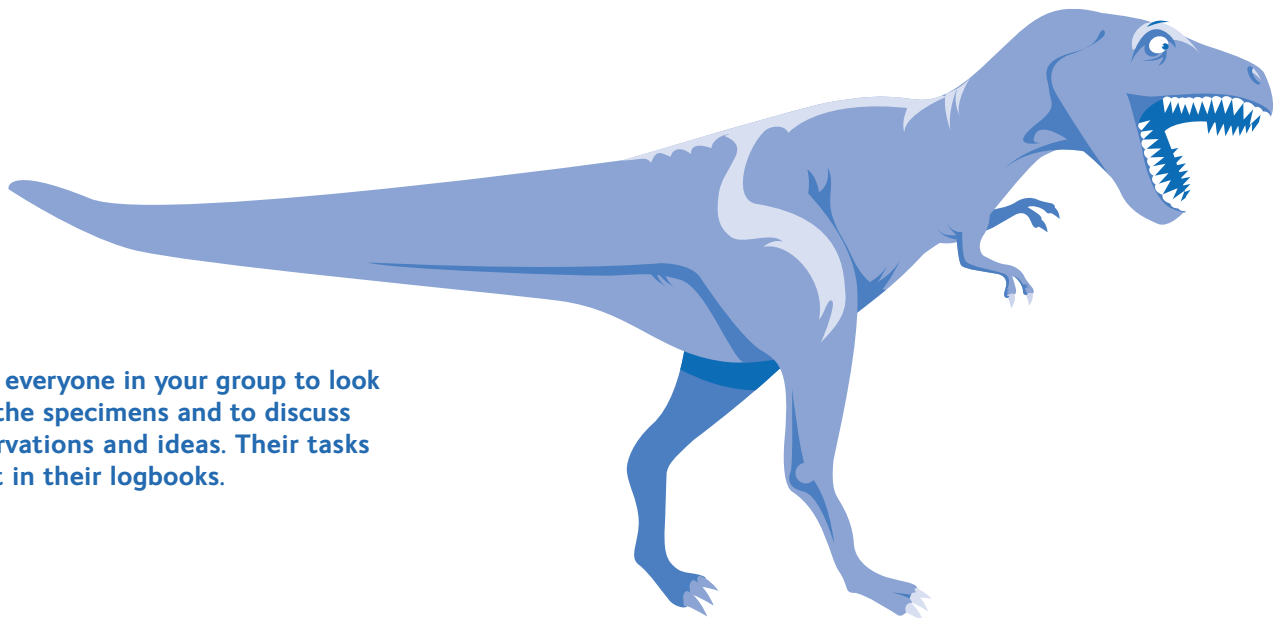


Key

- A** Ichthyosaur
- B** Mosasaur
- C** Glyptodon
- D** Giant ground sloth

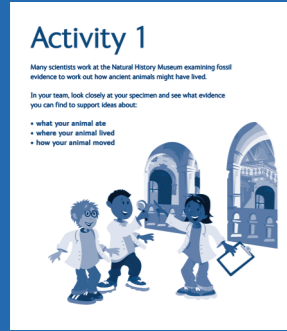
- Toilets
- Cloakroom
- Picnic Area
- Information desk

- Stairs
- Lift
- B1** School's Reception



Encourage everyone in your group to look closely at the specimens and to discuss their observations and ideas. Their tasks are set out in their logbooks.

Activity 1



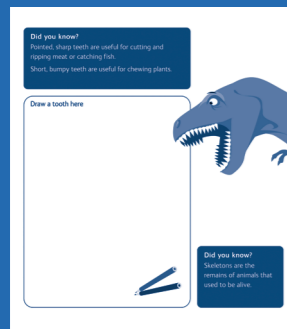
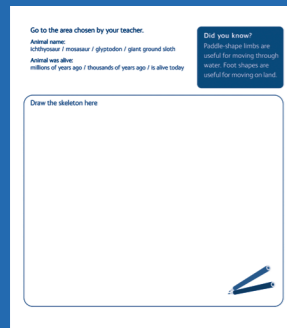
Remind the children they need to find out what their animal ate, how it moved and where it lived.

Focus their observations on the teeth and limbs of the specimen.

Pupils should be drawing on their knowledge that sharp teeth are a good shape for cutting or ripping meat and that bumpy teeth are useful for grinding plants.

Pupils should record their observations and conclusions in their logbooks.

There is space for drawing teeth and body shapes and a table for recording evidence and ideas.



Fill in the table to record your evidence and ideas.

What I want to find out...	Evidence e.g. sharp teeth or bumpy teeth	From the evidence I think...
What it ate e.g. plants or meat		It ate...
How it moved e.g. walked on two legs/four legs, ran, swam or flew		It moved...
Where it lived e.g. land, water or air		It lived...

Discuss with your group:
Can you be sure about the conclusions you have made?
Is there any other evidence you would like to see?

Useful questions:

- What shape are the teeth?
 - How do they compare to yours?
 - Have you seen teeth that shape before?
 - Would they be useful for cutting meat and/or catching fish? Why/why not?
 - Do you think they would be useful for chewing plants? Why/why not?
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- What shape are the limbs?
 - How does the shape compare to your arms and legs?
 - Do you think they are suitable for walking on land? Why/why not?
 - Do you think they are a useful shape for swimming through water? Why/why not?

Discussion points:

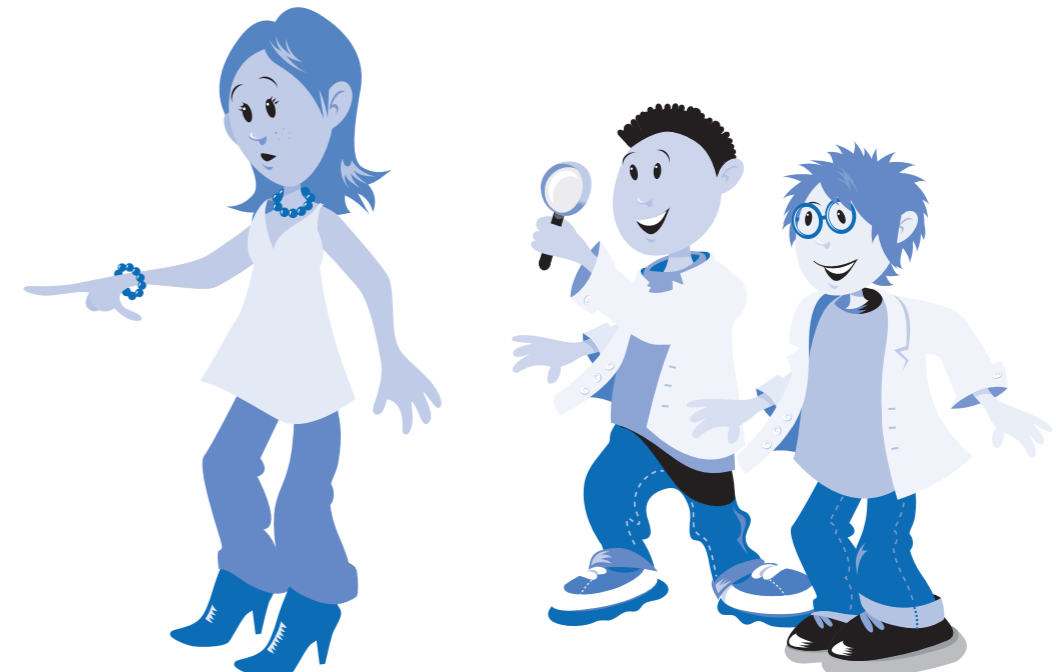
Encourage your group to discuss how certain they are about the conclusions they have drawn. Discuss whether there is any other evidence they would like to see, for example stomach contents of the animal to find out what it has eaten. There is no right or wrong answer to this. Explain that part of being a scientist is considering whether you have enough evidence.



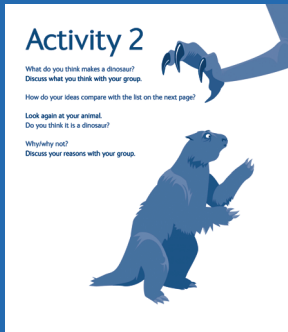
The following table provides background information on the specimens. Pupils should be looking at the fossil evidence to draw their own conclusions and not at the table. Focus more on the thinking and reasoning behind their ideas rather than whether you think they are right or wrong.

Specimens – background information

Specimen	Teeth and diet	Movement and habitat	Is it a dinosaur?
Ichthyosaur	Sharp teeth useful for catching fish or cutting meat	Paddle-shaped limbs useful for swimming	No. Although the ichthyosaurs were alive at the same time as the dinosaurs, they were not dinosaurs because they lived in water, not on land.
Mosasaur	Sharp teeth useful for catching fish or cutting meat	Paddle-shaped limbs useful for swimming	No. Although these marine lizards were alive at the same time as the dinosaurs, they were not dinosaurs because they lived in water, not on land.
Glyptodon	Bumpy teeth useful for chewing plant material	Legs/feet suitable for moving on land	No. The glyptodon lived on land and has straight legs underneath its body, like the dinosaurs, but it is not old enough to be a dinosaur. Although it is now extinct, the dinosaurs lived long before the glyptodon.
Giant ground sloth	Bumpy teeth useful for chewing plant material	Legs/feet suitable for moving on land	No. The giant ground sloth lived on land and has straight legs underneath its body, like the dinosaurs, but it is not old enough to be a dinosaur. Although it is now extinct, the dinosaurs lived long before the giant ground sloth.



Activity 2



Once pupils have recorded their ideas about how the animal lived they can evaluate whether or not they think it is a dinosaur.

Dinosaurs:

- lived on land
- had straight legs under their body
- could not fly
- lived between 230 and 65 million years ago

If your group finishes early, take them to any other nearby specimens. Ask them to look carefully and decide whether or not those specimens are dinosaurs, using the criteria in their logbooks.

At the time allotted by the class teacher, take the class to the *Dinosaurs* gallery.

The task is set out in their logbooks.



Encourage pupils to look at and give reasons about why the animals on display are dinosaurs.

Encourage pupils to look at the clues in their logbooks to work out which mystery dinosaur left the traces. They should be looking out for an animal with three toes on each foot and sharp teeth for ripping meat.

At the end of the session, please meet with the rest of the class and return the Dino-Scientist equipment to the School's Reception desk.

Useful questions:

- Do you think the animals lived on land? Why?
- Do they have straight legs under their bodies?
- How old are they?

