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Dinosaur Babies Exhibition 27 May 2017 - 5 November 2017



Teachers Guide

Discover the fascinating world of dinosaurs and their young in this family-focused interactive exhibition. **Dinosaur Babies** shows how dinosaurs looked after their eggs, nests and babies.

Meet 'Baby Louie'; the near-complete skeleton of a dinosaur embryo, dig in the discovery pit, touch a real dinosaur leg bone and come face-to-face with *Tyrannosaurus Rex*'s relative – a life-size *Tarbosaurus* skeleton cast.

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Dinosaur Babies is supported by the players of **People's Postcode Lottery**.
The learning activities for *Dinosaur Babies* are generously supported by **Western Power Distribution**.



Key messages

- Dinosaurs laid eggs like modern birds, lizards, crocodiles, and turtles.
- Dinosaur eggs are fossils. Very rarely, some contain fossil baby dinosaurs.
- Paleontologists find out about dinosaur family life by studying their nests.
- Some dinosaurs needed parental care when they hatched. Other dinosaurs were independent when they hatched.

What is in the exhibition?

There are 7 displays in the exhibition:



1. Ceratopsian babies

- Fossils to touch. Skeletons of this triceratops-like dinosaur family.



2. All sorts of eggs

- Real animals alive today that lay eggs - snakes, crocodiles, birds.



3. Sauropod eggs

- Huge herbivore leg bone, a nest of touchable eggs and skin from a dinosaur embryo (under the microscope)



4. Ornithopods (Hadrosaurs)

- Duckbilled dinosaur eggs and skeleton.
- 3D bone jigsaw to build.



5. Theropod eggs and nests

- Animatronic baby *Tyrannosaurus*, huge *Tarbosaurus* skeleton.



6. Baby Louie the hatchling

- Touchable *Gigantoraptor* nest
- Real dinosaur embryos.

7. Mysterious eggs

- Big Dig Pit, wheelchair accessible Dig Pit, dressing up.

Booking a visit

For school bookings, please call our Learning Dept on (029) 2057 3240.

For all other group bookings, please contact [Ticketline](#) on (029) 2023 0130

Email: learning@museumwales.ac.uk

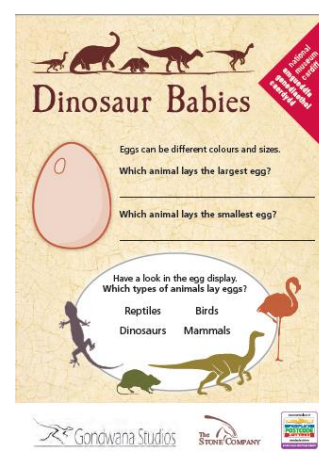
All groups must book in advance, whether visiting independently or on a museum-led visit. Bookable workshops are available to support the exhibition. See our website for more details: www.museumwales.ac.uk/learning/cardiff/

Costs:

Exhibition only	£60 – large group, up to 35 pupils £40 – small group, up to 15 pupils Teachers / supervisors go in free
Dinosaur Workshop only	£60
Combined workshop and visit to the exhibition	£120 – large group, up to 35 pupils £80 – small group, up to 15 pupils

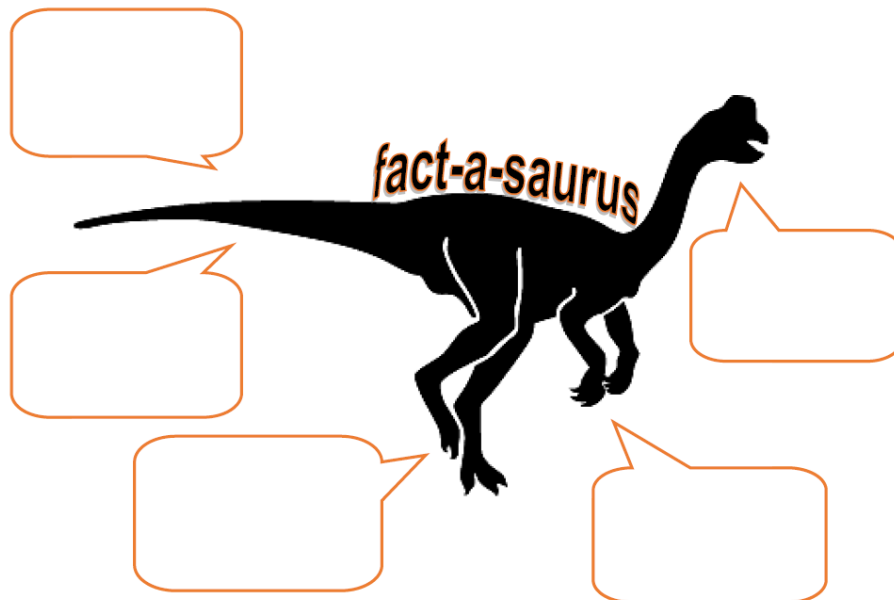
Things to do in the exhibition:

- Explore using touch. There are touchable dinosaur eggs and nests and even real dinosaur bones to touch.
- Download the exhibition trail from the Learning website and complete it as you go round, or pick it up in the exhibition on the day.
- Dig up dinosaur eggs. Which eggs can you find? Use a grid to plot where in the Big Dig Pit you found your eggs.
- Take photos! Please share them with us on twitter #dinobabies #deinosbach
- Collect data. There are many different ways that you could group data in the exhibition. How many birds' eggs are in the exhibition? How many









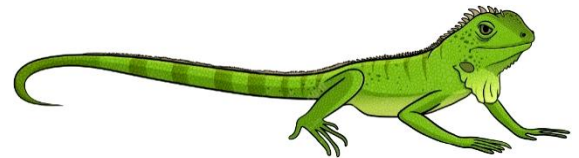
elongated (carnivore) dinosaur eggs are there in the exhibition? How many dinosaur skeletons? How many of these are babies?

- Print out one of the dinosaur shapes from the Learning website – write on the shape to create a 'Facta-saur' of things you've discovered in the exhibition. Pair & Share Factasaurs back at school.



Facta-saur ideas

-  Dinosaurs were reptiles.
-  Dinosaur means 'terrible lizard'.
-  Dinosaurs existed from 225 million years ago until 66 million years ago.
-  Marine reptiles and pterosaurs lived at the same time but were not dinosaurs.
-  Theropod (meat-eating) dinosaurs are closely related to birds.
-  No one knows what colour dinosaurs were.



Dinosaurs in the Exhibition:

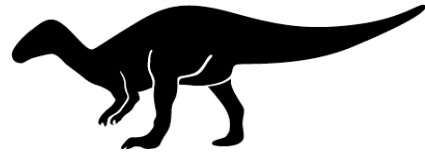
Herbivores:



- Skeletons and skulls of *Protoceratops* (pro-to-SAIR-uh-tops) family groups

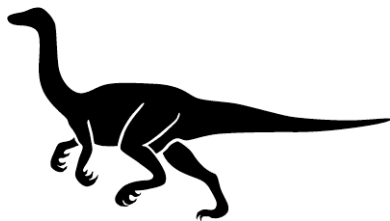


- Sauropod Eggs
e.g. *Titanosaurus* (tie-TAN-oh-sawr-us) and *Hypselosaurus* (HIP-sel-uh-SAW-rus).
- *Apatosaurus* (A-pat-o-SAWR-us) bone

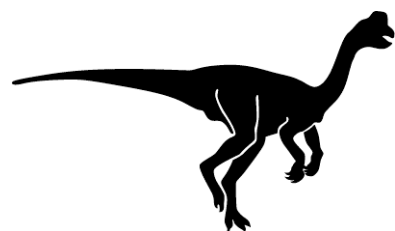


- Ornithopod (or-NITH-oh-pod)
e.g. *Hypacrosaurus* (hi-PACK-ro-SAWR-us) and *Edmontosaurus* Eggs
- Hadrosaur skull cast
- Real Hadrosaur leg bone

Carnivores:



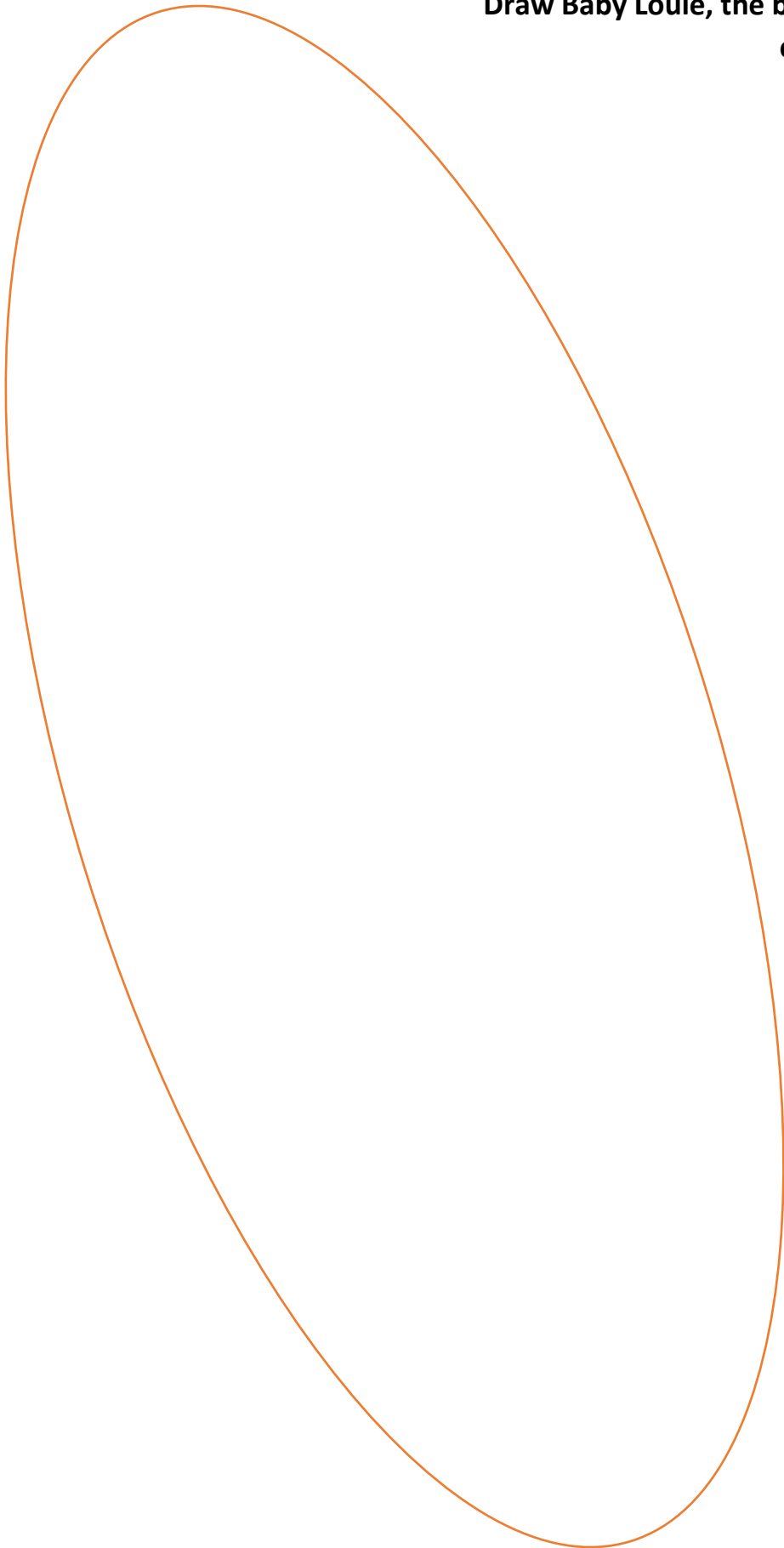
- Theropod (THAIR-oh-pod)
e.g. *Troodon* (TRO-oh-don) Eggs
- Complete skeleton of *Tarbosaurus*



- Complete *Oviraptor* (OH-vee-RAP-tor) nests
- Baby Louie, the *Gigantoraptor* hatchling

Dinosaur Eggs

Draw Baby Louie, the baby *Gigantoraptor*,
curled up in his egg.



Dino Babies Quiz

Dinosaurs laid eggs in nests on the ground.

Some dinosaurs stayed with their eggs until they hatched. Small dinosaurs may have sat on their eggs like chickens do today. Other dinosaurs covered their eggs with sand and plants to keep them warm and left them behind.

Dinosaur eggs ranged in size. Some were the size of golf balls. Others were the size of footballs. Eggs could not be too large or too thick. Air had to pass through the shells and the young dinosaurs had to break out of them.

1. How did dinosaurs reproduce?

- ☐ They gave birth.
- ☐ They laid eggs in caves.
- ☐ They laid eggs in nests.

2. Why did some dinosaurs sit on their eggs?

- ☐ To hide the colour of their eggs.
- ☐ To protect them from predators and weather.
- ☐ To keep them clean.

3. Where did dinosaurs make their nests:

- ☐ In tree branches.
- ☐ On the ground.
- ☐ In a cave.

4. Why couldn't dinosaur eggs be too large or too thick?

- ☐ So air could get in the shells and babies could break out.
- ☐ So the eggs could be hidden easily.
- ☐ Because no big, thick eggs have been found.

5. What modern-day animals lay eggs:

- ☐ Tigers
- ☐ Elephants
- ☐ Turtles

Answers

1) C, 2) B, 3) B, 4) A, 5) C

After the visit

Sauropod or Theropod?

1. Ask pupils to decide which dinosaur they are
2. Draw the shape of their egg – long or round – on card
3. Cut the egg to shape
4. Draw the baby dinosaur on one side
5. Draw a pattern on the other side of the egg



Which dinosaur are you?



Sauropods are:

- 🦖 Adventurous
- 🦖 Self-sufficient
- 🦖 Grab a bite to eat and run

Sauropod dinosaurs were ready to run from the nest soon after hatching.

They hatched from spherical (round) eggs.



Theropods:

- 🦖 Likes to know that someone you know is near
- 🦖 Prefers to work with others
- 🦖 Has someone making dinner for you

Theropod dinosaurs like oviraptor needed parental care when they hatched.

They hatched from elongated (oval) eggs.

After the visit - True or False?

Dinosaur eggs are fossils.	True There are many different types of fossils including dinosaurs, animals with and without backbones, and plants.
Giant dinosaurs laid giant dinosaur eggs.	False Dinosaurs start out small. The largest round dinosaur eggs are the size of a bowling ball. The largest long dinosaur eggs are as big as a loaf of bread. Most are much smaller. All are very small compared with the adults.
Dinosaurs and cavemen lived at the same time.	False Dinosaurs and humans did not live at the same time. Cavemen lived 63 million years after the dinosaurs! No human has ever seen a dinosaur.
Palaeontologists dig up dinosaurs.	True Palaeontology is the study of ancient life, including fossils. Archaeologists do not dig up dinosaurs, they dig up human remains.
All dinosaurs lived at the same time.	False Dinosaurs were on Earth for a very long time. Different dinosaurs lived at different times, millions of years apart.

More info

Download our **Dinosaur Detectives** iBook.

Unearth a dinosaur fossil, find out if *T. rex* had big feet and discover what dinosaurs liked to eat through a variety of puzzles and games.

Download the iBook or PDF file onto your portable device and start finding out more. You can use it at home, or bring it to the museum and use it as you explore the galleries.

<https://museum.wales/cardiff/learning/resources/>



Hi I'm *Dracoraptor*,
the Welsh dinosaur.

In 2014, two Welsh brothers found fossil bones from a small dinosaur in rocks on the beach near Penarth. A year later a student found the bones from its foot.

This was the first meat-eating dinosaur skeleton found in Wales. It was also a completely new type of dinosaur! It is called *Dracoraptor*, 'dragon-robber'.

Your Name: _____

If you found a new type of dinosaur, what would you call it?

This activity book was made possible thanks to donations from the Patrons of Amgueddfa Cymru



Meet Wales' newest dinosaur: ***Dracoraptor hanigani***.

Find out about the Welsh dinosaur in the main hall, and complete the FREE 'Dinosaurs in Wales' activity booklet.

