

# Science\_Dinosaurs

MARY ANNING  
\_Paleontologist



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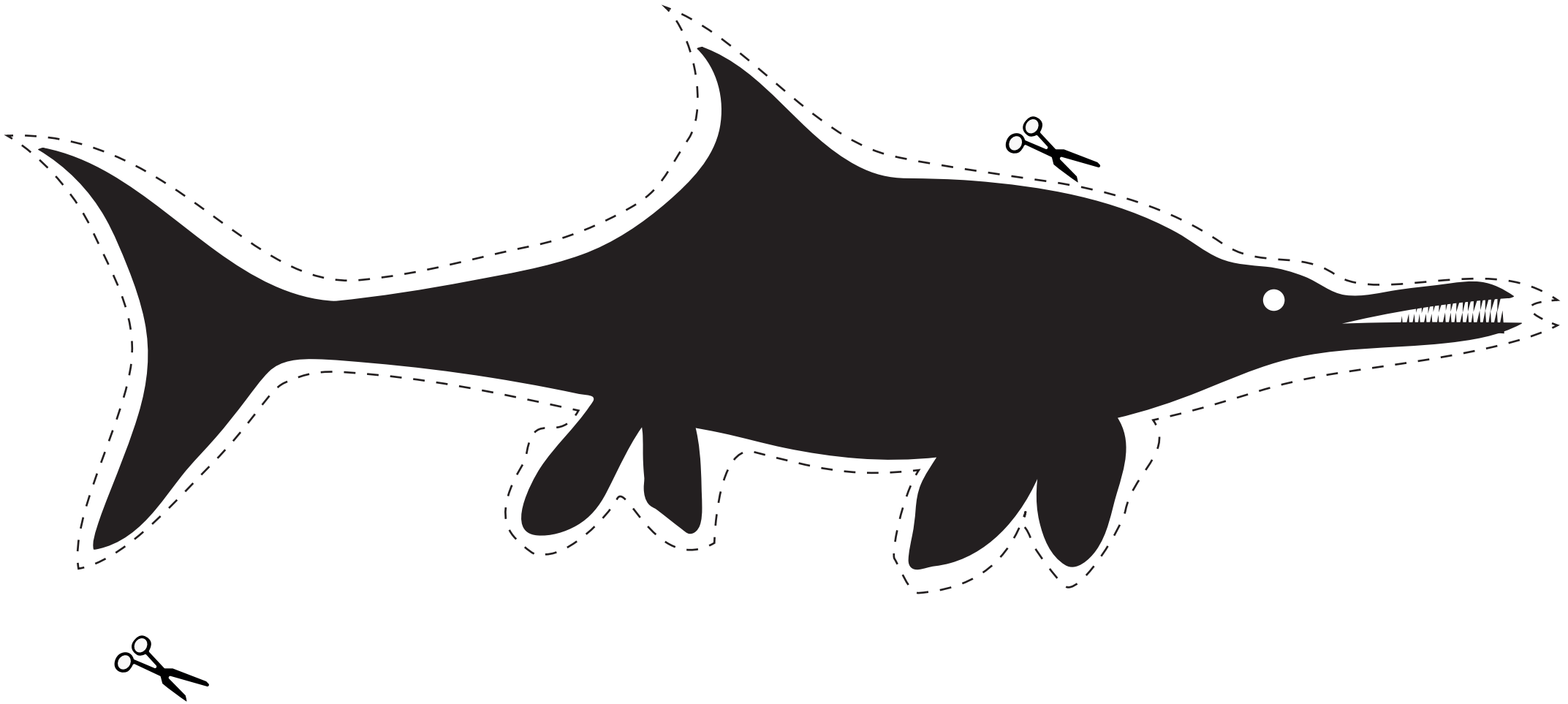
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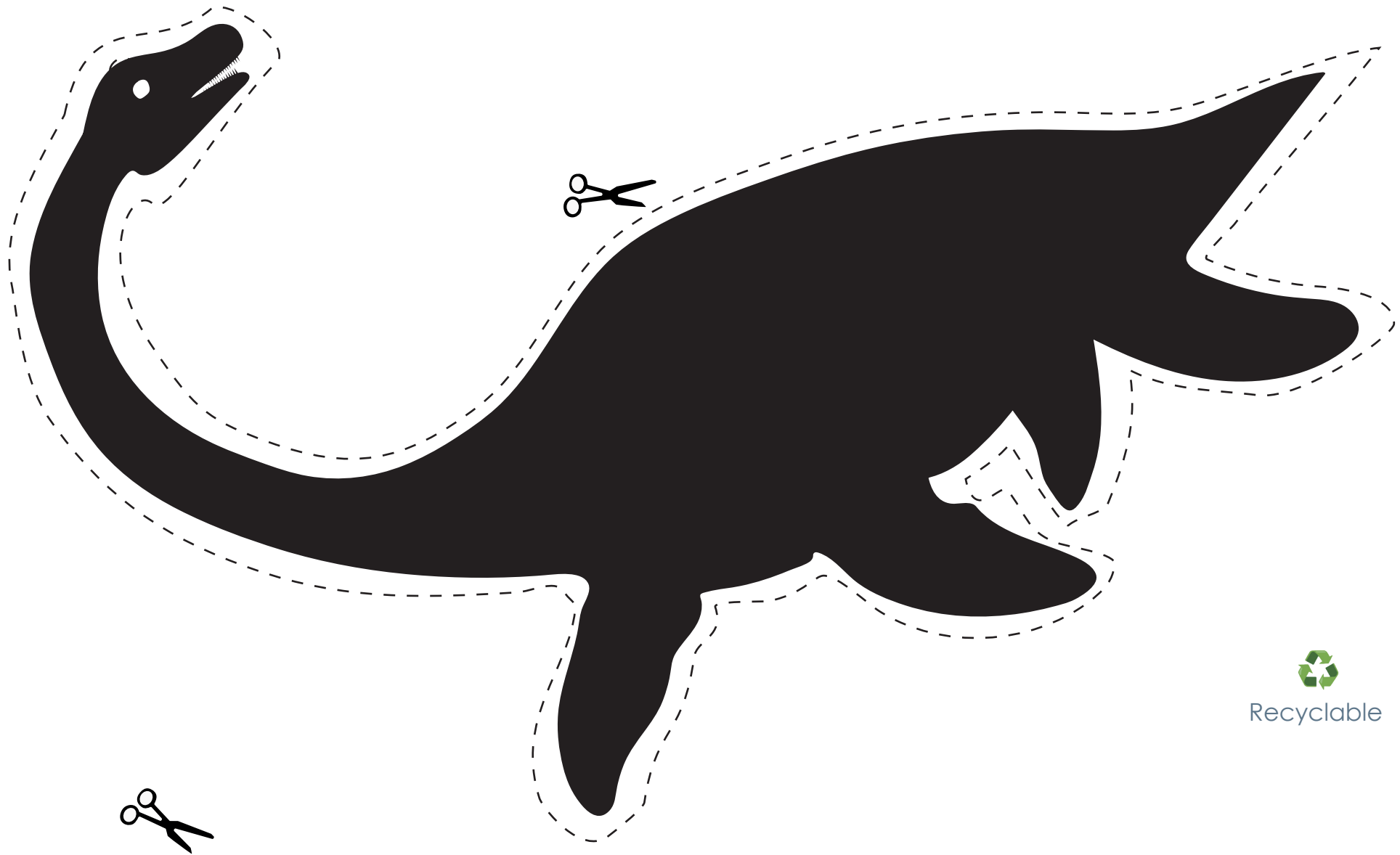
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## Ichthyosaurus:

(lizard fish) lived in Europe in the Lower Jurassic.





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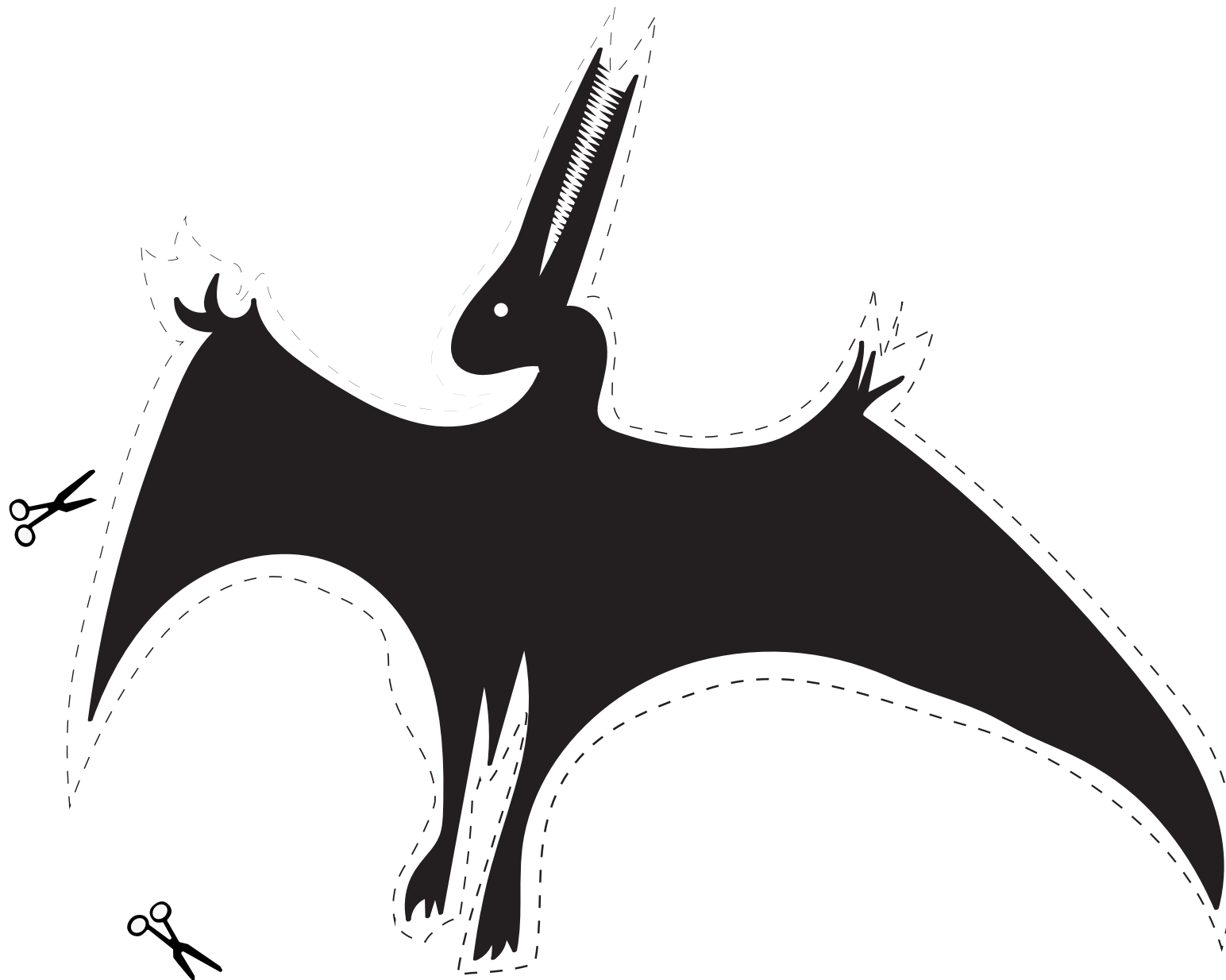


## **Plesiosaurus macrocephalus:**

(lizard-like) lived in Germany and England in the Lower Jurassic. Discovered by Mary Anning: its skeleton is now preserved in the Museum of Natural History in Paris.



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## **Pterosaur:**

(winged lizard), a flying reptile that lived from the Triassic to the Cretaceous.







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1. Skull skeleton of Pterosaur
2. Skull skeleton of Ichthyosaur

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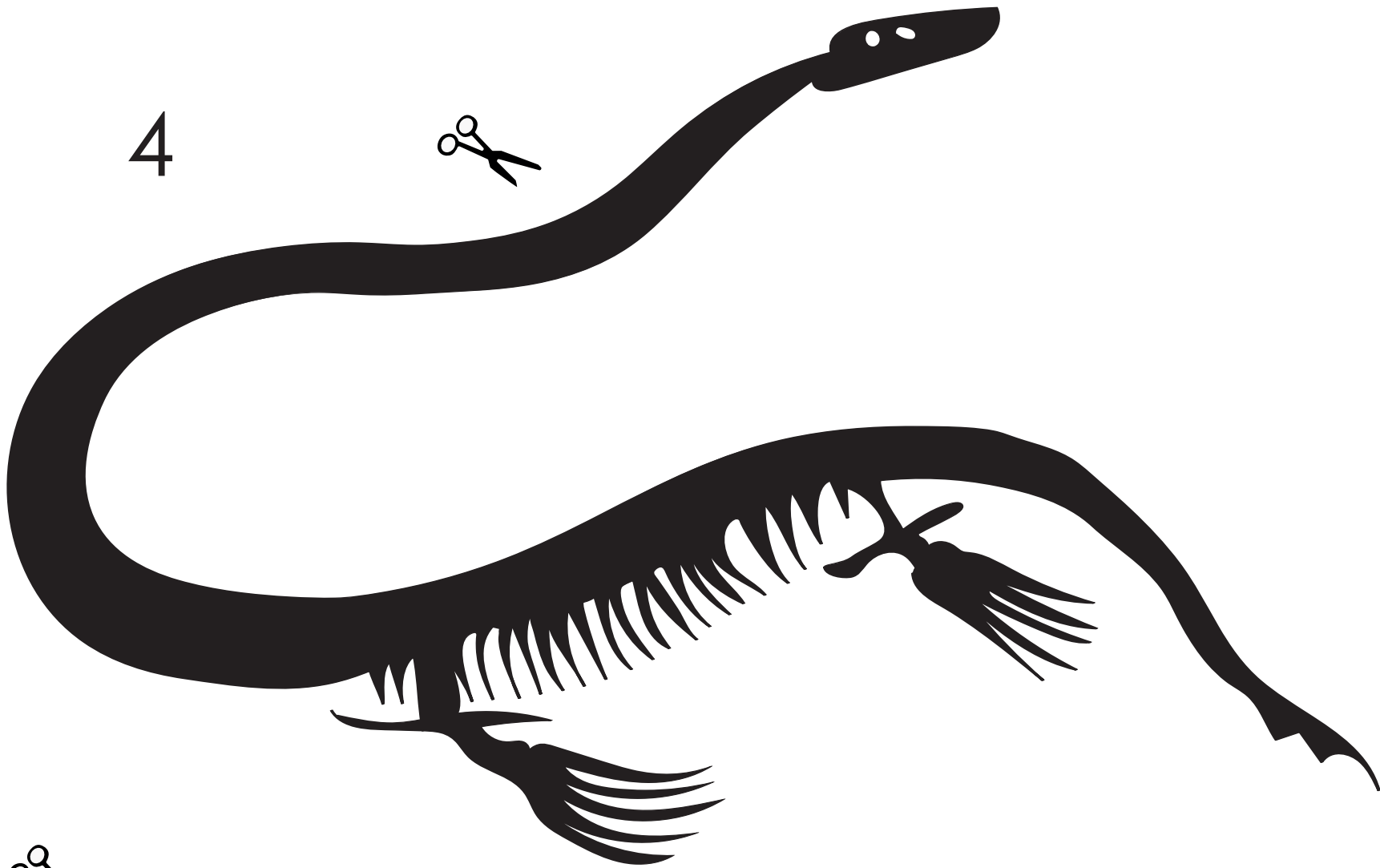


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## 4. Plesiosaur skeleton

## DINOSAURS\_ MARY ANNING

### THE PRINCESS OF PALAEONTOLOGY\*

The long Blue Lias cliffs, limestone strata that were like pages from a natural history book full of fossils in Lyme Regis were windswept, the pebble and sandy beach made walking difficult, but Mary and her father Richard didn't seem to mind too much as they were focused on finding fossils. Large bones emerged here and there, and they ran to collect and sell them to the many passing tourists. The large and very poor Anning family had made the sale of fossils their main means of livelihood, but the money was never enough and certainly couldn't be used to pay for an education.

One day, after the death of her father, who had slipped off a cliff, 11-year-old Mary, in the company of her brother Joseph, found the skull of an ichthyosaur "lizard fish" on the beach. Mary and her brother passed each other the long snout to observe it better.

Mary was fascinated and returned to the same place several times until, a few days later, she found the entire body. The rumour that a young girl from Dorset had found a monster spread quickly, and people from all over came to see it.

A collector bought it for a few pounds.

Mary used to go to the beach every day after a storm, attracted especially by the boulders breaking off the rock as it was in these that the most significant finds were to be found. She had to do this every day before the high tide would come in and take the precious fossils away. Her intelligent eyes seemed to sparkle every time they spotted a fossil, and in her mind, those ancient and majestic animals seemed to recompose themselves and come to life.

Mary daydreamed about that lost world. Even though many of the scientists of the time did not value her contribution because she was a woman, Mary went on to discover wonderful fossils, including a plesiosaur, a magnificent pterosaur specimen, numerous extinct fish species and even a shark ancestor called *Hybodus*. Every discovery was an absolute joy for Mary. Among Mary's discoveries were the coprolites, known at the time as bezoars, which were nothing more than fossilised droppings of animals that are now extinct and yet very important for discovering what those giant "lizards" ate.

The numerous finds sold not only to tourists in the town but also to museums and scientists helped Mary to buy herself a small house. She set up a shop there, the Anning Fossil Emporium, where she impaled and catalogued the many skeletons the rocks released "for her" after each storm.

Although Mary had not been able to study, she had read magazines and everything available even though the time in which she lived was not only male-dominated but also profoundly male chauvinist. Women were barred from voting and certainly could not aspire to become scientists.

However, her passion, care and attention to cleaning fossil bones, drawing and describing them had impressed the most enlightened minds of scientists who considered her the princess of palaeontology. Self-taught but profoundly wise, she had a dense correspondence with numerous scientists, including the palaeontologist Richard Owen, inventor in 1842 of the word "dinosaur" (frightening lizard), or the president of the Geological Society of London, Henry de la Beche, her faithful friend. On a cold March day in 1847, Mary, still young but seriously ill, no longer had the energy to devote to her great passion and work.

Her appointment as an honorary member of the Dorset Museum only a few months earlier had not repaid her for her many humiliations.

Surrounded by the familiar bones of her "monsters", Mary closed her eyes and died.

It took many years for her talent and fundamental contribution to be recognised, but in 2010, she was recognised by the Royal Society as one of the ten most important female scientists in the UK.

(\* nickname given to Mary Anning)



# DINOSAURS\_MARY ANNING

## HOW TO USE THE STORYTELLING MATERIAL

### INSTRUCTIONS:

After reading Mary Anning's biography, the teacher presents the silhouettes of three dinosaurs discovered by the British palaeontologist.

The provided storytelling tool can be used in two different ways. The silhouettes can be cut out and glued onto wooden sticks that will allow the boys and girls, as well as the teacher, to hold them and cast shadows on the walls of the previously and appropriately darkened classroom.

The second use, on the other hand, will allow the teacher to give the children an immersive experience: after having cut out the silhouettes, they will have to fix them on supports and project their enlarged shadows on the walls on which they will have set white sheets of paper, at such a distance that the drawings do not interfere with each other's shadows. In groups of three, the children can redraw the outlines of the dinosaurs.

The teacher can then ask the children to colour in the drawn silhouettes with colours chosen according to the period in which they lived, or with the help of pictures taken from the internet or prehistoric books, have them draw details of the various dinosaurs.

### For the teacher

PLEASE NOTE: The outlines of the skeletons should be cut out using a cutter and printed on paper weighing at least 200/250 grams.



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