

# Rocks & Soils

## Teaching Through Stories

TEACHER RESOURCE 1:  
Fossil Formation & Mary Anning

a story by Carmel Page

# Mary Anning, a story by Carmel Page

Photo: Joe Dunckley flickr.com/photos/steinsky/

Long ago, long, long ago, way, way back before the beginning of everything there was Mother Earth, and there was water. Mother Earth slept, and as she breathed, the waters of The One Sea moved about her.

Let's make the sea ...

Then, after a very, very, very, long time, fish began to move in the sea. They did a lot of the things that we do; they had families, they moved, they ate, they pooped and eventually they died, and they fell to the bottom of the sea.

And the sea washed in, and the sea washed out, and a little bit of sand fell to the bottom of the sea.

Then there were Belemnites living in the sea. They had hard shells with soft bodies inside, they did a lot of the things that we do; they had families, they moved, they ate, they pooped and eventually they died, and they fell to the bottom of the sea.

And the sea washed in, and the sea washed out and a little bit of sand fell to the bottom of the sea.

Then there were Ammonites living in the sea. They had hard shells, but they were curly shells. They had soft bodies inside the shell, they did a lot of the things that we do; they had families, they moved, they ate, they pooped and eventually they died, and they fell to the bottom of the sea.

And the sea washed in and the sea washed out and a little bit of sand fell to the bottom of the sea.

A long time after that there were big dinosaurs swimming in the sea like the Ichthyosaur. It is so big that I have only brought its paddle, the big flipper that it swims with. If it was swimming above us all that we would see is the paddle swimming past, above our heads. The ichthyosaurs did a lot of the things that we do; they had families, they moved, they ate, they pooped and eventually they died, and they fell to the bottom of the sea.

And the sea washed in, and the sea washed out and a little bit of sand fell to the bottom of the sea.

Over time, more sand fell on the sea bed, and more and more.



And so it carried on for years, or ages, and on and on, and the layers of sand got heavier and heavier and heavier. Everything got squashed down by the weight of the sand on top of it. When sand gets squashed down, it turns into rock and anything in the sand also gets turned into rock.

Mother Earth had been asleep for a long time but then she woke up and she stretched and as she did that the earth moved. Some of the rock which had been made under the sea was pulled up onto the land.

There were still waves in the sea and they washed in, and they washed out, and they washed against the earth and some of it started to fall into the sea.

That all happened very, very long ago. Not quite so long ago – perhaps when your great grandparent's great grandparents were born – there was a little girl called Mary Anning. She lived at the seaside at Lyme Regis, and she loved the sea. She specially loved walking along the beach with her dad. She liked it because she liked having time with her dad. She also liked it because they were very poor. Her father was a carpenter, he made things out of wood, but they were still poor. When they walked along the beach, they looked for curiosities and they could sell curiosities and make money from them.

The waves washed in and the waves washed out and curiosities got washed out of the cliffs.

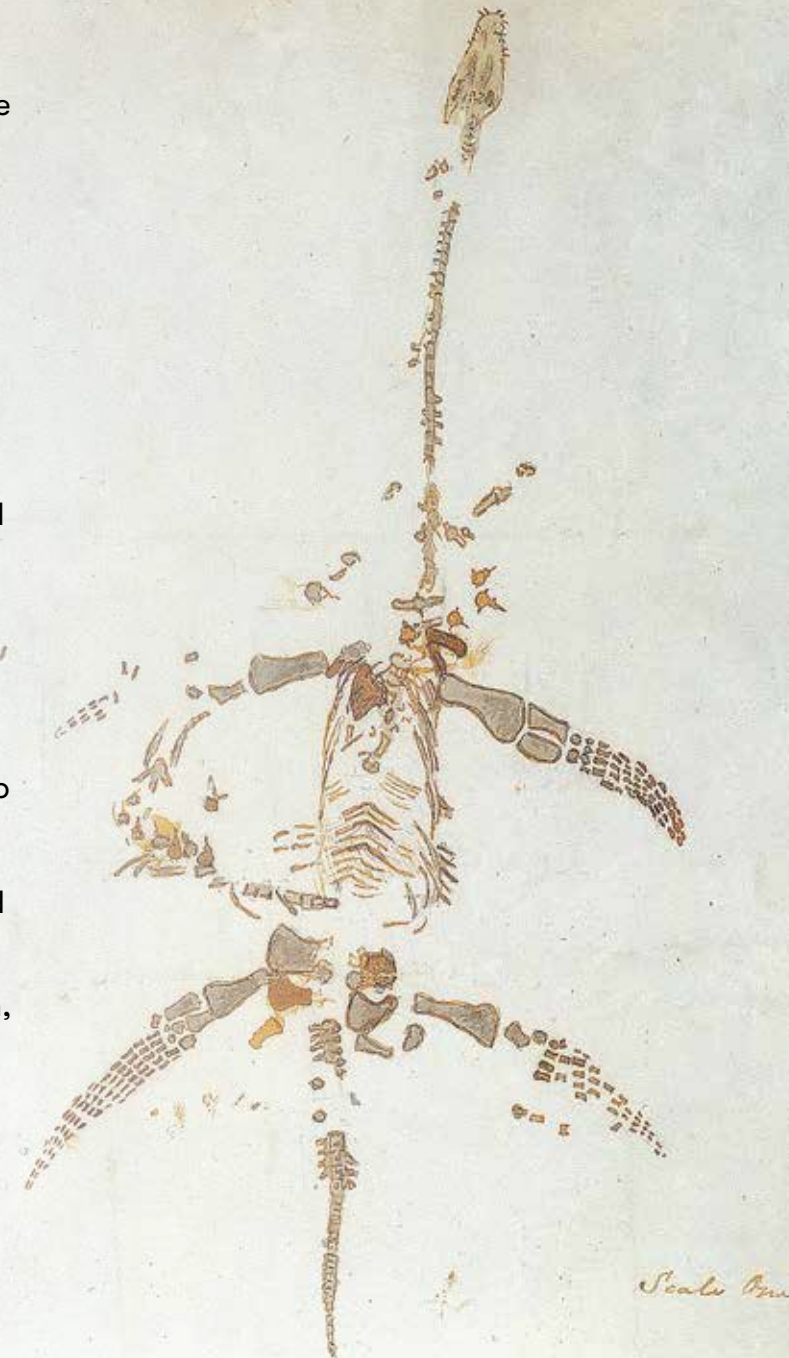
Sometimes Mary found things like this; no one knew what it was, but people liked to buy them.

The waves washed in, and the waves washed out and sometimes Mary found things like this; people called these snake stones because they looked like snakes that had curled up and gone to sleep.

The waves washed in, and the waves washed out and sometimes Mary found things like this; and no one knew what to call these, but people liked to buy them, which was all that mattered.

Then something really, really bad happened to Mary. Her father died. She missed him very much, and it also meant they didn't have enough money. Mary Anning decided that she had better spend more time looking for curiosities on the beach. The best time to find them was after a storm when the waves had been blown up really high. Then they knocked more curiosities out of the cliff, but it was dangerous to go on the beach then and it was often winter when it was very cold, but Mary Anning was brave and she kept working. Some days, Mary didn't look for curiosities because she was in school, but you had to pay to go to school and the family didn't have much money so she spent most of her time on the beach.

Now, up in London, Men of Science were starting to talk about curiosities -but they called them



'fossils'. They didn't know what fossils were, but they were very interested in them. They heard that there was a girl in Lyme Regis who was good at finding fossils, so they went to visit her.

Some of them said, "Her!?! She's just a child and she looks dirty, and how can a girl know about fossils?" But when they walked along the beach with her, they found out Mary knew more about fossils than anyone! They used to ask her lots of questions, then when they went back to London they pretended they had worked everything out themselves. Some of the Men of Science bought fossils from Mary Anning for a little bit of money, and then they sold them to other Men of Science for a lot of money!

Some of the Men of Science were kind to Mary. Even though she was a woman (she had grown up), even though some people thought that women couldn't understand science, especially not if they had hardly been to school, some of the men understood that Mary was very clever. They walked along the beach together as the tide washed in and the tide washed out, and they talked about the fossils.

They worked out that at different times in the past, different types of creatures had lived in the sea and over time the creatures had changed. Mary showed the men fossils like this; this is a fish that used to live in the sea. Some of the soft parts rotted but the bones can still be seen.

One day, Mary and her brother found the skull of an Ichthyosaur and Mary thought the whole skeleton might be in the cliff, so she dug and she dug and she dug until she found a paddle which looked like this, and she kept digging until she had the whole Ichthyosaur. Mary Anning was the first person to find one.

She also thought a lot about these; Mary Anning kept thinking about all the creatures in the sea. She thought they must have had families and moved and ate and pooped, and eventually she realised these were fossilised dinosaur poo. No one else had worked that out. Now we call them coprolites.

Then Mary became ill, so she went to bed. She was younger than me and she was very ill, and she lay down in bed and she died. Her family and friends had her buried in the local churchyard and they put soil on top of her. I'm sorry to say she didn't get turned into a fossil, which is a shame because she would have liked to be fossilised, but most things that die don't become fossils they just rot away. Nowadays, anyone who knows anything about fossils, knows about Mary Anning, and she is remembered as one of the best scientists this country has ever had.

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