



## Transcript for *Shark Lady* (Sourcebooks Explore) Preview Video

### Preview (0:00 – 8:41)

Hi everyone! It's Colleen from the KU Natural History Museum, and I am reminding you about tomorrow's Story Book Science here on Facebook Live at 10am. I'm really excited for tomorrow because we will be reading the book *Shark Lady*. This book is written by Jess Keating, and it's illustrated by Marta Álvarez Miguéns. And it is published and being read with permission from Sourcebooks Explore.

Now the reason I'm so excited to read this book is because it's about one of my favorite female scientists, Eugenie Clark, whose picture is on the wall. Now Eugenie Clark was a Japanese American ichthyologist from New York. So what that means is she studied fish. Now Eugenie studied many different types of fish, but she's most well-known for the work she did with sharks!

Now growing up and doing science research, a lot of people just thought that sharks were mindless monsters, that all they did was attack! But Eugenie knew better. Those people that thought sharks were mindless monsters also thought that women like Eugenie shouldn't be studying sharks, let alone doing science! Eugenie also disagreed with them. And for us, we should be very thankful that she continued to study and research and power through because we learned so many amazing things about sharks, thanks to Eugenie and all of her hard work.

Now I mentioned earlier that Eugenie was an ichthyologist. So she studies fish. Now there are a lot of different fish in the sea, and because of that, we can separate fish into categories based on their characteristics or their features. So there are some fish that have jaws, and there are some fish that don't have jaws. Fish that do not have jaws, we know those as jawless fish. And a lamprey is a really good example of a jawless fish. Now other fish do have jaws. Some fish that have jaws are bony fish. Some fish that have jaws are cartilaginous fish. Now bony fish like this ray-finned fish that you see on the wall, they have skeletons made of bone. Cartilaginous fish, which are not bony fish because their skeletons are made out of cartilage. And we're going to focus on cartilaginous fish, which include sharks, skates, and rays.

Now when we think about cartilaginous fish, we know that they have jaws. So let's look at a shark jaw! Alright. So this is a shark jaw, and one of the cool things about a shark jaw is it's made out of cartilage because we know sharks are fish that have skeletons made of cartilage. Now when we look at the shark jaw, this is looking at it from the front, you'll notice a series of teeth right at the front on the bottom, as well as at the top. So I'll put that closer for you to see. Now with shark jaws, not only do they have teeth right in that front row. We call them functional teeth because for sharks that use their teeth to eat, these teeth are the teeth used to eat. But if we flip and turn the shark jaw around, you'll notice that there are many, many rows, additional rows of teeth one right after the other. So those teeth that you see right here at the bottom and also at the top, it might be a little difficult to see, but you can see rows of teeth behind the functional teeth. Those series of teeth are called replacement teeth. So sharks, when they lose their teeth, and they tend to lose a lot of teeth, the replacement teeth take the place of the lost tooth! And they kind of just go up and replace the functional tooth at the front. So take a moment to look at the jaw of the shark and looking at the functional teeth and the replacement teeth.

Alright. I'm going to put this jaw down.

Now there are a lot of different sharks, and different sharks have different teeth shapes. Why do you think different sharks need to have different shapes of teeth?

Different sharks have to have different shapes of their teeth because different sharks eat different things! So for example, a tiger shark, this is an image of a tiger shark, their teeth have these serrated edges. So if you look at the photo, you'll notice that there are these ridges. Do you see that? Now those serrated edges, those allow the tiger shark to bite into their prey and then kind of move their head and saw into their prey, almost like using a knife to cut food. That is how this tiger shark uses its teeth. Port Jackson sharks, here's a photo of a Port Jackson shark. They have teeth that look a little different than what we normally think of when we think of shark teeth. This is what their jaw looks like. Now Port Jackson sharks, their teeth look like this: very flat and dense because they use their teeth to crush and crunch up animals with shells and other hard bits that they eat. So Port Jackson sharks, they eat things like crabs and other crustaceans. And lastly, I wanted to share with you the lemon shark! Lemon sharks have teeth that are very long, narrow, and sharp. This is what their teeth look like. So you can see how long and narrow those teeth are. And these teeth are really good for catching quick, bony fish in the water, which is what the lemon shark eats.

Now I have a couple of shark teeth that I want to share with you. And I'm going to show them to you, and I want you to make an observation about the teeth. I want you to look at them and taking all that you know about sharks and what we just talked about, I want you to think about what the shark that this tooth is from eats. So I'm going to grab those teeth, and I'm going to show you. I'll put these two on the camera. So there are two different teeth, and they're from different sharks. And I want you to make an observation about the teeth. What do you think the sharks eat? We have a very long, oops, a long, sharp, and narrow tooth. And we have a tooth that has tiny serrations. Alright. So take a moment longer looking at these teeth. And I'm going to put these back. What I want you to do is I want you to think about the food that the sharks would eat that have those types of teeth. And I want you to come back tomorrow to learn what sharks those teeth come from, and also what it is that they eat.

Now I'm so excited for tomorrow's Story Book Science. I can't wait to read a book about Eugenie Clark and all of the amazing things she taught us about sharks and how they are just these amazing, awesome creatures that are very misunderstood. We'll talk about how she, with the help of the observations of a local fisherman from an island in Mexico called Isla Mujeres, learned that sharks don't have to constantly move. In fact, some sharks can rest! We'll also learn about how she trained sharks and proved that sharks can learn! So she did an experiment where she trained sharks in order to receive a piece of food, kind of like if you were training a dog. So I can't wait for tomorrow where we get to read all of these amazing things together. But before I go, I want to know: what do you think is so cool about sharks?

Alright. I'll see you tomorrow! Bye!