



Transcript for *Walk on the Wild Side* written by Nicholas Oldland (Kids Can Press)

Introduction (approximately 0:00 – 4:04)

Hi everyone! It's Colleen from the KU Natural History Museum, and I'm so excited for today's Story Book Science. While we wait for other people to join us, I do want to remind everybody about the activity that I have for after our reading and after we look at museum specimens. So if you would like to participate using a scrap sheet of paper like this – I'll be using a scrap sheet of tissue paper – this is a really good time to go ahead and grab your scrap sheet of paper. Now I do want to remind you that you don't actually have to use a scrap sheet of paper, but if you'd like to, this is a good time to get it.

The other thing that I wanted to talk about while we wait for others to join us are the animals we're going to be reading about today. So on the cover of the book we have a beaver, a bear, and a moose, and we are going to be reading about their adventure up a mountain this week; but before we get to that adventure I was thinking about the beaver, the bear, and the moose, and I was thinking about all of these things that they have in common. And those things that they have in common are shared characters; and what that means is that they are mammals that have these features about them, these shared characters, that all mammals have and only mammals have. So if we look at the book – it's a little hard to see – but if we look at pictures of a beaver, a moose, and a bear, what we can see is that they have fur, or hair. That is a shared character of mammals. Now I also have hair. I have hair on my head. I have hair on my arms. So I am also a mammal. I have that same shared character.

Now although these animals have shared characters, because they're all mammals, they also have adaptations; and adaptations are features that have changed over time that allow an organism to survive its environment. And after the reading we're going to be talking about adaptations reflected in the shape of teeth as they are related to the diet of a beaver, a moose, and a bear. So I'm really excited about that.

Now that everyone has had some time to go and look for a scrap sheet of paper I want to go ahead and get started. The first thing that we'll do is go over our Story Book Science rules. We are not in the museum, but museum rules still apply. So that means to be kind and considerate. If you have questions, if you have comments, please feel free to share those, but remember to be kind and considerate; and also remember that I may not have an opportunity to see those questions or those comments as I'll be reading a book.

Now, as I've already showed the book cover, this is the book we'll be reading: *Walk on the Wild Side*. It's by Nicholas Oldland, and it's being read with permission from Kids Can Press. So thank you to Kids Can Press for letting us read this book. I really enjoy *Walk on the Wild Side*. I like it because it reminds me that not everything has to be a competition. When we go on an adventure, or when we really do anything, we can take it slow, and that's totally okay to do.

Now the last thing I want to mention before we read the book is that if you need a partial transcript of this reading it will be available on our website later today, and there is a link to our website in the description. You should also be able to add closed captions within your own Facebook settings. So let's get started!

Walk on the Wild Side by Nicholas Oldland.

Reading from *Walk on the Wild Side* (approximately 4:05 – 8:34)

Walk on the Wild Side includes copyrighted materials, and we do not have permission to include the written text of the book in this transcript.

Conclusion (approximately 8:35 – 19:55)

The end.

Now that was a really fun book. One of the things that I thought was interesting was that the moose was so, so eager to win the race that it was doing pretty well. It was in the lead, but then it fell off the mountain; and then the bear, who wanted to help the moose, it also fell off the mountain trying to do so; but the beaver was able to help both the moose and the bear by using its teeth in order to gnaw on a tree, cut it down, and then make notches or carvings in the wood of the log so that the bear and the moose could use it as a ladder. So the beaver was using its teeth.

Now the beaver's teeth and the shape of its teeth, those are an adaptation that are related to its diet. So before we talk about the teeth and the teeth shape – let's talk about mammal diets. So if a mammal were to, say, only eat meat, we would use the word carnivore to describe a mammal that only eats meat. If a mammal only ate plants, we would use the word herbivore to describe the mammal that only eats plants; and we also have the word omnivore, and that word describes a mammal that eats both meat and plants.

So let's go back to the beaver. Now I have some museum specimens. I have a, um, skull of a beaver. This is the top portion of the skull, and then this is the lower jaw of the beaver. Now I'm going to put the lower jaw down because we're going to focus on that upper skull right here. Now you have these teeth at the front. Those are incisors, and there are two at the front on the top skull and then two on the lower jaw; and these incisors, they are long, and they are orange. That orange is caused by the enamel. The enamel makes the teeth very strong, and that allows the beaver to gnaw on wood; and it allows those teeth to not break while it does that because wood is pretty tough. So you want to make sure that those teeth are very strong.

Now I have an example of what a beaver gnawing on wood looks like; and so this is a stick, and I'll bring it close to the camera. Do you all notice those notches and those gnaw marks? Because those gnaw marks are made by the beaver as it gnaws on wood using those incisors. So those are just two teeth of the beaver. If we look at the side of the skull – so right here – those are cheek teeth. Those are pre molars, and they're molars; and they're very wide, and they're very bumpy. So these cheek teeth of the beaver, they are excellent at grinding up plant material, because plant material like leaves, they are very tough. So the beaver needs to be able to grind them up in order to digest the food. So looking at these wide and bumpy teeth, that teeth shape, it is an adaptation related to diet; and the beaver is an herbivore. So we can put that right under its picture.

Now the next animal we're going to talk about is the moose. So moose are very large. I do not have a moose specimen to share with you just because I don't think it would fit in my camera frame; but I do have a specimen of a animal, a mammal, that is very closely related to the moose. I have a lower jaw of a white-tailed deer. Now white-tailed deer and moose, they are found in the same family; and so we can look at this white-tailed deer jaw in order to better understand not only the deer but the moose as well and its diet. So what I'm going to do is I'm going to put this close to the camera; and these are the cheek teeth; and you can definitely see they're a little bigger, but they're still very wide, and they're still very bumpy. And as we know wide, bumpy teeth – if teeth are shaped like that – you tend to see it in herbivores, because those wide and bumpy

teeth, they allow the mammal to take plant material, and crush it up, make it less tough so that it's easier to digest. So the moose, just like the deer, that is also a herbivore. So we can put that underneath the picture.

Alright. Now the last specimen I have to show you is a brown bear skull. Now brown bears – in fact, all bears – a lot of people just assume that they're carnivores, that they only eat meat; but that's not true. Bears, and brown bears especially, they're omnivores. So they eat both meat and plants. Now I'm going to put omnivore on the board since we've already discussed its diet; and now what we're going to do is we're going to look at the skull to see its teeth, the shape of its teeth, and better understand why it's an omnivore. So this is also quite a large skull, but here is a bear skull; and these right here at the front, those are incisors. They have a completely different shape than the incisors of the beaver that we saw. The brown bear also has canines. We did not see those on the beaver. So these canines are, especially their shape, are very unique to the brown bear compared to the beaver and the moose; and when we look at the cheek teeth along the side, you do notice that they are wide, but they're not as bumpy as the cheek teeth of the beaver or the deer. So this is a good indication that the diet of the brown bear is both meat and plants. So these canines are very long and very sharp and narrow. Those are really good for ripping meat apart; and that allows these teeth shape. They're an adaptation related to diet that allow the bear to have a very diverse diet of both meat and plants.

Alright. So I'm going to put this bear skull down, because now it is time for our activity. So if you have your scrap sheet of paper this is a good time to grab it. What we're going to do is we're going to use our hands to model the different teeth shapes. Now we're first going to talk about the Beaver. So what I want you to do is take your left hand and put your middle and pointer finger together like this, and then do the same with your right hand; and then take your left hand and point your fingers down. Point your fingers up on your right hand and have them touch like this; and this is a model of the beaver's incisors. Alright. So if you want to use your piece of paper, you can put it between like that, and then you can pretend to gnaw as if your paper was a piece of wood. Alright. So that represented the beaver's incisors.

Now we're going to do a hand model to represent the cheek teeth of the beaver and the moose. So we know that they're wide and bumpy. So we're going to be using our knuckles on our fists to represent wide and bumpy cheek teeth. So make a fist with both hands. Put your left hand down like this, and then have your right hand pointed up to do the same. If you have your piece of paper – opps – might fall, so just be careful. Put the piece of paper between those two fists you've made, and then rub your fists back and forth; and that represents the grinding that wide and bumpy teeth do in order to make plant material a little more digestible for herbivores.

Now, lastly, we have to have a hand symbol to represent the canines of the bear. So what we're going to do is, we're going to take our full hand, and we're going to bend our fingers just a little bit. So this represents the, um, the sharp, narrow, long canines of the bear; and then have your left hand on top pointing down, your right hand on the bottom pointing up; and this piece of paper is now going to represent a salmon. What we want to do is, we want to rip that piece of paper as best as we can. So we're going to use our hands to do just that. Alright. So that represents how canines, um, of bears, brown bears especially, are able to rip apart their food.

Now I'm so glad that you joined me for Story Book Science today. I had a blast reading *Walk on the Wild Side* and talking about adaptations reflected in the shape of teeth of mammals related to their diet, but it is the end. So make sure that you clean up any scrap sheets of paper that might be lying around; and I do hope to see you next week here at 10am on Facebook Live. We are going to be reading a new book. It is about a very famous bird called *Wisdom: The Midway Albatross*, and it's written by Darcy Pattison and illustrated by Kitty Harvill; and we'll be reading it with permission from Mims House. So I hope to see you next week, and I hope you have a good day. Bye!