



Transcript for *Grand Canyon* by Jason Chin (Roaring Brook Press, an Imprint of Macmillan)

Introduction (approximately 0:00 – 3:48)

Hi everyone! It's Colleen from the KU Natural History Museum, and I'm so, so excited for today's Story Book Science. We will be reading the book *Grand Canyon* by Jason Chin. And I do want to wait for some folks to join us. So, while we wait, I want to talk a little bit about the book and what we'll be talking about.

Now, the title is also the name of a national park. So, we're continuing our exploration of national parks by exploring Grand Canyon National Park. And here is a picture of Grand Canyon National Park. Why do you think it's called Grand Canyon National Park? Take a moment to look at the photo.

So, one reason is that it's really big. It's very grand! So, this is just a close up of one area, but you can see all in the back, that's also the Grand Canyon. And it stretches, really, really long. And there's a canyon! So, that's the name: Grand Canyon National Park.

And I want you to continue to look at this photo. And I want you to think to yourself what the environment of Grand Canyon National Park is. So, what do you think the environment is like? If you need some help, you can always look at the photo for clues. So, you might look for the different types of plants that can give you a clue about the environment. Also, maybe what the environment looks like! Does it look hot? Does it look dry? All of these things are clues you can use to determine the environment of Grand Canyon National Park. Alright!

So, I'm going to put this photo down. We will talk more about Grand Canyon National Park and its environment, and we'll even talk a little bit about the different plants that can be found in the park after our reading. But folks have joined us. So, I'm going to go ahead and get started.

First and foremost, we need to go over our guidelines for Story Book Science. So, we are not in the museum, but we are going to follow museum rules. What that means is you should feel free to ask a question! But if you ask a question, you need to make sure to use kind and considerate words. Alright? And if you respond to someone's question or you write a comment, you also need to make sure to use kind and considerate words. The reason we want to use kind and considerate words is because we want to make this space welcome and inclusive for all. So, can you use those kinds and considerate words for me? Excellent! Thank you so much!

Welcome to Story Book Science! Today, I am going to be reading the book *Grand Canyon*. This book is by Jason Chin, and it is published by Roaring Book, Roaring Brook Press, which is an imprint of Macmillan. They're also giving us the permission to read this book. So, thank you to them. Now, this book is going to help us explore Grand Canyon National Park, and we're going to talk about a lot of different things including the plants that can be found in the park.

Now, if you have any questions, please feel free to ask, just know I may not be able to see them until the very end, and only if there is time. And if you need a partial transcript of this reading, that will be made available a little later today on the museum's website.

Now, I am ready to go. So, let's go ahead and get started by reading the book *Grand Canyon*!

Reading from *Grand Canyon* (approximately 3:49 – 18:21)

Grand Canyon includes copyrighted materials, and we do not have permission to include the written text of the book in this transcript.

Conclusion (approximately 18:22 – 28:36)

Alright. And that is the end of our story about Grand Canyon National Park!

Now, I don't know about you, but I learned a lot about the Grand Canyon! We learned about the geology. We learned about the fossils and the different layers of rocks. We learned about plants and animals that live in the Grand Canyon. And not only that they just live in the Grand Canyon, but they live in different parts of the canyon.

Now, earlier, I showed you a photo of Grand Canyon, and we saw lots of different pictures. But here is another one. And this is a picture of Grand Canyon National Park. And I asked you to think about the environment. How would you describe the Grand Canyon, just based on this picture? And I also told you that there are some clues like the plants growing, what it looks like. It may look hot and dry. All of those things can help you determine the environment of the Grand Canyon.

Now, when we talk about the Grand Canyon as a place, we describe it as a semi-arid desert. But as we know from the book that we just read, there's a lot going on in the canyon. It's a very big, it's a very deep canyon. So, there are these different unique habitats within the canyon.

And habitat is a very important word, and it's a vocabulary word. So, we are going to put it on our vocabulary wall.

So, habitat is a place where living things like animals and plants can be found, where they live.

So, with Grand Canyon National Park, we know that there are many different habitats depending on where in the canyon you are. And we talked about a couple of them. So, we talked about riparian habitats down below at the bottom of the canyon. And we talked about other habitats as well. And these habitats, they're determined by the elevation. So, deep down in the canyon at a lower elevation you have the riparian habitat. If you go up and you move up in elevation, you have a different habitat. And so on and so forth until you get to the rim, or the top of the canyon. And we can focus on these different habitats based on the plants that live there. And another word we can use to describe habitats of the Grand Canyon are vegetation communities. So, we're going to put that word on our vocabulary wall as well.

Alright. So, we have these habitats, or vegetation communities. And I want to go through a couple of them with you. Alright?

So, the first vegetation community is the vegetation community at the bottom of the canyon. So, we're talking about the lowest elevation of the canyon, which is the riparian vegetation community. So, let's put that on the wall!

Now, riparian means near water. And we learned that there are creeks at the bottom of the canyon, and all of those creeks flow into the Colorado River. So, here is the Colorado River, and near the water of the river are these trees, these banks. So, these riparian vegetation communities. And you can find a lot of different plants

in this vegetation community. One example includes ferns! So, this is a maidenhair fern that grows in riparian communities of Grand Canyon National Park. And these plants, they are unique because they don't have seeds, and they don't have flowers. So, ferns are a type of plant without seeds and without flowers. Alright?

Now, the next vegetation community we're going to explore, it is above the riparian community. So, we are increasing our elevation, and we're going up from the bottom of the canyon to the desert scrub vegetation community. So, while I put that word on our vocabulary wall, I want you to think what plants do you think would be in that vegetation community. What plants would you find in the desert scrub vegetation community?

Alright. What plants do you think would exist in the desert scrub community? Maybe this picture of the desert scrub will help you think about the plants. This plant in the foreground of the picture is a Utah agave. Other plants that can be found in the desert scrub include plants like this. Now, this is a cactus, and it's just one species of cactus. This is the dollarjoint prickly pear cactus. And you can tell it's a prickly pear cactus based on the paddle shape of the cactus. And cactus, like the prickly pear cactus, they're angiosperms. So, they're a special type of plant that produce flowers. And this is what the flowers of a prickly pear cactus look like. So, you can see, again, the oval shape. So, we know this is a prickly pear cactus, but it has its flowers in bloom. So, cacti are angiosperms. They produce flowers. Alright?

Now, we have one final vegetation community I want to talk about. And this is a vegetation community that is very high in elevation. So, it's very close to the rim, or the top of the canyon. So, we're going to move from riparian up towards the desert scrub, all the way up to the ponderosa pine forest. Alright?

So, one of the plants we'll talk about that grows in this vegetation community of the ponderosa pine forest is ponderosa pine! So, this is what a ponderosa pine tree looks like. And it is a special type of plant known as a gymnosperm. And gymnosperms produce cones. So, for a ponderosa pine, the cones that they produce look like this.

Now, I don't have a ponderosa pine cone with me, but I do have an example of a pine cone that was produced by another gymnosperm. And I'm going to grab it to share with you.

Alright. So, this is, again, not a cone of a ponderosa pine, but another pine cone. So, an example of a pine that was produced by a gymnosperm, or a cone-bearing plant. And I want you to just take a moment to look at it. Take the opportunity to look at the pine cone. And while you look at it, I want you to think to yourself what vegetation community of Grand Canyon National Park that we talked about would you find gymnosperms. Do you remember what it was called? It was the ponderosa pine forest vegetation community! Excellent!

Now, this is the end of our Story Book Science today. But before I go, I want to remind you that Grand Canyon is a national park. So, like Everglades National Park, there are elements of conservation that occur. So, protecting of natural resources. But that hasn't always been the case for Grand Canyon National Park. In the 1800s and 1900s, there were a lot of people who were moving west in the United States. They were going from the eastern part of the country, and they were moving west. And one of the places they went to was Grand Canyon and what is now the national park. And when they did that, they weren't thinking about conservation. They were coming into the area to mine. And that had a lot of impacts on the land and also the people who were there originally. And in fact, there are many Indigenous tribes that still have ties to the land that we define as Grand Canyon National Park. And it's really important to understand the history of the place. Not just the natural history, but also the history, how people have used it, especially knowing that making land claims can have a really big impact on the land and the people who were there originally. So, that's something I want you to think about with Grand Canyon National Park and other national parks as well.

And I hope that you continue to learn, not just by yourself, but also with us. Next week, Mira will have an awesome STEM challenge about prickly pear cactus. And I will also be back at the end of this month to read about a national park in India: Gir National Park, where there are Asiatic lions and the lion queens that conserve and protect those lions. So, I hope you join me in the coming weeks, and we can learn more about national parks together. Alright? I hope you have a good day, and I'll see you then! Bye!