Unit 10 GeoClip: Supergroup Part 2

OK, we're here at the desert view outlook, looking out over the eastern end of the main part of the Grand Canyon National Park. But there's some spectacular scenery here that's somewhat unappreciated because here you can see some of the stuff in between, and what's cool about it is that because it's been tilted over, in a sense, you've gotten real lucky and you've preserved a lot more of it than you would if it stayed all vertical. And the reason for that is if you can imagine each of these layers is part of the Grand Canyon super group, and this is just a whole bunch of layers of volcanics and sedimentary rocks. And these are real old these are all 700 million to 1.2 billion years old, something like that.

So you've got these really old rocks that are all lying nice and flat, nice and horizontal, laid down like that, but at some point they tilted over at a slight angle, and then this nice line cut across and started to erode away across them. And so at one end of the canyon see a little bit of this. As you drive to the east you start to see younger, and younger layers coming out underneath what's called an uncomformity.

And then all of this was sliced off. But what's amazing about it is the amount of rock that would have been here a long time ago, it's probably three miles worth, right now it's spread out across probably 20 or 30 miles of the canyon, but originally there was a good three miles of this stuff.

And the fact that they are slanted really helps us to preserve all the different layers. If it stayed flat you'd have sliced off so much more and you'd have lost all that information. It's slanted a little bit, like a deck of cards that's been pushed out and so even though you're starting to slice it off you still retain some of the older decks, some of the deeper parts of that deck of cards.