

Mini-Lesson: “How long does it take a forest to grow?”

VIDEO TRANSCRIPT

VIDEO 1

Hi, it's Danni. I want to show you a picture from a trip I took. The little blue dot here is me, and I'm about to climb this massive 400-year-old tree. To climb up, we used ropes, pulleys, and our own muscle power. It was 45 minutes of dangling in the breeze and trying not to look down. But the view from the top was so worth it. Green forests in every direction with no signs of people. It felt like I'd gone back in time. Someone named Kaz is curious about forests. Let's give Kaz a call now.

[Video Call]

- Hi, Danni.

- Hi, Kaz.

- I have a question for you. How long does it take a forest to grow?

- That's a great question. And it's tricky to answer.

One reason is that there are different kinds of forests. There are forests like this one, but also forests like this, and like this, and this. And check out this forest. Here, things are underwater for part of the year. Maybe you've visited forests where you live, too. So if all of these are forests, what exactly is a forest? These places look pretty different, but maybe you notice some things they have in common.

VIDEO 2

Maybe one thing you noticed is that all these places have trees. Pine trees, maple trees, kapok trees. Depending on the forest, you'll find different trees growing there. And not just a few trees. A forest has trees covering a big area, and often miles and miles of trees. So if we want to know how long it takes a forest to grow, maybe we can start with how long it takes the trees to grow. But that's tricky, too. Some trees grow quickly, and others grow slowly. Even in the same area, different trees grow in different ways. Let's imagine that you are a tree, but instead of a giant like this, you're a seedling—a young tree newly sprouted from a seed. To grow, you'll need sunlight and water, and this area has both. But there's a problem. To you, the sunlight here feels intense, and the rain pounds the ground. Some plants don't seem to mind, though. These grasses and shrubs are tough. They also grow much faster than you, and it's getting really crowded. This is not a good place for you to grow, at least not yet. But after a few years, some other seedlings begin to grow here. These young trees like lots of sunlight. So for them, this area is just right. Over the years, those trees grow taller. See the shadows their branches make? Now there's less sunlight reaching the ground. That makes it harder for some plants to grow. Without lots of light, they'll die. But not you, little seedling. You don't mind some shade. This is finally a good place for you to grow. And slowly over many more years, you'll grow into a giant. It takes you over a hundred years to grow to this size, but really, it took even more time than that. Remember when the area looked like this at first? Back then, it was hard for a seedling like you to survive. It took many years of change as other plants grew first before trees like you could grow well in a forest. That's the thing about forests: they're constantly changing. There are changes day by day and changes over many years. As different plants grow, different animals can live in a forest too. They can find things they need, like food and shelter. Check out who's

living here. Other living things are also part of these changes. Take a look. There's a whole world on the forest floor. Some are so small, you need a microscope to see them. Even tiny things are a big part of how a forest grows. Sure, trees are the main feature of a forest, but a forest is so much more than trees. It's kind of like how a town is more than just buildings or just people. It's made up of many different things. A forest is made up of many different things, too, all growing and changing together. Eventually, one of these big trees will die and fall. That's another big change. Where there was shade, there's suddenly sunlight. Now, different plants can find what they need to survive here. And after a storm or a wildfire, a section of forest may end up looking more like this again. A big change like this can be a start of a new cycle, a set of events that keep repeating. A healthy forest regrows again and again. So, in summary, it's hard to say how long it takes a forest to grow because a forest is constantly changing day by day and over many years. It can take over a hundred years for a tree to grow this big, but a forest is more than trees. A healthy forest is made up of many different things, all growing and changing together. And as living things die, a forest can go through a cycle of change and regrow again. But some changes made by people make it much harder for a forest to regrow. For instance, many forests in the US state of Wisconsin were cut down in the past. It seemed like the forest would never recover. So students from nearby schools started replanting them. And more than a hundred years later, students are still enjoying those forests. A small positive change today can grow into a big change for the future. That's all for this week's question. Thanks, Kaz, for asking it.