

Sixth Grade

DCI.ESS.3.C Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to the **Earth's environment can** have different impacts (+&-) for living things.

There are a number of ways human activities have had an effect on the mixed conifer forest of which the giant sequoia trees are a part. Fire suppression, forest density, the drought, and pine bark beetles have had a dramatic effect on the forest. The guides will discuss problems of forest density due to fire suppression and the long term effect of the drought and pine bark beetles on the mixed conifer forest.

Classroom Activities

What's Happening to California's Forests

There are many topics that show how human activities have altered the mixed conifer forests here at Big Trees State Park. Explore these topics by having your students divide into groups and research some of the ways the forest is changing and how the changes will impact the forest and human activities within the forest. Each group can report back to the class report back to the class.

Here is a list of possible topics:

- **Pine bark beetle infestation** Evidence of the impact of the pine bark beetle can be readily seen as you drive through Arnold on the way to the park. This is an infestation **that will impact the California's forests for a long time. What caused it? Can anything be done with the dead trees? Were humans responsible in any way for the damage caused? Is there anything we can do in the future to prevent this kind of devastation?**
- **Fire suppression** There is a lot of discussion about how fire suppression has impacted the forests. A forest fire was very close to Big Trees in 2015 and the park had to look at ways to protect the giant sequoia trees, which lead to questions about fire in the forest. How has fire suppression impacted **California's forests? Are wild fires good or bad? What happens to a forest after a wild fire? What is forest succession?**
- **Forest Density** The amount and type of trees in the forest can affect the health of the forest. What does a healthy forest look like? How does the number of trees affect the trees ability to thrive? Why does the type of tree in a forest matter to the health of the forest and the other trees?

