

The Lorax – Teacher Notes

These notes are designed to assist teachers in drawing parallels between the story of The Lorax, written in 1971 by Dr. Seuss, and the environmental saga of the Anaconda Copper Mining Company in southwest Montana.

Cover Page

The Lorax was written in 1971 by Dr. Seuss (Theodore Geisel) at the infancy of the environmentalist movement. The book, though vintage in its “Seussian” simplicity, has a very obvious message. It remains one of the most popular and most discussed “environmental” stories among all age groups.

Using the notes below, it is easy to draw many parallels between the story of The Lorax and the environmental saga of the Anaconda Copper Mining Company in southwest Montana. Though there are many lessons one could learn from reading The Lorax, the best and easiest to teach your class is that with a little scientific literacy, even a Dr. Seuss book can become far more interesting and important than it seems at first glance!! By the time the class is over, we’ll have spent a half an hour discussing the meaning of a “children’s book” ☺ Who would have ever thought?

And the best part: you can use science to expand the way you look at everything around you, because science is at its best and most important when it’s taken out of the classroom and applied to the lives we live everyday. *PRETTY MUCH EVERYTHING* has a scientific explanation or solution! One good analogy one can make here is with Sir Isaac Newton, one of the world’s most important scientists. Newton, the father of gravitation, physics and a lot of our most universal scientific fundamentals, said the laws and principles he found and described were but smooth, shiny stones he was able to find like a child on the beach, with the great sea of uncertainty before him, still ready to be discovered.

Pages 1-2

“At the far end of town where the Grickle Grass grows, and the wind smells slow and sour when it blows and no birds ever sing excepting old crows is the Street of the Lifted Lorax...”

The page shows a dark and dreary landscape with no trees and an old, sickly crow sitting atop the street sign. If students are familiar with western Montana, ask the students how this description is similar to the landscape along Silver Bow Creek, the upper Clark Fork and surrounding the old Washoe Smelter near Anaconda, or a similarly impacted landscape. There has been a negative impact on the area’s **biodiversity** (“no birds but old crows”) and the Grickle Grass is an obvious **indicator species** of contamination, much like the tufted hairgrass and saltgrass used as indicators of the metals and acid contamination in the upper Clark Fork basin.

Pages 3-4

“You won’t see the Once-ler, don’t knock at his door. He stays in his Lerkim on top of his store...”

There was an old saying during the Anaconda Company’s reign of power that all of the biggest decisions in Montana politics were made on the sixth floor of the Hennessey building. The sixth floor was where all the ACM executive offices were and no common folk – namely miners or citizens, but also very few mine foremen – were ever allowed to enter.

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The Once-ler plays the same role in *The Lorax* as the ACM played in the mining industry of the Upper Clark Fork basin; therefore the parallel between the Once-ler's "lerkim" and the sixth floor of the Hennessey can be made easily.

Pages 11-12

Have the students pay close attention to the "pre-Onceler" ecosystem... Truffula trees, swomee-swans, brown bar-ba-loots, humming fish...all are drastically affected by the impacts of the Once-ler's rampant industry.

Pages 31-32

The Onceler and his Thneed factory...

Although not the same as copper mining, the same principles of expansion and the economics of supply and demand figure in...the demand for thneeds (or copper) is high, therefore it is necessary for the Once-ler family (or Anaconda Company) to step up its supply/production, ignorant/apathetic of the reality that natural resources and the environment (whether it's copper and the Clark Fork or Truffula trees and Seuss-land) are expendable and fragile...and not applicable to the economic principles of supply and demand.

Butte and Anaconda boomed during a time when copper was in outrageous demand...electricity, industrialization and the fronts of two World Wars consumed every ounce of copper the Butte mines and the Anaconda smelter ever produced.

Pages 35-36

Furthermore, even if the Once-ler did feel any remorse or wrong-doing toward the damages he was doing, it's obvious the only thing driving his industry is the demand for Thneeds..."*Business is business and business must grow, regardless of crummies and tummies, you know.*"

Pages 39-40

"Once-ler, you're making such smogulous smoke! My poor Swomee-Swans, why they can't sing a note!"

Use the smog in the book to compare with the smelter fallout from the Washoe Smelter in Anaconda – 60,000 pounds or 30 *tons* of arsenic and nearly 300,000 pounds or 150 *tons* of acid-producing sulfur were belched from the Anaconda smelter EACH DAY during it's peak years of production (1900-1925).

The ecosystem of the entire upper Deer Lodge valley was impacted and so was its economy outside of mining. Sure, the Anaconda Company supplied nearly 80 percent of the state's labor (ACM not only owned all the mines and smelters, but also the railroads, water companies, electric utilities, newspapers, lumber mills and many other important holdings); but the ranchers and farmers of the Upper Clark Fork suffered greatly under the smelter's impacts – dead cows, horses and sheep; contaminated hay and water; acidic and metals-laced soils worthless for growing or feeding anything.

The agricultural community of the Upper Clark Fork waged a legal battle against the ACM in an effort to end these impacts, but it was a David and Goliath battle that in this case, the Goliath won handily. (See notes for pages 47-48 below)

Pages 45-46

The "glumping" of the humming fishes' pond in *The Lorax* is very similar to what happened with Silver Bow Creek and the Clark Fork and the tailings contamination..."*no more can they hum for their gills are all gummed...*" with copper, zinc and other contaminated sediments fish cannot tolerate. That's why Silver bow Creek was troutless for over 100 years.

Pages 47-48

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Pages 51-52

By the time the Thneed factory is at its peak production, the Truffula Tree ecosystem has been devastated, not only to the point that its biodiversity is diminished, but so are its supply of Truffula Trees, ending the production of thneeds. At the end, when the last Truffula tree has been chopped and all the employees are gone and *“all that was left ‘neath the bad smelling sky was my big empty factory... the Lorax... and I”*, the Onceler is at a point of reckoning and reflection.

Here is where we can discuss with the students what things/practices could have been done in both the Onceler’s case and in the Anaconda Company’s case that could have a) kept the company and the economy going and b) minimized the impacts on the natural resource and the ecosystem.

Pages 59-60

At the end, the Onceler tosses the kid in the story a Trufflula seed. He gives him directions on how to reestablish the forest and how to “protect” it.

The analogy, although in most places it isn’t true to the degree it is here, of a second chance rings true in The Lorax. In the upper Clark Fork, we too are being given a second chance through the restoration of an entire watershed. Our “Truffula seed,” so to speak, is the \$1 billion dollars of restoration and remediation underway to give us a new watershed, unimpacted from the damages of historic mining – A SECOND CHANCE.

Now it’s up to us to learn how to take care of it – to become good watershed stewards – and we can’t do that without scientific literacy.