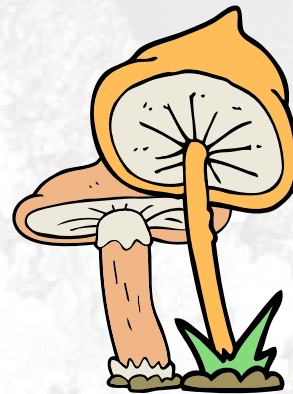
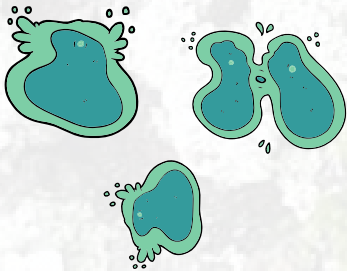


Lichen

Sounds like "like-en"

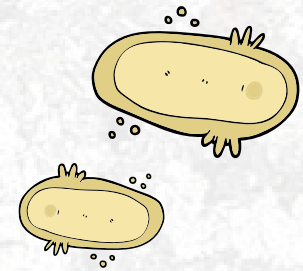
Lichens are made up of several different organisms that work and live together. Although these types of organisms can be found on their own, once they are part of a lichen, they need each other to survive. They are symbiotic.

Algae



Fungus

Yeast



The fungus and yeast make up the structure, kind of like the house, and the algae creates food for the lichen using photosynthesis. Even though none of the parts of lichens are plants or animals, it's still alive.

Lichens & Air Quality

Lichens can help us figure out how clean the air is. Look around in your back yard or favorite park and see what kind of lichen you can find. More fruticose and foliose normally means better air quality.



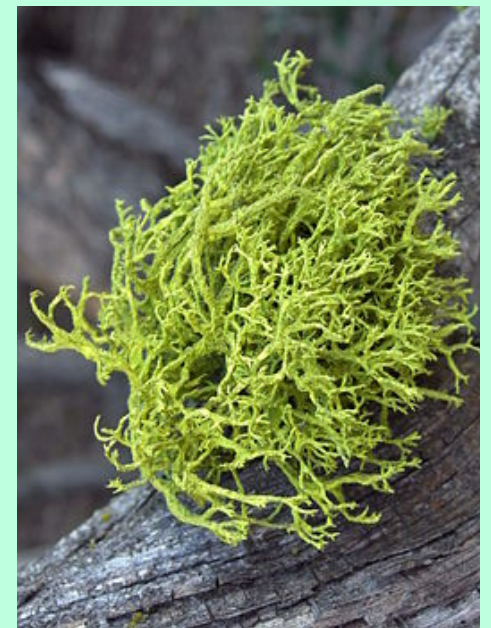
Crustose

grows anywhere. You will find it in clean or dirty air.



Foliose

grows in ok air quality. If the air is too dirty it can't grow.



Fruticose

grows in clean air only. Finding this means the air is probably clean.



This activity is adapted from our Clean Air Kits, and was paid for through Allegheny County Clean Air Funds.

Drawbacks of Indicators

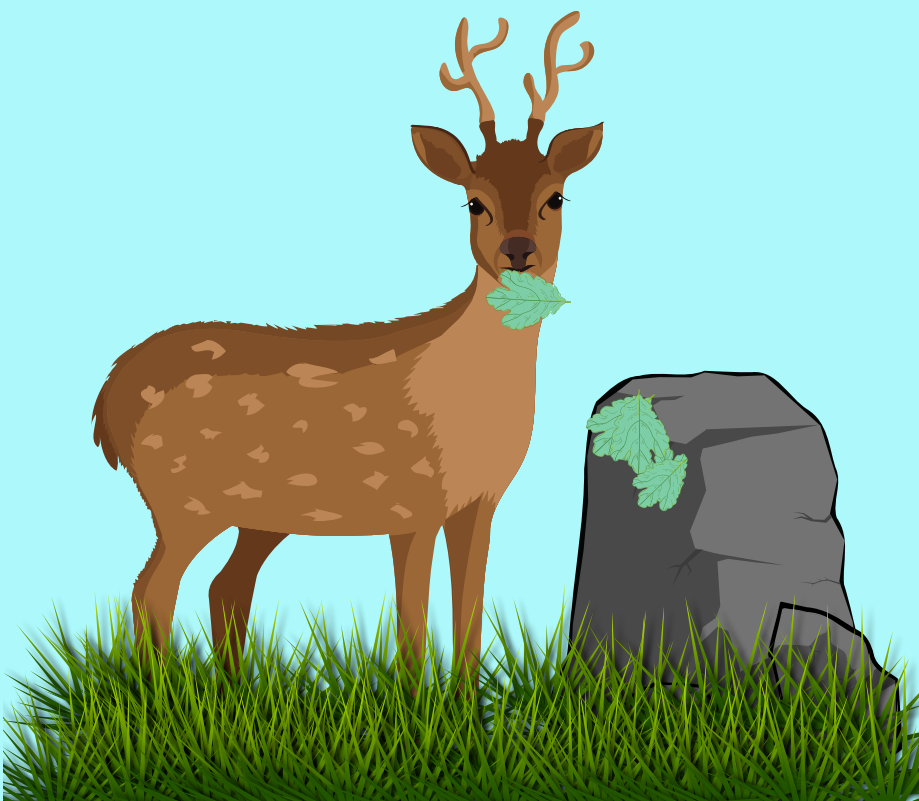
Bio-indicators, such as lichen, can help up assess the environment, but there are a few drawbacks.

- Lichens can be slow growing. This means that air quality might be good, even if there are few lichens present. For Example: Imagine there was a forest fire 100 years ago. Since then the trees have grown back. Today, it is a large, thriving forest, but doesn't have many lichens. It might have taken years for the lichens to be introduced back into the area, and then even more time for them to grow and multiply.
- Lichens need sunlight for photosynthesis, so in a forested area they are often found growing at the tops of trees. If you visit the forest in the winter, when trees are bare, you can see lots of lichens and assume the air is pretty good. If you go during the summer, many of the lichens are hidden by leaves, so it might make it seem like the air isn't very good.

The best thing to do when assessing air quality is to look for lichens and then check air quality reports to see if it matches up. If not, try to figure out what may be causing the difference.

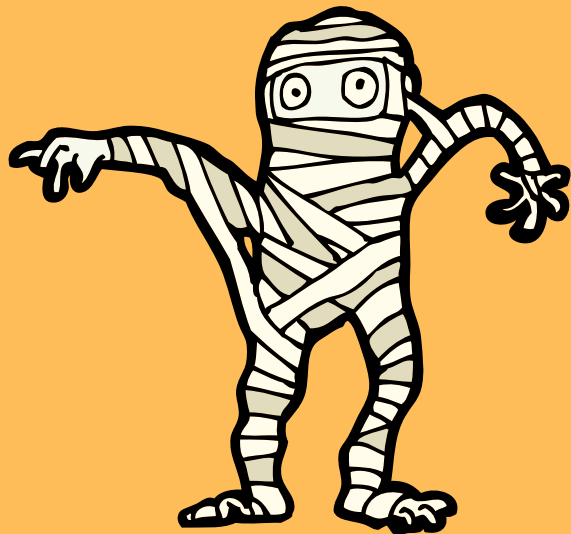


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**Deer and caribou might
eat lichen as a snack.**

**Lichen are used by birds and
squirrels to line their nests.**



**Sometimes, ancient mummies
were stuffed with lichen.**

