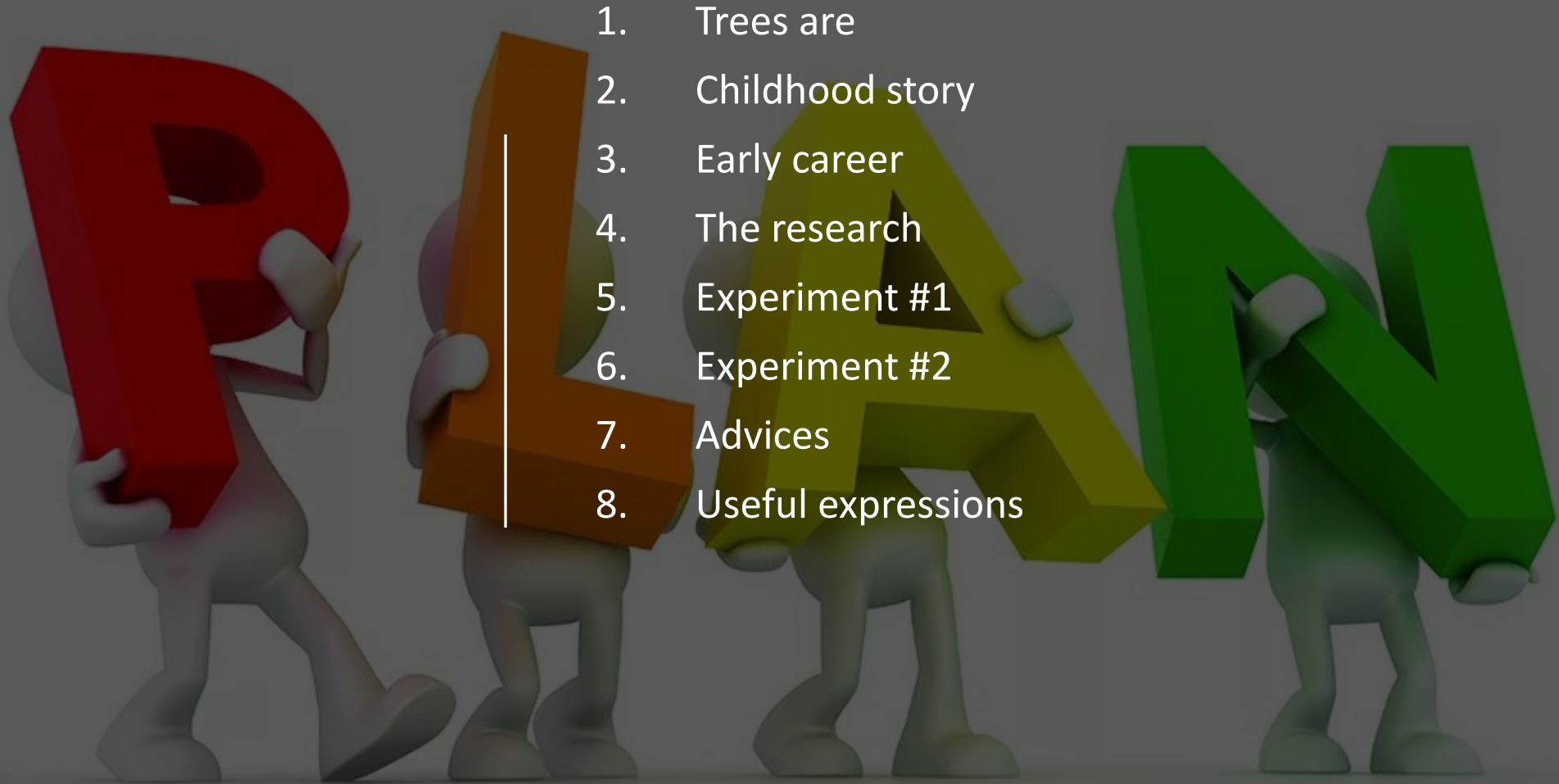




HOW TREES TALK TO EACH OTHER

Done by Nika Grigoryan
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1. Trees are
2. Childhood story
3. Early career
4. The research
5. Experiment #1
6. Experiment #2
7. Advices
8. Useful expressions



the foundation
of forests

pathways connect
trees and allow them to
communicate and to
behave as a single
organism

world of infinite
biological
pathways

sort of
intelligence

Childhood story



Early career

- Studied forestry
- Worked alongside the powerful people in charge of the commercial harvest
- Went back to school



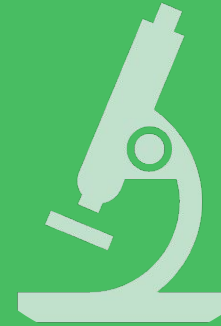
The research



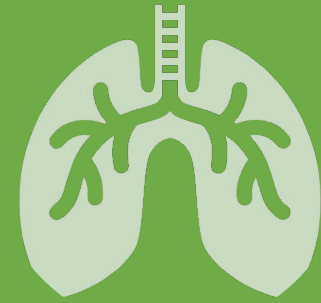
She grew 80 replicates of three species: paper birch, Douglas fir, and western red cedar.



She gathered her apparatus: bought some plastic bags and duct tape and shade cloth, a timer, a paper suit, a respirator.



And then she borrowed some high-tech stuff from the university: a Geiger counter, a scintillation counter, a mass spectrometer, microscopes.

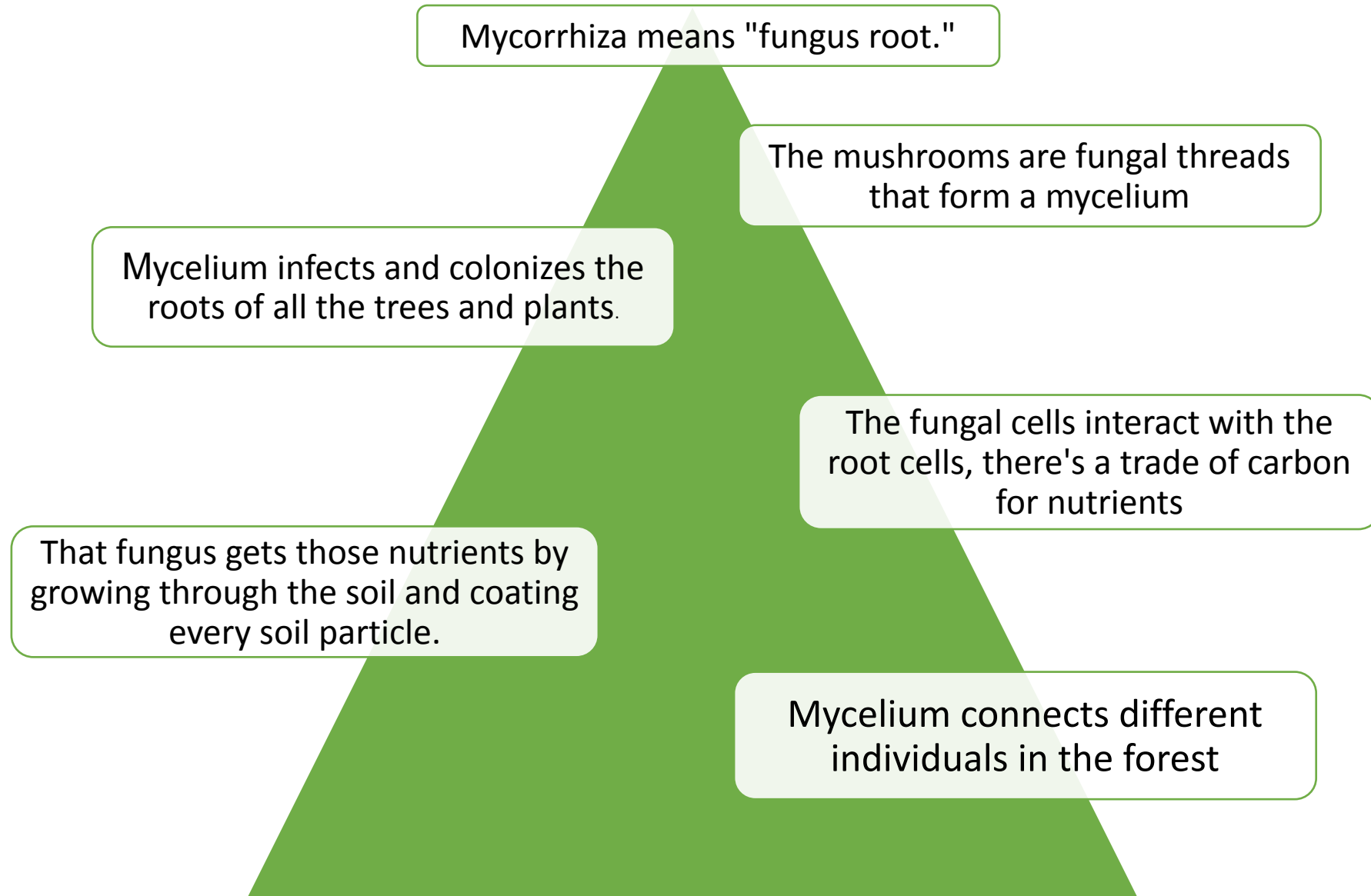


Some dangerous stuff: syringes full of radioactive carbon-14 carbon dioxide gas and some high-pressure bottles of the stable isotope carbon-13 carbon dioxide gas.





How trees communicate?



A scenic view of a pine forest on a hillside overlooking the ocean under a clear blue sky. The foreground shows the dark, gnarled branches of a pine tree. The middle ground is filled with lush green pine trees. In the background, the blue ocean stretches to the horizon under a clear sky.

Experiment #2

They grew mother trees with kin and stranger's seedlings. And it turns out they do recognize their kin.

Mother trees colonize their kin with bigger mycorrhizal networks. They send them more carbon below ground. They even reduce their own root competition to make elbow room for their kids. When mother trees are injured or dying, they also send messages of wisdom on to the next generation of seedlings.

ADVICES

1. First, we all need to get out in the forest.
2. To save our old-growth forests.
3. We do cut, we need to save the legacies
4. To regenerate our forests with a diversity of species and genotypes and structures by planting and allowing natural regeneration.

Useful expressions

Logger – лесоруб

Cohesive – связный

Infinite biological pathways –
бесконечные
биологические
тропы

Duct tape – изолента

Geiger counter –
счетчик Гейгера

Cub – детеныш

Birch – береза

Needles – иглы

clear-cutting –
вырубка

Tip of the iceberg –
верхушка айсберга

fungal cells -
грибковые клетки

Dense – плотный

Nodes – узлы

Carbon – углерод

Hubs –
концентраторы



thank you for
your
attention



Сделал
презентацию?



Да...



Какой
ценой?



Ценой всего