

Trees and Forests – Environmental Impact report

With the building of the luxury ski resort moving forward, the local city council, in joint collaboration with the contactors behind building the ski resort, has hired a well renowned botanist group to produce an extensive environmental Impact report. This report will share an analysis of the local trees and forest, clearly showing the vital importance of their existence and making it clear how they will need protection.

As part of the clear-cutting process, which must take place to build the resort, provincial government environmental regulations stipulate that such a report must be carried out to prove, with absolute certainty, that a project of this magnitude can be safely carried out and there will be no lasting impacts on the environment. The success of a thorough and accurate report will also allow the ski resort, and local park officials, to maintain the local tree and forest in and around the resort area in the manner required for sustainability.

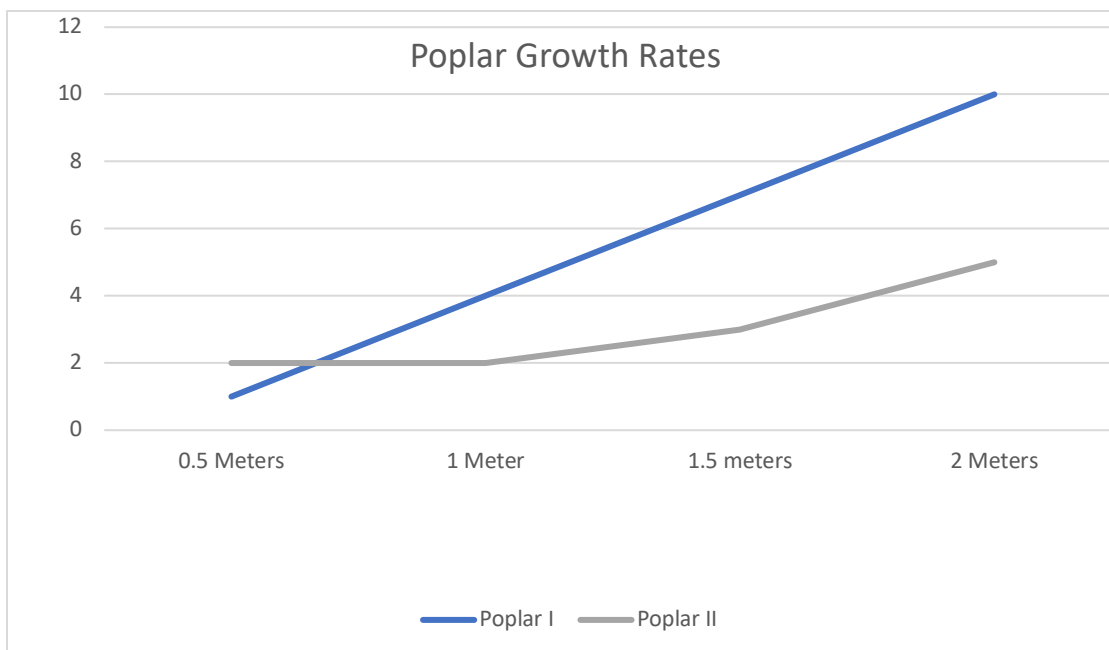
You are playing the role of a dendrologist (tree expert) assigned to create this report for the ski resort contractors and local city council.

Part 1 of 3

Data analysis - Growth rates and identification

It is vital that ski resort designers and contractors understand tree growth rates, when cutting down an extensive number of trees during the installation of the ski resort's infrastructure. From maintenance road ways to water, gas and electrical lines, it will be necessary to uproot trees and others plant formations. The ski resort has promised to replant any tree that is cut down but is required to record and regularly present observational evidence of newly planted trees and their growth rates. If they are unable to do this they will be fined by the CEPA (Canadian environmental protection agency).

Growth rates data study



Above is a chart that represents the growth of two poplar tree over a year period in the area of the ski resort build. Both trees have the same exposure to sunlight and receive the same amount of water. Both trees experience the same air temperature. The resulting heights of both trees are recorded in the graph above.

What do you notice in the chart? Why is it happening? What do we need to know to work out what is happening?

Describe below, in paragraph form and using the correct scientific language, what is the *responding variable* in this experiment? You must include the terms: **time, tree height, temperature and water amount** in your paragraph.

Part 2 of 3

Eco System protection

To properly protect the balance of the eco systems after the building of the resort it is vital to understand that ecosystem and how it works. This will support a continued state of balance and the potential of harmony between the human impact of the ski resort and the natural environment of the surrounding forests.

Part 3 of 3

Human impact and use of resources

Final part:

Students will write a summary report on their findings, pulling together the analysis they made and using scientific vocabulary to show their understanding.

Part of the report will show they understand the importance of measuring and observation of a local environment to support it's protection and show an appreciation of using scientific tools and definitions to explore and communicate their findings to support problem solving.

Expository Report organizer (Can include images):

Research Resources:

<https://learning-center.homesciencetools.com/article/learn-about-trees-and-forests/>