Name: _____

Date: _____
Period: _____

Tree Ring Tool Worksheet

Trees need a number of resources to survive and grow. What are some resources that trees need?

All of the resources trees need to survive and grow are **abiotic**, or non-living, parts of the ecosystem. Abiotic factors in the environment around a tree may change from year to year. For example, it may rain more in some years compared to others.

In addition to abiotic factors, tree growth and survival may be affected by **biotic**, or living, factors. Can you describe a situation where a biotic factor in the environment would affect the growth of a tree?

Studying how much a tree has grown can tell us something about the biotic and abiotic factors in the environment around the tree. We can estimate how much a tree has grown by measuring **tree rings**!

Each year, if the abiotic and biotic conditions are good, the tree adds a layer of wood around its trunk. These layers form tree rings – one ring for every year of growth. If we look at the end of a tree that has been cut down, we can see these rings and see how much the tree has grown during each year of its life!

Scientists don't want to have to cut down a lot of trees to see how much they have grown, so they came up with a way to sample a tree's rings without hurting the tree. This is called *coring* a tree. A core is collected using a special drill that can remove a small piece of wood that is about the size of a pencil. The rings look like stripes along the length of the piece of wood.

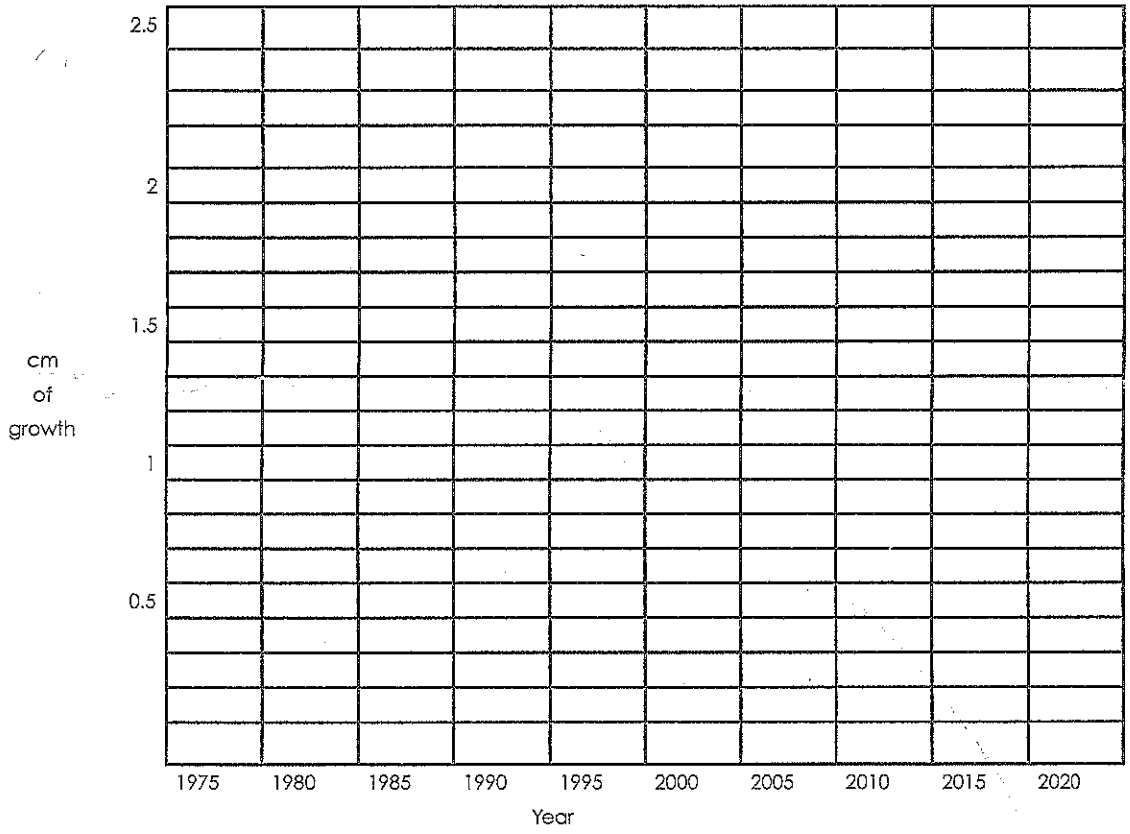
There are two tree ring cores that were collected on the two islands you have been exploring in EcoMUVE. Access the Tree Ring Tool using the following link:

Name: _____ Date: _____
Period: _____

Use the tree ring tool to measure the distance between the tree rings. Since you're able to visit the island every five years, let's measure how much the trees grew between each of your visits. As you measure the width of the tree rings, record your answers in the table below:

	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2015	2015-2020
Tree A										
Tree B										

Use the graph section below to create a graph of the data you collected. You will want to share this graph and data with your teammates.



Which island do you think each tree core came from?

Tree A - Tree B -

Why?

You may need to talk with the Population Specialist on your team to discover how the biotic and abiotic factors on the islands may be different.