

The Tree of Life: Exploring Biodiversity Using Genomic and Computational Methods

Lesson 1

Tree Tender for Floridians

One period of 6-10th grade science courses

Introduction

Is there any hope in a world with climate change, too many people, pollution and species extinctions? A drive around your town may reveal endless blacktop and development. However, a long drive through most parts of Florida reveals extensive areas of wildlands. Could it be that Florida, the third most populated state in the USA and the 8th most densely populated, may be a model for sustainable land use? This activity will present to students current land use trends and ask them to create a model map of a sustainable Florida.

Sunshine State Standards of your choice

Online resources

<http://worldpopulationreview.com/states/florida-population/>

<http://1000friendsofflorida.org/florida2070/presentation/>

http://edr.state.fl.us/Content/presentations/population-demographics/DemographicTrends_11-6-13.pdf

<https://www.census.gov/>

<http://guiffrd.ucf.edu/c.php?g=78401&p=516931>

<http://fnai.org/>

<http://floridawildlifecorridor.org/>

<https://www.farmland.org/farming-on-the-edge-state-maps>

<https://fcit.usf.edu/> cropland

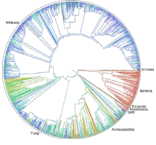
<http://floridaconserve.org/landowner-resources/>

Introduce the lesson the day after the Tree Tender movie, with a few slides showing scenes of Florida populations, busy areas, traffic scenes and a map of Florida metro areas sharing facts about population growth (327,000 in 2017.) Ask how Florida's map may look in 50 years. Distribute a worksheet map of Florida with metro areas defined and have students predict how those urban/suburban areas will look in 50 years and then use markers to shade these future developed areas.

Have a discussion. Ask why they filled in the the maps the way they did? Where will the farms and wild animals live?

Proceed with the PowerPoint presentation.

- Describe population centers using Florida2070 facts and maps
- Describe conservation areas using Tampa Tribune article facts and fnai.org, floridawildlifecorridor.org maps
- Describe farm/rural areas using fcit.usf.edu and farmland.org maps
- Propose that a division by percentage into thirds is possible and n model for well-developed states east of the Mississippi.

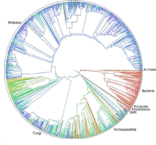


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- Explain that it is even happening With Florida Forever and Rural Family Lands Protection Program.

Extension

Discussion of how Florida can be a model for the rest of the nation.



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How will the darker urban areas look in 50 years? Shade in your predictions.

