Title:
Tree Tender Conservation Warriors

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Abstract:
After viewing the treetender video and responding to the questions, students will have a Harkness discussion about their answers to the questions. The students will then collaborate with a conservation resource to research a particular threatened organisms.

Subject, Grade, Level:
Environmental/Earth Science
Biologies
Biotechnologies

Learning objectives:

Students will be able to

- *Recognize what the Tree of Life is*
- *Understand that all organisms have a shared common DNA ancestry*
- *Realize that evolutionary trends of biotic and abiotic aspects of an biome can be used to predict conservation needs*
- *Discover the varying biotic and abiotic data of a particular organism in need of conservation*
- *Create visual projects to educate others*
- *Extension: Create a community level action plan for sustained conservation*

Timeframe:
2-3 class periods to complete lesson, discussion and in class research

1 class period for presentations

List of materials:
Tree Tender video and questions (see Resource section below)

Computers with internet access

Contact information for White Oak

Procedure and general instructions (for instructor).

After studying DNA, Genetics and Ecology, the teacher will bridge these to the Evolution/Conservation unit the teacher will:

1. Show the Tree Tender Video and have students fill out the video discussion questions. The class will hold a Harkness/Popcorn style discussion about answers to each question. (40 min)
2. Put students into 4 groups (5 min, have them move seats to be in groups)
3. Each group will be assigned an organism that is in need of conservation at White Oak Conservation in Northeast Florida (contact information in Resources section below) to be researched. (5 min to assign and share contact information)
4. Each group will work with an education coordinator at White Oak to research the following about their organism: (60 minutes) Skype? Email? Visit?

- Where on the planet the organism is located and what is its niche there?
- What factors caused its risk/need for conservation and over what time frame?
- What other organisms are related to this organism both genetically and morphologically
- What can humans to do help conserve this organism?

Extension – Have each group create an on campus action plan/game for grades to compete for a prize each quarter. The game should be about improving consciousness of conservation and caring for our environment.

Examples: ALL student led

- Campus recycling program
- Trash can wars
- One Man's Trash – recycled items as art

Procedure and general instructions (for students).

1. Answer the Tree Tender Film Questions while viewing the Tree Tender Film
2. Participate in group discussion about your answers
3. In your assigned groups, you will contact an education coordinator at White Oak to obtain the data for the following about their organism: (60 minutes) Skype? Email? Visit?

- Where on the planet the organism is located and what is its niche there?
- What factors caused its risk/need for conservation and over what time frame?
- What other organisms are related to this organism both genetically and morphologically

- What can humans to do help conserve this organism?

4. Each group will create:

A shared google doc to post their findings (homework after contact with education coordinator at White Oak)

A group presentation to answer the above questions (give 1 class period to create together, 5 min long)

Including a visual representation of:

- The ecosystem their organism lives in
- The risk factors that caused risk
- A phylogenic tree using the most current DNA base sequences to show common ancestor
- Visuals/links of activities that can be done to help conserve the organism (video's?)

Reference list

Website for video: www.treetender.org

See next page for Tree Tender Film Questions

White Oak Conservation Information: 904-225-3200

58705 White Oak Road

Yulee, Florida 32097

education@white-oak.org

TreeTender Film Questions to make available to students:

Tree Tender Film Questions

Name: _____ Date: _____

Directions: Answer the questions below (individually or in a small group) after watching Tree Tender. Come together as a class to discuss your answers and come up with the best ways you can be a Tree Tender, too!

1. How are we connected to other organisms on the planet?

2. How can we use the Tree to better understand other organisms?

3. How do we benefit from ecosystem services?

4. How do we affect the planet and its inhabitants?

5. What can we do to help slow the loss of biodiversity?