Every Tree For Itself
Short Version

Part 1 (10 minutes)
1. Welcome students. Explain that you will be discussing trees and the things which trees need to grow.

2. Provide each group of 2-3 students a tree cookie (cross section of a tree trunk). Allow them a few minutes to look at the tree cookie. While they are looking, try pointing out:
   - the rings
   - how the rings are two different colors (early wood and late wood)
   - how one year’s growth is the combination of one light colored ring and one dark colored ring
   - how the annual rings vary in size
   - ask if there are any dark spots or marks other than the annual rings – these may be spots where a branch was connected to the trunk, or evidence of a fire.

3. Explain to students that since trees cannot get-up and walk to better environmental conditions, a tree’s growth depends on the environmental conditions surrounding the tree.

4. Ask students to list some of the things a tree must get from its environment in order to survive and grow. Answers should include:
   - water
   - sunlight
   - nutrients from the soil
   - space to grow

Part 2 (10 minutes)
5. Explain to students that they are going to play a game to learn about a tree’s growth and how it is dependent on the environment.

6. Give each student a pre-made paper plate tree cookie. Arrange students in a group standing on their paper plate. Explain to students that they cannot move off of their plate because that would indicate that the tree has been cut-down and therefore dead.

7. Once students are standing in a loose group on their paper plate, spread out the blue (water), green (nutrient), and yellow (sunlight) cards all around them. Explain to students that when you tell them, they must gather as many of the water, nutrient, and sunlight cards as they can.

8. After students have been given 15 seconds to gather cards, tell the students to stop and stand up. Ask if every student got at least one water card… one nutrient card…. and one sunlight card. If they didn’t, it’s ok…. they are not dead, yet! A tree can survive for a while without water (drought) or sunlight (dark, cloudy days). But, if these conditions last, the tree will most likely die.

9. Collect the cards from all the students, re-spread the cards out around the students. Play the game again. Again, after students have been given 15 seconds to gather cards, tell the students to stop and stand up.
Again, ask if every student got at least one water card… one nutrient card…. and one sunlight card. If they didn’t, and they didn’t last round, they are now dead. Have these students sit down.

Have a discussion with the entire class about the effects of drought or lack of nutrients would have on the long-term health of trees.

10. If time permits, try re-arranging the students (trees) into a tight group and spread the cards only along the outside of the group. Explain to students that trees also need space. When trees do not have enough space, they often do not get the water, nutrients and sunlight they need to survive.

11. Wrap up the activity by asking students again what the things a tree needs to survive – water, nutrients from the soil, sunlight, and space. Ask students if there is a word which covers all these things – HABITAT!