Promoting ‘diversity’ is a basic principle of urban forestry. A diverse forest implies a more resilient forest, since disease or insect outbreaks likely won't affect every tree all at once.

**Goal and Objectives**

**Goal:** Students will evaluate how the diversity of species affects the ecosystem.

**Objectives:** Students will

1. Investigate and define qualities related to ecological diversity.
2. Present a plan to create a diverse ecosystem that includes native species.
3. Evaluate an ideal diverse forest community.

**Materials**

- Tablet(s) or computer(s) with internet access
- Projector and screen
- White board or chart paper and markers
- Tree Trails Portfolio, Student Learning Log/Journal

**Handouts**

- Diverse Ecosystem Rubric

**Activity Materials**

- Cameras or camera phones

**Time and Internet Links**

**Instructional Time:** 2-3 sessions, 45 minutes each

- Keep America Beautiful Leader Learning Guide Community Greening article, Backyard Biodiversity
  [http://www.americanforests.org/magazine/article/backyard-biodiversity](http://www.americanforests.org/magazine/article/backyard-biodiversity)
- Keep America Beautiful Leader Learning Guide Discover What Trees Do For Your Community
- Firewise, Communities Compatible with Nature brochure
III. Explain

1. Their findings should lead into a discussion about the diversity, biodiversity and ecosystem they found and what improvements might be investigated.

2. Provide the group with a laptop/tablet to research an ideal diverse ecosystem for their community.
III. Explain continued

They should go online to determine what native plants are best for their environment. They may consider other strategic ecosystem plans as a model.

3. Have students use their research as a plan to find ways to improve the diversity and ecosystem of their school grounds, neighborhood and/or community.

4. Provide each group with the Diverse Ecosystem Rubric to assist them with defining some of the characteristics of a more diverse landscape.

IV. Extend/Elaborate

1. Have each group develop a presentation of an ideal landscape plan for a particular area in their community. Their plan should outline what native plants, animals, organisms and trees will work best together for their environment.

2. Each group should give their presentation to the class.

V. Evaluate

1. Ask each group to evaluate other group’s ideal plan. Ask students to combine their best ideas to create one plan for the school, neighborhood and/or community. They may present the plan to the principal, school board and/or the city council.

2. Then make a new map or revise the one they created earlier. Graphs may be used to enhance their plan.

3. Ask students what they Learned about Diversity, Biodiversity, & Ecosystems and list on a chart.

VI. Extra Mileage/Attention

Extra Mileage: Have students go online to locate a different ideal forest ecosystem (in another area of the world, state, community, etc.). Compare and contrast that to their local ecosystem. Ask these students to present their findings to the rest of the class.

Extra Attention: Have “expert” peers work with students to analyze and/or revise the Diverse Ecosystem Rubric.