FOREST ECOLOGY







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CLASS DESCRIPTION: An Ecology Class

Based in the unique Forest Ecology Building, students will travel through the woods gaining a balanced appreciation of both the living forest and wood as a harvested resource. Field work may involve planting, brushing around seedlings, and bud capping. Students will be challenged to make a simple forest management plan and choose ways to manage personal consumption to maintain forest sustainability. This is an all-day class (with lunch served at the FEB) paired with either Stream Study, Fisheries Management, Beavers, Animal Signs, or Cross-country Skiing. One adult is recommended to accompany this class.

Total time: 3 hours (2 hours outdoors)

Audience: 6-20 students, 4th grade through adult

Activity level: strenuous

Travel: 2 miles

Total uphill travel: 400 feet

GUIDING QUESTION

Describe the complexity in a forest ecosystem and how humans interact with it.

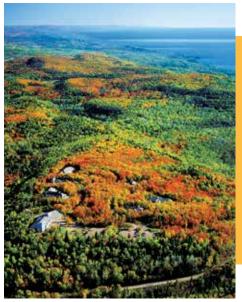
CONCEPTS

- 1. A complex natural system is more adaptable than a simple one and is more able to absorb disturbances.
- 2. A growing human population is making increasing demands on natural resources.
- 3. Disturbance can change species mix, structure, and succession in a forest.
- 4. Disturbance is important for maintaining complexity, wildlife habitat, and biological diversity in forests.
- 5. Nature knows best. Humans can mimic natural processes to restore or enhance habitats.

OUTCOMES

Upon completion of Forest Ecology class students will be able to:

- 1. Identify the major tree species at Wolf Ridge.
- 2. Define and use at least seven of the following forestry terms: cord, acre, plantation, succession, ecosystem, pioneer species, snag, diversity (age and species), disturbance, clearcut, selective cut, erosion, habitat, pollution, sustainable.
- 3. Demonstrate silvicultural practices such as releasing, bud capping, crosscut sawing.
- 4. Choose ways to manage personal consumption in order to maintain forest sustainability.





Our mission is to develop a citizenry that has the knowledge, skills, motivation and commitment to act together for a quality environment.

6282 Cranberry Road | Finland, MN 55603-9700 | www.wolf-ridge.org

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Revised August 2017



Equipment

Classroom Equipment:

- 10 Adopt-A-Tree blindfolds
- paper and pencil for "commit and toss"
- timber cruiser vest, cap, pants, hard hat, axe, peavey
- scavenger hunt collection cups
- posters
- map of Minnesota forests

Red Backpack in Education Kit Room (morning class):

- 10 blindfolds
- whiteboard
- whiteboard markers
- cards for stops on hike

Lunch Basket (for all day class April-November)

- Duluth Pack in the kitchen
- Sandwiches
- Fruit
- Granola Bars
- Cookies
- Mustard & Mayo
- Cups
- Lemonade mix

Appendices

- Glossary
- Building Tour
- Lunch Procedure
- Optional Activities
- References
- Sources
- Map
- Spiral Learning Sheet
- Planning Outline

Set-up (15 min.)

- Classroom/class prep description
- Safety Management

I. What is a forest? (20 min.)

- A. Trees as Individuals
- B. Value of Forests

II. What trees are growing here and why? (60 min.)

- A. Morning Class
- B. Afternoon Class

III. What do foresters consider? (10 min.)

- A. Value of Forests
- B. Old Forestry
- C. New Forestry

IV. How do people mimic natural processes in forests? (60 min.)

- A. White Pine Deer Exclosure & Scavenger Hunt
- B. Budcapping Red Pines
- C. Brush Lopping
- D. Planting
- E. Cord Wood & Crosscut Sawing

V. What can we consider? (20 min.)

- A. Value of Forests
- B. Next Steps

[Return to Wolf Ridge] (20 min.)

Clean-up (15 min.)