



Lesson Plan

Theme: Different kinds of plants may look different from one another, but they share a basic life cycle and have similar needs too. Plants live in places that provide the things they need, and plants are adapted to the places they live.

Length of Lesson: 1.5 hours

Introduction: 20 minutes

Field and Interpretive Center (IC) Activities: 60 minutes

Conclusion: 10 minutes

Minnesota Academic Science Standards/Benchmarks:

- 2.4.1.1.1 – Describe and sort plants into groups in many ways, according to their physical characteristics and behaviors.
- 2.4.2.1.1 – Recognize that plants need space, water, nutrients and air, and that they fulfill these needs in different ways.
- 2.4.3.1.1 – Describe the characteristics of plants at different stages of their life cycles.

Excellence in EE: Guidelines for Learning Standards:

- Grades (K-4) - Strand 1 Questioning, Analysis and Interpretation Skills, A) Questioning, C) Collecting information
- Grades (K-4) - Strand 2 Knowledge of Environmental Processes and Systems 2.2 The Living Environment, A) Organisms, populations and communities, C) Systems and Connections

Objectives (Students will be able to...):

- state the different needs of a plant
- sort plants into groups based on their physical characteristics
- explain the basic life cycle of a plant
- describe the characteristics of plants at different stages in their life cycles

Background Information :

Background information can be found in Appendix A.

*Helping people discover, enjoy,
understand, and preserve the incredible
natural world that surrounds us.*

Introduction:

Goals: Welcome students to River Bend, introduce the River Bend leaders, and introduce the program content.

Key points:

- Welcome
- Review seed program if applicable
- Introduce plant life cycles
- Set expectations for the day

Activities:

1. Every Tree for Itself (*adapted from Project Learning Tree*)

Goal: To understand several key factors that play into plant survival.

Key points:

- Students will compete with one another as plants to acquire their survival needs.
- Several rounds that emphasize different habitat factors will be played.

Assessment: Discuss how the trees needed to acquire all of the resources and the consequences if they failed to do so. What do all plants need to do to insure their survival and how can different environmental factors impact that?

2. Life Cycles

Goal: To reaffirm that plants go through the same life cycle as their parents (starting as seeds).

Key points:

- Students will act out the plant life cycle through a rock paper scissors game
- Each student will see how many time they are able to complete their plant life cycle.

Assessment: Can they make any connections to this game and real world examples?

3. Plant Characterization Hike: (active learning)

Goal: To identify real world examples of plants that are in various life cycle stages.

Key Points:

- Identify plants in various stages while hiking.
- Locate plants with unique adaptations.

Assessment: Pay attention to the connections the students make between the plant stages they can see now and the other examples from the day. Look for recognition that one plant stage becomes another.