

PLANT CONNECTIONS



9-11

LEADER'S GUIDE

Florida 4-H Plant Science Program



Plant Connections



A Plant Science Project



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PREFACE

4-H PLANT CONNECTIONS

A Plant Science Curriculum
for 9-11 year olds

The new Florida 4-H Plant Science framework, a part of the Environmental Education Framework, OUR NATURAL WORLD, includes the basic premise that plants are important in children's lives. The 4-H Plant Science program provides an opportunity for young people to practice a variety of life skills while learning subject matter.

PLANT CONNECTIONS

PLANT CONNECTIONS is the second level of the 4-H Plant Science Core Curricula that is designed to help 9-11 year old children understand the role plants play in our lives and how to grow and care for them. Additional curriculum packages are being designed for youth in other age ranges and for sequential advancement in the Plant Science program.

To the informed Florida citizen, it is not surprising that plant science commands a priority within the total Florida 4-H education curriculum. An investment in young people's knowledge, understanding and attitudes about plants affect their lives and cannot be ignored now or in the future. Below you see the framework for the 4-H plant science curricula. It charts the direction for development, review and revision.

4-H ENVIRONMENTAL EDUCATION CURRICULUM FRAMEWORK

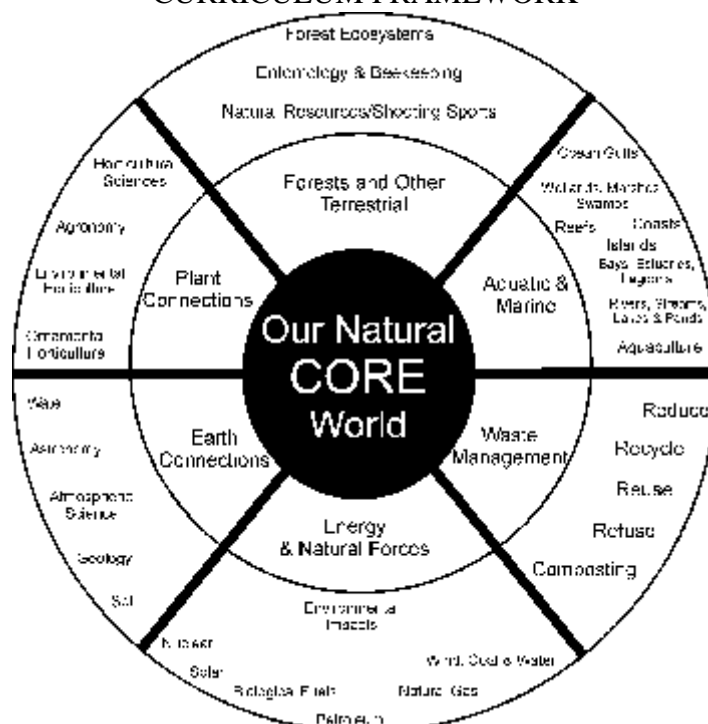


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About Plant Connections. . .

The development of this 4-H Plant Science Project Kit was driven by two basic principles:

1. Learning about plants can be fun! The project guide provides simple and inexpensive, yet fun activities that teach youth about major plant science concepts including What is a Plant?, Why Are Plants Important?, What Makes Plants Grow?, How to Grow Plants, How to Select and Handle Plants, and The Future In Plants.
2. 4-H volunteer teaching activities must be ready-to-use. This project includes materials needed to conduct plant science activities in an easy-to-use format. It was designed to be teacher-friendly and takes much of the guesswork out of teaching this subject.

AGE OR GRADE LEVELS

This project was developed for youth ages 9-11. Both group and individual activities encourage participation and action in all aspects of plant science education. Teachers and volunteers are encouraged to select learning activities that are most suitable to their youth. The overall intent is to facilitate learning and to spark creativity in both teachers and youth.

CONTENT

The following resources are components of the 4-H Plant Science Program:

- **LEADER'S GUIDE** - This three-ring notebook contains a complete, easy-to-read outline for lessons. Each lesson provides a variety of activities that can be conducted depending upon the time frame devoted to this project. The following activities are a mix of games, experiments, role plays or demonstrations that help to teach the basic principles and concepts in each lesson. The lesson concludes with a review using activity sheets in the youth's Workbook and discussion questions for youth to REFLECT and APPLY.
- **PLANT CONNECTIONS WORKBOOK** - The Workbook contains activity sheets for youth that correspond to each lesson. A variety of activities including puzzles, word searches, mobile, and other instructional activities make up this fun booklet.

LESSON PROFILES

A brief description of the six Plant Connections Lessons:

- **LESSON 1: WHAT IS A PLANT?**
To become familiar with some basic principles of plants and the plant kingdom. The youth will learn to recognize plants, their parts and function. They will also learn about the classification of plants and how they affect our lives.
- **LESSON 2: WHY ARE PLANTS IMPORTANT?**
To recognize the importance of plants with humans, animals and the environment. The youth will learn skills in composting and landscaping, as well as, being able to identify producers, consumers and decomposers and their common uses. They will learn the process of photosynthesis, its benefits, and how plants and animals depend on each other.
- **LESSON 3: WHAT MAKES PLANTS GROW?**
To become familiar with what makes plants grow. The youth will learn to identify five basic plant needs and the ways plants compete for those needs. They will also learn to describe what a plant needs to manufacture its own food, how the nutrient content of soil can be improved and a plant's role in the hydrologic cycle.
- **LESSON 4: HOW TO GROW PLANTS**
To become familiar with the basic principles and management techniques for reproducing and taking care of plants. The youth will learn to list requirements for plant growth, identify five major categories of plant pests, and ways to control them. They will also be able to explain why planning a garden is important, asexual propagation, and the differences between perfect and imperfect flowers.
- **LESSON 5: HOW TO SELECT AND HANDLE PLANTS.**
To become familiar with wise consumer practices for selecting, handling, and storing plants and their products. The youth will learn to discuss ways to minimize the risk of food related illnesses and the importance of food preservation. They will also identify qualities that are desirable in plant products and introduce native landscape plants. They will learn about the commercial production of vegetables and know about different plants physical and chemical defense mechanisms.
- **LESSON 6: THE FUTURE IN PLANTS**
To become familiar with the importance of becoming involved with plant science as a field of study, and a career choice. The youth will be able to give examples of technological advances in agriculture, list the advantages and disadvantages of hydroponics and of organic/inorganic gardening and construct a terrarium. The youth will also identify occupational opportunities in horticulture and the different types of jobs involved with food production and distribution.