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Introduction

Dear Teacher,

Why produce a curriculum module on plant conservation? As you know, biodiversity loss is a major global environmental problem. Much public interest and attention is given to animal conservation; in comparison, plant conservation tends to be neglected. This is true even though protecting animals depends on protecting plants! This module is designed to help you make clear to your students why plant conservation is of critical importance to the environment and human well-being.

The module is aligned with National Science Education Standards and addresses several broad topics:

- Practical reasons for protecting the diversity of plants, using plant medicines as an example
- Ecological reasons for conserving plants, using pollination and seed dispersal as examples
- Major threats to plants around the world.

As your students learn about plant conservation, they will also learn about important biological and ecological processes.

The activities in this module are designed to stimulate your students' interest and develop their skills in working together and thinking critically. They are designed to be "brain-on!" Straight-forward information is largely conveyed in reading assignments, rather than in class. This will allow you, the teacher, to avoid lecturing (which, as we all know, is not a middle-school-friendly classroom activity!) and your students to devote class time to applying their previously acquired knowledge. Because important content is covered outside of class, it is very important that your students complete the necessary assignments before beginning the in-class activities.

The module consists of seven lessons. We urge you to wrap up the module with a visit to your local botanic garden. Botanic Gardens Conservation International (BGCI) is committed to plant conservation and believes that visits to botanic gardens, where students encounter rare and interesting plants first-hand, are important in developing their interest in plants and conservation.

This package includes all information and printed materials you need to teach each lesson and complete each of the activities. Readings to accompany each lesson are included in the module packet. Additional materials, including worksheets, a wrap-up exam, ideas for action projects, a study guide, and resource references, are also included.

We greatly appreciate your participation in pilot testing this module! We want the module to be as useful to teachers and their middle school students as possible. Your feedback is very important to us. We are providing an evaluation form that we've kept as simple as possible—we know how busy teachers are! Yet, your honest suggestions about how to make the activities most effective are vital to us. We will use your feedback to revise the module for publication and nationwide distribution.

Thanks again for participating in this pilot program. We hope you and your students will have a fruitful learning journey and become inspired to help conserve the world's plant diversity.

The MODULE and National Science Education Standards

| Lesson | Name of Lesson | National Science Education Content Standards Applied to Activity |
|--------|--|--|
| 1 | Welcome to Planet Plant! | Content Area C: Life Science <ul style="list-style-type: none"> Diversity and Adaptations of Organisms |
| 2 | How We Depend Upon Plants: Plant Medicines | Content Area C: Life Science <ul style="list-style-type: none"> Diversity and Adaptations of Organisms |
| 3 | Flower Dissection Lab | Content Area C: Life Science <ul style="list-style-type: none"> Structure and Function in Living Systems Reproduction and Heredity |
| 4 | Amazing Pollinators | Content Area C: Life Science <ul style="list-style-type: none"> Structure and Function in Living Systems Reproduction and Heredity Diversity and Adaptations of Organisms |
| 5 | Seeds, Fruits and Their Dispersers | Content Area C: Life Science <ul style="list-style-type: none"> Structure and Function in Living Systems Diversity and Adaptations of Organism |
| 6 | Endangered Plants | Content Area F: Science in Personal and Social Perspectives <ul style="list-style-type: none"> Populations, Resources, and Environments |
| 7 | The Importance of Plant Conservation | Content Area F: Science in Personal and Social Perspectives <ul style="list-style-type: none"> Populations, Resources, and Environments |

TIPS FOR PLANNING AHEAD

Most of the activities provide everything you will need to carry them out with your students. Several of them, however, require you to plan ahead in some way. Below is a list of the tasks you will need to complete on your own:

1. Contact your local botanic garden to schedule a field trip to be conducted once your class has completed the module. We recommend reading “Connecting Botanic Garden Education Programs to Planet Plant” before contacting your botanic garden.
2. Activity #3 (Flower Dissection Lab) requires flowers for dissection. See the activity for a list of suggested flowers and tips on how to get them free from local garden shops.
3. Activity #6 (Endangered Plants) requires a list of endangered plants from which your students will select their projects. The projects will be most interesting if your students select from plants in your region. We have provided the names of web sites that should make it easy for you to produce such a list for your classes.
4. Activity #5 (Seeds, Fruits and Their Dispersers) includes photos of the seeds and fruits required for the activity. If you are able to collect examples of seeds and fruits yourself, they will work better than photos alone.