



# Greater Des Moines Botanical Garden

Exploring, explaining and celebrating the world of plants

## Addressed Learning Standards

### Ecosystems on the Edge

To understand our world, one must understand ecosystems and their importance. The world has many types of ecosystems and each has their own biotic and abiotic factors for survival. In this lesson, students will discover the different ecosystems in the conservatory, how plants (specifically the orchid) thrives in their ecosystem, and how symbiotic relationships work in the plant world.

#### **Grade Level:**

6<sup>th</sup> – 8<sup>th</sup>

#### **Locations:**

Botany Lab  
Conservatory  
Gardner's Show House

#### **Subjects:**

Life Science  
Biological Evolution  
Ecology  
Geography

#### **Next Generation Science Standards:**

##### **MS-LS2-1**

Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.

##### **MS-LS2-2**

Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

##### **MS-LS2-3**

Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

##### **MS-LS2-4**

Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect population.

##### **MS-LS2-5**

Evaluate competing design solutions for maintaining biodiversity and ecosystem services

#### **Iowa Core:**

#### **Geography**

##### **SS.6-8.G.3**

Understand how human factors and the distribution of resources affect the development of society and the movement of populations.

##### **SS.6-8.G.4**

Understand how physical processes and human actions modify the environment and how the environment affects humans.