



## 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:

3<sup>rd</sup> – 5<sup>th</sup>

#### Locations:

Botany Lab  
Conservatory  
Gardner's Show House

#### Subjects:

Life Science  
Biological Evolution  
Ecology  
Geography

#### Next Generation Science Standards:

##### **3-ESS2-2**

Obtain and combine information to describe climates in different regions of the world.

##### **3-LS4-3**

Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.

##### **4-LS1-1**

Construct an argument that plants and animals have internal and external structures that function to support survival, growth, behavior, and reproduction.

##### **5-LS1-1**

Support an argument that plants get the materials they need for growth chiefly from air and water. (Emphasis is on the idea that plant matter comes mostly from air and water, not from the soil.)

#### Iowa Core:

#### **Geography**

##### **SS.3-5.G.3**

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

##### **SS.3-5.G.4**

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