

UNITED STATES BOTANIC GARDEN CURRICULUM

HOW PLANTS WORK EXHIBIT

Grades 3-5

HOW PLANTS WORK: A GUIDE TO BEING GREEN EXHIBIT

Plants face daily challenges and a lifetime of threats, diseases and enemies—yet most manage to hold ground, grow and reproduce. Although humans are locked into a life-and-death dependence on plants, people often fail to appreciate them as living, breathing, dynamic organisms. *How Plants Work*, a permanent exhibit in the East Gallery of the United States Botanic Garden, will introduce you to the daily realities of life as a plant.

The United States Botanic Garden's *How Plants Work* Exhibit reveals the secrets of how plants – seemingly sedentary organisms – manage to survive in every corner of the planet. There are larger-than-life models, interactive features, and a host of live examples that help students, and their adult mentors, understand and appreciate their green partners and man's dependence upon them for survival.

BIG IDEAS

While visiting the exhibit, students will be challenged to explore 5 aspects of plants and discover just how much they are alive and how they work by addressing the following “Big Ideas”:

- 1) **Are Plants Like Us?** – Explore the phenomenal things plants can do and how thoroughly we depend on them. Use the huge family tree ‘map’ to trace familiar plants back to their ancient ancestors.
- 2) **A Puzzle of Plant Parts** – A colorful and impressive plant sculpture (dubbed *Scarlet magnifica*) shows off its stunning oversized parts. Real plants, panels, and a “fluff” machine reveal that plant parts take many forms as a result of being adapted to unique environments.
- 3) **The Green Machine** – This section features another larger-than-life plant sculpture (named *Electra botanica*) complete with interactive light displays. These displays demonstrate the industrious and busy life of a plant, representing what happens during photosynthesis and beyond.
- 4) **Surviving Against the Odds** – At this station students come to appreciate the incredible variety of ways in which plants meet their daily challenges (e.g. battling predators, surviving drought, finding enough light, etc.).
- 5) **Plant Multiplication** – This area explores reproductive cycles for four plant groups: ferns, mosses, cone bearing plants, and flowering plants.

The intent of the *How Plants Work* Exhibit and its corresponding curriculum is not to create a list of facts and figures. Instead, the intent is to challenge students to explore, think, and come up with their own questions and conclusions about how plants work and the various ways plants impact human life.