



Botany Explorer School Program

K-3 Grades Curriculum

The *Botany Explorer School Program* is one of three plant-based education programs offered to school groups at Olbrich Botanical Gardens.

The primary goals of the *Botany Explorer School Program* are:

- To introduce students to the basic structure of plants and the role and function of seeds, stems, leaves, roots, and flowers.
- To provide students with an authentic learning experience involving inquiry-based and hands-on learning methodologies.
- To enrich classroom learning by supporting the Wisconsin Model Academic Standards and the Metropolitan Madison School District (MMSD) K-8 Science Standards.

INTRODUCTION & SAFETY

Students are introduced to the *Botany Explorer School Program*. Through visual examples, physical demonstrations, and models, students develop an understanding of the importance of plants in their daily lives and recognize and name plant anatomy related to nutrient uptake, photosynthesis, and pollination. Students also participate in defining safety protocols while on site.

- **Wisconsin Standards for Agriculture, Food, and Natural Resources:** NR 2.a.1.e, PS1.a.1.e, PS1.c.2.e, PS2.a.1.e, PS2.c.1.e
- **Wisconsin Model Early Learning Standards:** A.EL.2
- **Wisconsin's Model Academic Standards for Environmental Education:** A.4.4
- **Wisconsin Standards for Health Education:** (PK-2) 1:1:A1, 1:1B2
- **Wisconsin State Standards for Literacy:** Speaking and Listening 1 (K-2), 2 (K-1), 3 (3-5)
- **Wisconsin Model Academic Standards for Science:** A.4.1, A.4.2, C.4.1, C.4.2, F.4.1, F.4.2, F.4.4
- **MMSD K-8 Science Standards:**
 - Grade 1 Life Sciences *Characteristics and Life Cycles of Plants*
 - Grade 3 Life Sciences *Structure & Response of Organisms*

LEARNING STATIONS

DISCOVERING SEEDS

This learning station engages students in hands-on learning about seeds. Students dissect a seed, explore the diversity of seed types, and discover seed adaptations through hands-on demonstrations.

- **Wisconsin Standards for Agriculture, Food, and Natural Resources:** PS2.a.1.e
- **Wisconsin State Standards for Literacy:** Speaking and Listening 1 (K-2), 2 (K-1), 3 (3-5)
- **Wisconsin's Model Academic Standards for Environmental Education:** A.4.1, A.4.2, A.4.3, A.4.4, B.4.6
- **Wisconsin Model Academic Standards for Science:** C.4.1, C.4.2, C.4.4, C.4.5, C.4.7, F.4.1, F.4.2, F.4.3, F.4.4
- **MMSD K-8 Science Standards:**
 - Grade 1 Life Science *Characteristics of Life Cycles of Plants*
 - Grade 3 Life Science *Structure and Responses of Organisms*

DISCOVERING STEMS

This learning station provides students with tactile activities that illustrate the important role stems play in the life of a plant. Students will examine celery stalks, discover the many ways we use stems in our daily lives, and examine some stem adaptations.

- **Wisconsin Standards for Agriculture, Food, and Natural Resources:** PS2.a.1.e



- **Wisconsin's Model Academic Standards for Environmental Education:** A.4.1, A.4.2, A.4.3, B.4.6, B.4.10
- **Wisconsin State Standards for Literacy:** Speaking and Listening 1 (K-2), 2 (K-1), 3 (3-5)
- **Wisconsin Model Academic Standards for Science:** A.4.1, A.4.2, A.4.3, A.4.4, C.4.1, C.4.2, C.4.4, C.4.5, C.4.7, F.4.1, F.4.2, F.4.4
- **MMSD K-8 Science Standards:**
 - Grade 1 Life Science *Characteristics of Life Cycles of Plants*
 - Grade 3 Life Science *Structure and Responses of Organisms*

DISCOVERING LEAVES

This learning station offers students a unique opportunity to explore a wide variety of common and non-native plants and their leaves. Students compare and contrast leaves while learning the important role leaves play in making food for the plant.

- **Wisconsin Standards for Agriculture, Food, and Natural Resources:** PS2.a.1.e
- **Wisconsin's Model Academic Standards for Environmental Education:** A.4.1, A.4.2, A.4.3, A.4.4, B.4.1, B.4.6
- **Wisconsin State Standards for Literacy:** Speaking and Listening 1 (K-2), 2 (K-1), 3 (3-5)
- **Wisconsin Model Academic Standards for Science:** A.4.1, A.4.2, C.4.1, C.4.2, C.4.5, C.4.7, F.4.1, F.4.2, F.4.4
- **MMSD K-8 Science Standards:**
 - Grade 1 Life Science *Characteristics of Life Cycles of Plants*
 - Grade 3 Life Science *Structure and Responses of Organisms*

GUIDED CONSERVATORY TOUR

Students participate in a 30-minute guided tour and scavenger hunt through the Bolz Conservatory as part of the *Botany Explorer School Program*. During the tour students explore the diversity of leaves, stems, roots, and flowers while engaging in an authentic learning experience in the botanically rich environment of Olbrich's unique tropical rainforest habitat.

- **Wisconsin Standards for Agriculture, Food, and Natural Resources:** AS6.a.1.e
- **Wisconsin Model Early Learning Standards:** C.EL.1F.4.4, C.4.2
- **Wisconsin State Standards for Literacy:** Speaking and Listening 1 (K-2), 2 (K-1), 3 (3-5)
- **Wisconsin's Standards for Physical Education:** Understanding Physical Activity and Well Being D.4.1; Respectful Behavior F.4.1, F.4.2
- **MMSD K-8 Science Standards:**
 - Grade 1 Life Sciences *Characteristics and Life Cycles of Plants*
 - Grade 3 Life Sciences *Structure & Response of Organisms*