

## **Second Grade STEAM Tour: Plants**

### **Introduction**

On this interactive STEAM tour second grade students will explore artworks in Mia's collection that depict plants on their own, in still lifes and in landscapes. Students will compare and contrast the artists' plant images with scientific renderings of plants by artistic scientists to discover how they are alike and different. They will learn just how important observation of the natural world is to artists around the world. Hands-on activities throughout the tour reinforce the idea that art, math, and science are very closely related.

### **Supplies (in green tour bag)**

Botanical prints

Rulers (include metric measurements)

Examples of artists' tools: paint brushes and palette with "paint"

Student notebooks

Clipboards

Pencils

Fake flowers and plastic bugs

### **Artworks (realistic and imaginative)**

Explain that on this tour you will all be thinking like scientists and artists. Throughout time both scientists and artists have been interested in observing and documenting plants. Many artists use their imaginations when creating a work of art. Using the prints provided and realistic and imaginative works of art on the tour, ask students to note the differences or similarities between contrasting works of art. Follow up questions could include: What did the artist see in real life? What did the artist make up in his or her mind? Why do you suppose they wanted to make it this way? What do you see that makes you say that?

### **Measuring**

Using the botanical reproductions provided, have the students use their rulers to measure the different parts of the plant and record the results in their scientific journal (their notebook). Some students are learning the metric system—so your rulers have centimeters and inches. This is a wonderful time to compare and contrast. Ask the students: What part of the plant is largest? What part is the smallest? How do the plants look alike and how do they appear different from each other? Students could even sort the plants based on their physical characteristics (roots, bulbs, shape of leaves, etc.). If the ruler seems too challenging for students who have not yet learned to use a ruler, feel free to have them use the space between their fingers.

### **Support visual arts standards**

At every work of art on the tour be sure to discuss one or two important visual elements. Invite students to air "paint" the lines they see with their fingers. Discuss how many of the lines they are following in the plants are curved lines. Name where the artwork comes from and provide a relative time frame (e.g. long long ago or brand new). Tell what it is made of and when possible show an artist's tool (e.g. paintbrush).

**Art making**

Using the fake flowers and bugs as props, ask students to create their own still life drawings incorporating realistic and/or more imaginative flowers. If you have studied pictures with bugs or decay, encourage them to incorporate bugs and other living things that might show the plants do not have long to live.

**Science** 2.4.1.1.1 Living things are diverse with many different observable characteristics. Benchmark: Describe and sort plants into groups in many ways, according to their physical characteristics and behaviors.

**Math – Geometry & Measurement** Understand length as a measurable attribute; use tools to measure length. 2.3.2.1 Benchmark: Understand the relationship between the size of the unit of measurement and the number of units needed to measure the length of an object.

2.3.2.2 Benchmark: Demonstrate an understanding of the relationship between length and numbers on a ruler by using a ruler to measure lengths to the nearest centimeter or inch.

**Visual Arts** 0.1.1.5.1 Identify the elements of visual art including color, line, shape, texture and space.

**Visual Arts** 0.1.2.5.1 Identify the tools, materials, and techniques from a variety of two- and three-dimensional media such as drawing, printmaking, ceramics or sculpture

**Visual Arts** 0.2.1.5.1 Create original two- and three- dimensional artworks to express ideas, experiences or stories.

**Visual Arts** 0.4.1.5.1 Compare and contrast the characteristics of a variety of works of visual art.