

## Illustrating Nature

Adapted from [Art & Science: A Curriculum for K–12 Teachers](#)

**Content Area(s):** Science and Visual Arts

### Project Description:

Inspired by the drawings and paintings in *Maria Sibylla Merian: Artist, Scientist, Adventurer* by Sarah B. Pomeroy and Jeyaraney Kathirithamby, students will observe the natural world around them and create illustrations of flowers, plants, and insects.

Maria Sibylla Merian (1647–1717), one of the world's first entomologists, was also a botanist, naturalist, and celebrated artist. Her images were prizes by scientists and art collectors for their beauty and accuracy.

### Essential Question

How did Maria Sibylla Merian use her talents as an illustrator and painter to help the fields of science and biology? Explore this question with students using examples of Merian's works of art. Follow up with a deeper conversation using the following prompts.

1. How can art be used as an observational tool?
2. Why would it be important to seventeenth-century scientists to have accurate pictures of plants and insects?
3. Describe how Maria Sibylla's illustrations are different from the actual subject matter.
4. What are some advantages of having an illustration instead of a photograph? What are some disadvantages?
5. What types of plants and insects have you observed in your community?
6. How do you record nature?

### Classroom Activity

Train your powers of observation as you look closely at the natural world around you and create drawings like Maria Sibylla Merian. Along with her daughters, Merian challenged and forever changed the artistic standards of natural history illustrations. Their work was crucial to the development of the field of entomology, the study of insects. Before photography, scientists had to rely on drawings of natural specimens to study insects and plants. Artists were often hired to make these drawings and illustrations.

## Lesson Steps

- Tell students to look closely at a drawing from *Maria Sibylla Merian: Artist, Scientist, Adventurer* and share some observations.
  - What do you see in the drawing?
  - What types of shapes do you see?
  - Do you see similar lines or shapes?
  - Are there any plants or insects that are similar to each other?
- Record some of their observations on a classroom board.
- Have students venture outside the classroom and collect insects (in prepared containers), plants, or leaves. If there is no place to collect samples, bring some for your class.
- Hand out paper and art supplies.
- Have students draw their insects or plants, making sure to identify some of the characteristics identified as a group.
- Remind students of the lines and shapes they found in the Merian images.
- Release any bugs that were captured.

## Classroom Extension

- In small groups, have students research the insects and plants they illustrated. They can work together to create a small booklet of nature illustrations from around their community or school.
- Ask students to consider what Maria Sibylla Merian did to make the insects look three-dimensional. Point out examples of shadows and shading and have students use value to give their drawings a more realistic appearance.

## California State Content Standards for Visual & Performing Arts

### Grade 6

Creative Expression Standard 2.1

Creative Expression Standard 2.3

### Grade 7

Artistic Perception Standard 1.1

Artistic Perception Standard 1.3

### Grade 8

Artistic Perception Standard 1.1

Artistic Perception Standard 1.4

## California Science Content Standards

### Grade 5

Investigation & Experimentation 6.a

### Grade 7

Structure & Function in Living Systems 5.a, c  
Investigation & Experimentation 7.a  
Investigation & Experimentation 7.b