



**BRANDYWINE  
RIVER MUSEUM  
OF ART**

## **Plant Shapes and Patterns: Math and Visual Arts**

### **Objectives:**

1. Discover how and why certain artists use simplified depictions of plants in their paintings
2. Reduce a plant to basic shapes
3. Create a black and white plant pattern

**Grade Level:** Middle and High School

### **Common Core Academic Standards:**

- CCSS.MATH.CONTENT.HSG.MG.A.1: Use geometric shapes, their measures, and their properties to describe objects (e.g., modeling a tree trunk or a human torso as a cylinder).
- CCSS.MATH.CONTENT.HSG.GMD.B.4: Identify the shapes of two-dimensional cross-sections of three-dimensional objects, and identify three-dimensional objects generated by rotations of two-dimensional objects.

### **Suggested Images:**

- *Potted Plant in Window*; Horace Pippin; 1944
- *Open Window*; Carolyn Wyeth; 1944

**Introduction:** A misconception with art is that for something to be considered good it needs to be as realistic and detailed as possible. However, not all artists are concerned with realism. Some artists may choose to paint objects that appear flattened or simplified. The reason may be to focus on the shape or color of the object, or to evoke a certain mood or feeling in a work. Simplifying objects can allow for patterns, shape, line and color to be more prominent.

**Discover:** In *Potted Plant in Window*, Horace Pippin paints a still life of a green-leaved plant sitting on a windowsill flanked by green curtains. Other objects such as a rocking chair are present in the work, but the focus is the plant in the center especially on the shape of the leaves and the outline of the entire plant. In a similar fashion, Carolyn Wyeth pares down objects into simplified forms in her painting, *Open Window*. The artist uses the magenta of the flower corsage to stand out among the otherwise somber tones in the work. *What sort of mood does Carolyn Wyeth's painting evoke? Why?*

**Create:** A black and white plant pattern drawing.

### Materials:

- Assortment of fresh or dried plants
- Pencils
- Rulers
- 6 x 6 squares of white drawing paper
- Black markers

### Assignment:

1. Students will choose a plant that they wish to draw.
2. Students will study their plant and choose 3 parts of it that they want to highlight. Example of Hosta plant: the leaves, the seed pods, and the seeds.
3. Divide the drawing paper into 4 equal quadrants by lightly drawing with pencil and a ruler.
4. Draw simplified versions of the 3 parts of the plant as separate entities with none of the parts connecting or touching, making sure that each part of the plant falls in at least 2 quadrants.
5. Color in the backgrounds of quadrants 1 and 3 in black marker, leaving the plant drawings that fall in those quadrants white.
6. Students will then color in the plant drawings in quadrants 2 and 4 black while leaving the background white.
7. OPTIONAL: Generate the mirror image of the drawing and make multiples of both using a copier or scanner to create a more complex final piece.

