

# PATTERN AND PLAN

**GRADE:** 3-12

**TIME:** Two 50-minute sessions

What roles do patterns play in a community? In this lesson, students will investigate patterns in the work of Frank Lloyd Wright and in larger designs, such as those of city plans, in order to discover how pattern can create unity, improve daily life, and strengthen communities. Then, students will use patterns to design a unique city plan for a collaboratively-made terrain.

**INTEGRATED SUBJECTS:** Social Studies, Visual Arts, Media Literacy

## OBJECTIVES

### MATERIALS | RESOURCES

Examples of Frank Lloyd Wright's  
architecture

Sketchbooks

Pencils

Froebel blocks (optional)

Markers

Kraft paper

Library or Internet access (primarily Google  
Earth) for independent student  
research

A variety of maps or images of city plans  
(optional)

Images of patterns in nature (optional)

1. Understand the role of pattern in micro design (architectural details) and macro design (city plans).
2. Consider how patterns can strengthen or weaken communities.
3. Identify patterns in maps of communities and in the work of Frank Lloyd Wright.
4. Design a unique pattern for a model community, applying Wright's ideas about organic architectural design and considering modern elements of cities.

## ESSENTIAL QUESTIONS

1. What roles do patterns play in a community?
2. How can city plans strengthen communities?

# LESSON PROCEDURE

## EXPLORE

### Session One

- **Ask students:** Where in our world do we see patterns? Why do patterns exist?
- **Introduce the concept of organic architecture in Frank Lloyd Wright buildings.**
  - Organic architecture is a philosophy of architecture which promotes harmony between human habitation and the natural world. More information at <https://www.teachingbydesign.org/about/organic-design/>.
  - For Wright, organic architecture also meant that a building must be a unified, total design. This means that every element of the design must be connected, including site and structure, interior and exterior, furniture, ornament, and architecture. More information at <https://flwright.org/researchandexplore/furnitureanddecorativearts>.

## ENGAGE

### Session One

- **Display images of Frank Lloyd Wright's architecture and have students sketch any patterns that they see. Have students consider:** How are patterns repeated? Where do you see them? How are patterns you see related to Wright's philosophy of organic architecture? **Highlight how Frank Lloyd Wright's art glass designs include geometric shapes that often reference plants and other organic forms.**
  - Differentiation: Take a field trip to a Frank Lloyd Wright Trust site and have students sketch patterns they see during the tour.
  - Optional Extension: Have students look for and sketch patterns in nature, considering how they compare and contrast to patterns found in the work of Frank Lloyd Wright.
- **Ask students to use Google Earth to take a close look at their own community.** (Tip: Students can locate their school and then zoom out from there!) **Challenge students to find and sketch patterns they see. Encourage students to investigate lots of communities. Have students consider:** How do patterns in communities differ? What are some ways that borders are created in communities? Do you see multiple patterns in one community? If so, how do they relate to each other and/or how are they used?
  - Differentiation: This exercise can be done with a variety of maps if students do not have access to the Internet.
- **Ask students to share any observations or insights they've made about patterns and communities. Have students consider:** How might Frank Lloyd Wright use patterns to design a community?

## DESIGN

### Session One

- **Have students sketch a few patterns that can be applied to something small (such as upholstery for a piece of furniture) as well as something big (like a city plan). If available, Froebel blocks or other building blocks can be used by students as they experiment.**

## EXPLORE

### Session Two

- **Review organic architecture and the work of Frank Lloyd Wright.**
- **Ask students:** What role do patterns play in a community? How can patterns strengthen or weaken communities?

# LESSON PROCEDURE (continued)

## ENGAGE

Session Two

- **With students, use Kraft paper to collaboratively build a terrain for a model community. To do so, lay out a large sheet of Kraft paper. Have students use markers to mark rivers, streams, and ponds. Place balls of crumbled paper underneath the sheet to form hills.**
- **Have students consider:** Where are the natural boundaries of this terrain? What type of pattern would help to create a good community on this terrain?

## DESIGN

Session Two

- **Challenge students to consider the terrain as they design and create a network of patterns that form a city plan. Encourage students to mark the natural features in their plan. Have students consider:** Is there a point of emphasis in this plan? How might this area be utilized?
- **If time allows, have students mark public and residential areas on their city plans. Ask students:** Do both public and private areas in the city follow the same pattern? If so, why? If not, how are they connected? **Encourage students to create a unified, cohesive plan.**

## CRITIQUE & INTERPRET

Session Two

- **Have students share their city plans with their peers and note why they think their pattern would create a successful community on the terrain built by the class.**
- **Have students identify any advantages or disadvantages to the proposed city plans.**
- **Have students consider:** In what other ways could patterns be incorporated into the design of a community? **Encourage students to reflect upon how patterns they've designed could be repeated in buildings that make up the community.**