

**UNIT 1: GEOGRAPHY AND ENVIRONMENT**  
**LESSON 1**

# Art and Nature

Explore how artists' choices in design and materials are informed by their environment



# Lesson Overview

## LEARNING OBJECTIVES

Students will:

- Analyze a work of art from multiple perspectives, focusing on design and materials
- Learn about the history and process of porcelain production in China
- Examine how works of art can depict and reflect ideas about the natural world

## VOCABULARY

<u>Ceramic</u>	Objects produced by shaping pieces of clay that are then hardened by heat
<u>Cobalt blue</u>	Greenish-blue mineral used to produce a deep, vibrant blue pigment
<u>Porcelain</u>	Hard, fine-grained ceramic, fired at a high temperature in a kiln, and prized for its durability and translucence

## REQUIRED MATERIALS

- Drawing paper
- Drawing pencils
- Unfired clay (if available)

## INCLUDED RESOURCES

- Fish and Plant Chart
- Image of Jingdezhen
- Touch objects (for physical toolkit): porcelain sample and cobalt pigment (in sealed jar, not to be opened)

**For the Teacher**

## Background Information

*Wine Jar with Fish and Aquatic Plants* is a masterpiece of fourteenth-century porcelain and an example of a naturalistic style of surface decoration that was gaining popularity in China at the time. The jar was produced in the imperial kilns of Jingdezhen, a city in southeastern China that is known as the “porcelain capital” because it has been producing pottery for 1,700 years. Located near the best-quality deposits of petuntse, or porcelain stone, in China, Jingdezhen is surrounded by pine forests, which provide wood for its kilns. It is situated on the south bank of the Chang River, which connects the city to river systems flowing north and south, facilitating the transport of fragile objects such as this wine jar. The wine jar was probably a gift for a government official. In this lesson, students will look closely at the object through multiple lenses in order to gain an understanding of how its design and materials reflect ideas about the natural world as well as the specific geography of the area where it was created.

## Artwork Description

This blue-and-white porcelain jar depicts a lively underwater scene. Four distinct fish swim around the belly of the jar. One (with a spiky dorsal fin) is a freshwater perch, and the remaining three are from the carp family. Each fish has an open mouth and a wide-open eye that looks straight out at the viewer. The textures of the scales and fins are rendered in exquisite detail. The fish are elegantly framed by a variety of water plants local to Jingdezhen: lotus, eelgrass, duckweed, water crowfoot, and pondweed. The leaves and stems of the plants and flowers twist and bend, suggesting the flow of water. A band of crashing waves circles the top of the jar.



*Wine Jar with Fish and Aquatic Plants*, 14th century. Porcelain with underglaze cobalt blue decoration, 11<sup>5</sup>/<sub>16</sub> × 15<sup>3</sup>/<sub>4</sub> in. (50.5 × 54.9 cm). Brooklyn Museum; The William E. Hutchins Collection, Bequest of Augustus S. Hutchins, 52.87.1. Creative Commons-BY. (Photo: Brooklyn Museum)

# About the Artwork

## MATERIALS

*Wine Jar with Fish and Aquatic Plants* is made from porcelain, a white clay that develops a glasslike appearance when fired. Chinese ceramicists are thought to have developed porcelain in the sixth century or earlier in northern China. It is generally made with kaolin, a soft white clay, and petuntse, a stone composed of feldspar, mica, and quartz. In Jingdezhen, the Gaoling Mountain provides artisans with a rich source of kaolin clay. Porcelain is fired at extremely high temperatures (up to 2252°F/1400°C) and retains its color after it is fired.

The wine jar's rich-blue color is produced by cobalt-oxide pigment. The mineral cobalt was first imported into China as early as the eighth century. Mined at sites in the Arabian Peninsula, northwestern Iran, and West Asia, the raw material was transported through international trade along the Silk Route. Cobalt was a luxury good, and its use signified the wealth and power of the person who commissioned the wine jar.

## PROCESS

The painting of cobalt blue on porcelain, widespread in China beginning in the fourteenth century, is an important development in the global history of ceramics. The images on the wine jar were created through the process of cobalt-underglaze painting. The mineral pigment was painted directly onto the clay, and the object was then glazed and fired. Cobalt was favored for its beautiful, deep hue and its ability to withstand the high firing temperatures used to create porcelain.

## DESIGN

*Wine Jar with Fish and Aquatic Plants* establishes the illusion of movement and harmony through a variety of artistic conventions. For example, the jar's bulging sides heighten a sense of movement. The artist placed the four fish at even intervals around the jar to create balance, and used the flora to create a frame around each fish. The undulating (smoothly rising and falling) lines surrounding the neck of the jar suggest the surface of a pond or perhaps an aquarium. In addition to the jar shape itself, the artist used sinuous (bending and twisting) lines to suggest motion, from the curving postures of the fish to the wavy stems and leaves of the plants that appear to sway gently with the currents of the water. A wide variety of textures render the fish and plants in meticulous detail, creating visual interest. Although the jar has a limited palette (range of colors) of cobalt blue on a white ground, the artist has varied the saturation, or intensity, of the pigment so that there appears to be a diversity of color.

# Lesson

## STEP 1: 10 MINUTES

## Warm-Up

Explain to students that they will be looking at a work of art and thinking about how the artist represents nature.

Show students images of *Wine Jar with Fish and Aquatic Plants*, including details of the different sides of the jar. Explain to students that the jar is round, and includes designs going all around it. It may help to share printouts of the details in addition to showing them on a projector.

Observational sketching: Invite students to look closely at the jar and spend 5 minutes sketching details of different fish and plants, and details that suggest the underwater setting.

## STEP 2: 15 MINUTES

## Artwork Discussion

After students complete their sketches, ask:

- What did you notice about the fish? How did the artist make the fish look different from one another?
- What different lines, shapes, and textures did you draw to recreate the plants?
- What details did you find that tell us this is an underwater setting?
- What do the fish and plants in the artwork tell us about the environment where the jar was made?

Show or hand out the chart identifying the different plants and fish on the jar. Explain that the artist decorated the jar with specific types of fish and plant life from the local environment.

## STEP 3: 15 MINUTES

## Activity: Material Exploration

Tell students that this work of art was created in the fourteenth century and comes from Jingdezhen, a city located in southeastern China, on the south bank of the Chang River.

Show students a map of the area and an [image](#) of Jingdezhen.

Tell students that this part of China is known as the “porcelain capital” because it has been producing pottery for 1,700 years. Jingdezhen is close to China’s best-quality deposits of porcelain stone, which are found in the mountains that surround the city, and nearby pine forests provide wood for the kilns. The Chang River connects the city to river systems flowing north and south, facilitating the transport of fragile objects such as this wine jar. Porcelain was first developed in China, and it was highly sought after in other places. Blue-and-white porcelains, like the wine jar, influenced other artists all over the world, and are still being made today.



[Click image to enlarge](#)

Explain that both this local porcelain and cobalt, a valuable mineral imported from Iran, were used to make the wine jar.

Allow students to handle the porcelain and cobalt (in a sealed jar) and explain how the object was made: first, the unfired clay was shaped; second, designs were painted onto the wet clay; third, a glaze was applied; and, finally, the jar was fired at a high temperature in a kiln. If time allows, show students the video [Porcelain for Emperors](#), from the Smithsonian National Museum of Asian Art.

Ask students:

- How do the materials look and feel?
- How do the materials look different from the finished jar?
- What associations do these colors have for you?
- Why do you think these materials were chosen to make the wine jar?
- What do they add to this scene?



# Lesson Extensions

## SCIENCE CONNECTION—LOCAL NATURE

The wine jar uses imagery of fish and plants local to the region. Ask students to consider: What kinds of plants or animals have you seen in your own community? After generating a list of ideas, go on a neighborhood walk to look for plants or animals, and ask students to sketch what they find in as much detail as possible. After the walk, hang their sketches up or turn them into a booklet to showcase local plant and animal life.

## ARTS CONNECTION—SEND A MESSAGE

Explain to students that the wine jar was probably given as a gift to a government official, and that the Chinese names of the four fish on the jar sound similar to the Chinese words for “honest and incorruptible.” Ask what they think this phrase means, and why someone would want a government official to think about the phrase. After discussion, ask them to think about someone in power they’d want to send a message to. Ask: What words or phrases would you want that person to consider? What kinds of images would you include to support your message? Have students create a drawing or painting to convey their message, and share the finished artwork with the person they made it for.

# Worksheets and Additional Materials

# Fish and Plant Chart

Fish and Plants Depicted on *Wine Jar with Fish and Aquatic Plants*

Mackerel



Whitefish



Carp



Perch



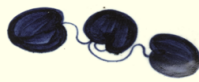
Lotus



Eelgrass



Duckweed



Water Crowfoot



Pondweed



Cover:  
*Wine Jar with Fish and Aquatic Plants*, 14th century.  
Porcelain with underglaze cobalt blue decoration,  
11<sup>15</sup>/<sub>16</sub> × 15<sup>3</sup>/<sub>4</sub> in. (30.3 × 34.9 cm). Brooklyn Museum;  
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