

Asian Odyssey

A National K-12 Interdisciplinary Curriculum Model

The
Cleveland
Museum
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USING NATURAL RESOURCES IN CHINESE AND JAPANESE ART

Grade Level

This lesson was written for a 3rd-grade class; it can be adapted for grades 4-5.

Introduction

This lesson will serve as an introduction to natural resources, both renewable and nonrenewable, and will examine how the availability of resources influenced artistic styles in China and Japan.

Purpose

- To identify and understand the difference between renewable and nonrenewable resources
- To understand how a country's natural resources influence the materials artists use
- To identify natural resources in China and Japan
- To identify why Japan is poor in natural resources

Concepts

- Natural resource: Something that is found in nature and is valuable to humans
- Renewable resource: living resources, such as forests and wildlife, that replace themselves through reproduction
- Nonrenewable resource: nonliving resources, such as minerals and fuel sources, that once used do not replace themselves once used.

Key Ideas

- Japan is made up of a number of volcanic islands. The country's mineral reserves are small and often of poor quality. Japan also lacks a supply of fossil fuel (a fuel that is formed in the earth from plant or animal remains). In addition the amount of land suited to farming is limited by the country's mountainous terrain, and the soil is often poor, meaning that much of Japanese food must be imported.
- Within China's boundaries exists a highly diverse and complex country. Probably China's most important natural resource is its people, more than one-fifth of all the people in the world live there.
- China's landscape is home to the highest (Mount Everest) and one of the lowest places on Earth, and its relief varies from nearly impenetrable mountains to vast

- coastal lowlands. China's climate ranges from extremely dry, desertlike conditions in the northwest to tropical monsoon conditions in the southeast, and the country has the greatest contrast in temperature between its northern and southern borders of any country in the world.
- The diversity of both China's terrain and its climate means that the country is home to a vast number of plant and animal species.
 - China is also well endowed with mineral resources, the most important of which is coal. There are also significant supplies of iron ore. Copper, tin, lead, zinc, and gold are also found in quantity.
 - Many of the materials used by Chinese artists throughout the country's long history were readily available.
 - Bronze is an alloy (mixture) of copper and tin, with other metals such as zinc sometimes added. Bronze objects were first produced in China around 1700 BCE.
 - Clay is the result of the wearing down and decomposition of rocks containing aluminous minerals such as granite, lime, magnesia, oxide of iron, and other ingredients. Kaolin is a very refined type of white clay that is used in making porcelain.
 - Jade (jadeite or nephrite) is a beautifully colored stone patterned by natural veining. It is extremely hard and must be worked by grinding away its surface rather than by cutting. Jade has been highly valued by the Chinese since ancient times and was thought to have magical and healing powers because of its hardness and indestructibility. Jade has been worked for thousands of years and jade tools have been found dating from BCE 12,000.
 - Tin, copper, and jade (jadeite and nephrite) are nonrenewable resources.
 - Clay, found throughout China and Japan, is a renewable resource.

Materials

Chinese: Jade

Jade Amulet in the Form of a Seated Figure With a Bovine Head, BCE 4700-2920, CMA 1953.628

Double Dragon Plaque, BCE 475-221, CMA 1952.579

Jade Bird Pendant, BCE c.1000-mid-900s, CMA 1972.38

Jade Fluted Ring with Dragon Head, BCE 475-221, CMA 1985.75

Chinese: Bronze

Mat Weight in the Form of a Bear, BCE 206-24CE, 1994.203

Square Wine Bucket, China BCE 1100-1050, China, CMA 1963.103

Chinese: Clay

Tomb Guardians, late 7th or early 8th century, CMA 2000.118.1-.2

Horse, 8th century, CMA 1955.295

Bowl of Peonies, 1662-1722, CMA 1964.198

Japanese: Clay

Flame-Style Storage Vessel, c.BCE 2500, CMA 1984.68

Jar with Combed Design, Sueki Ware, 400s-500s, CMA 1991.124

Haniwa Figure of a Female, 500s, CMA 1962.39

Vessel, 4th-5th century, CMA 1989.69

Procedure: Two-day Lesson

Day One

1. Introduce the term natural resource and ask students to name the natural resources they know. List them on the board.
2. Introduce the terms renewable and nonrenewable resources and ask students what they think the difference is. Write a definition for each on the board.
3. Refer to the list of resources students identified in Step 1, and label each as renewable (R) or nonrenewable (NR).
4. Display the images of the Chinese artworks from the Cleveland Museum and ask students to describe each object. What materials do you think each was made from? Why were those materials used?
5. Using the artworks and what was learned above, lead a discussion as to what natural resources Chinese artists had available (tin and copper to make bronze, jade (nephrite), and clay).
6. Which of these resources are renewable? (clay) Which are nonrenewable? (tin, copper, nephrite)

Day Two

1. Review the definition of natural resource and the list from Day One. Ask students if they can think of any additional natural resources and add them to the list.
2. Review the terms renewable and nonrenewable resources. Label any new resources added to the list as renewable (R) or nonrenewable (NR).
3. Use the artworks from Japan to lead a discussion that asks students to describe each object. What materials do you think each was made from? Using these art pieces and what we learned from them what are the natural resources in Japan? (clay) Is this a renewable resource? (yes)
4. Why does it seem that there were fewer natural resources for Japanese artists to work with? (Remind students that Japan is much smaller than China and that it is a mountainous country with poor soil and few minerals.)

Enrichment

- A. Have students research where natural resources such as jade, copper, and tin--as well as any other items they listed--are found in China. Have them mark a large map of China with symbols showing the areas where these resources are found.
- B. Research the techniques of making of bronze in ancient China.

Ohio State Standards

1. Make inferences regarding events or outcomes from information
2. Investigate the properties of soil (color and texture)
3. Investigate that soils are often found in layers and can be different from place to place
4. Use physical maps to answer questions
5. Read and interpret maps
6. Explain how resources, transportation, location, influenced development

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