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LESSON FIVE

WHY DIDN'T CHINA DISCOVER THE NEW WORLD?

INTRODUCTION

History In the early 1400s China was more technologically advanced than Europe. During that time, China embarked on a series of naval expeditions of much vaster scope than those of the Portuguese or Spanish at the end of the century. However, within a few years China ceased its maritime explorations.

Mystery With a chronological head start and superior technology, why didn't China, rather than Spain or Portugal, discover the New World?

Economic History Technology was important to overcoming barriers to ocean voyages, but so were the beliefs and attitudes of societies. Chinese culture did not provide the kinds of incentives that encouraged trade and exploration.

CONCEPTS

Economic Growth
Technology
Trade
Incentive

OBJECTIVES

- ◆ Identify several examples of technology that the Chinese possessed before the Europeans did
- ◆ Explain several Chinese beliefs that served as disincentives to voyages of exploration
- ◆ Analyze the relationship between social attitudes and economic growth

LESSON DESCRIPTION

Students in small groups discuss reasons why a nation might sponsor voyages of exploration. The teacher displays and discusses a visual showing several innovations of importance to ocean exploration that appeared in China well before they did

in Europe. Students then read about a series of Chinese naval expeditions that took place from 1402 to 1433 and discuss reasons why the Chinese government did not sponsor more ocean voyages after 1433.

TIME REQUIRED

One class period

MATERIALS

- 1 transparency of Visual 1
- ★ 1 copy of Activity 1 for each student

PROCEDURE

1. Ask class to develop a list of reasons why a nation's government might support voyages of exploration. (National prestige, new territory, military advantages, additional resources, new markets for products, scientific curiosity.)
2. Ask class for a recent example of governments sponsoring voyages of exploration. (Sponsorship of space exploration by the United States and the former Soviet Union.) Ask students what they think the motives of the United States and the former Soviet Union were for sponsoring space exploration. (Answers will vary.)
3. Explain that in the 15th century most ships traveled along sea coasts. To navigate the ocean, ships had to be able to sail far away from the sight of land. They had to be strong enough and large enough to withstand ocean storms. Long voyages of discovery were difficult or impossible without certain *technological* advances. Define "technology" as the application of scientific knowledge to the solution of practical problems.
4. Display Visual 1 and explain how each of these technological achievements was useful for ocean voyages. (A rudder is a vertical blade at the stern of a vessel that can be used to change directions. Multiple sails allow a ship to sail into the wind. When a ship is damaged, watertight compartments prevent water from filling the entire hull and sinking the ship. A leeboard is a board lowered into the water to prevent a ship from drifting sideways. A magnetic compass shows direction to navigators who are out of sight of land.) Note that Columbus's ships had neither leeboards nor water-

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tight hull compartments, since these innovations had not yet been introduced in Europe.

5. Suggest that there is an economic mystery about the discovery of the New World (the continents of North and South America). The Chinese had better equipment, and they had it earlier than did the nations of Europe. Why didn't Chinese explorers, rather than Portuguese and Spanish explorers, discover the New World?

6. Distribute Activity 1. Divide class into groups to read and discuss Activity 1, with one person in each group taking notes on the discussion. (Answers: The five points listed in Activity 1 were disincentives to voyages of exploration because:

- A. Emperors after Yung-Lo regarded naval expeditions as too expensive, given the financial condition of the government.
- B. Repelling Mongol invasions was expensive.
- C. An important motive for exploration is to find profitable trade opportunities, but this motive would be dishonorable according to Neo-Confucian philosophy.
- D. An explorer who was away from home on a long voyage would be unable to care properly for the tombs of his ancestors.
- E. If the Chinese believed that foreign cultures and their products were inferior, they would have little incentive to learn more about, or trade with, foreign countries.)

not lead to persisting economic growth in China. Useful inventions were not produced in large numbers to raise the living standards of the people or to trade with other countries. The Chinese beliefs that material gain was not important, that trade was a sordid activity and that foreign cultures were inferior, did not provide the kinds of incentives that can lead to economic growth.

CLOSURE

Remind students that the level of technology in ancient and medieval China was in general much higher than that of Europe. Many of the inventions that we think of as European in origin actually appeared first in China. To give just a few examples, the Chinese were making cast iron in the 4th century B.C. and steel by the 2nd century B.C. Matches were invented in the 6th century A.D. and the mechanical clock in the 8th century.

Many other examples of Chinese technology can be cited, but these inventions and innovations did

VISUAL 1
**TECHNOLOGICAL ACHIEVEMENTS
IMPORTANT TO OCEAN VOYAGES**

	CHINA	EUROPE
Axial Rudder	1st Century	12th Century
Multiple Masts and Sails	2nd Century	14th Century
Watertight Compartments in Ship Hulls	2nd Century	18th Century
Leeboard	8th Century	16th Century
Magnetic Compass (as used in navigation)	9th to 11th Centuries	12th Century

Robert Temple, *The Genius of China: 3,000 Years of Science, Discovery, and Invention*, New York: Simon and Schuster, 1986.

ACTIVITY 1

THE VOYAGES OF ZHENG HE

Name _____

Between 1405 and 1433 A.D., the Chinese government (primarily during the reign of the emperor Yung Lo, 1403-1425) sent seven naval expeditions south and west to India, Persia, Arabia, and Africa under the leadership of Zheng He. Many of these expeditions included several hundred ships and thousands of sailors and soldiers. Some of the ships employed were over 440 feet long, 180 feet wide at the broadest point, had four decks, and could carry over 1,000 men.

In contrast, when Columbus sailed from Spain in 1492, he had a fleet of only three ships. His flagship, the Santa Maria, was only 115 feet long, with a deck length of 60 feet. It was a half-decked ship and carried a maximum crew of 40. The other two ships were even smaller.

After 1433 the Chinese government launched no further naval expeditions. In 1436 the emperor forbade the building of ships for overseas voyages. Forty years later, the government destroyed the records of the voyages of Zheng He. While Spanish and Portuguese explorers claimed the lands of Central and South America, the Chinese withdrew from the seas.

Why did China not follow up on its technological superiority? Explain how each of the following statements provides reasons why the Chinese government ceased to sponsor voyages of exploration after 1433.

1. The Chinese government had an inadequate system for collecting taxes. The spending of Yung-Lo's government greatly exceeded the tax revenue that could be collected.
2. In the mid-1400s, Mongols began frequent attacks on China's north border.
3. Neo-Confucian scholars held many important government posts. Neo-Confucian philosophy advocated the suppression of desire for worldly things. Trade was held in contempt. Particularly after Yung Lo's death, the influence of the Neo-Confucian scholars grew.
4. The Chinese believed that each person had a duty to care regularly for the tombs of his ancestors.
5. Most Chinese believed that their civilization was superior to all others, that foreign goods were inferior to Chinese goods, and that there was little to be learned from foreigners.



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