



>> On their way to the Indies, Vasco da Gama's ships rounded the southern tip of Africa, shown here in the distance.

 **Interactive Flipped Video**

>> Objectives

Understand the major causes of European exploration.

Analyze early Portuguese and Spanish explorations and expansion.

Describe how the Portuguese established footholds on Africa's coasts.

Describe European searches for a direct route to Asia.

>> Key Terms

Moluccas
Prince Henry
cartographer
Mombasa
Malindi
Vasco da Gama
Christopher
Columbus
Line of Demarcation
Treaty of Tordesillas
Ferdinand Magellan
circumnavigate
Cape Town
Boers

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Starting in the 1400s, Europeans undertook a flurry of exploration, mapping new sea routes around the world. This great age of exploration was fueled by many causes, but at first, the most important cause was the search for spices.

Europeans Explore Overseas

Causes of European Exploration

European Trade with Asia Europeans had traded with Asia long before the Renaissance. During the Middle Ages, the Crusades introduced Europeans to many luxury goods from Asia. When the Mongol empire united much of Asia in the 1200s and 1300s, Asian goods flowed to Europe along complex overland trade routes.

The Black Death and the breakup of the Mongol empire disrupted Asian trade routes, but by the 1400s, Europe's population was growing—as was the demand for goods from Asia. The most valued trade items were spices, such as cloves, cinnamon, and pepper. People used spices to preserve and add flavor to food, and to make medicines and perfumes.

The chief source of spices was the **Moluccas**, an island chain in present-day Indonesia. Europeans called the Moluccas the Spice Islands.

The Drive to Explore In the 1400s, Arab and Italian merchants controlled most trade between Asia and Europe. Muslim traders brought spices and other goods to Mediterranean ports in Egypt,

Syria, and Turkey. From there, Italian traders carried them to European markets. Each time goods passed from one trader to another, prices increased.

Europeans wanted to cut out the Muslim and Italian middlemen and gain direct access to the riches of Asia. To do so, the Atlantic powers sought a new route to Asia, one that bypassed the Mediterranean.

Many explorers hoped to get rich by entering the spice trade or conquering other lands. Yet the desire for wealth was not the only motive that lured them to sea. Some missionaries and soldiers ventured overseas to win new converts to Christianity. The Renaissance spirit of curiosity also fed a desire to learn more about lands beyond Europe.

Improved Technology Improvements in technology helped Europeans cross vast oceans. Cartographers, or mapmakers, created more accurate maps and sea charts. European sailors also learned how to use the astrolabe, an instrument used to determine latitude at sea. The astrolabe was first developed by the ancient Greeks and later perfected by the Arabs.

Along with more reliable navigational tools, Europeans designed larger and better ships. The Portuguese developed the caravel, which combined the square sails of European ships with Arab lateen, or triangular, sails. Caravels also adapted the sternpost

rudder and numerous masts of Chinese ships. The new rigging made it easier to sail across, or even into, the wind. Finally, European ships added more armaments, including sturdier cannons.

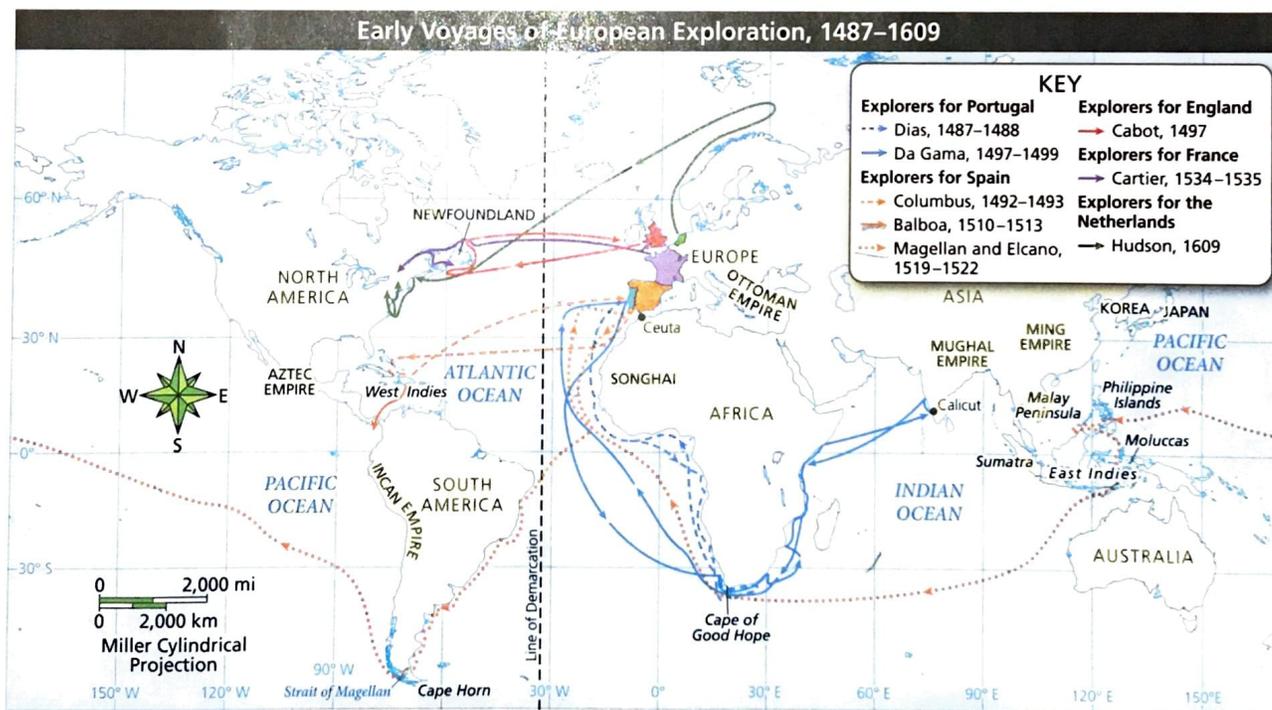
? IDENTIFY What were the major causes of European exploration?

Portugal Explores the Seas

Portugal, a small nation on the western edge of Spain, led the way in exploration. As in Spain, Christian knights in Portugal had fought to end Muslim rule. By the 1400s, Portugal was strong enough to expand into Muslim North Africa. In 1415, the Portuguese seized Ceuta (SAY oo tah) on the North African coast. The victory sparked the imagination of **Prince Henry**, known to history as Henry the Navigator.

The African Coast Mapped Prince Henry saw great promise in Africa. The Portuguese could convert Africans—most of whom practiced either Islam or native religions—to Christianity. He also believed that in Africa he would find the sources of the gold Muslim traders controlled.

Finally, Prince Henry hoped to find an easier way to reach Asia that bypassed the Mediterranean, which



>> Analyze Maps Portugal led the way in exploring the world by ship. Spain and other countries soon followed. How did Magellan's route to Asia differ from the routes of other explorers?



meant going around Africa. The Portuguese felt that with their expert knowledge and technology, they could accomplish this feat. At Sagres, in southern Portugal, Henry gathered scientists, **cartographers**, or mapmakers, and other experts. They redesigned ships, prepared maps, and trained captains and crews for long voyages.

Henry then sent ships that slowly worked their way south to explore the coast of West Africa. Henry died in 1460, but the Portuguese continued their quest.

Portuguese Footholds in Africa The Portuguese built small forts in West Africa to collect food and water and to repair their ships. They also established trading posts to trade muskets, tools, and cloth for gold, ivory, hides, and slaves. These were not colonies peopled by settlers. Instead, the Portuguese left just enough men and firepower to defend their forts.

From West Africa, the Portuguese sailed around the continent. In 1488, Bartholomeu Dias rounded the southern tip of Africa.

Despite the turbulent seas around it, the tip became known as the Cape of Good Hope because it opened the way for a trade route through the Indian Ocean to Asia.

The Portuguese continued to establish forts and trading posts, but they also attacked East African coastal cities such as **Mombasa** and **Malindi**, which were hubs of international trade. With cannons blazing, they expelled the Arabs who controlled the East African trade network and took over this thriving commerce for themselves. Each conquest added to their growing trade empire.

Over the next two centuries, some Portuguese explorers managed to reach parts of present-day Congo, Zambia, and Zimbabwe, establishing limited trade. In general, however, the Portuguese did not venture far from Africa's coasts. They knew little about the interior of Africa, and they lacked accurate maps or other resources to help them explore there. Furthermore, Africans in the interior, who wanted to control the gold trade, resisted such exploration.

Beyond Africa: Reaching India In 1497, Portuguese navigator **Vasco da Gama** followed in Dias's footsteps, leading four ships around the Cape of Good Hope. Da Gama, however, had plans to go farther. After a ten-month voyage, da Gama reached the great spice port of Calicut on the west coast of India. On the long voyage home, the Portuguese lost half their ships, and many sailors died of hunger, thirst, and scurvy, a disease caused by a lack of vitamin C in the diet.

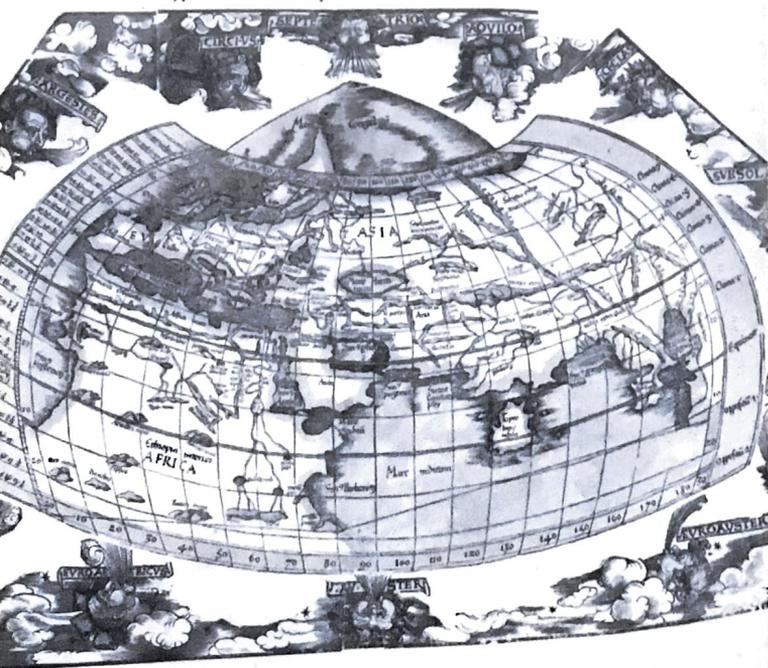
Despite the suffering, the venture proved highly profitable to survivors. In India, da Gama had acquired a cargo of spices that he sold at an enormous profit. He quickly outfitted a new fleet, seeking greater profits. In 1502, he forced a treaty on the ruler of Calicut. Da Gama then left Portuguese merchants there whose job was to buy spices when prices were low and store them until the next fleet could return. Before long, the Portuguese began seizing other outposts around the Indian Ocean, building a vast trading empire and making Portugal a world power.

? EXPLAIN How did the Portuguese create a trading empire stretching from Africa through the Indian Ocean to India?

Columbus Searches for a Route to Asia

The profitable Portuguese voyages spurred other European nations to seek a sea route to Asia. An Italian navigator from the port of Genoa, **Christopher Columbus**, wanted to reach the East Indies—a group of islands in Southeast Asia, today part of Indonesia—by sailing west across the Atlantic. Like most educated Europeans, Columbus knew that Earth was a sphere.

Typus orbis descriptione Ptolemæi.



>> Identify This colored woodcut, "World Map According to Ptolemy" (1541), shows early European geographic knowledge. Which regions are shown most inaccurately? Explain.

The Treaty of Tordesillas, 1494

CAUSES	KEY PROVISIONS OF TREATY	EFFECTS
<ul style="list-style-type: none"> • Columbus explored Caribbean islands. • Spain, seeking wealth and power, claimed control of the islands. • Portugal, with its own ambitions, disputed Spain's claims. • Aided by Pope Alexander IV, Spain and Portugal negotiated a treaty. 	<ul style="list-style-type: none"> • Lands discovered west of a meridian 370 leagues west of the Cape Verde Islands would belong to Spain. • Lands discovered east of a meridian 370 leagues west of the Cape Verde Islands would belong to Portugal. 	<ul style="list-style-type: none"> • Treaty favored Spain: most of Americas was west of the line. • Spain claimed much of the Americas. • Spanish colonies yielded incredible wealth for Spain, especially silver and gold. • Spanish language and culture became key elements of Latin American culture. • Brazil became a Portuguese colony and retains much Portuguese culture today. • England, France, and other countries did not recognize the agreement and established their own colonies in the Americas.

>> **Analyze Charts** The Treaty of Tordesillas resolved a major territorial dispute between Spain and Portugal. Whose rights and claims were not addressed by this treaty?

A few weeks sailing west, he reasoned, would bring a ship to eastern Asia. His plan made sense, but Columbus greatly underestimated Earth's size—and he had no idea that two continents, North and South America, lay in his path.

Reaching Faraway Lands Portugal refused to sponsor him, but Columbus persuaded Ferdinand and Isabella of Spain to finance his voyage. To increase their authority, the Spanish rulers had taken radical measures, including expelling Jews from Spain. They hoped their actions would strengthen Catholicism. However, the loss of some of Spain's most affluent and cultured people weakened the nation. The rulers hoped Columbus's voyage would bring wealth and prestige.

On August 3, 1492, Columbus sailed west with three small ships, the *Niña*, the *Pinta*, and the *Santa María*. Although the expedition encountered good weather and a favorable wind, no land came into sight for many weeks. Provisions ran low, and the crew became anxious. Finally, on October 12, land was spotted.

Columbus spent several months cruising the islands of the Caribbean. Because he thought he had reached the Indies, he called the people of the region "Indians." In 1493, he returned to Spain to a hero's welcome. In three later voyages, Columbus remained convinced that he had reached the coast of east Asia. Before long,

though, other Europeans realized that Columbus had found a route to previously unknown continents.

Spain and Portugal Divide Up the World Spain and Portugal each pressed rival claims to the islands Columbus explored. With the support of the pope, the two countries agreed to settle their claims and signed the **Treaty of Tordesillas** in 1494. It set a **Line of Demarcation**, dividing the non-European world into two zones. Spain had trading and exploration rights in any lands west of the line, including most of the Americas. Portugal had the same rights east of the line. The actual Line of Demarcation was unclear because geography at the time was not precise. However, the treaty allowed Spain and Portugal to claim vast areas in their zones. It also spurred other European nations to challenge Spanish and Portuguese claims and build their own trade empires.

Naming the Western Hemisphere An Italian sea captain named Amerigo Vespucci wrote a journal describing his voyage to Brazil. In 1507, a German cartographer named Martin Waldseemüller used Vespucci's descriptions of his voyage to publish a map of the region, which he labeled "America." Over time, the term "Americas" came to be used for both continents of the Western Hemisphere. The islands

Columbus had explored in the Caribbean became known as the West Indies.

? INFER Why were Spanish rulers pleased with the Treaty of Tordesillas and Line of Demarcation?

The Search for a Route to the Pacific

Once Europeans realized that the Americas blocked a sea passage to India, they hunted for a route around or through the Americas in order to reach Asia. The English, Dutch, and French explored the coast of North America unsuccessfully for a “northwest passage,” or a route from the Atlantic Ocean to the Pacific through the Arctic islands. Meanwhile, in 1513, the Spanish adventurer Vasco Núñez de Balboa, helped by local Indians, hacked a passage westward through the tropical forests of Panama. From a ridge on the west coast, he gazed at a huge body of water. The body of water that he named the South Sea was in fact the Pacific Ocean.

Magellan Sets Sail On September 20, 1519, a minor Portuguese nobleman named **Ferdinand Magellan** set out from Spain with five ships to find a way to reach

the Pacific. Magellan’s ships sailed south and west, through storms and calms and tropical heat. At last, his fleet reached the coast of South America. Carefully, they explored each bay, hoping to find one that would lead to the Pacific. In November 1520, Magellan’s ships entered a bay at the southern tip of South America. Amid brutal storms, rushing tides, and unpredictable winds, Magellan found a passage that later became known as the Strait of Magellan. The ships emerged into Balboa’s South Sea. Magellan renamed the sea the Pacific, from the Latin word meaning *peaceful*.

The Long Way Home Their mission accomplished, most of the crew wanted to return to Spain the way they had come. Magellan, however, insisted that they push on across the Pacific to the East Indies. Magellan underestimated the size of the Pacific. Three more weeks, he thought, would bring them to the Spice Islands. Magellan was wrong.

For nearly four months, the ships plowed across the uncharted ocean. Finally, in March 1521, the fleet reached the Philippines, where Magellan was killed. On September 8, 1522, nearly three years after setting out, the survivors—one ship and 18 sailors—reached Spain. The survivors had been the first people to **circumnavigate**, or sail around, the world. Antonio Pigafetta, one of the few survivors of the expedition,

TO SAIL AROUND THE WORLD: MAGELLAN'S VOYAGE 1519–1522

5 SHIPS

TRINIDAD
CONCEPCIÓN
SAN ANTONIO
VICTORIA
SANTIAGO

(ONLY THE VICTORIA SURVIVES)

END OF MAY 1519

LOADING PROVISIONS FOR 2 YEARS

- 213,800 LBS. OF BISCUITS
- 72,000 LBS. OF SALTED BEEF
- 57,000 LBS. OF SALTED PORK
- 984 LARGE CHEESES
- 5,600 LBS. OF BEANS
- 10,080 LBS. OF CHICKPEAS

(AND IT WASN'T NEARLY ENOUGH)

ARMAMENT

58 CULVERINS (TUBE-LIKE GUNS);
13 CANNON: 7 FALCONETS (LIGHT),
3 LARGE LOMBARDS (HEAVY), 3 PASAMUROS (HEAVY).
5,000 LBS. OF GUNPOWDER,
LEAD-SHOT, CANNON BALLS OF IRON AND STONE.
100 CORSELETS (LIGHT BODY ARMOR),
WITH BREASTPLATES AND HELMETS.
60 CATAPULTS, 4,300 ARROWS AND
120 SKEINS OF WIRE FOR BOWS,
50 ARQUEBUSES (MATCHLOCK GUNS).
200 SHIELDS, 1,140 SPEARS,
120 JAVELINS, 1,000 LANCES, AND 206 PIKES

ABOUT 270 MEN,

MOST SPANISH OR PORTUGUESE,
BUT ALSO FRENCH, FLEMISH,
ITALIAN, GERMAN, GREEK, IRISH,
MOORISH AFRICAN, ASIAN, AND ENGLISH.

ONLY 18 SURVIVE.

Source: Stefan Zweig, *Conqueror of the Seas: The Story of Magellan*

SEPTEMBER 20, 1519

MAGELLAN AND HIS CREW
SAIL FROM SEVILLE, SPAIN.
ASTROLOGERS PREDICT THE VOYAGE
WILL BE PROSPEROUS.

>> Months of careful planning, provisioning, and loading of supplies went into preparing for Magellan’s voyage. Even so, during the long voyage, regular stops for fresh food and water were required.

Interactive 3-D Model

observed: "I believe of a certainty that no one will ever again make such a voyage."

? INFER What was the significance of Balboa's discovery?

European Expansion in Africa

Following the Portuguese and Spanish examples, several other European powers sought to expand their trade networks. By the 1600s, the French, English, and Dutch all had footholds along the coast of West Africa. These outposts often changed hands as European countries battled for control of the new trade routes. Like the Portuguese, they used these footholds to protect and expand their trade routes in Africa, the Indian Ocean, and India.

The Dutch Settle Cape Town In 1652, Dutch settlers began to arrive at the southern tip of the continent. They built **Cape Town**, the first permanent European settlement in Africa, to supply ships sailing to or from the East Indies.

Dutch farmers, called **Boers**, settled around Cape Town. Over time, they ousted, enslaved, or killed the people who lived there. The Boers held a Calvinist belief that they were the elect, or chosen, of God. They looked on Africans as inferiors. In the 1700s, Boer herders and ivory hunters began to push north from the Cape Colony. As they did so, they battled powerful African groups like the Zulus who had settled in southern Africa.

The British and French Explore By the mid-1600s, the British and French had both reached present-day Senegal. The French established a fort in the region around 1700. In the late 1700s, stories about British explorers' search for the source of the Nile River sparked an interest in Africa among Europeans, especially the French and British. In 1788, the British established the African Association, an organization that sponsored explorers to Africa. Over the next century, European exploration of Africa would explode.

? IDENTIFY Why did the European presence in Africa expand?



>> In the late 1600s, the Dutch colony at Cape Town was busy with arriving and departing ships.

ASSESSMENT

- 1. Identify Cause and Effect** Why did Europeans explore Africa, Asia, and the Americas beginning in the 1400s?
- 2. Identify Steps in a Process** Describe how the Portuguese gained dominance of the spice trade.
- 3. Draw Conclusions** How did competition between European countries such as Portugal and Spain affect overseas exploration and expansion?
- 4. Summarize** Summarize European searches for a direct route across the Atlantic Ocean to Asia.
- 5. Cite Evidence** How did religious beliefs cause Dutch immigrants to aggressively expand their settlements in southern Africa?