

## Let's Explore!

Beginning in the early 15th century and continuing into the early 17th century, people went in search of new water routes to obtain spices. Historians call this period the Age of Exploration. What caused people to pile into wooden ships and sail on voyages without knowing where they were actually going and whether they'd safely return home? Well, during the early 1400s, there wasn't refrigeration. An important way to preserve foods was to use spices—those common items in your kitchen such as pepper, cinnamon and cloves. Who would think today that people would risk their lives for such items? But, back then, spices helped preserve food and hide the smell and taste of rotting food. People also used spices in making perfumes and medicines. From the 12th to 15th centuries, Italy—especially the citystates of Venice and Genoa—dominated the spice trade. By the end of the 14th century, Venice had a spice monopoly. Because Venice controlled the trade, they could charge very high prices for the spices. While that made Venice very wealthy, other European countries didn't like the high prices for spices. Traders wanted to find alternative routes to obtain spices, make money and preserve food, so they turned to the ocean.

Would you have gotten on a rickety wooden ship and sailed on the ocean in search of new trade routes? What kind of people did this? Perhaps, people who wished to become rich and famous. Others may have loved adventure and dangerous situations. Still others may have wished to escape a bad life and thought

being on a ship was better than poverty or sitting in a jail cell back home. The first country that sent explorers

in search of a sea route to Asia was Portugal. As you will read, thanks in large part to Prince

Henry, Portugal soon took center stage during the Age of Exploration. Other countries such as Spain,
England, France and
Holland took notice of the Portuguese. They saw the possibilities of riches and power for their countries and

began sponsoring
expeditions in
search of new lands
and spices for trading.
Additionally,
countries with
very religious
leaders, such as King
Ferdinand and Queen
Isabella of Spain,

thought that funding voyages

would enable them to spread Christianity to the Asian people. They became eager to help fund such voyages.

Gather your belongings, say goodbye to loved ones and let's sail off into the Age of Exploration.



### Under the Lake and Through the Cave

There are many different areas of Earth that scientists are exploring. One team of scientists navigated a submersible down into Lake Tahoe, which is between California and Nevada. A yellow submersible took the crew 100 to 200 feet underneath the water as part of the Undersea Voyage Project. The expedition was to study invasive aquatic species that have been spreading in Lake Tahoe. It also examined seismic faults in the lake and their likelihood of creating future earthquakes. The team also discovered and studied groves of ancient underwater trees. The Undersea

Voyager Project is planning a much larger expedition. Scientists want to circumnavigate the world's oceans in submersibles to check for pollution and overall conditions of our oceans.

In addition, archaeologists have found in a Vietnamese jungle what is said to be the world's largest cave passage. Called Hang Son Doong (Mountain River Cave), the cave measures 650 feet high and 500 feet wide. It is much larger than the previous record holder, Deer Cave, of Sarwark, Malaysia. The 13-member British-Vietnamese cave

expedition spent five days exploring the cave, which was originally found in 1991 by a local Vietnamese man named Ho Khanh. Upon entering the cave, the expedition encountered howling winds and frightening noises (caused by an underground river). The group navigated two underground rivers to reach their goal, which was the main passage of the cave. The expedition plans to return to the cave to do more study.

If you could get a sponsor for an expedition, where would you travel and what would you like to learn more about?



# Age of Exploration

#### Life Aboard a Ship

Sailing on a ship was certainly not a comfortable experience. It was very cramped. Without the ability to cook at sea, (remember, ships were made of wood) food was pickled or tough, dried meat (imagine chewing your shoes). A common food for long voyages, biscuits were often teeming with weevils, maggots and worms. They were usually moldy, and sailors might have eaten biscuits in the dark to make swallowing them easier. Other foods included cheese, dried beans, onions and salted

fish, pork or beef. With few fresh vegetables or fruit to eat to provide needed vitamin C, sailors often got a fatal illness called scurvy. With scurvy, the tongue and gums would turn black and get swollen.

Algae and bacteria that could make you sick grew in the barrels of fresh water. So sailors often brought wine and beer to drink. There was no privacy on a 65-foot long ship, and men often slept on the deck. There were no showers or bathroom facilities on board, either.

#### Risks—Real and Imagined

Sailing during the Age of Exploration involved many risks, both real and imagined. Real dangers included getting lost and never returning home. Heavy storms could sink wooden ships, or sailors could be swept overboard and drown. Ship crews could run out of food and drinking water and get sick and die.

By the 15th century, people knew the world was round, and you wouldn't sail off the edge of Earth. However, many sailors believed myths about the ocean that were based on fear,



## So Many Explorers!

Here are some famous explorers who contributed during the Age of Exploration.

#### Portugal

- Bartolomeu Dias and his crew were the first to make it to the southern tip of Africa, which he named the Cape of Good Hope. The year was 1488.
- In 1497 and 1498, Vasco da Gama and his crew were the first to sail around Africa and through the Indian Ocean to the country of India. Only two of the four ships survived the voyage. Many of the crew died from thirst, scurvy and hunger.
- Pedro Alvares Cabral, having been blown off course on his voyage around Africa, landed instead in South America in 1500. He discovered the area we know as Brazil.

#### Spain

• Ferdinand Magellan, sailing for Spain (though he was born in Portugal), was the first to try to circumnavigate (travel all the way around) the Earth in 1519 to 1522. Sadly, Magellan and much of his crew died in the Philippines with the remainder of the crew completing the journey.

- Magellan renamed the South Sea "Mar Pacifico," or the Pacific Ocean. The word "pacific" means peaceful.
- Christopher Columbus: Unable to get Portugal to pay for his expedition, he convinced King Ferdinand and Queen Isabella of Spain to do so. He left in 1492 and reached the island of Hispaniola. To his dying day, Columbus was convinced he'd reached Asia, not realizing he'd actually discovered new lands for the people of Europe.
- Ponce de Leon discovered Florida in 1513 while searching for the fountain of youth. The settlement St. Augustine became the first European settlement in the New World.
- · Hernando Cortés defeated the Aztec Empire of Mexico for Spain between 1519 and 1521.
- Francisco Pizarro conquered the Inca Empire in South America for Spain while Francisco Coronado, from 1540 to 1542, explored the southwestern United States. Hernando de Soto also made claims of North America for Spain.
- Vasco Nunez de Balboa was the first European to see the South Sea, or the Pacific Ocean. Balboa claimed the ocean for Spain in 1513. American Indians helped him cut down vegetation in the Panama forest to reach the South Sea.

boredom or lack of knowledge. Sailors believed floating mountains in the ocean could destroy ships. Any idea what these could have really been? People also believed there was a giant furnace near the equator that would burn your ship with its intense heat. Sailors thought that as you got close to the equator, the sun was closer to the Earth and would burn a person's skin totally black. They believed the ocean had magnets that could pull the nails from ships, causing the ship to sink.

Sailors also commonly believed in sea monsters. Sailors told tales of sea monsters that were so big the creatures stood in the ocean and blew water from holes in their foreheads. (Sound like anything that does exist in the ocean?) Ship crews also feared giant crabs and enormous fish with suction cups on their heads that could pull ships into the ocean's depths. Some sailors actually encouraged such tales of sea monsters to scare competing countries from traveling the seas. Others told stories out of boredom, vivid imagination or to exaggerate their bravery. When people became more knowledgeable, educators explained away many of these sea myths.

#### **Navigation**

Many early explorers stayed close to shore, choosing to follow landmarks. Shipmen steered by looking at the position of the sun and stars and by knowing which way the wind blew. The invention of the compass in the mid 1200s really aided sailors' explorations further out to sea. Other navigation equipment included long lines of knotted ropes that sailors dropped into the water. Crews used these lines to track their ship's speed. The faster the rope unwound, the faster the ship was traveling. They also used lead weights to measure the depth of the water and an astrolabe to determine the ship's latitude. Sailors used crossstaffs, or wooden rods with sliding crosspieces, to measure the angle of the sun and navigate through the ocean.

#### The Good and Bad of Exploration

The Age of Exploration had both positive and negative results. Fortunately, Europeans learned about the compass from the Arabs, who had originally learned of this invention from the Chinese about 400 years earlier. Europeans enjoyed new foods such as sugar, lemon, tobacco, chocolate, potatoes and turkey. Countries gained wealth and knowledge from the new lands and resources that European explorers discovered.

On the negative side, stronger cultures dominated weaker cultures, often over land and resources. Diseases that were not known to indigenous (native) people killed many because the indigenous people didn't have immunity against these illnesses. Diseases such as measles and smallpox wiped out hundreds of thousands of native people. And, with a need for workers back in Europe after nearly one third of the population had died from the Black Death, Europeans began taking slaves. Later, Christian missionaries came to the areas discovered by European explorers. Sometimes, they forced their religion upon native people, and the natives' cultures were changed forever.

# World Biography Henry the Navigator

The man chiefly responsible for Portugal's dominance during the Age of Exploration was Prince Henry the Navigator. Born in 1394, Henry was the son of King John I. He became fascinated with geography, trade and the riches of Africa.

It may surprise you to learn that Prince Henry was not an explorer who

"sailed across the ocean blue, discovering lands for me and you." Instead, he started the first school of navigation in Sagres, Portugal. It was here where sailors from all over the country learned mapmaking, shipbuilding and methods of navigation. Prince Henry also designed a new sailing vessel, the caravel, which was of tremendous importance in sea exploration.

Around 1418, when the school was established, no one had yet traveled past a dangerous area of the Atlantic, Cape Bojador, located off the coast of Africa. Sailors feared the area's strong currents and violent storms. People called the area past this point the Sea of Darkness. Prince Henry sponsored expeditions beyond Cape Bojador. It wasn't until 1434 when Gil Eannes, a Portuguese explorer, succeeded in sailing past Cape Bojador. He successfully sailed to the area known as the Canary Islands. From 1444 to 1446, Prince Henry sponsored about 40 ships to explore the west coast of Africa. Why the interest? Prince Henry yearned to add to the geographic knowledge of the time, especially about Africa. He also wanted to find a trade route to the Far East and find lots of gold. In fact, the Portuguese heard stories of a River of Gold, which they could use to finance future expeditions. Prince Henry also wished to spread Christianity. Prince Henry the Navigator died in 1460, having lived to see Portugal become the world's leader in sea exploration.

#### France

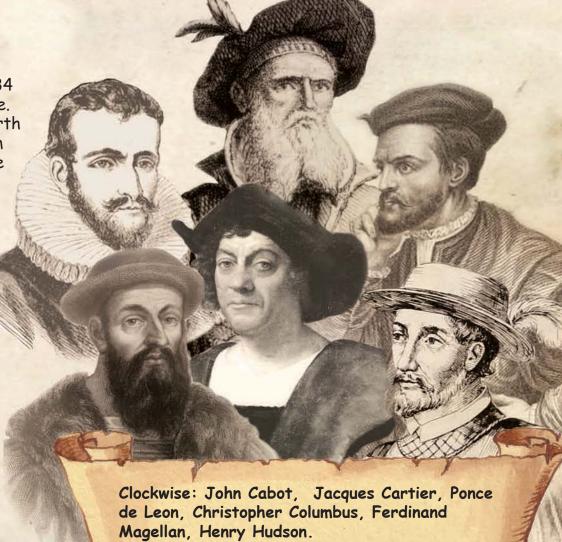
 Giovanni Verrazano in 1524 and Jacques Cartier in 1534 made claims of much of the area of Canada for France. Both were unsuccessful in finding a route through North America to Asia. However, they mapped the land from North Carolina to Newfoundland and traveled what we now call the St. Lawrence River. A civil war in France in the mid-1500s ended their involvement in the Age of Exploration.

England

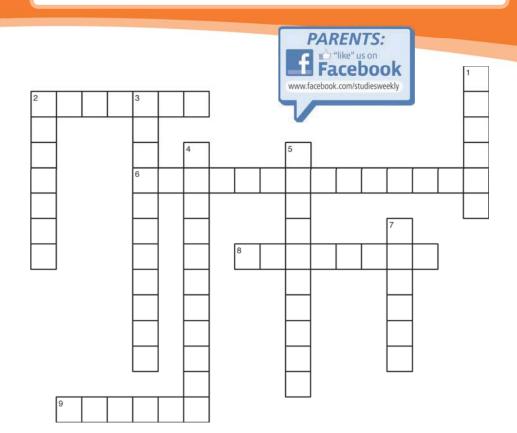
- · The leaders of England such as King Henry VII and Queen Elizabeth I hoped to find a northwest passage, a water route through North America to India. Although they were not successful in this effort, explorers did set up colonies in the new world.
- · John Cabot made his voyage to North America in 1497, claiming the area of Newfoundland for England.

#### Holland

Henry Hudson explored the Hudson River in 1609.



Name



#### **ACROSS**

- 2. ship that revolutionized travel during the Age of Exploration
- 6. to travel all the way around
- 8. Portuguese explorer sponsored by Spain who tried to sail around the world
- 9. disease caused by lack of vitamin C

#### **DOWN**

- 1. something explorers wanted to buy in the
- 2. navigation instrument invented in the 1200s
- 3. first explorer to sail around Africa to India
- 4. explorer who opened a school for sailors
- 5. native
  - 7. Spanish explorer who first discovered the Pacific Ocean



As you read this week's lesson, circle or highlight all proper nouns with any color pen or highlighter. This will help you find some of the crossword answers and get ready for this week's test.

# A Ship that

# Changed the World



The invention of the automobile helped change the world. It enabled people to get from place to place much faster than by horse and buggy. During the Age of Exploration, a new type of ship revolutionized sea travel. It was called

the caravel (also spelled carvel). It replaced the large, oar-driven galley ships that required lots of manpower. The caravel quickly became the sailing vessel of choice for many explorers, beginning in the 15th century.

Two of Christopher Columbus' ships, the Pinta and Niña, were caravels. Explorers such as Bartolomeu Diaz and Vasco da Gama also chose to sail caravels. Why was this ship so popular? First, it had two to three square or triangular masts that could sail into, or against, the wind. This made it a powerful, fast moving ship, about twice the speed of the oar-driven galley ships. It also required fewer men to operate, and with less crew, labor was cheaper and there was more space left for cargo.

a crew of about 20. With a length of only 65 feet, the caravel could sail upriver in more shallow waters without problem. Easy to maneuver, lighter than other ships of the time, the caravel was the ship that helped make the Age of Exploration successful.

# American ivics

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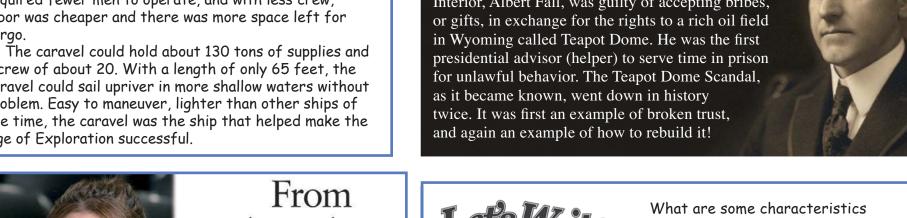
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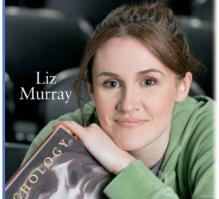
### **President Coolidge Rebuilds Bridge of Broken Trust**

Have you ever wondered how people acquire, or gain, power? In a representative democracy like the United States, a lot of that power comes from trust. We give our vote of confidence to leaders we have faith in. If those leaders betray our trust, then we are free to elect a new representative and the power shifts. But once trust is broken, it can be hard to rebuild.

One of the most famous betrayals of our public trust happened with President Harding's administration. With President Harding's sudden death in 1923, it was up to the new president to repair that bridge of trust. President Calvin Coolidge didn't waste time. He made it clear that no one in government would be above the law. "If there has been any crime," he said, "it must be prosecuted—no one will be shielded for any party, political or other reasons ... Every law will be enforced and every right of the people and government will be protected." And he meant it.

Investigators soon found that Secretary of the Interior, Albert Fall, was guilty of accepting bribes, or gifts, in exchange for the rights to a rich oil field in Wyoming called Teapot Dome. He was the first presidential advisor (helper) to serve time in prison for unlawful behavior. The Teapot Dome Scandal, as it became known, went down in history twice. It was first an example of broken trust, and again an example of how to rebuild it!





# homeless to Harvard.

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Lets White

that an explorer during the Age of Exploration might have needed to sail

in search of new sea trade routes to the Indies? Brainstorm a list of different characteristics. Then, write a story pretending to be an explorer during the Age of Exploration. Include at least four facts you learned in this issue of World History Studies Weekly and check your work for proper spelling, grammar and punctuation.