

### Technology

- Before the mid 1400s there were some serious problems that kept Europeans from sailing across oceans:
  - Ships needed to stay within sight of land.
  - Because of this, ship building had not begun to develop ships capable of staying at sea for long periods of time.

#### Astrolabe



- This Muslim invention was used to determine latitude by measuring the distance of the Sun or a particular star from the horizon.
- A simplified and heavier version called a Mariner's Astrolabe became standard nautical equipment.

### Henry the Navigator



- Prince Henry "the Navigator" is largely responsible for the advancement in European navigation.
- The son of King John I of Portugal, he never made a single great voyage, but he is remembered as the father of modern navigation.

### Henry the Navigator

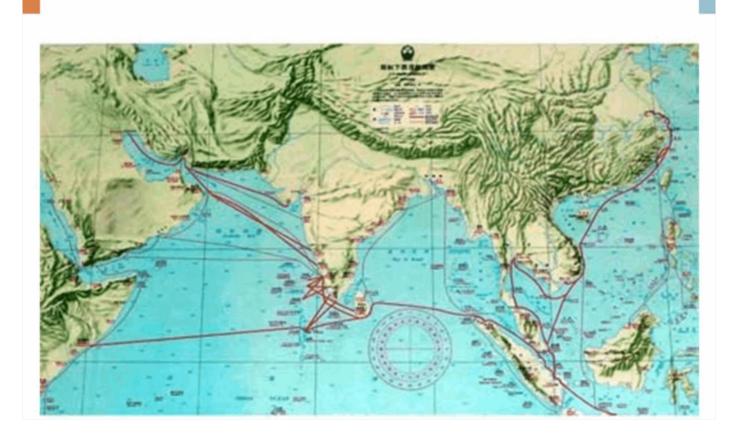
- Set up a school for navigation at Cape St. Vincent.
- Hire experts to teach regardless of their faith or nationality.
- Spent 40 years studying and teaching cartography, ship building, instrument use, and geography.
- Without his efforts, European exploration might have taken much longer to begin.



- Born in 1371 to Muslim parents in the rural Chinese province of Yunnan.
- Very little chance of going far in life.
- Offered himself as a eunuch serving the court of the Ming Dynasty.

- At the time, Ming leaders were trying to take power away from the Confucian ministers. They were placing the power these minister used to have in the hands of the eunuchs, and Zheng He gained influence rapidly.
- In 1403 Zheng He helped with a coup, and was rewarded when Emperor Chengzu was victorious.
- Zheng He became one of the top advisors to the Emperor.

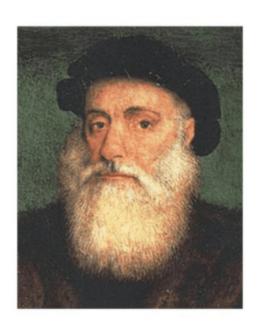
- Beginning in 1405, Zheng He was placed in charge of the entire Ming Navy.
- He led seven voyages of exploration into Southeast Asia, South Asia, and East Africa.
- These expeditions were huge undertakings. Zheng He had to plan the voyages, organize the building of ships, gather supplies, and make the tough decisions as the leader at sea.



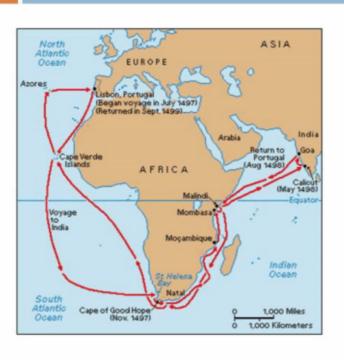


Explorer	# of ships	# of crew
Zheng He (1405-1433)	48-317	28,000
Columbus (1492)	3	90
Da Gama (1498)	4	About 160
Magellan (1521)	5	265

- The size of the ships and the fleets that were included in Zheng He's expeditions were amazing.
- His voyages were as much about displaying Ming power as they were about discovery.



- Born into a Portuguese noble family in 1460.
- 1488-95 Sailed with a Portuguese fleet fighting against pirates.
- In 1497 King John II chose him to lead a four ship expedition around Africa to India.



- Da Gama was a good leader. He chose men based on ability, not status.
- Part of this journey was a 4,500 mile stretch without sighting land. (Columbus was only out of sight of land for 2,600 miles)



- The Raja of Malindi provided the fleet with an experience Muslim pilot who guided them to Calicut, India. They voyage had taken ten months and two weeks.
- They tried to establish trade, but the Indians did not want the sea trade to grow. \$\$\$

- Da Gama is kidnapped by the King of Calicut. He would probably been killed, but his brother kidnapped a group of Indian nobles. A prisoner exchange was arranged, and the Portuguese sailed for home.
- Portuguese factories were set up in Calicut, but the natives destroyed them.
- Vasco da Gama was chosen to lead an expedition to punish the Indians.

"...the King of Calicut arrested me and treated me with contempt; and I did not return to avenge the injury. Therefore he has committed a greater one. On this account, I feel in my heart a strong inclination to go and make havoc of him."

- During this voyage, da Gama harassed Muslim settlements. He also attacked a ship full of Muslims on a pilgrimage. He burned the ship to the water, and all of the passengers were killed.
- Da Gama died in 1524 while serving as a Portuguese viceroy in India for King John III.



- □ Born 1451 in Genoa
- From 1470-1472 he focuses on learning cartography and seamanship
- 1474-75 he serves in a Genoese fleet in a war against Aragon
- His ship is sunk by a Venetian galley, and swims to Spain.

- Between 1477 and 1488 Columbus teaches himself navigation. In 1479 he qualifies as a master navigator.
- He sails with several voyages down the West coast of Africa. During these voyages Columbus forms his ideas of sailing West to reach the Far East.
- He pitches his ideas to King John II of Portugal, but he rejects it. This is not because he doubted the theories. Portugal was already invested in voyages to and empire in India.

- 1484 Columbus heads to Spain after his wife dies and John II says, "no."
- He proposes his voyage to Ferdinand and Isabella of Spain. They like his ideas, but Spanish money is needed to fight the Moors. Funding is simply not available.
- Christopher sends his brother Bartholomew to England to try there, but his ship was attacked by pirates and delayed.



- Before his brother could speak to the English the Spanish war with the Moors ended. Ferdinand and Isabella grant funding.
- Columbus was very confident that the voyage would be a success.



- His ships were small. The Santa Maria was fair sized, but the Nina and Pinta were not much more than uncovered boats with sails.
- Most of his men were impressed convicts.

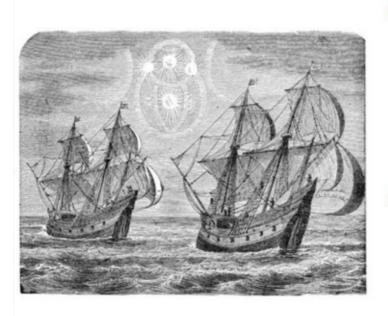
- In August of 1492 the trio of ships sets sail, and in October they reach the Bahamas. From there Columbus goes to Cuba and Hispaniola (Haiti).
- Santa Maria is wrecked, and her wreckage is used to build a fort for the crew who must stay behind.
- After being gone for 224 days, the Nina (with Columbus aboard) returns to Spain.
- Celebrations are held with Columbus showing off the six "longsuffering Indians in native dress" that he forced to return with him.

- He would make three more voyages, but he never found his sea route to the riches of the Far East.
- That is what he had been trying to accomplish, so in the eyes of his patrons he was a failure.
- Columbus retires and lives the rest of his life as a forgotten man.
- He died without ceremony in 1504.



- Born in 1470 to a very noble Portuguese family.
- Disliked by King
  Emmanuel of Portugal.
- Angered by disrespect,
  Magellan switched
  teams and sought
  sponsorship by King
  Charles I of Spain.

- Orders from the Pope in 1493 and 1494 had divided the New World in between Spain (who got the West) and Portugal (who got the East).
- This caused a problem for Spain. The Far East had a lot of wealth because of the spice trade, and now Spain could not send ships there without intruding on Portuguese territory.
- Magellan proposed to find a South West passage around the American continent in 1519.

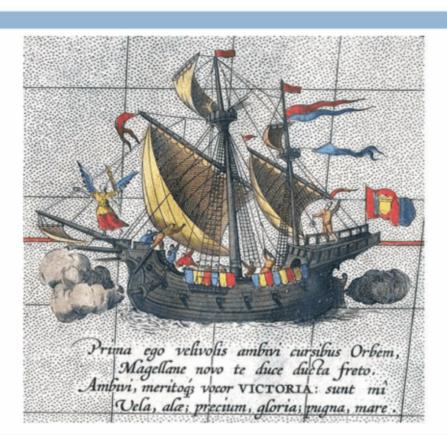


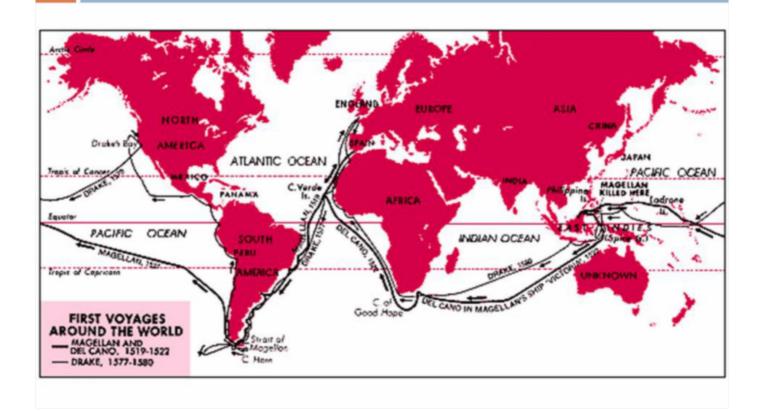
- King Charles I of Spain offered Magellan 5% of the expedition's profits and 6.5% of the profits from any two of the islands he discovered.
- When Magellan sailed in 1519, his was the most well-supplied fleet that had ever sailed from Europe.

- 5,600 pounds of gunpowder
- Cargo holds full of mirrors and glass beads
- The beginning of the journey was smooth, and the interaction between the Spanish and the natives along the East coast of South America was friendly.
- Eventually the men began to doubt that the American continent would ever end.
- □ In 1520 some of the men began a mutiny.

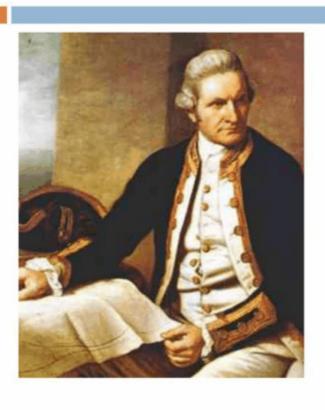
- Magellan stopped the fleet, had the guilty men taken on shore (including one of the ship captains), and had many of the killed. The rest of them were left on the beach.
- In October the fleet finally rounded Cape Horn.
- They were not prepared for the size of the Pacific Ocean. They had used most of their supplies before they were even half way across.
- April, 1521 They reach the Philippines.

- A native Philippine group called the Mactan rose up against the Spaniards. Magellan decided to teach them a lesson.
- In a small battle, the Spanish were crushed. Magellan was killed.
- The remaining two ships split. One was captured by the Portuguese.
- The Victoria sailed around the Cape of Good Hope and returned to Spain as the first ship to circumnavigate the globe.
- The journey had taken almost 3 years. Out of the 270 men who began the voyage, 18 survived.





#### James Cook

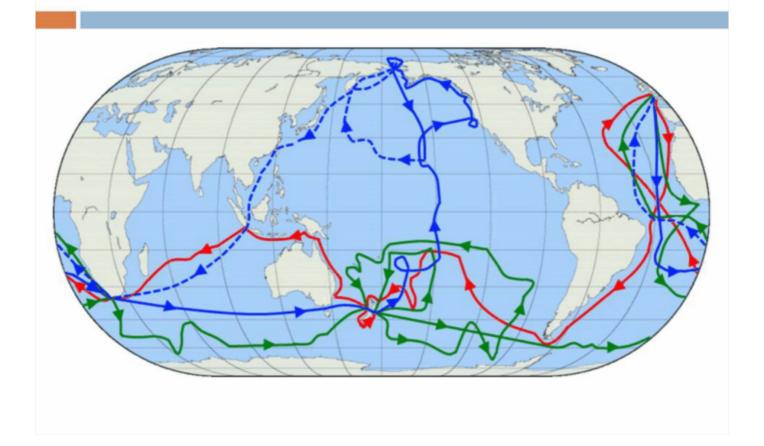


- Born into a common family in 1728.
- He fights in the Royal Navy during the Seven Year's War.
- He is chosen to serve in a mission to survey the St. Lawrence River and Nova Scotia.
- Promoted to an officer.

#### James Cook

- 1768-1771: Commands scientific expedition into the Pacific to make astronomical observations and search for the theoretical continent Terra Australes. During this search he discovers and charts New Zealand.
- 1772-1775: Charts Easter Island and finds South Georgia Island.
- 1776-1779: Searches for North West passage. Visits New Zealand, discovers Tahiti and the Hawaiian Island.
- 1779: James Cook is killed by native while dealing with a dispute over stolen property.

### James Cook



#### Samuel De Champlain

- □ Born 1567
- Died 1635 in Quebec
- Champlain got his start in exploration while serving in French expeditions to Central America.
- For his service he received an honorary title in the court of Henry IV.
- In 1603 he received an invitation to visit the River of Canada (later called the St. Lawrence River)

#### Samuel de Champlain

- Beginning in 1604 he began living among settlers in the area known as Acadia near the Bay of Fundy.
- The main problem with these early Canadian settlements was that every winter half or more of the settlers died.
- Samuel de Champlain wanted to start a real settlement that was able to survive the elements.
- □ In 1608 he returned leading a group of 32 settlers.
- Only Champlain and 8 others lived through the first winter.

#### Samuel de Champlain

- More Frenchmen joined them the next June.
- France had made treaties with some of the local Indian tribes, and by 1610 Champlain had joined forces with the Northern Tribes. They defeated Iroquois raiders in a battle near Lake Champlain.
- French colonist had gained prestige with the Indians.
- The fur trade expanded very quickly.
- Champlain returned to France, but was called back to Quebec by King Louis XIII to restore the fur trade which had almost vanished by 1613.

#### Samuel de Champlain

- Champlain established the colony of Quebec.
- In 1628 the colony fell to the English, but Champlain and its inhabitants held out as long as they had supplies and gunpowder.
- As a prisoner in England he argued that Quebec had fallen after hostilities between France and England had already ended.
- Quebec was restored to the French.
- Champlain returned to his colony in 1633. He died in 1635, but he had already built Quebec into a significant colony.

### Wrapping it up

- Rank the seven explorers in order of importance:
  - 1st and why?
  - □ 2<sup>nd</sup>
  - □ 3rd
  - □ 4<sup>th</sup>
  - □ 5<sup>th</sup>
  - □ 6<sup>th</sup>
  - 7<sup>th</sup> and why?

- Rank the seven explorers in order of likability:
  - 1st and why?
  - 2<sup>nd</sup>
  - □ 3<sup>rd</sup>
  - □ 4<sup>th</sup>
  - □ 5<sup>th</sup>
  - □ 6<sup>th</sup>
  - □ 7<sup>th</sup> and why?