

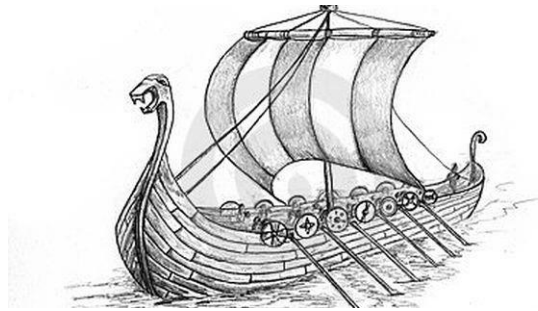
Sea voyages 1

The Vikings

The Vikings were pirates from the Scandinavian countries of Norway, Sweden and Denmark.

The Vikings traveled the seas of between AD 700 to 1100. They traveled to countries such as Britain and Ireland. Some went to fight and steal treasure. Others settled in new lands as farmers, craftsmen or traders. The Vikings also made discoveries of new lands: Iceland, Greenland and North America.

They used the sun and stars for navigation. They also carried with them a cage of ravens. When they thought they were near land they would release the ravens. If the ravens returned, they knew they were not near land. If they didn't return, they knew that land was close by.



1. Draw and describe the Viking's boat in words.
2. How was the boat propelled? (2 ways)
3. Where else in history is there a recorded information about releasing birds to find out whether land was near?

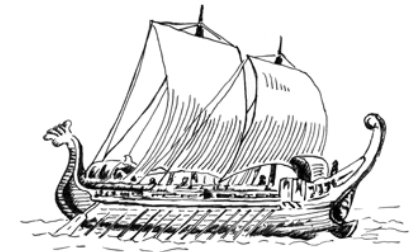
Sea voyages 2

The Phoenicians

The Phoenicians were the people that came from the lands we know today as Syria, Lebanon and Northern Israel. They were masters of sea travel covering great distances in their ships of trade and war. History records from the 6th Century BC show that they were the first people to travel to the Atlantic coasts of Africa and Europe. Jonah would have traveled on one of these ships.

When making short trading trips they traveled close to the coast, keeping land in sight. Most nights and during bad weather they chose to bring their ships in to protected areas along the coast. Trading trips on the Mediterranean took place almost totally between March and October when weather conditions were best.

For longer voyages that required sailing in the open ocean, they used the stars. They would maintain the right direction by observing the "Phoenician Star" and now known as Polaris or the North Star.



1. Draw a map of the Mediterranean and show where the Phoenicians lived.
2. What did the sailors do in bad weather?

Sea voyages 3

Pacific Polynesians

Polynesian navigators used a whole range of techniques including use of the stars, the movement of ocean currents and wave patterns caused by islands and atolls, the flight of birds, the winds and the weather.

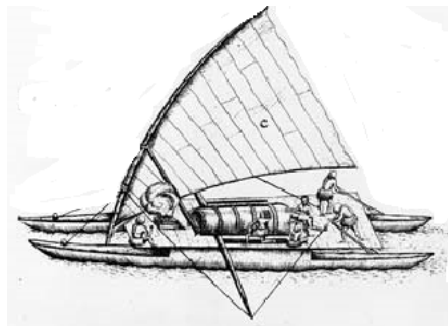
Bird observation

Long-distance Polynesian voyaging followed the seasonal paths of bird migrations. A voyage from Tahiti, the Cook Islands to New Zealand might have followed the migration of the long-tailed cuckoo.

On his first voyage of Pacific exploration, Captain James Cook had the assistance of a Tahitian navigator, Tupaia, who drew a chart of the islands within a 3,000-km radius (to the north and west) of his home island of Ra'iatea. Tupaia had knowledge of 130 islands and named 74 on his chart.

His grandfather and father had passed to Tupaia the knowledge as to the location of the major islands of western Polynesia and the navigation information necessary to voyage to Fiji, Samoa and Tonga.

Draw a Polynesian boat and describe it in words.



Sea voyages 4

European exploration

British, Spanish, Portuguese and Dutch explorers made major discoveries in the 15th – 18th centuries.

Christopher Columbus (Italian) discovered America in 1492, commissioned by the King of Spain.

Dirk Hartog (Dutch) discovered the West Coast of Australia 1616.

Abel Tasman (Dutch) discovered Australia's Southern island, Tasmania, in 1642.

James Cook (English) discovered the East Coast of Australia 1770.

James Cook discovered South Georgia Island, just to the north of Antarctica in 1774.

Roald Amundsen (Norwegian) was the first to reach the South Pole 1911.



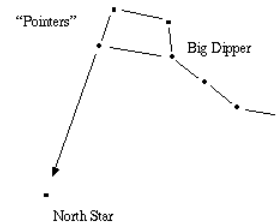
Draw an early European sailing ship and describe it in words.

Sea voyages 5

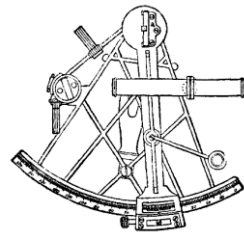
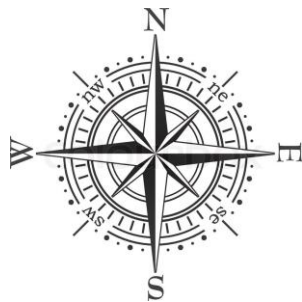
Early methods of navigation

Sailors from many parts of the world used the North Star, also called Polaris, as a sign post in the sky. It is a fixed star and true north can be found directly under this star.

The northern star is always just near the “Saucepan” (Southern Hemisphere), or “Big Dipper” (Northern Hemisphere).



European explorers developed instruments to guide them. These were the compass, which always points north, and the sextant which was used to find the angle of the sun or stars above the horizon.



1. Draw the North star and the “Big Dipper”. Where would you find the Big Dipper?
2. Draw the North star and the “Saucepan”. Where would you find the Saucepan?
3. Draw a compass and a sextant and say what they are used for

Sea voyages 6

Mapping

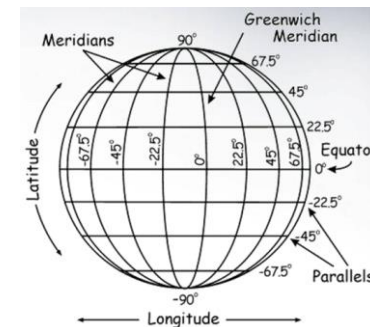
The early Greeks developed a system of showing where you are on a map, by parallel horizontal and vertical lines, which we now call latitude and longitude.

The horizontal lines are lines of latitude. Each degree of latitude is approximately 111 kilometers apart, although there is little variation as the earth is not perfectly round as it is shaped slightly like an egg.

The vertical lines on the globe are known as longitude. They all come together at poles and are widest at equator i.e. at the middle of the earth. Greenwich in England is at zero-degree longitude.

Degrees of longitude and latitude are divided into minutes and seconds. Every degree has 60 minutes and every minute has 60 seconds.

Early explorers could calculate latitude by the position of the sun, but to calculate longitude they needed an accurate clock.



Find out the latitude and longitude of the place you live.

Sea voyages 7

Facts about ships

- Large watercraft are generally called ships.
- Smaller watercraft are generally called boats.
- They are designed to float on water, whether it be in lakes, rivers or seas.
- Boats and ships serve a variety of purposes including transport, recreation, fishing, sporting competition and military operations.
- Some boats are human powered, including kayaks, canoes and gondolas.
- Sailboats are propelled by wind and sails.
- The tall upright post on a sailboat is called a mast.
- Motorboats are propelled by engines.
- Cargo ships carry goods between ports around the world.
- The hull is the main body of a boat or ship.
- Starboard and port are nautical terms which describe the right (starboard) and left (port) sides when facing the front (bow) of a ship or boat.
- The rear part of a ship or boat is called the stern.

1. What is the difference between a ship and a boat?
2. Draw and label some different kinds of boats.
3. Draw a ship and label the parts of the ship.

Sea Voyages 8

How do boats move?

There are a large number of different ways to move the ship through the water:

Oars – the first source of ship propulsion ever developed. They rely on the strength of the person in the boat to pull the boat along, and are normally only seen on smaller boats which are easier to propel. Not great to move a large container ship

Sail – uses the wind to propel a boat through the water. Great when there's wind about. Awful on a bright calm day

Paddle steamers – use large paddle wheels to push a boat through the water.

Propeller – the most common form of ship propulsion today. They can operate on their own or in groups of two or three, and are normally mounted in a fixed position on the ship.

For the ship to move, the propeller needs a source of power, or an engine. This is normally placed in the centre of the ship low down as it can be very heavy. To connect the engine to the propeller, a propeller shaft can be used, providing a physical link.

Draw four different kinds of boats and show how they are propelled. Use words to help you describe each drawing.