

VIKING LONGSHIPS

SHIP FACTS

Sizes of longships vary greatly, but most are between 60 feet and 90 feet in length. The larger ships can carry more than 50 warriors at a time.



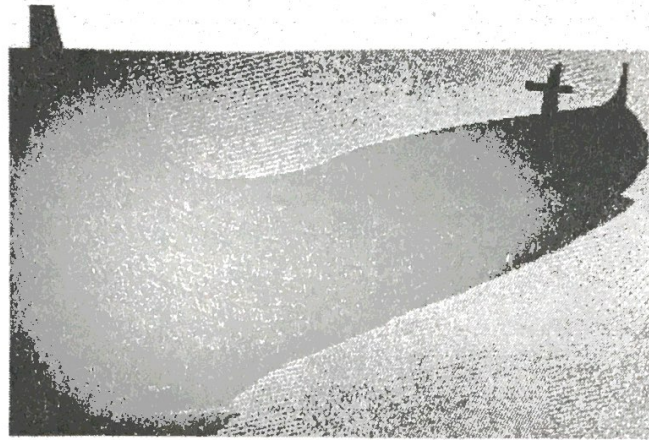
Despite their large size, many longships are still actually light enough to be dragged out of the water and pushed on rollers for short distances overland. This is essential when rivers are blocked by rocks, rapids, or waterfalls.



Many longships can reach the formidable speed of 17 miles per hour in a strong wind. Even when under oar, the maximum speed is still amazingly fast — 7 miles per hour.



The biggest and most famous longship of its day was built in 998 by Olaf Trygvason, king of Norway. Named *The Long Serpent*, it was a staggering 121 feet long and was powered by the strength of more than 68 rowers!



So, what exactly made the Vikings' longships so useful, durable, and deadly? The main strength lay in design.

First, craftsmen used axes to split oak trees into long, thin boards. They then used iron nails to attach them to a long keel, or spine, which ran along the bottom of the ship. The boards were nailed to each other so they overlapped, like a fish's scales.

Thin ropes soaked with pitch (a tar-like liquid made from tree sap) were placed in the joints between the boards to waterproof the hull. Finally,

the structure was reinforced with wooden ribs, which were tied in with flexible larch tree roots.

This technique is known as **clinker-building**, and it results in vessels that are quite flexible. While the hulls of other ships might snap in two if they ran into rough weather or other obstacles, longships usually bent, but didn't break. Since the keel didn't run too deep, the ships could easily navigate rivers and other shallow waters. And because they were light, they could go very fast.

Viking warships were known as **drekars**, or dragons, because of the fearsome wooden dragon-heads adorning their fronts. Their sides were usually decorated with the shields of the warriors on board, and the biggest could carry more than 100 men! Of course, drekars were only used in war; when Vikings were more interested in trading, they carried supplies in cargo ships called **knarrs**.

Numerous Viking longships have been unearthed in Northern Europe. The largest, a warship found in Denmark in 1996, is more than 36 meters long. The most famous is probably the Gokstad ship (pictured), unearthed in Norway in 1880. You can see it at the Viking Ship Museum in the Norwegian capital of Oslo.

1) Why was the design of Vikings longships so important to their effectiveness?

2) What were the results of clinker-building? How would this offer the Vikings extra protection and safety?

3) Why do you think the Vikings decorated their longships with drekars?

4) Why was it necessary for the longships to be light in weight? (despite the size).

5) The Viking longships were able to travel at very high speeds — what benefits could this provide the Vikings?