The Tools of Exploration

Out on the open seas, winds easily blew ships off course. With only the sun, moon, and stars to guide them, few sailors willingly ventured beyond the sight of land. In order to travel to distant places, European inventors and sailors experimented with new tools for navigation and new designs for sailing ships, often borrowing from other cultures.

The large cargo area could hold the numerous supplies needed for long voyages.

Its shallow draft (depth of the ship’s keel below the water) allowed it to explore close to the shore.

The average caravel was 65 feet long. This versatile ship had triangular sails for maneuverability and square sails for power.

The sextant replaced the astrolabe in the mid-1700s as the instrument for measuring the height of the stars above the horizon—to determine latitude and longitude.

Here, a French mariner uses an early navigation instrument that he has brought ashore to fix his ship’s position. It was difficult to make accurate calculations aboard wave-tossed vessels.

1. Analyzing Motives
   Why did inventors and sailors develop better tools for navigation?

2. Summarizing
   What types of navigational or other tools do sailors use today? Choose one type of tool and write a brief explanation of what it does.