

R6

On YouTube!

RRS: Reading rule Spanker: 2K Reading system:

1. Speed map-under 45 seconds.
2. Preview questions-circle mystery questions/underline keywords to find later.
3. Line reference bump-do line reference/try to bump into some of the keywords for mystery questions.
4. Mystery questions-try to snapshot capitalized keywords or numbers, bear claw or finger scan.
5. Big picture-do big picture questions last once you have answered other questions.

Tools:

1. Scratch for flags
2. See topic sentence
3. Use Good/Stinky rule
4. Use your flags

Passage II

SOCIAL SCIENCE: This passage is adapted from the book chapter "The Discovery and Settlement of Polynesia" by Dennis Kawaharada (©1999 by University of Hawai'i).

Fiji, Tonga, and Samoa are islands of Polynesia.

The Polynesian migration to Hawai'i was part of one of the most remarkable achievements of humanity: the discovery and settlement of the remote, widely scattered islands of the central Pacific. The migration began before the birth of Christ. While Europeans were sailing close to the coastlines of continents before developing navigational instruments that would allow them to venture onto the open ocean, voyagers from Fiji, Tonga, and Samoa began to settle islands in an ocean area of over 10 million square miles. The settlement took a thousand years to complete and involved finding and fixing in mind the position of islands, sometimes less than a mile in diameter on which the highest landmark was a coconut tree. By the time European explorers entered the Pacific Ocean in the 16th century almost all the habitable islands had been settled for hundreds of years.

The voyaging was all the more remarkable in that it was done in canoes built with tools of stone, bone, and coral. The canoes were navigated without instruments by expert seafarers who depended on their observations of the ocean and sky and traditional knowledge of the patterns of nature for clues to the direction and location of islands. The canoe hulls were dug out from tree trunks with adzes or made from planks sewn together with a cordage of coconut fiber twisted into strands and braided for strength. Cracks and seams were sealed with coconut fibers and sap from breadfruit or other trees. An outrigger was attached to a single hull for greater stability on the ocean; two hulls were lashed together with crossbeams and a deck added between the hulls to create double canoes capable of voyaging long distances.

The canoes were paddled when there was no wind and sailed when there was; the sails were woven from coconut or pandanus leaves. These vessels were seaworthy enough to make voyages of over 2,000 miles along the longest sea roads of Polynesia, such as the one between Hawai'i and Tahiti. And though these double-hulled canoes had less carrying capacity than the broad-beamed ships of the European explorers, the Polynesian canoes were faster: one of English explorer Captain Cook's crew estimated a Tongan canoe could sail "three miles to our two."

After a visit to the Society Islands in 1774, Spanish Captain Andia y Varela described the canoes he saw: "It would give the most skilful [European] builder a shock to see craft having no more breadth of beam than three [arm] spans carrying a spread of sail so large as to befit one of ours with a beam of eight or ten spans, and which, though without means of lowering or furling the sail, make sport of the winds and waves during a gale. These canoes are as fine forward as the edge of a

knife, so that they travel faster than the swiftest of our vessels; and they are marvellous, not only in this respect, but for their smartness in shifting from one tack to the other."

The voyaging was by no means easy. There was always a danger of swamping or capsizing in heavy seas, of having sails ripped apart or masts and booms broken by fierce winds, of smashing the hulls against unseen rocks or reefs; and while there were grass or leaf shelters on the decks of voyaging canoes, the voyagers were often exposed to the wind, rain, and sun, with only capes of leaves or bark-cloth wrappings for protection. A stormy night at sea, even in the tropics, can be brutally chilling. If supplies ran short during a long voyage, and no fish or rainwater replenished them, then starvation became a possibility.

A long voyage was not just a physical, but a mental challenge as well, particularly for a navigator without compass or chart. To navigate miles of open ocean required an extensive and intimate knowledge of the ocean and sky. Captain Cook noted that Polynesian navigators used the rising and setting points of celestial bodies for directions.

To keep track of their position at sea during long sea voyages, the navigators used a system of dead reckoning—memorizing the distance and direction traveled until the destination was reached. Finding islands before they could actually be seen was also part of the art of navigation. Voyagers followed the flight of land-dwelling birds that fished at sea as these birds flew from the direction of islands in the morning or returned in the evenings. The navigators also watched for changes in swell patterns, clouds piled up over land, reflections on clouds from lagoons, and drifting land vegetation.

11. In the context of the passage, the phrase "sometimes less than a mile in diameter on which the highest landmark was a coconut tree" (lines 13–14) primarily serves to explain why:
- A. there are many islands scattered throughout the central Pacific.
 - B. similar vegetation exists on most islands in the central Pacific.
 - C. early voyagers had difficulty locating islands in the central Pacific.
 - D. European explorers searched for large, habitable islands in the central Pacific.
12. As it is used in line 12, the phrase *fixing in mind* most nearly means:
- F. committing to memory.
 - G. imagining for a moment.
 - H. repairing with careful attention.
 - J. solving through mathematical equations.

13. The passage makes clear that, unlike voyagers from Polynesia, European explorers didn't travel into the open ocean until which of the following aids to ocean travel were developed?
- Outriggers that could be attached to a ship's hull for stability on the ocean
 - Island lighthouse marks that were visible on the horizon
 - Adzes, cogage, and crossbeams
 - Navigational instruments
14. The statement in lines 5–10 most nearly serves to provide a contrast between the:
- Polynesian and European explorations of the central Pacific in the sixteenth century, or the basis of the number of square miles explored.
 - earliest navigational instruments used by Polynesian voyagers and those used by European explorers.
 - design and construction of Polynesian canoes and the design and construction of European ships.
 - extent of exploration by Polynesians and by Europeans during the same period in history.
15. The second paragraph (lines 18–33) primarily serves to provide:
- an explanation of how an outrigger attached to a single hull increased the stability of a Polynesian canoe on the ocean.
 - a step-by-step explanation of how Polynesian builders used tree sap to repair cracks in their canoes.
 - a description of how early Polynesian voyagers observed the night sky to help determine the locations of islands.
 - an overview of several elements of the construction and navigation of canoes used by early Polynesian voyagers of the central Pacific.
16. It can most reasonably be inferred from the passage that a Polynesian canoe that could have made a journey of over 2,000 miles would likely have been:
- double hulled.
 - eight to ten arm spans wide.
 - equipped with a means of lowering or furling the sails.
 - outfitted with sails made of bark cloth, specially designed for long-distance travel.
17. In lines 47–53, Varela is quoted as expressing amazement after a visit to the Society Islands over seeing a Polynesian canoe that featured a:
- breadth of beam of only one arm span.
 - breadth of beam that was eight or ten arm spans, outfitted with a sail that would have better fit a much smaller ship.
 - sail of the same shape and material as sails used on many European ships.
 - sail so large that it would have fit a ship with a breadth of beam of eight or ten arm spans.
18. As it is used in line 52, the phrase *make sport of* most nearly means:
- struggle to conquer.
 - pass through with ease.
 - avoid altogether.
 - defeat slowly and methodically.
19. Which of the following is NOT mentioned in the passage as a condition or an event that was a threat to the safety of early Polynesian voyagers of the central Pacific?
- Starvation and lack of rainwater
 - Collisions with other ships
 - Extremely cold nights
 - Fierce winds
20. When Varela describes the Polynesian canoes he saw during a visit to the Society Islands as being "as fine forward as the edge of a knife" (lines 53–54), he most specifically means that the:
- entire body of each canoe was the same width.
 - planks of the canoes were thin and polished.
 - front portion of each canoe was streamlined.
 - canoes were faster when paddled forward than when paddled backward.