PhotoMedia Spotlight

Student Version

Marshallese Stick Chart

Can you navigate the Pacific?

For the complete photos with media resources, visit: http://nationalgeographic.org/media/micronesian-stick-chart/

Ancient mariners from the Marshall Islands developed "stick charts" to understand the vast Pacific Ocean. However, the devices are not really sticks and they're not really charts!

The charts aren't made of sticks. Most stick charts are made of coconut fiber and shells. These fibers and shells tell the navigator the location of islands, waves, and currents.

Marshallese navigators did not use stick charts the way we use maps and charts today. The Marshallese probably did not even look at stick charts on their long canoe journeys. Navigators memorized the chart before the journey was made.

Charts were unique. Sometimes, a stick chart could only be read by the person who made it!

Use "Fast Facts" to better understand how the Marshallese navigators represented the ocean.

Read the "Questions" to see if you can navigate the Pacific using clues in the stick chart above.

Questions

- **Read the Fast Facts first!** Assume this stick chart is being held in the traditional orientation: north at the top, east at the right.

How many islands are depicted on this stick chart?

There are **29** islands on this stick chart, represented by shells.

- In what direction is the greatest concentration of islands?

Most islands are scattered in the **north**, particularly in the far northwest and northeast.

- In what direction is the most isolated island?

The island in the **southwest** corner of the stick chart is most removed from other islands.

- Where is the area with the strongest swells, or wind waves?

The **northeast** is marked with many long, curved sticks representing swells and other wind waves.

- Where is the largest stretch of open ocean, with few islands, currents, or swells?

The **central west** or **southeast** are nearly empty of any representation.

Fast Facts

- Stick charts use natural materials found on and around Pacific islands to represent specific phenomena, characteristics, or locations.

- Shells represent islands.

- Coconut fibers ("sticks") represent wave patterns. Straight lines represent currents—consistent, predictable waves.

- Bent or curved lines represent swells. Unlike currents, swells are created by the wind. Their strength and direction can change with the weather.

Vocabulary

Term	Part of Speech	Definition
ancient	*adjective*	very old.
chart	*noun*	type of map with information useful to ocean or air navigators.
compass	*noun*	instrument used to tell direction.
current	*noun*	steady, predictable flow of fluid within a larger body of that fluid.
fiber	*noun*	long, thin, threadlike material produced by plants that aids digestive motion when consumed.
island	*noun*	body of land surrounded by water.
latitude	*noun*	distance north or south of the Equator, measured in degrees.
longitude	*noun*	distance east or west of the prime meridian, measured in degrees.
map	*noun*	symbolic representation of selected characteristics of a place, usually drawn on a flat surface.
mariner	*noun*	sailor.
maritime	*adjective*	having to do with the ocean.
navigation	*noun*	art and science of determining an object's position, course, and distance traveled.
navigator	*noun*	person who charts a course or path.
phenomena	*plural noun*	(singular: phenomenon) any observable occurrence or feature.
shell	*noun*	hard outer covering of an animal.
stick chart	*noun*	map made with sticks and shells, used by South Pacific islanders to navigate ocean swells, islands, and reefs.
swell	*noun*	stable, crestless wind wave formed far out at sea.
voyage	*noun*	long journey or trip.
wave	*noun*	vibrations (oscillations) around a fixed location, usually involving a transfer of energy from one point to another.
weather	*noun*	state of the atmosphere, including temperature, atmospheric pressure, wind, humidity, precipitation, and cloudiness.

Term	Part of Speech	Definition
wind	*noun*	movement of air (from a high pressure zone to a low pressure zone) caused by the uneven heating of the Earth by the sun.

Articles & Profiles

- Micronesian Stick Charts
- The British Museum: Navigation Chart

Images

- Polynesian Stick Charts

Maps

- National Geographic Education: Australia & Oceania MapMaker Kit
- National Geographic Education: MapMaker 1-Page Map: Australia & Oceania

Worksheets & Handouts

- Micronesian Journal of the Humanities and Social Sciences: Traditional and Nineteenth Century Communication Patterns in the Marshall Islands