

Becoming a Pacific Navigator

About 2500 years ago people started spreading out across the part of the Pacific Ocean that we call Polynesia. Sailing in canoes they had to travel huge distances across the seas without the help of maps, compasses, telescopes or any of the other navigation aids that European explorers would take for granted 2000 years later.

So how did they travel across the Pacific? By observing the world around them as they sailed to a new home the Polynesian people could find their way from one small island to another.

Now it's your chance to learn some of the skills of the Polynesian navigator.

You will need:

- a compass
- a clipboard and pencil
- a pair of binoculars to share

What you are going to do is spend one week observing the weather at your school and then deciding which day of the week was best for starting a journey across the Pacific Ocean.

You will be keeping a cloud chart and a wind chart for a week. Will you have the skills to become a Polynesian navigator?

Which Way is Which?

There are a lot of different ways of predicting the direction that you are looking in even without the aid of a compass. For instance, the sun always rises in the east and sets in the west. Keep your left hand on your side and then raise it so that it is pointing at the early morning sun. You are now facing north. Behind you is south and your right-hand side is west.

If you look at tree trunks then any moss or lichen will be thicker and greener on the south side of the tree.

Even your house can help you find directions. Is there a spot in your house that is always cold and shady no matter what time of day it is. That is the side of your house that is facing north.

Use a compass to see if you are right.

Looking at Clouds

The Polynesians had to decide when it was a good time to set sail. That meant that they needed to know what the weather was going to be like in the near future. Looking up at the clouds can help with this.

There are lots of different types of cloud and each of them tells us about the kind of weather we could expect.



Alto cumulus

Small “cloudlets” in a pattern. Seen as a warning of steady rain to come.



Altostratus

Layers of thick grey clouds covering all or part of the sky. Steady rain is on the way.



Cirrostratus

Thin clouds high up in the sky. If this cloud looks like a continuous sheet then there are stormy conditions coming. If it is not continuous then the storm has passed by and the weather will be fine.



Cirrus

If these clouds are scattered across the sky then there is little chance of bad weather. If the clouds are shaped like hooks or are in thick patches then there is rainy weather on the way.



Cumulonimbus

These thick heavy clouds with flat tops means that storms and rain are on the way very soon.



Cumulus

Puffy clouds that change shape. They mean fair weather is here to stay



Nimbostratus

Dark and layered clouds that block out the sun. Rain with little or no wind.



Stratus

Sheet of grey dull clouds low in the sky. They mean light rain.

Looking at Clouds Chart

Name _____

Day	Time	Type of clouds seen	My weather prediction for the next few days
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			

Measuring the Wind

The Polynesians did not have any compasses to help them to travel between islands but they did know if the wind was blowing in the right direction for them to set sail in their boats.

The wind could also help them predict what the weather was going to be like.

The people of Hawaii knew that when the wind was coming from the south and seemed to be getting stronger then a storm was on the way. If the same wind was light and seemed to be blowing at different speeds then the weather was going to be hot and humid.

If the wind came from the northeast then there would be fair weather with a small chance of light rain.

What direction is the wind blowing in?

Your teacher will divide your class into small groups. Each group will have a compass. Your teacher will show you how to use the compass so that all of your group is facing north. This can be done in the classroom.

Your teacher will then take you outside. In your groups find north again and remember the spot you are all standing on and what is right in front of you when you are looking north. Don't forget that behind you is south, your left is west and your right is east.

Give the compass back to your teacher. You will never see it again!

You are going to spend a week trying to work out in your groups what direction the wind is blowing in just by remembering which way is north. You must always return to the same spot and always look at the same thing that you did the first time.

There are lots of ways of working out what direction the wind is moving in.

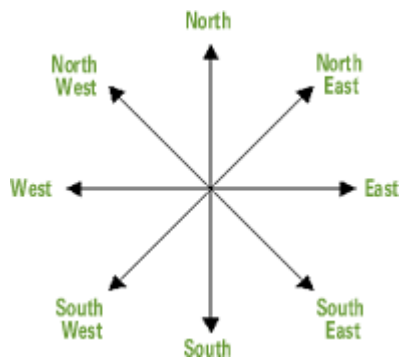
- Look up in the sky and see what direction the clouds are moving in
- If there any trees or large bushes nearby look at the direction that the branches and leaves are moving
- Lick your finger and hold it up in the air. The bit of your finger that feels the coldest should tell you where the wind is coming from.

You might need to use your binoculars to help with this.

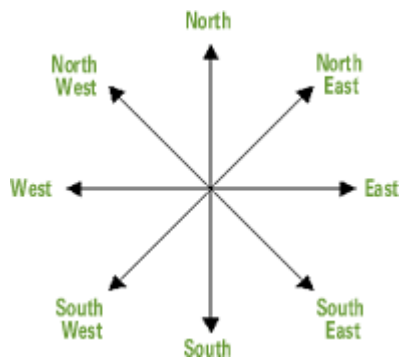
Measuring the Wind Record

On each day just circle the direction that you think that the wind is blowing in

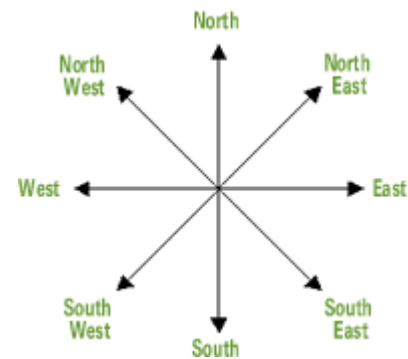
Name _____



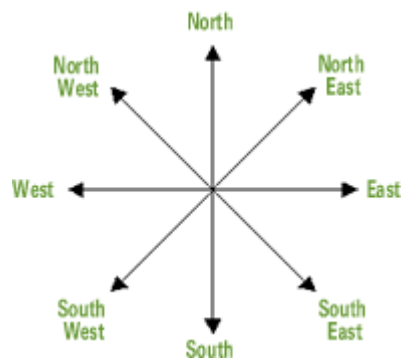
Monday



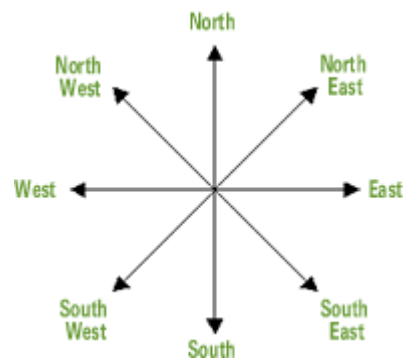
Tuesday



Wednesday



Thursday



Friday