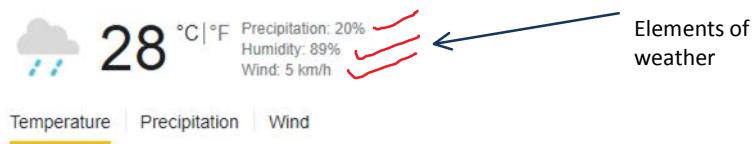


WEATHER

1. Weather - the day to day condition of the atmosphere at a place with respect to the temperature , humidity, rainfall, wind-speed , etc. is called the weather at that place.



Screen clipping taken: 26-08-2021 19:00



Precipitation :

In meteorology, precipitation is any product of the condensation of atmospheric water vapor that falls under gravitational pull from clouds. The main forms of precipitation include drizzling, rain, sleet, snow, ice pellets, graupel and hail.

Pasted from <<https://en.wikipedia.org/wiki/Precipitation>>

Meteorology is a branch of the atmospheric sciences (which include atmospheric chemistry and atmospheric physics), with a major focus on weather forecasting. The word meteorology is from the Ancient Greek μετέωρος metéōros (meteor) and -λογία -logia (-o)logy), meaning "the study of things high in the air."

Pasted from <<https://en.wikipedia.org/wiki/Meteorology>>

Humidity:

Humidity is the concentration of water vapour present in the air. Water vapor, the gaseous state of water, is generally invisible to the human eye. Humidity indicates the likelihood for precipitation, dew, or fog to be present.

Pasted from <<https://en.wikipedia.org/wiki/Humidity>>

Weather Today in Railway Loco Colony, West Bengal

34°

Feels Like



High/Low	--/26°	Wind	5 km/h
Humidity	90%	Dew Point	26°
Pressure	↑ 1001.4 mb	UV Index	0 of 10
Visibility	9.66 km	Moon Phase	Waning Gibbous

INDIA METEOROLOGICAL DEPARTMENT

The agency has gained in prominence due to the significance of the monsoon rains on Indian agriculture. It plays a vital role in preparing the annual monsoon forecast, as well as in tracking the progress of the monsoon across India every season.

IMD also operates seismic monitoring centres at key locations for earthquake monitoring and measurements.

After a tropical cyclone hit Calcutta in 1864, and the subsequent famines in 1866 and 1871 due to the failure of the monsoons, it was decided to organise the collection and analysis of meteorological observations under one roof. As a result, the India Meteorology Department was established in 1875.

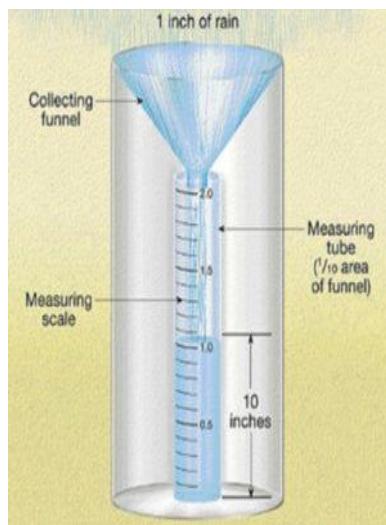
Pasted from <https://en.wikipedia.org/wiki/India_Meteorological_Department>

The screenshot shows the official website of the India Meteorological Department (IMD) under the Ministry of Earth Sciences, Government of India. The top navigation bar includes links for Home, Departmental Website, About IMD, People, Publications, SOP, Services, and Press Release. The main content area features a map of India with current weather conditions (cloud cover, precipitation), detailed weather information for New Delhi (temperature 34°C, humidity 54%, wind speed 11.1 km/h, observation time 2021-08-26 17:30 IST, sunrise 05:57 IST, sunset 18:50 IST, moonrise 21:21 IST, moonset 09:20 IST), and a satellite radar map showing lightning activity across the country. A sidebar on the left provides links for Warnings (Subdivision Wise, District Wise) and Nowcast (District Wise, Station Wise). The bottom of the page features a section titled 'Our Services'.

Rain Gauge:

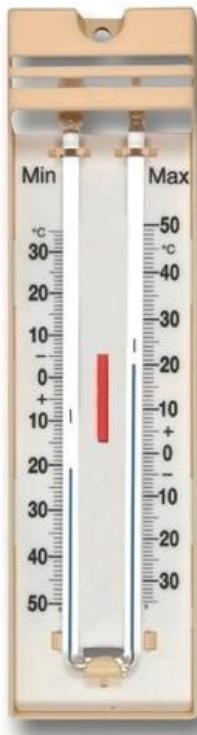
The first standardized rain gauge was invented in 1441 in Korea. In 1662 the first tipping bucket rain gauge was invented in Britain by Christopher Wren and Robert Hooke.





Maximum and minimum thermometer:

working : <https://youtu.be/QHbzghWKbwU>



Weather :

- can vary greatly over a day.
- Max temperature is generally in the afternoon and minimum is generally in the early morning.
- Sun is the main cause of the changes in the weather. Energy absorbed by the surface, ocean, atmosphere and that determines the weather at a place.

CLIMATE

Climate: the average weather *pattern* of a place over a long period of time , say 25 years .

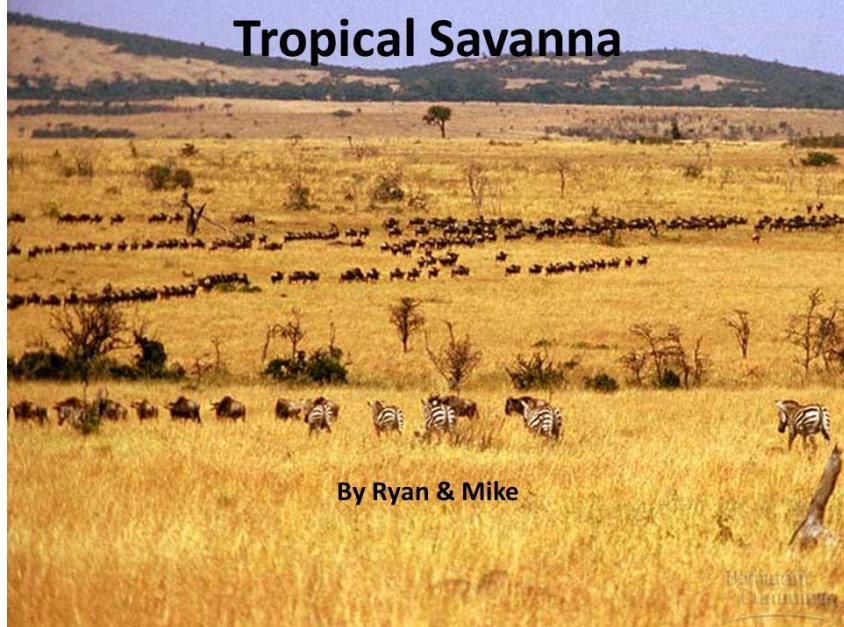
e.g.

hot
hot and wet
hot and dry (desert)
cold
cold and dry
cold and wet

Tropical



Tropical wet - dry



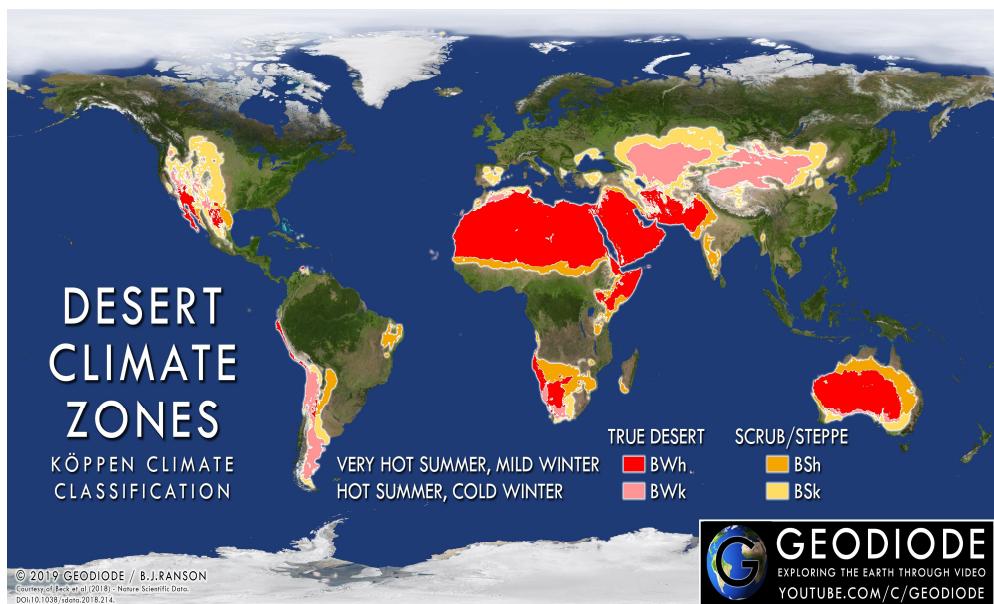
By Ryan & Mike

University of California

Tropical wet



Desert



Arid :



Polar :



Tundra:

treeless polar desert found in the high latitudes in the polar regions, primarily in Alaska, Canada, Russia, Greenland, Iceland, and Scandinavia, as well as sub-Antarctic islands.



Mediterranean:



Climate and adaptation (of animals) :

POLAR REGIONS :

POLAR BEARS in Arctic Region :



- white fur - camouflage (defence and attack)
- two thick layers of fur - protects from extreme cold
- layer of fat under the skin - Insulator , *have to move slowly and rest often to avoid getting*

overheated

- Good swimmer - can close nostrils and remain underwater for long
- large and wide paws
- strong sense of smell like all bears

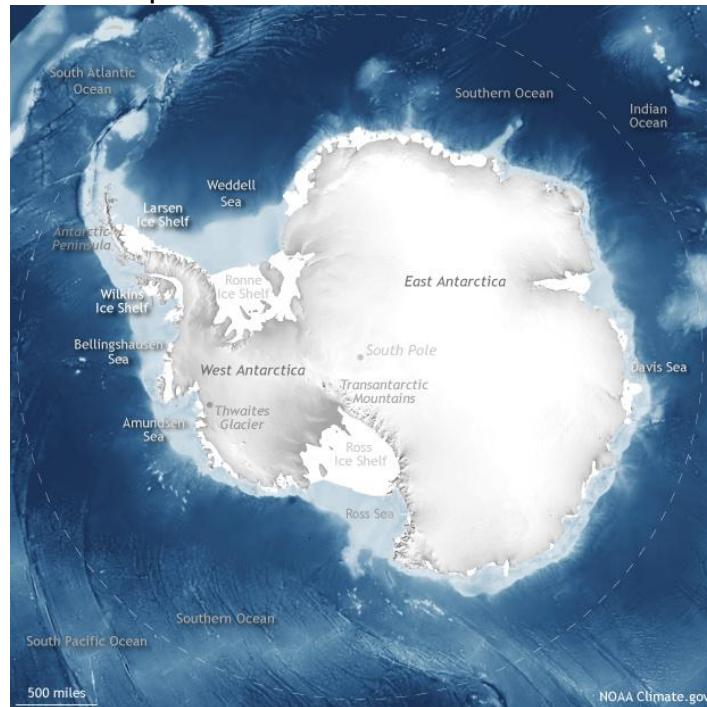
Crew surrounded by 13 Polar bears :



<https://youtu.be/Vi-33aj12xw>

PENGUINS (Antarctica)

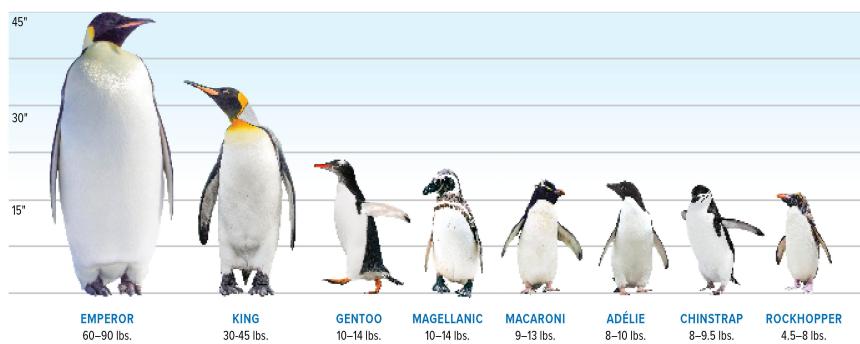
Antarctica map



NOAA Climate.gov



YOUR AT-A-GLANCE GUIDE TO PENGUINS





All about Penguins of the southern ocean :

 <https://world.expeditions.com/expedition-stories/stories/meet-the-penguins-of-the-southern-ocean/>

Features of Penguin:

- black and white - camouflage
- thick skin and lots of fat - protection from cold
- huddling for warmth (using body Heat - radiating from the body)
- Good swimmers and great divers
- streamlined body and webbed feet - makes them good swimmers

other animals in polar region :

Fishes



Musk Oxen

musk_ox

musk-ox
(*Ovibos moschatus*)



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Reindeers



Foxes





Seals



Whales



Birds





ARCTIC ANIMALS



www.eslforums.com

Bird migration

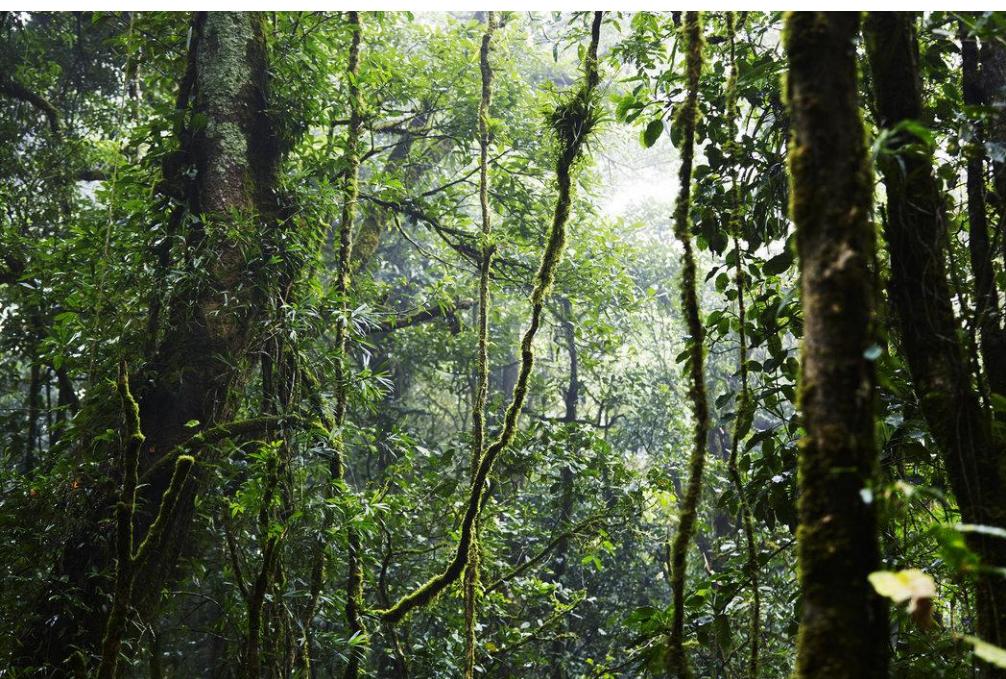
siberian crane - rajasthan

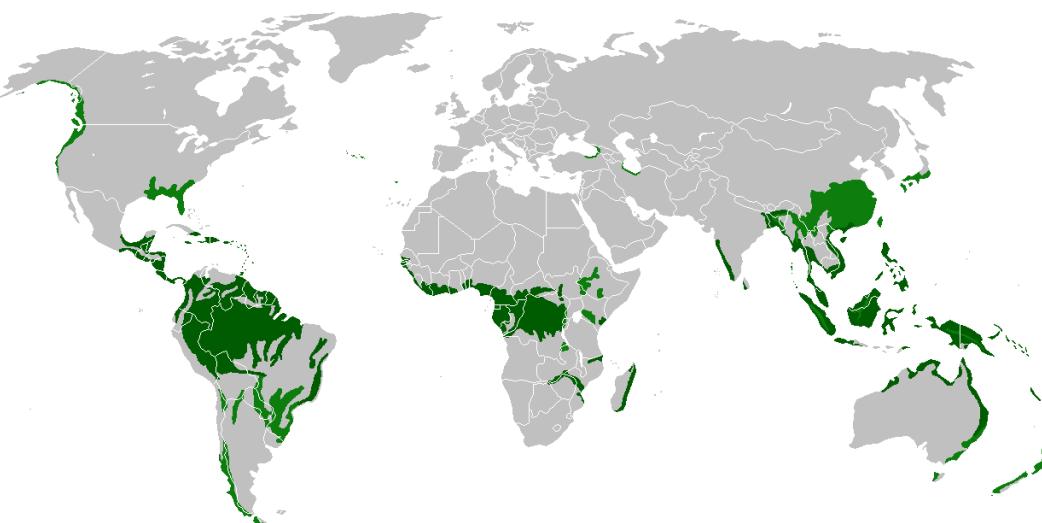
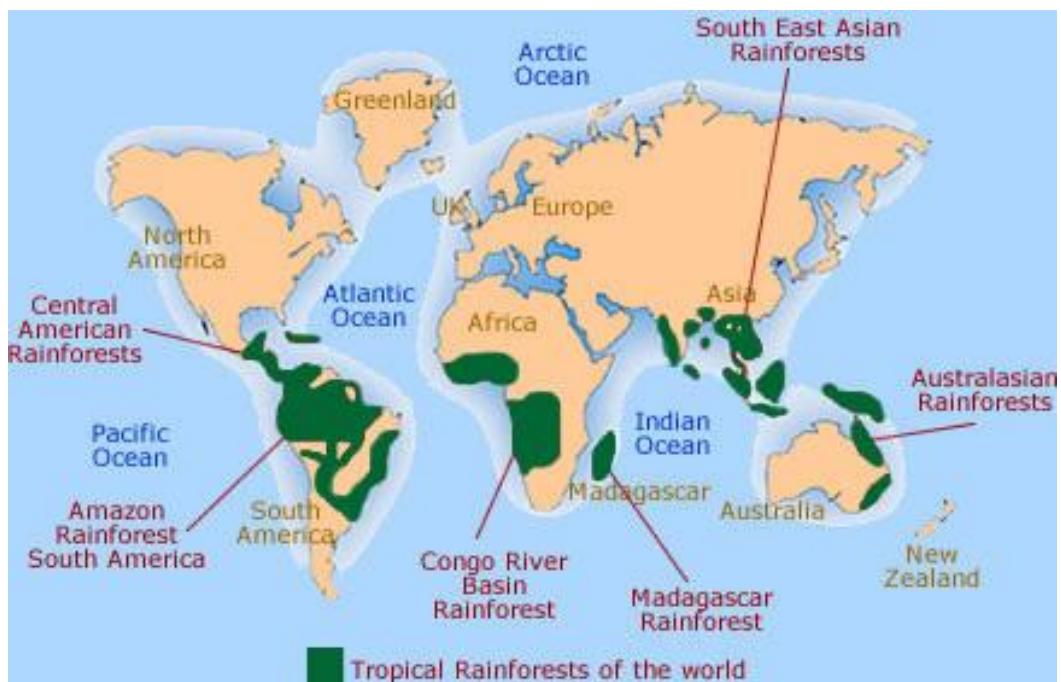




TROPICAL RAINFORESTS :

- Climate : Hot and humid
- plenty of animals and vegetation





Rainforest Animals:



Red Eyed Frog:

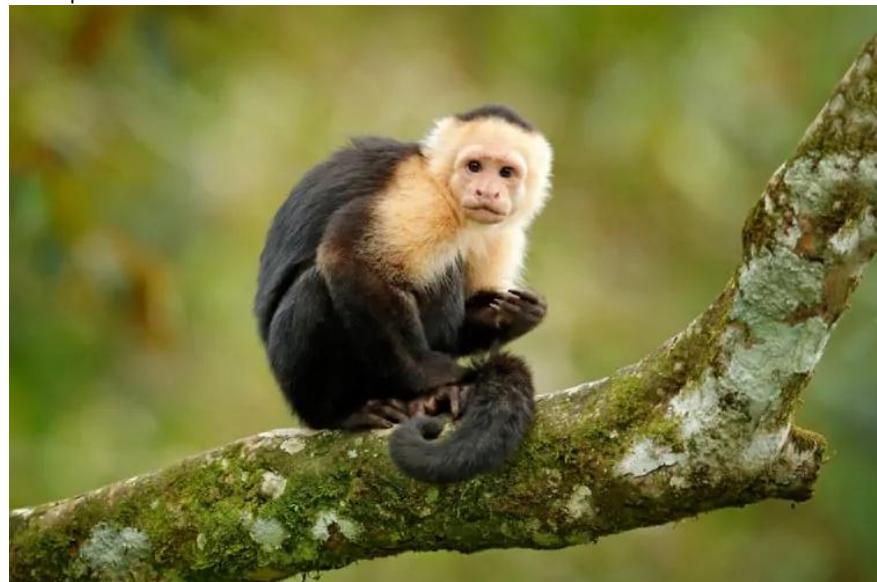
- *Adaptation* : sticky pads on its feet to help it climb the trees on which it lives.



- Red Eyed Frog untamed :
<https://youtu.be/NCj8IXNTAA>

Monkey:

- *Adaptation* : Long tails to grasp branches , strong limbs also . No need to come down to the forest floor , thus avoiding risk of predators.



Toucan :

- *Adaptation* : Long beaks to get food from branches that can't hold their weight .
 - can't fly very well, adapted to live in the canopy.



- ◆ ALL about toucans :
<https://youtu.be/9QbyE4iPGYU> (2:14)

Lion tailed macaque (Beard Ape) found in Western Ghats :



Indian Elephant :



Adaptations:

- ◆ nose as Trunk , strong and muscular and useful in many situations .
- ◆ Big ears for cooling and listening low intensity sounds .