

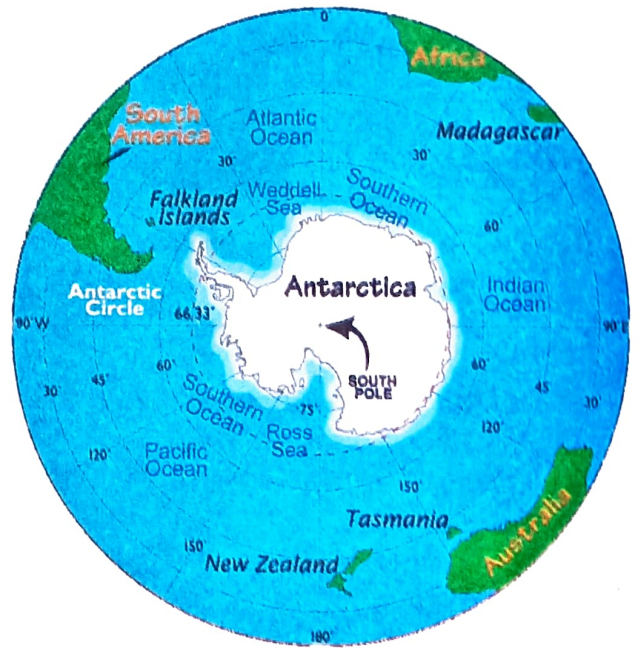
Antarctica

Before you read

- * Do you know what a continent is ?
- * Do you know how many continents are there on the earth ?
- * Try to locate Antarctica on a globe with the help of your teacher and look at its map in an atlas.

(There are seven continents on the earth. A continent is one of several very large landmasses. Antarctica is the southernmost continent on the earth.)

Antarctica is on the South Pole. It is located at the bottom of the globe. Almost all of Antarctica is located within the Antarctic Circle, an imaginary line that circles the southern part of the world. Around Antarctica is the Southern Ocean. It is the fifth largest continent in area after Asia, Africa, North America and South America. Antarctica is the coldest, driest and windiest continent. No humans live in Antarctica permanently. Most of the people who live in Antarctica are scientists and support staff.



Antarctica is considered to be a desert. A desert is a large area of land that has very little water and very few plants growing on it. Many deserts are covered by sand. The Sahara desert is one of them. But there is no sand in Antarctica. Then why is it considered to be a desert ? It is a desert because of its low rainfall. Deserts are extremely dry places with little or no precipitation. Precipitation is the amount of rain, snow etc., that falls in an area. As

there is no rain in Antarctica, it is called a desert. It is in fact the biggest desert in the world! It is significantly bigger than the world's largest hot desert, the Sahara in Africa.

During winter (from March to August) at the South Pole, the sun does not rise above the horizon. In summer (from September to February) the sun does not set for a long duration. About 98% of Antarctica is covered by a layer of ice which is over a mile deep. It is also about 90% of world's ice. All that ice amounts to 70% of the world's fresh water. The average temperature in the interior of Antarctica is between -67° and -76° Fahrenheit.

Antarctica's climate is inhospitable and therefore it has low biodiversity. However, several species of whale such as Blue Whale, Fin Whale, Humpback Whale and Sperm Whale are found in the sea around Antarctica. The most famous inhabitants of this icy desert are its penguins. Different species of



penguins breed here. Emperor penguins are the largest of all penguins. Penguins are flightless birds. They are not able to fly; their wings are developed for swimming rather than flying. They huddle together to escape the cruel wind of Antarctica and to conserve warmth. Besides these, many types of algae, bacteria, fungi, plants, protista and certain other animals such as mites, nematodes, seals and tardigrades etc., are found here.

Antarctica is such a continent that does not have any administrative unit. Various countries have claimed parts of Antarctica but these claims are not always recognised by other countries. Antarctica is protected by the 'Antarctic Treaty'. This treaty prevents countries from claiming parts of Antarctica. It was opened for signature on 1 December 1959 and officially came into force on 23 June 1961. At the beginning, twelve countries signed the treaty. As of 2019, there are 54 states party

to the treaty. This treaty also ensured that Antarctica could only be used for scientific purposes.

Though it is the coldest place on earth in the contemporary times, researchers say that around 50 million years ago, temperatures in some parts of Antarctica could reach around 63° Fahrenheit or 17° Celsius. It is said that there was a temperate climate. There were evergreen forests all around it and various kinds of animals also lived there. It was home to a rainforest at that time. Unfortunately, in the course of time these were wiped out by lower temperatures and the formation of ice caps. Scientists have proved this with evidence, such as fossils of ferns and forest creatures which are found in Antarctica.

Today Antarctica is a harsh place to survive in for its unimaginably cold temperature. But adventurous people visit Antarctica via the Antarctic Peninsula. Antarctic Peninsula is also known as the Banana Belt. Tourists visit Antarctica during Antarctic summer. Visitors to Antarctica always need a permit. Many people have explored Antarctica. To keep Antarctica pristine, a lot of rules are framed to ensure that nothing pollutes the environment of Antarctica. Nobody can carry soil or growing compost to Antarctica because soil may contain plant seeds and other things like eggs or larvae of any soil dwelling invertebrates. The tourists can't even take anything from Antarctica either. Everyone loves having a memento for their travels. In Antarctica taking anything is banned. These include rocks, feathers, bones, eggs and any kind of biological material including traces of soil.



Sir James Clark Ross of Great Britain was one of the most famous explorers of Antarctica. He is considered to be the first man to recognise Antarctica as a continent. Ronald Amundsen of Norway, Robert Falcon Scott of Great Britain, Sir Douglas Mawson of Australia, Sir Edmund Hillary of New Zealand are some of the explorers who ventured to step onto this icy landmass.

In present time, global warming is a burning problem. The effect of global warming on Antarctica is clearly seen. There has been a gradual rise in temperature of this vast land of ice in the last 50 years. Rise in temperature eventually may result in the melting of the Antarctic ice which will raise the global sea level. This may inundate the global coastline.

Antarctica is very dear to scientists who love our mother planet earth. It is important for science and is considered to be the biggest natural laboratory of the world. Antarctica tells us about how our world works and the impact of human activities on the natural world. It is a unique record of what our planet's climate was like over the past one million years. We must walk hand in hand towards saving and protecting Antarctica which very few of us will ever visit but on whose good health the future of mankind depends.

Word Notes :

- South Pole : one of the two locations on the surface of the earth which is the southern end of the globe
- Antarctic Circle : an imaginary circle parallel to the equator
- horizon : the line at which the earth's surface and the sky appear to meet
- biodiversity : the variety of plant and animal life in the world or in a particular habitat
- temperate climate : it is generally warm during summer and cold during winter
- peninsula : it is a landform surrounded by water on the majority of its border
- inundate : to cover an area of land with a large amount of water
- larvae : an insect at the stage when it has just come out of an egg and looks like a short fat worm
- memento : a thing that one keeps or gives to somebody as a reminder of a place
- invertebrate : an animal with no backbone

Remember the words

continent	southernmost	imaginary	rainfall	windiest
precipitation	horizon	temperature	inhospitable	biodiversity
inhabitants	algae	fungi	nematodes	treaty
evidence	fossils	peninsula	pristine	compost
invertebrates	unique	landmass	inundate	coastline

For the teacher only

The students are expected to learn the use of the non-continuous verbs, the future continuous tense and the future perfect tense in sentences.

Comprehension

- Answer the following questions in complete sentences.
 - How many continents are there on the earth ? Write the names.
 - Where is Antarctica ?
 - What is a desert ?
 - What are the most famous inhabitants of Antarctica ?
 - What is precipitation ?
 - What is the largest hot desert of the world ?
- Write about the Antarctic Treaty.
- Arrange the order of the following words as you find them in a dictionary.
continent, huddle, compost, evidence, inhospitable, circle, impact, escape, inhabitants, invertebrates
- Look at the word :
southernmost : furthest south
Now, write words which end in 'most' for the following.
 - nn— —most : nearest to the centre or inside of something
 - termost : situated at the farthest possible point from the centre
 - ba — — most : furthest back

- d) — **opmost** : highest in rank
 e) — **lmost** : nearly
 f) — **tmost** : most extreme
 g) — **e** — **tmost** : farthest to the left
 h) **f** — — **emost** : the most important or famous / in a position at the front

Grammar and Usage :

A. Non-Continuous Verbs

Present Progressive/Continuous Tense is used :

- * for an action going on at the time of speaking
 e.g. I am writing now.
- * imagining an unseen activity
 e.g. I think the children are playing.
- * for a planned/arranged future
 e.g. I am leaving for Roorkee tonight.

There are some verbs, however, in English, which are not ordinarily (normally) used in continuous tense, on account of their meaning.

Such verbs are called **Non-Continuous Verbs**. In other words they are verbs that have no -ing forms *in their ordinary meaning*.

These verbs are discussed below :

- | | | |
|--|---|---|
| a) Verbs of Senses (involuntary action) | : | eg. see, hear, smell, notice, recognise, feel, taste |
| b) Verbs of Feeling and Emotion | : | eg. want, wish, desire, like, love, hate, hope, admire, adore etc. |
| c) Verbs of Possession | : | eg. own, belong, possess |
| d) Verbs of Appearing | : | eg. appear, look, seem |
| e) Verbs of Thinking or Mental Activity | : | eg. think, know, understand, remember, believe, suppose, agree, mind etc. |

The above mentioned verbs are used in the Present Indefinite Tense instead of the Present Continuous Tense when we use them while describing an action that is taking place at the time of speaking.

Examples :

- i) I *am seeing* a beautiful bird in the garden now. (Incorrect)
I **see** a beautiful bird in the garden now. (Correct)
- ii) This rose *is smelling* sweet. (Incorrect)
This rose **smells** sweet. (Correct)
- iii) I *am wanting* a book. (Incorrect)
I **want** a book. (Correct)
- iv) I *am loving* my parents. (Incorrect)
I **love** my parents. (Correct)
- v) I *am hoping* he will return. (Incorrect)
I **hope** he will return. (Correct)
- vi) They *are owning* a big building. (Incorrect)
They **own** a big building. (Correct)
- vii) This plot of land *is belonging* to us. (Incorrect)
This plot of land **belongs** to us. (Correct)
- viii) He *is possessing* much wealth. (Incorrect)
He **possesses** much wealth. (Correct)
- ix) They *are looking* joyous. (Incorrect)
They **look** joyous. (Correct)
- x) It *is seeming* it will rain. (Incorrect)
It **seems** it will rain. (Correct)
- xi) This newspaper *is appearing* daily. (Incorrect)
This newspaper **appears** daily. (Correct)
- xii) I *am thinking* you are right. (Incorrect)
I **think** you are right. (Correct)
- xiii) She *is knowing* the fact. (Incorrect)
She **knows** the fact. (Correct)

- xiv) People *are understanding* the incident. (Incorrect)
People understand the incident. (Correct)

* This is noteworthy that the above mentioned verbs are also used in the Present Continuous Tense with *a change of meaning*. (in a technical sense)

Examples :

- i) The doctor *is seeing* the patient. (*treating*)
- ii) Justice Gogoi *is hearing* the case. (*to judge*)
- iii) Mother *is tasting* the curry to see whether it is perfect. (*checking*)
- iv) I *am feeling* much better today. (*yesterday I was very sick*)
- v) I *am thinking* of going to America. (*considering the idea of*)
- vi) Mr. Sarma *is minding* the baby while Mrs. Sarma is out shopping. (*looking after*)
- vii) I *am seeing* my dentist this afternoon. (*paying a visit to*)
- viii) He *is seeing* to the arrangement for the meeting. (*supervising*)
- ix) The doctor *was feeling* the arm of the injured person. (*observing*)
- x) He *is always doubting* my honesty. (*not believing*)
- xi) I *am having* some difficulty with this subject. (*experiencing*)
- xii) He *is forgetting* his mother tongue. (*gradually losing knowledge*)

Activity 1

Use the correct tense form of the verbs in brackets and rewrite the sentences.

- i) I — (feel) cold now.
- ii) This house — (belong) to our uncle nowadays.
- iii) I — (wish) he will come soon.
- iv) The girl — (look) very happy; have you noticed her ?
- v) Nishanta — (admire) Rina's intelligence since his childhood.
- vi) We — (remember) his bravery till now.
- vii) I — (understand) what he feels.

B. The Future Continuous Tense

The Future Continuous Tense is used to talk about actions which will be in progress at a time in the future.

Sentence Structure of The Future Continuous Tense						
Subject	+	will/shall	+	be	+	verb + ing
I		shall		be		waiting

Now look at the following table :

Person	Singular	Plural
First Person	: I shall be playing	We shall be playing
Second Person	: You will be playing	You will be playing
Third Person	: He will be playing	They will be playing Nikita will be playing

Examples :

- i) We **shall be waiting** for the singer at this time tomorrow.
- ii) My students **will be playing** football at this time tomorrow.
- iii) They **will be having** their dinner at 8 p.m. tomorrow.

Again we also use this tense to talk about actions in the future which are already planned or previously arranged. In the same way to express an action that is planned or arranged to take place in the near future we use the present continuous tense.

Examples :

- i) I **will be staying** here till Sunday. (future continuous tense)
- ii) I **am staying** here till Sunday. (present continuous tense)
- iii) We **will be leaving** for Delhi in half an hour. (future continuous tense)
- iv) We **are leaving** for Delhi in half an hour. (present continuous tense)
- v) They **will be learning** Hindi till next month. (future continuous tense)
- vi) They **are learning** Hindi till next month. (present continuous tense)
- vii) I **will be working** till 11.30 p.m. tonight. (future continuous tense)

- viii) I am working till 11.30 p.m. tonight. (present continuous tense)
 ix) Ribi **will be playing** for our team even next year. (future continuous tense)
 x) Ribi **is playing** for our team even next year. (present continuous tense)

Activity 2

Rewrite the following sentences using the future continuous tense.

- Our teacher (teach) geography till next November.
- The teacher (meet) the boy at this time tomorrow.
- Gunjan and Krishan (play) badminton at this time tomorrow.
- My mother (write) the story till 10 o'clock tonight.
- Meghna (leave) for Kolkata in an hour.

C. The Future Perfect Tense

Future perfect tense is used to indicate the completion of an action by a certain time in the future

Sentence Structure of The Future Perfect Tense

Subject	+	will/shall	+	have	+	past participle form of verb
I		shall		have		finished
You		will		have		done
They		will		have		completed

Now look at the following table :

Person	Singular	Plural
First Person	: I shall have written	We shall have written
Second Person	: You will have written	You will have written
Third Person	: He /She will have written	They will have written Barun will have written

Examples :

- We **will have completed** this assignment by this evening.
- They **will have finished** painting the walls by this afternoon.

- iii) I **shall have done** the homework before father comes.
- iv) He **will have left** the party before you reach there.
- v) The train **will have arrived** before we reach the station.

Activity 3

Fill in the blanks with future perfect tense form of the verbs given in brackets.

- i) My sister — (recite) a poem before the dance performane of her friends.
- ii) Nilanjana — (decorate) the sitting room before the guests arrive.
- iii) I — (close) all the windows of my house by 5 pm.
- iv) They — (pack) their luggage by tonight.
- v) The boys — (reach) home by now.

Phrasal Verbs

- Get at : The fox tried to **get at** the ripe grapes.
 Get through : He **got through** the homework in time.
 Get on : We **are getting on** well with our studies.
 Get away : The thief **got away** safely.

Idioms

- At close quarters : They heard a hue and cry **at close quarters**.
 At home : He is **at home** in mathematics.
 At random : He called out the names **at random** from the list.

Writing Activity

Diary Entry

1. 7/8/2019

10 p.m.

Dear diary,

My examination starts tomorrow and I am a little nervous. Tomorrow we have the English paper. Contents of the English textbook are not that difficult. In fact I find them easier than many other subjects. But I am scared of the mathematics paper. Mom says that mathematics is a very beautiful subject. She is so caring and always tries to encourage me. I love my mom. Alas ! I am missing my sound sleep that I

have always had. Ok, now I shall read a very beautiful poem of the English textbook and try to fall asleep with it.

Good night
Mithun

Daily Assam. Com

2. 15 May, 2019
Monday 10.30 p.m.
Dear diary,

Shifting to a new city and a new school, in the mid-session, had left me very unhappy. I badly missed my old school, teachers and friends. But today, my new classmates went out of their way to help me when I fell down the stairs in the school. They took me to the first-aid room and even did my written work. It has been just one week, but I have started to feel comfortable already in the school.

Good night
Boby

3. 3 January, 2019 Wednesday 11 p.m.
Dear diary,

I felt very happy today as my art teacher had selected me for an on-the-spot drawing competition in our school and I stood first in that competition. I received many compliments from my friends, teachers and my parents. I got a medal, a trophy, a certificate and Rs. 3000/-. I was very happy at that time because I was thinking of buying some sports equipment with that money. It was really a remarkable day for me.

Good night
Bedanta

Activity

1. You and your friends are participating in a dance drama to be staged in the annual function of your school. Put your thoughts in your diary regarding the experience during its rehearsal.
2. You are trying to write a short story for publication in the annual magazine of your school. Write down your thoughts in your diary.

Build Up Your Vocabulary

Antonyms

able	: unable	kind	: unkind
common	: uncommon	pleasant	: unpleasant
popular	: unpopular	fortunate	: unfortunate
developed	: undeveloped, underdeveloped	stop	: start, resume
agree	: disagree	allow	: disallow
honest	: dishonest	pleasure	: pain
weal	: woe	justice	: injustice
believe	: doubt	death	: life
friend	: foe, enemy	freedom	: slavery
success	: failure	rise	: fall
rest	: motion	virtue	: vice
love	: hatred	giant	: dwarf
dawn	: dusk	gain	: loss
sweet	: bitter	top	: bottom
bright	: dull	cheap	: costly
clever	: stupid	broad	: narrow
full	: empty	extravagant	: frugal
friendly	: hostile	deep	: shallow
public	: private	thick	: thin
competent	: unfit	timid	: brave
loose	: tight	coarse	: fine
offer	: refuse	create	: destroy
conceal	: reveal	refuse	: accept
lament	: rejoice	lead	: follow

Synonyms

ancient	: old	achieve	: accomplish
anger	: rage	bear	: endure
build	: erect, make, construct	blend	: mix, mingle
brief	: short, concise	civil	: polite, courteous
common	: general, ordinary	comprehend	: understand
confuse	: puzzle, perplex	check	: restrain
character	: conduct, nature	capacity	: ability
delicious	: palatable, tasty, delightful	dream	: vision, imagination
disease	: illness, ailment, malady	dirty	: shabby, untidy, filthy
distress	: grief, sorrow	error	: mistake
event	: incident, occasion	famous	: celebrated, renowned
foolish	: stupid, silly	grief	: sorrow
gift	: present	greedy	: covetous
guard	: protect	hate	: despise
hide	: conceal	holy	: sacred
just	: fair, right, proper	keen	: sharp, enthusiastic
king	: monarch, ruler	lonely	: alone, solitary
labour	: work, toil	little	: small, tiny
loyal	: faithful	ease	: comfort
