

SPECTACULAR WONDERS

Let us do these activities before we read.

I Look at the pictures given below and sort them into natural and man-made wonders.



1.



2.



3.



4.



5.



6.



7.



8.

Natural: _____, _____, _____, and _____

Man-made: _____, _____, _____, and _____

II Which of these wonders—man-made or natural—are more appealing and why? Share your answers with your classmates and teacher.

III Work in pairs. Write down two wonders of nature that have amazed you. Discuss what makes them impressive. Share your answers with your classmates and teacher.

IV Work in groups of four. Complete the web chart given below with words that you associate with the phrase, 'Nature's Power'. Share your answers with your classmates and teacher.





Let us read

mystifying:
strange or
impossible to
explain

spectacle: an
unusual sight
that attracts
interest

exotic:
uncommon

botanical:
relating to
plants

feats: tasks
difficult to
achieve,
especially those
involving a lot
of skill

indigenous:
native

tangible:
noticeable

India is home to some of the most **mystifying** natural phenomena that surprise and spark our imagination.

1. THE VALLEY OF FLOWERS, UTTARAKHAND



The Valley of Flowers is an eye-catching **spectacle** with around 600 species of **exotic** flowers, including orchids, poppies, primulas, marigold, daisies, and anemones. It is a place where nature blooms in its full glory offering an attractive view.

The trek to the valley offers spectacular views of beautiful waterfalls and wild streams. The valley is also home to rare wildlife species like the grey langur, flying squirrel, red fox, lime butterfly, and snow leopard, to name a few.

With a stunning backdrop of the mighty Himalayan ranges, the Valley of Flowers National Park presents an unforgettable experience for visitors. Spread over a huge area in the Chamoli district, the Valley of Flowers National Park is a UNESCO World Heritage Site. Between the months of May and October, this area turns into a **botanical** wonderland!

2. THE LIVING ROOT BRIDGES, MEGHALAYA



Imagine building a bridge without the use of cement, stones, concrete, etc. Is it possible? The living root bridges are incredible **feats** of engineering built by the **indigenous** people of Meghalaya. The living root

bridges are one of Meghalaya's most beautiful **tangible** UNESCO world heritage sites.

Crossing the many waterways without bridges was difficult for people in the past, during monsoons.

Attempts to use bamboo or wooden bridges across these waterways proved **futile** as these bridges could not last long in the heavy rains and strong waters. Living root bridges are an innovative and indigenous solution to solve this age-old problem.

They are made of **intertwined** roots which are a sort of magic, but they aren't imaginary. These bridges have been built for centuries by the indigenous people of the land. It is a naturally built ecosystem of local flora. It also symbolises the relationship and knowledge that the local people have over their region and the cultural significance that it holds for them. Under ideal conditions, a root bridge is thought to be able to **persist** for hundreds of years. These bridges frequently rise 50 to 100 feet in the air. The state's longest living root bridge is said to be a **whopping** 175 feet in length. There are approximately 100 or so known living root bridges across different villages.

3. THE LONAR CRATER LAKE, MAHARASHTRA



The Lonar Crater Lake is a geological wonder, **nestled** in the town of Lonar in Buldhana district, Maharashtra. It is believed to have been formed thousands of years ago. This ancient landform, consisting of a giant hole, came into

existence when a **colossal** meteorite, blazing at an extremely high speed, crashed into the Earth, leaving behind a stunning mark. It is the only crater in India formed in basaltic rock by a meteorite impact and ranks as the third largest in the world, placing it among the top five largest craters globally.

The crater's perfectly circular depression **cradles** a unique saline lake at its core, creating a striking visual contrast against the surrounding **rugged** terrain. This site is a rare and extraordinary blend of celestial impact and **terrestrial** beauty. The rim of the meteor crater offers a breath-taking spectacle of nature's power and the enduring **allure** of our planet's ancient past.

futile: useless

intertwined:
twisted together

persist:
continue to exist

whopping:
huge

nestled:
situated in a half-hidden or sheltered position

colossal:
extremely large

cradles: holds

rugged: rough

terrestrial: on or related to earth

allure:
attraction



4. MAGNETIC HILLS IN LEH DISTRICT, LADAKH



In the travels around Leh-Ladakh, is a fascinating sight which arouses curiosity to no end—the Magnetic Hill, a place where gravity takes a backseat!

Lying at a distance of around 30 km from Leh, the Magnetic

Hill is marked by a yellow signboard which reads ‘The Phenomenon That Defies Gravity’. It also instructs visitors to park vehicles in the box marked with a white point on the road, which is known as the Magnetic Road. When the vehicles are parked at the indicated spot, they begin moving forward at a speed of almost 20km/h. This unusual place creates an **optical illusion** where vehicles appear to roll uphill, a sight that has left tourists in disbelief for years, caused by the peculiar alignment of surrounding slopes and the horizon line.

5. GLOWING WATERS OF KERALA



Situated 15 kms from Kerala’s Kochi town, Kumbalangi is a beautiful village with vast green vegetation. In the **serene backwaters** of Kumbalangi village, one can see magically glowing waters in the night.

This phenomenon is called **bioluminescence**, and is caused by a high concentration of micro-planktons in the sea, which are small organisms found in marine and freshwater. This beautiful sight has captured the attention of locals as well as tourists, making Kumbalangi an **eco-tourism** village in India. One can experience the village life in all its beauty and simplicity, and **acquaint** oneself to their cuisine and culture.

optical illusion:

something that tricks your eyes and makes you see it differently from how it really is

serene: calm

backwaters: a part of a river where the water does not flow

bioluminescence: light produced inside the body of a living organism by a chemical reaction

eco-tourism: tourism that is responsible towards preserving the environment

acquaint: to become familiar with something

6. THE SUNDARBANS



Can a forest exist in a coastal zone? Yes, they are called mangrove forests, where trees take root under water in the low-oxygen soil. The roots slow down the movement of tidal waters, stabilising the coastline and reducing

erosion. The Sundarbans is one such mangrove forest spread over 1,400 kms in West Bengal, lying in the delta of rivers, such as the Ganga, the Brahmaputra, and the Meghna. The name is derived from *sundari* trees that are plentiful in the area.

The area is also populated by an extensive range of flora and fauna, including many bird species, the majestic Bengal tiger, and other threatened species, such as the **estuarine** crocodile and the Indian python.

7. THE INVISIBLE CHANDIPUR BEACH, ODISHA



Have you seen things disappearing in front of your eyes? Well, such things happen at times, when we keep things at some place, and just forget where we have kept them. But, what if there's a sea that disappears?

This happens in Odisha. It is a beach in the Balasore district where one can witness the sea disappearing mysteriously—the Chandipur Beach which is known for its unique feature of playing hide-and-seek with its visitors.

The sea can actually be witnessed disappearing and reappearing. This is because the sea water moves. It **retreats** by 2–5 km during **ebb tide**, the duration between the high tide and low tide, and comes back to the shore at the time of high tide. This unusual natural phenomenon keeps on happening

estuarine:

living in an estuary (an area where a freshwater river meets the ocean)

retreats: goes backwards

ebb tide: period of time when water flows away from the shore





mystique:
mystery

enigmatic:
puzzling

intrigue:
interest

daily, where one can actually see the sea, and then watch it disappear in front of their eyes!

These awe-inspiring natural wonders of India highlight the **mystique** of the country's landscapes, each phenomenon telling its own story of nature's artistic flair and **enigmatic** charm. They challenge our understanding of the natural world and captivate our senses. They serve as a reminder of the extraordinary forces that shape our environment, blending scientific **intrigue** with the magic of folklore.

Let us discuss

I Complete the information in the table given below. One example has been done for you. Share your answers with your classmates and teacher.

Amazing Natural Phenomena	Location	One Unique Feature
1. The Valley of Flowers	Chamoli district, Uttarakhand	Around 600 species of exotic flowers
2. The Living Root Bridges		
3.	Buldhana district, Maharashtra	
4. Magnetic Hills		
5. Glowing Waters		
6.	West Bengal	
7.	Balasore district, Odisha	



Let us think and reflect

I Read the given extracts and answer the questions that follow.

1. *India is home to some of the most mystifying natural phenomena that surprise and spark our imagination.*

- (i) Replace the underlined phrase with one from the extract.
India is the birthplace of several rare species of flora and fauna that thrive in its diverse ecosystems.
- (ii) What does the phrase 'nature's unusual side' suggest about the phenomena described?
- (iii) Complete the similarity by choosing the correct option.
spark: imagination :: _____ : _____.
- A. inspiration; creativity
B. wonder; amazement
C. effort; reward
D. knowledge; books
- (iv) Identify whether the following statement is true or false.
Some natural phenomena can surprise people.

2. *Have you seen things disappearing in front of your eyes? Well, such things happen at times, when we keep things at some place, and just forget where we have kept them. But, what if there's a sea that disappears?*

This happens in Odisha. It is a beach in the Balasore district where one can witness the sea disappearing mysteriously—the Chandipur Beach which is known for its unique feature of playing hide-and-seek with its visitors.

- (i) Complete the following sentence with a suitable reason.
The writer's most likely purpose to introduce the information about the Chandipur Beach phenomenon with a question is to _____. (engage the reader's curiosity and create a sense of suspense/draw the reader to learn more about the unusual phenomenon/set the tone for the surprising nature of the content that follows)
- (ii) Select the option that is correct for both Assertion (A) and Reason (R).
(A): Chandipur Beach in Odisha is known for its unique feature of the sea disappearing.
(R): The tides retreat drastically, exposing the Chandipur beach.
- A. Both (A) and (R) are true, and (R) is the correct explanation of (A).
B. Both (A) and (R) are true, but (R) is not the correct explanation of (A).
C. (A) is true, but (R) is false.
D. (A) is false, but (R) is true.

- (iii) What does the term 'unique' suggest about the beach in Balasore?
- very popular
 - one of its kind
 - ancient place
 - far from city
- (iv) What does the writer want to convey with the use of the phrase 'playing hide-and-seek with its visitors'?

II Answer the following questions.

- How are the living root bridges a boon for the local people of Meghalaya?
- Why is the Lonar Crater Lake considered a remarkable and rare site?
- What might be the writer's purpose of highlighting the awe-inspiring natural wonders of India?
- The writer uses descriptive language and introductory questions for some of the natural phenomena. What impact does it have on the readers?
- Which of these unusual phenomena did you find the most interesting and why?



Let us learn

I Fill in the blanks with the correct expressions from the text given in the box below.

came into existence	to no end	in full glory
in disbelief	to name a few	age-old problem

- I have read many stories _____.
- Do you know when this little town _____?
- His hard work has helped him _____.
- There are no simple solutions to the _____ of traffic jams.

5. He opened the ancient wooden box and stared at the treasure _____.

6. The garden is _____ in spring
with lots of beautiful flowers in bloom.



II Select the correct synonyms from the box given below that match the list of words in 1–5. You may refer to a thesaurus.

colossal exotic serene
enigmatic spectacular

1. mysterious, puzzling, baffling
2. mighty, gigantic, huge
3. breath-taking, stunning, awe-inspiring
4. peaceful, calm, tranquil
5. unusual, peculiar, foreign

III The expressions 'hide-and-seek' and 'flora and fauna' are used in the text. These are called **binomials**—a pair of fixed words joined by 'and' or 'or'. The binomials are mostly synonyms, antonyms, rhyming words, same sound words (alliterations), etc.

Match the binomials in Column 1 with their meanings in Column 2. You may refer to a dictionary.

Column 1	Column 2
1. odds and ends	(i) put different things together to get a range of possibilities
2. on and off	(ii) complete part of or belong to
3. mix and match	(iii) choose only the best (things, people, etc.)
4. all or nothing	(iv) at some time in the future
5. part and parcel	(v) sometimes, occasionally
6. pick and choose	(vi) increase or develop very quickly
7. sooner or later	(vii) small, unimportant things
8. leaps and bounds	(viii) something to be done completely or not at all

Use the binomials given in Column 1 in sentences of your own.



IV Study the highlighted words in the following sentences from the text.

- The **living** root bridges are one of Meghalaya's most beautiful...
- ...creating a **striking** visual contrast against the surrounding **rugged** terrain.

In the given sentences, the highlighted words 'living', 'striking', and 'rugged' are examples of verbs used as adjectives. Such verbs are called **participles**.

Participles are verb forms that can function as **adjectives**, and they come in two types: **present participles** ('living' and 'striking') usually ending in -ing, and **past participles** ('rugged') usually ending in -ed, -d, -t, -en, or -n. (though irregular verbs may vary)

Present participles are used to describe ongoing or continuous actions.

For example,

People have seen these lights **moving** quickly in random directions but often **hanging** out in one spot for a while before **fading**.

Past participles usually describe actions that have already been completed.

For example,

When the vehicles are parked at the **indicated** spot, they begin moving forward at a speed of almost 20km/h.

Now, fill in the blanks using present participle or past participle form of the verbs in the box given below.

stand amaze carve scatter glow

1. The _____ marble monument looks even more spectacular in the moonlight.
2. The _____ view of the Himalayas from Darjeeling attracts visitors from all over the world.
3. The Sun Temple in Konark features intricately _____ stone wheels and walls.
4. _____ at a height of 182 m, the Statue of Unity is dedicated to Sardar Vallabhbhai Patel.
5. The _____ islands of the Andaman and Nicobar offer some of the cleanest beaches in India.

V Study the highlighted word in the following sentence from the text.

Crossing the many waterways without bridges was difficult for people in the past, during monsoons.

In the given sentence, the highlighted word 'crossing', is one example of a verb used as a noun. Such a verb is called **gerund**.

Gerunds are verb forms that can function as **nouns** and they end in -ing. They can serve as the subject, complement, or object in a sentence, as well as the object of a preposition.

For example,

- Subject of a sentence:
Swimming is my favourite hobby.
- Subject complement:
Her passion is **painting**.
- Object of a verb:
I enjoy **reading** books in my free time.
- Object of a preposition:
She is interested in **learning** new languages.
- After certain verbs:
Shekar avoided **talking** about his weekend plans.

Underline the gerunds and participles in the following sentences. Write 'G' for gerunds and 'P' for participles in the space provided. One example has been done for you.

1. Dancing is a great way to express emotions. **G**
2. Travelling can broaden your perspective.
3. The falling leaves signalled the arrival of autumn.
4. She enjoys cooking new recipes for her family.
5. Reading helps improve your vocabulary.
6. He watched the shimmering stars in the night sky.
7. Forgetting the keys inside, Kanchan locked the door.

VI Combine the following pairs of sentences using participles or gerunds. You may use the clues given in brackets. One example has been done for you.

1. Nitesh entered the room. He saw his friend sitting in the corner.
(participle)
Entering the room, Nitesh saw his friend sitting in the corner.





2. Smitha walked carelessly. She slipped on the doormat. (participle)
3. Sleep for eight hours. It is good for health. (gerund)
4. Ranjith felt happy about the result. He called his parents. (participle)
5. Father encouraged Meena. Meena joined the course. (gerund)



Let us listen

- I You will listen to a brother and sister discuss a natural phenomenon. As you listen, mark the four true statements from 1–6 given below. (Transcript for teacher on page 153)



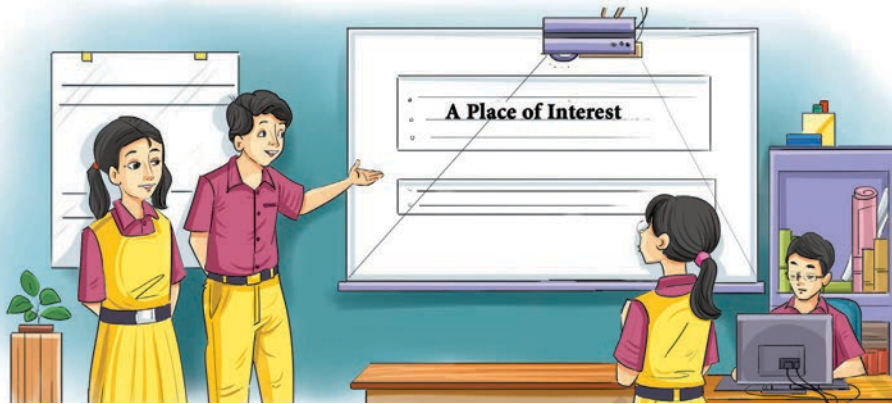
1. The brother was taken aback to see the posted pictures.
2. The brother admitted to not knowing about his sister's favourite picture.
3. The sister stated that the rainbow mountain was like any other mountain.
4. The brother was aware of the reason for the formation of colours on the mountain.
5. The brother was surprised to learn about the mountain being covered with snow till recently.
6. The sister understood nature's role in the beauty of the mountain.





Let us speak

I Work in groups of four. Make a presentation on a place of interest in and around your region that people like to visit. You may use the following guidelines to make your presentation.



Guidelines:

1. Slides 1–2: Choose any popular place of interest in your region.
2. Slides 3–4: Mention where it is located and how to reach there.
3. Slides 5–6: Describe the attractions of the place, why it is popular and explain its historical importance, if any.
4. Slides 7–8: List out weather conditions, local food, customs, and language.
5. Slides 9–10: Suggest the best time of the year to visit and why you recommend this place.



Let us write

I You just read vivid descriptions of the natural wonders of our country. Write a descriptive essay for your school magazine describing anything from nature that attracted your attention. It may be an object, a place, or an event experienced by you. Remember to give a title to your essay.

Use proper format and content organisation—begin with a title, include introduction (one paragraph), body (two to three paragraphs), and conclusion (one paragraph).





Let us explore

I Man-made Wonders

1. Kallanai Dam (The Grand Anaicut) in Tamil Nadu is one of the world's oldest dams and is still in use. The Kallanai Dam represents a significant achievement in ancient Indian hydraulic engineering. It was built by the Chola King Karikala around 150 CE.
2. Another spectacular legacy of ancient wisdom that we have is the world's first residential university at Nalanda in Bihar. Nalanda was established much before any European university, providing higher education to thousands of students. It was declared as a UNESCO heritage site in 1980.

You may visit the site given below to know more about this.

<https://nalandauniv.edu.in/about-nalanda/history-and-revival/>

3. Hampi, a town in Karnataka, is also a UNESCO World Heritage Site. The Vittala Temple in Hampi was built in the 15th century. This temple has 56 special pillars known as the *SaReGaMa* pillars. When these pillars are tapped, they produce musical notes that can be heard clearly.



4. Some of the man-made wonders of modern India include the Bandra-Worli Sea Link in Mumbai; Statue of Unity in Gujarat; Bhupen Hazarika Setu (The Dhola-Sadiya Bridge) in Assam; and many more.

- II Some micro-planktons in the sea are bioluminescent. Have you seen any other life form that has this quality? Identify the insect given below and find out what it is called in your language. Look out for it when you visit a field or a place with a wetland.



TRANSCRIPTS

THE CASE OF THE FIFTH WORD



Let us listen (refer to page 117)

I You will listen to a podcast about ways of improving observation skills.
As you listen, mark true or false for the statements 1–4.

Hello everyone! In today's episode, we'll be discussing some simple but effective ways to improve our observation skills. Being observant isn't just about seeing, it's about truly noticing details in the world around us. Whether it's in daily life or in the workplace, observation skills can help us become more aware, make better decisions, and even improve memory. Let's get started!

First, slow down and take your time. Rushing through tasks often leads to missed details. When you take time to focus on what's in front of you, you're more likely to notice features you might otherwise overlook. When you pause and observe, the details become clearer.

Another effective method is to engage all your senses. Observation isn't just about seeing; it's also about hearing, smelling, touching, and even tasting. The more senses you engage, the more information you absorb. For example, when you're in a new environment, don't just look around—pay attention to sounds, smells, and textures too.

A third tip is to ask questions. Curious people tend to be better observers because they actively try to understand what they're noticing. Asking questions about what you see, like "Why is this here?" or "What purpose does it serve?" forces your brain to think critically about what you're observing.

Next, take notes or make sketches. Writing down what you observe can help reinforce details in your memory. Even quick sketches of an object or place can strengthen your understanding of its features.





Finally, it's important to practise mindfulness. Mindfulness helps you stay present in the moment and fully engage with your surroundings. When you're mindful, you're not distracted by anything, this leads to improved observation skills.

Start incorporating these techniques into your daily routine, and soon you'll be observing things you never noticed before!

- II You will once again listen to the podcast. As you listen, complete the given sentences by filling in the blanks with one to three exact words you hear.

THE MAGIC BRUSH OF DREAMS



Let us listen (refer to page 132)

- I You will listen to five speakers speak about a magical power they wish for. As you listen, match statements 1–7 with speakers (i)–(v). There are two statements you do not need.

SPEAKER (i) : If I could have any magical power, I'd choose the ability to predict the future. Imagine being able to see profits and losses before time. I could make better savings and secure my business. Plus, I'd use it to help others make wise financial decisions as well.

SPEAKER (ii) : I think having the power to learn instantly would be amazing! Exams would be easy, and I'd have more time for activities I enjoy, like playing cricket. If I could remember everything, it would make life so much easier!

SPEAKER (iii) : I would want the power of flying. Imagine being able to see the world from up above clearly. I would be able to go from one place to another quickly without using any means of transport. It would be a dream come true.

SPEAKER (iv) : At my age, I'd love to have the power of healing. There are so many aches and pains



that come with growing old, but it's not just for me. If I could heal others too, I'd help my family stay healthy and happy.

SPEAKER (v) : If I had a magical power, I'd want control over the weather. We depend so much on the rains. With this power, I could ensure that crops always get the right amount of rain and sunshine.

SPECTACULAR WONDERS



Let us listen (refer to page 148)

I You will listen to a brother and sister discuss a natural phenomenon. As you listen, mark the four true statements from 1–6 given below.

BROTHER : I liked the pictures Uncle Dileep posted yesterday from the Republic of Peru. Can you guess which was my favourite?

SISTER : I know it was the Rainbow Mountain. I say that because it was certainly my favourite.

BROTHER : Really! I didn't know it was your favourite too. Can you imagine the creativity in Nature? What a marvellous natural phenomenon!

SISTER : I could not believe my eyes when I saw that picture. There are so many colours there. Do you know how it's formed?

BROTHER : Of course! It's actually quite amazing. The mountain gets its colours from layers of minerals like clay, limestone, and sandstone that got deposited millions of years ago.

SISTER : Wow, I read that too. I think each colour is due to a different mineral. Like, the green comes from copper, and the red from clay. It's like nature painted the mountain!





BROTHER : I cannot believe the fact that it was all buried under snow until recently.

SISTER : Oh! The melting snow must have made it visible again. That's why it looks so fresh and bright today.

BROTHER : Those layers of minerals were actually deposited by water from ancient seas and lakes.

SISTER : Each colour represents a different time in history. That's why it's called the rainbow mountain.

