

All About Eclipses

A solar eclipse occurs when the moon appears between the earth and the sun and partially blocks the sunlight.

A lunar eclipse occurs when the earth appears between the sun and the moon and restricts the sunlight from reaching the moon.

Name the eclipse using the given clues and the Help box.

Help box

- Total solar eclipse — ④
- Total lunar eclipse — ①
- Partial lunar eclipse — ③
- Partial solar eclipse — ②
- Annular solar eclipse — ⑤

- ② It occurs when the sun, moon and earth are not exactly in a straight line and as a result, only a small part of the sun is covered by the moon's shadow.



Partial solar eclipse

- ④ In this type of eclipse, the moon completely blocks the sun.



Total solar eclipse

- ① In this type of eclipse, the sun and the moon appear on exactly opposite sides of the earth; and the moon appears red in colour.



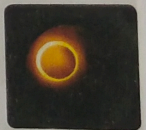
Total lunar eclipse

- ③ In this type of eclipse, the earth's shadow covers only a part of the moon.



Partial lunar eclipse

- ⑤ In this type of eclipse, the moon covers the sun's centre, with only its outer edges being visible forming a ring of fire around the moon.



Annular solar eclipse

Do You Know?

A lunar eclipse can occur only on the night of the full moon.

Let Us Apply

Umbra is the darkest or the completely dark central portion of a shadow cast by the Earth or moon during an eclipse. What does the term 'penumbra' mean?




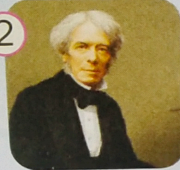

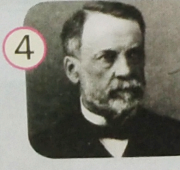

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Scientists and Their Contributions

Match the pictures of scientists with their names and scientific contributions.

Column A	Column B	Column C
 1	i Michael Faraday	a Discovered two new chemical elements
 2	ii Louis Pasteur	b Invented the electric motor
 3	iii Galileo Galilei	c Proposed the theory of gravity
 4	iv Isaac Newton	d Invented pasteurisation and the vaccines for rabies and anthrax
 5	v Marie Curie	e Invented the telescope

Do You Know?
Albert Einstein is known as the Father of Modern Physics.

Let Us Apply
List the famous works of Isaac Newton.



Beak Tales

Draw a line to match these birds with the features of their beaks.



Hawk



Dove



Duck



Cardinal



Woodpecker

a

This bird possesses a slim and short beak that helps it to feed on seeds, fruits, and plants.

b

This bird has a short and thick conical beak that helps in cracking open the seeds.

c

This bird has a peculiarly long beak with chisel-like features. This helps it to bore into barks and consume insects and tree sap by extending its barbed tongue.

d

The curved beak with razor sharp tip of this carnivorous bird helps it to tear its prey into smaller pieces, making it easy to swallow.

e

The flat beak of this bird helps it to strain the water from the sides when it consumes its food that includes aquatic plants and animals.

Do You Know?

The average weight of a bee hummingbird varies from 1.6 to 2 grams.

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Let Us Apply

Storks are mute birds. They clatter their bills to communicate. The beak also helps them to catch their prey. Make a list of the food items that storks eat.

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Literary Felicitations

Read the clues and write the names of these awards given in the field of literature, using the **Help box**.

⑥ Hugo Award

National Book Award

③ Guardian First Book Award

Nobel Prize in Literature

⑦ Man Booker Prize

Pulitzer Prize

- ① Writer of a full-length novel in English language from a Commonwealth Nation, Ireland or Zimbabwe
- ② The US award for achievement for those in newspaper, magazine or online journalism, literature and musical composition with 21 categories including journalism, letters, drama and music
- ③ Award given to first-time authors of English fiction and non-fiction books
- ④ US literature prize awarded in four categories – fiction, non-fiction, poetry, and young people's literature along with two lifetime achievement awards
- ⑤ A prestigious literature award given to an author for their outstanding work
- ⑥ Award given for science fiction or fantasy and categories include Best Novel, Best Graphic Story and Best Fan Writer

Man Booker Prize

Pulitzer Prize

Guardian First Book Award

National Book Award

Nobel Prize in Literature

Hugo Award

Do You Know?

Rabindranath Tagore was awarded the Nobel Prize for Literature in 1913.

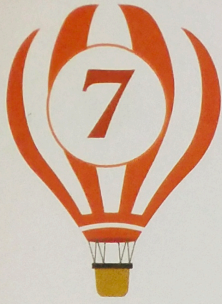
Let Us Apply

You have learned about some of the most prestigious literary awards in this chapter. Find the names of some recipients of these awards.



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Mythical Creatures

Identify these mythical creatures and write their names using the Help box.

Help box

③ Unicorn	④ Werewolf	① Phoenix
② Yeti	⑥ Dragon	⑤ Vampire

①



Phoenix

②



Yeti

③



Unicorn

④



Werewolf

⑤



Vampire

⑥



Dragon

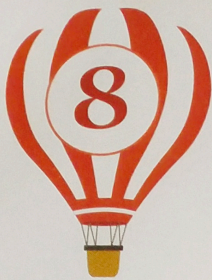
Do You Know?

Mythical creatures are the ones that are made famous in folklore and myths. Conclusive evidence of their existence is yet to be found.

Let Us Apply







According to legend, phoenix is a bird that is reborn from its ashes. Find out about the special qualities of the creatures mentioned above. Which one do you find the most impressive and why?





Coining New Words

Match the word in Column A with the two words in Column B using which it has been formed. Then, match the word with its meaning in Column C. The first one has been done for you.

A	B	C
A1  Baggravation	B1 Breakfast + Dinner	C1 Printed collection of blog posts
A2  Blook	B2 Bag + Aggravation	C2 A news article presented in the form of charts, images or graphics
A3  Charticle	B3 Hungry + Angry	C3 Usual breakfast dishes in evening
A4  Brinner	B4 Sheep + People	C4 Annoyance at airport when your bag arrives last on the luggage belt
A5  Hangry	B5 Chart + Article	C5 Unquestioning followers
A6  Sheeple	B6 Blog + Book	C6 Anger because of extreme hunger

GENERAL KNOWLEDGE

Do You Know?

Like all other areas of study, language is also constantly evolving. As a result, each year new words that are coined and popularly used are added to the dictionary.

Let Us Apply

Words created by blending the sounds and meanings of two words are called portmanteau words.

Combine the following words to create portmanteau words.

- Chill + Relax
- Information + Entertainment
- Breakfast + Lunch



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Prefixes and Suffixes

Use the words in Column A before or after the words in Column B to create new meaningful words.

Column A	Column B	Column C
1 Re	Match	return, rematch, relock, redo, remount, reprint
2 Mis	Turn	<i>match, mismanage, misprint</i>
3 Able	Manage	<i>manageable, lockable, doable</i>
4 Un	Lock	<i>mountable, printable</i>
5 Er	Do	<i>undo, unlock, unhappy</i>
6 Under	Mount	<i>happier, manager, doer, printer</i>
7 Dis	Water	<i>underwater, underage</i>
8 Less	Happy	<i>dismount, dishonest</i>
9 Ed	Honest	<i>matchless, waterless, ageless</i>
	Print	<i>matched, turned, managed, locked</i>
	Age	<i>mounted, watered, printed, aged</i>

Do You Know?

The letters added in front of the root words are called prefix and the ones added after the root word are called suffix.

Let Us Apply

Over the next two days, make a note of prefixes and suffixes you use most frequently in your conversations.





I Play...

Draw a line to match these players with the sport they are associated with.



1
Dwight Howard



2
Diego Maradona

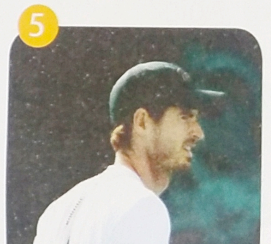


3
Harmanpreet Kaur



4
Steffi Graf

- FOOTBALL
- CRICKET
- LAWN TENNIS
- BASKETBALL



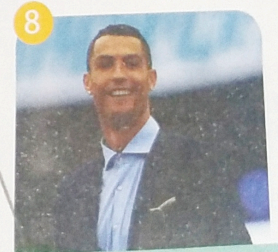
5
Andy Murray



6
Maya Moore



7
Rahul Dravid



8
Cristiano Ronaldo

GENERAL KNOWLEDGE

Do You Know?

Usain Bolt is the first man to win eight Olympic gold medals in sprinting.

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Let Us Apply

It is never too late to pick up a new hobby. There are many examples of sports personalities who excelled at more than one sport. Find out some such examples.

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A Small Step

Tick (✓) the most environment-friendly options in the following situations.

- 1 You scraped your knee and tore your brand new trousers.
 - a. Get similar ones from the market
 - b. Keep wearing the torn ones
 - c. Request your mom to turn them into shorts
- 2 You are going out on a sunny afternoon.
 - a. Carry a water bottle along
 - b. Buy one when you feel thirsty
 - c. Keep tolerating the thirst till you return home
- 3 You are serving lunch for yourself.
 - a. Take everything that is available even if you do not want to eat it
 - b. Take only as much as you can eat and go back for a second serving
 - c. Throw the leftovers in the trash can
- 4 The drawing you made is not satisfactory.
 - a. Tear the page and draw another
 - b. Turn the page over and use the other side
 - c. Give up trying
- 5 Your elder sibling gets a growth spurt and many of his new clothes get wasted.
 - a. Wear their clothes happily
 - b. Wear their clothes grudgingly
 - c. Refuse to wear them
- 6 Your younger sister likes to brush only with a running tap.
 - a. Explain how this is wastage and convince her to turn it off
 - b. Humour her so that she would at least brush
 - c. Ban her from brushing her teeth

Do You Know?

Earth Hour is an annual movement organised by the World Wide Fund for Nature (WWF). Here, people are encouraged to switch off all the electrical appliances that they can for an hour to pledge solidarity to conserving the environment.

Let Us Connect

Despite being young, there are numerous ways in which children can save resources. Look around and find out some of the ways in which you can contribute.



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Acronyms

Acronyms are words formed from the initial letters of other words and pronounced as they are spelled, not as separate letters. For example, North Atlantic Treaty Organisation is abbreviated as NATO.

Write the full forms of the following acronyms.

1 UNESCO

United Nations Educational, Scientific and Cultural Organisation

2 SCUBA

Self-Contained Underwater Breathing Apparatus

3 AIDS

Acquired Immune Deficiency Syndrome

4 NASA

National Aeronautics and Space Administration

5 UNICEF

United Nations International Children's Emergency Fund

6 NOIDA

New Okhla Industrial Development Authority

7 SUV

Sports Utility Vehicle

8 LCD

Liquid Crystal Display

GENERAL KNOWLEDGE

Do You Know?

Acronym comes from two words *acro* meaning 'beginning' and *onym* meaning 'word name'.

Let Us Apply

Make a list of five more acronyms in addition to those learnt here.



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