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Earth : The Blue Planet

Focus On

- ◆ Continents
- ◆ Oceans



HERE WE GO.....

Pictures of some planets are given below. Observe them and answer the given questions :



- Identify and name the planets.
- Which colour help to identify the planet earth. What does this colour depict?
- What are the other colours in the pictures? What do they signify?

Nearly 71 percent of the surface of the Earth is covered with water giving it its dominant blue colour. The rest 29 percent of its surface is divided into different landforms like mountains, plains, deserts, plateaus etc.

Our Earth has the most favourable conditions for life. No other planet out of all the eight planets in our Solar System supports life. Therefore our Earth is a unique planet.

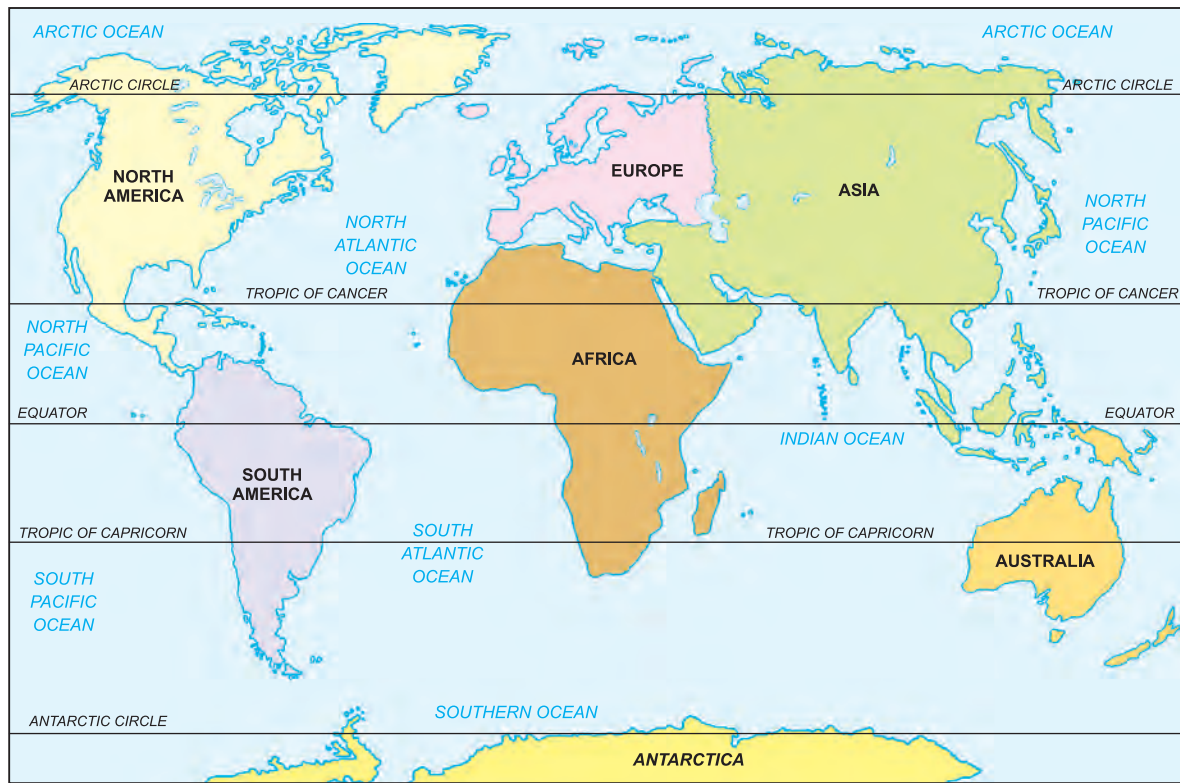
Continents

Asia, Africa, Antarctica, Australia, Europe, North America and South America are the seven continents on our Earth. All the continents have a vast variety of physical features like plains, rivers, lakes, forests, mountains and deserts.

Fact Byte

Earth was a big integrated landmass in the very beginning of its origin. We use to call that a super-continent and is known by the name Pangaea. Due to geological activities, Pangaea broke apart into pieces and formed the continents and islands, as they are today.





Continents and Oceans

Asia

Although Asia has only 30 percent of the Earth's total land area, 60 percent of the world's total population resides here. It is the largest continent. It is the most diversified continent as it is rich in physical features, climatic variations and cultural profile. It also has the largest coastline in the world. It is surrounded by the Pacific Ocean on the east, the Indian Ocean on the southern side and the Arctic Ocean on the northern side.

The climate of Asia is mostly tropical. It bears the variation in daily temperature ranges. Asia has rich physical features including the Himalayas, the tallest mountain range in the world; the Gobi desert of China, the coldest desert in the World and the Thar Desert in India, one of the hottest deserts in the world.



The Himalayas



The Thar Desert

Fact Byte

The 14 tallest mountains on the Earth, collectively known as the Eight-Thousanders, are all located in Asia. Each one is over 8000 metres.

Africa

Africa is the second most populous continent and about 15 percent of the world's total population lives here. It occupies almost 20.4 percent of the Earth's total land area and is the



second largest of the seven continents. It is surrounded by oceans on all sides : the Indian Ocean in the east, the Atlantic Ocean in the west, the Southern Ocean in the south and the Mediterranean Sea in the north which separates it from Europe. More than half of this continent is covered with dry land and deserts. Sahara Desert in Africa is the hottest desert in the world. The **Equator** passes through the continent due to which it has great climatic variations.



The Sahara Desert

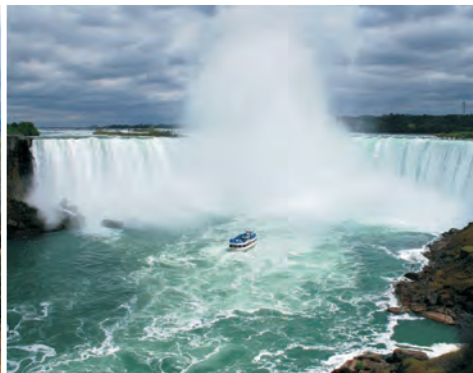
North America

North America is the third largest continent on the Earth. It is surrounded by the Arctic Ocean on the north and the Atlantic Ocean on the east. The Pacific Ocean surrounds it on the western and the southern sides. North America is connected to South America by the **Isthmus** of Panama.

North America has a large number of mountain ranges such as the Rockies and the Appalachians as well as waterfalls, like the Niagara Falls. Its great plain is drained by many rivers and lakes.



The Appalachians



The Niagara Falls



The Rockies

South America

South America is the fourth largest continent in the world. Most of the people inhabit its western and eastern coasts due to its topography. In comparison to other continents, South America has an extremely short coastline.



The Amazon Rainforest

The second largest river and first in terms of the amount of water, the Amazon river, flows through this continent. The world's highest waterfall, the Angel Falls is also located here. This continent is most famous for its prosperous **biodiversity** in the world's largest forest : the Amazon Rainforest.



The Angel Falls



Antarctica

Antarctica is the coldest, driest and windiest continent in the world. It is the fifth largest continent. It has remained mostly unaffected by the ruthless exploitation of nature by human beings. The continent is also called the **White Continent**. Being a desert of ice, it is practically inhabitable and hence no particular country has a political boundary on this continent. Only animals like whales, seals, penguins, etc., that are adapted to extremely cold climate can live on this continent.

South Pole lies in Antarctica. It is completely surrounded by the Southern Ocean. Antarctica lies in the Southern Hemisphere of the Antarctic region.

This astonishing continent holds the key to the most distinct secrets of the Earth's history. Scientists are continuously trying to explore Antarctica and many countries including India, USA, Russia, etc. have set up their research laboratories here.

Dakshin Gangotri, Maitri and Bharti are the research stations settled on Antarctica by India.

Europe

Europe has 6.8 percent of the world's total land area. It is the second smallest continent in the world. But, it is the third most populous continent in the world as 11 percent of world's population live here.

The Arctic and the Atlantic Oceans lie to the north and west of this continent, respectively. The Mediterranean Sea, the Caspian Sea and the Black Sea are on its southern side. It is separated from Asia by the watershed divides of the Ural and Caucasus mountains in the east. Europe's southern region is mountainous whereas its northern region has a vast plain extending towards the east and is popularly known as the **Great European Plains**.

Australia

Australia, is often also known as the 'Island continent' because it is the smallest continent in the world. But, despite being small, it is one of the most developed countries in the world in all respects and standards.



Maitri, India's second permanent research station in Antarctica, was built on the rocking mountainous region named Schirmacher Oasis

Fact Byte

The majority of Antarctica is covered in ice (20 million square kilometres) and only 1% is permanently ice-free. This ice, with an average thickness of 1.6 km contributes to 90% of the world's fresh water.



The Alps Mountain Range



It is located in the Southern Hemisphere and is surrounded by the Indian Ocean in the west and the Pacific Ocean in the east, the Southern Ocean (Antarctic) in the south and the Arafura Sea in the north.

The world's largest coral reef, the Great Barrier Reef, lies on the north east coast of Australia. It is enriched with different physical attributes like the Great Dividing Range and the Blue Mountains.



The Great Barrier Reef is home to diverse marine ecosystems

Oceans

There are five oceans that contain 97 percent of the Earth's total water. These oceans in the descending order of their size are the Pacific, Atlantic, Indian, Southern or Antarctic and Arctic oceans.

The Pacific Ocean

It is the largest ocean in the world covering 46 percent of the Earth's water surface. It divides North America and South America from Asia and Australia.

The Pacific Ring of Fire is a horse-shoe shaped area in the Pacific basin, which is home to almost 75 percent of the world's active and dormant volcanoes. This is also one of the most earthquake sensitive zones in the world. Frequent tremors that are experienced around the globe every year are emerged from this pacific basin. The **Mariana Trench** in the Pacific Ocean is the deepest point of the Earth.



The Pacific Ring of Fire

The Atlantic Ocean

The Atlantic Ocean is the second largest ocean in the world. It is also known as the 'Sea of Atlas'. It covers 29 percent of the Earth's water surface area. It is connected to all the other oceans in the world. It has an elongated S-shaped basin separating America from Europe and Africa.

The Mid-Atlantic Ridge is a big **submarine mountain range** in the Atlantic Ocean.



The Mid-Atlantic Ridge

The Indian Ocean

The Indian ocean is the third largest ocean. It covers 20 percent of the Earth's water surface. It is stretched to Asia in the north, Africa in the west, Australia in the east and the Southern Ocean in the south.



Suez Canal connects it to the Mediterranean Sea. It provides major sea routes to the world.

Fact Byte

Sea water can also be less saline near land, where rivers add freshwater. The ocean around Antarctica has a low salinity of just below 34 ppt, and around the Arctic ocean, it is down to 30 ppt in places.



The Suez Canal

The Southern Ocean

The Southern Ocean lies in the Southern Hemisphere. It is also known as the Antarctic Ocean. It completely covers Antarctica and gets water through the merger of the Pacific, Atlantic and Indian Oceans into it.

The Arctic Ocean

This is the smallest ocean in the world and is partially covered with ice most of the year. It is lowest in salinity level in comparison to the other oceans due to low evaporation of water. It is surrounded by Europe, Asia, North America and Greenland.

Flash On

- ◆ Our Earth is the only planet of the Solar System that supports all forms of life.
- ◆ More than two-third of the earth's surface is covered with water.
- ◆ There are seven continents and five oceans on the surface of the Earth.
- ◆ Asia is the biggest continent while the Pacific Ocean is the biggest ocean.



Stir Up Your Mind

A. Tick (✓) the correct answer :

1. A big integrated landmass on Earth that was made up of all the continents has been named as :
 (a) Subcontinent (b) Pangaea (c) Island (d) Antarctica
2. Which is the smallest ocean in the world?
 (a) The Atlantic Ocean (b) The Pacific Ocean
 (c) The Indian Ocean (d) The Arctic Ocean
3. Which is the second smallest continent on Earth?
 (a) South America (b) Africa (c) Europe (d) North America
4. Which ocean provides the major sea routes of the world?
 (a) The Indian Ocean (b) The Southern Ocean
 (c) The Pacific Ocean (d) The Atlantic Ocean



5. Which continent has the shortest coastline of all the continents?

- (a) Europe (b) Asia (c) South America (d) North America

B. Fill in the blanks :

1. The only planet that supports life is the _____.
2. The _____ in the Pacific Ocean is the deepest point of the Earth.
3. _____ has the largest coastline.
4. Approximately _____ percent of the Earth's surface is covered with the water bodies.
5. The world's largest coral reef, lies on the east coast of _____.

C. Match the following :

Column A

1. Arctic Ocean
2. Australia
3. Africa
4. Amazon Rainforest
5. Atlantic Ocean

Column B

- (a) S-shaped basin
- (b) Sahara Desert
- (c) The smallest ocean
- (d) Island continent
- (e) South America

D. Answer the following briefly :

1. What are islands?
2. What percent of the Earth is exposed as land?
3. What connects the Indian Ocean to Mediterranean Sea?
4. What are oceans? Name the largest ocean in the world.
5. Name the largest and the smallest continents of the world.

E. Answer the following in detail :

1. What are continents? Name the seven continents of the world in the increasing order of their size.
2. What is the difference between an island and a continent?
3. What do you mean by pacific ring of fire?
4. Describe some features of Australia.



Practice Time

QUIZ

1. Name the countries that lie on the Equator.
2. How many countries are there in South America?
3. Name the largest and the smallest country in the world.
4. How the continents, that are together known as Eurasia, are separated with each other?
5. Find out the names of five famous islands of the world.

DO IT

Map

On an outline map of the world, mark the following :



1. All the continents.
2. The Isthmus of Panama.
3. The Mariana Trench.
4. Five Oceans.

□ DRAWING WORK

Take a physical map of the world. Cut out the shapes of seven continents with seven different coloured papers. Now paste them on the map at right place. Also mark them.

□ PROJECT WORK

Divide the class in 7 groups. Assign one continent to each. Each group will collect more information about its respective continent and share it in class.

□ HOTSPOT

Which continent do you think is the most suitable for one to live on?

□ YOUR TURN

How many countries are there in Asia? Name 10 prominent countries.

□ HAVE FUN

Name the following :

1. The Sea of Atlas

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2. The desert of Ice

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3. The largest ocean

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4. World's largest and densest rainforest

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5. The hottest desert in the world

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6. The most populous continent

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7. The island continent

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8. The ocean with lowest salinity level

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INFO Organiser

❖ Time to explore the Seven continents further! Find out and fill in the information.

Seven Continents	
→ Asia →	Largest Country _____ Smallest Country _____
→ Africa →	Largest Country _____ Smallest Country _____
→ North America →	Largest Country _____ Smallest Country _____
→ South America →	Largest Country _____ Smallest Country _____
→ Europe →	Largest Country _____ Smallest Country _____
→ Australia →	Largest Country _____ Smallest Country _____
→ Antarctica →	Fauna found here _____ _____

