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# Visual Quiz

1. Which car goes in to which road?

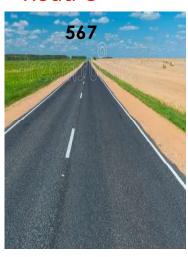
Road A



Road B



Road C



Car 1



Car 2



Car 3



- 1. Car 1 goes in to Road B, because 17 goes into 136
- 2. Car 2 goes in to Road C, because 81 goes into 567
- 3. Car 3 goes in to Road A, because 27 goes into 243

Approximately 6,000 lightning strikes happen on Earth every minute!

## **Pre Algebra For Kids**

1. Eight minus a number is equal to 4.

Express the above as an open sentence using a variable x.

a. 
$$X = 4$$

$$b.8 - X = 4$$

a. 
$$X = 4$$
 b.  $8 - X = 4$  c.  $X - 8 = 4$  d.  $8 \div x = 4$ 

d. 
$$8 \div x = 4$$

2. Five times a number is equal to 15.

Express the above as an open sentence using a variable y.

$$a.v + 5 = 15$$

a.y + 5 = 15 b. y x 5 = 15 ( c. 
$$y \div 5 = 15$$
 d. y = 3

**C.** 
$$y \div 5 = 15$$

$$d. y = 3$$

3. Start with a number y, multiply it by 7, and then add 4. Write this as an algebraic expression

a. 
$$4y + 7$$

b. 
$$7y + 4$$

a. 
$$4y + 7$$
 b.  $7y + 4$  c.  $7(y+4)$  d.  $7y - 4$ 

$$d.7y - 4$$

4. Start with a number y, divide it by 5, and then add 13. Write this as an algebraic expression.

**a.** 
$$\frac{y}{5} + 13$$

a. 
$$\frac{y}{5} + 13$$
 b.  $\frac{y+13}{5}$  c.  $\frac{y}{5} - 13$  d.  $\frac{y}{13} + 5$ 

$$C.\frac{y}{5} - 13$$

d. 
$$\frac{y}{13} + 5$$

5. Start with a number y, divide it by 3, and then add  $\frac{2}{3}$ 

Write this as an algebric expression

.a. 
$$\frac{y+\frac{2}{3}}{3}$$
 b.  $\frac{y}{3}-\frac{2}{3}$  c.  $\frac{y}{3}+\frac{2}{3}$  d.  $\frac{y}{3}+2$ 

b. 
$$\frac{y}{3} - \frac{2}{3}$$

$$C.\frac{y}{3} + \frac{2}{3}$$

$$\frac{y}{3} + 2$$

Answers

$$1 - b$$
,  $2 - b$ ,  $3 - a$ ,  $4 - a$ ,  $5 - c$ 

# **Probability For Kids**

- 1. There are six sweets in a bag. One is white, three are red and two are blue. What is the probability of picking a blue sweet?
  - a. 1/6
- b. 2/6 c. 3/6
- 2. When a dice is rolled, what is the probability of getting an even number?
  - a. 4/6
- b. 1/2
- 1/3

there are six numbers on a dice and three of them are even. That means the chance of picking out an even number is 3/6, which is the same as 11/21.

- 3.If you flip a coin, there is always a  $^{1}/2$  chance that it will land on heads.
- a. True b. False

Coins only have two sides - heads and tails - so there is always a 1/2 chance hat it will land on heads.

4. A number is chosen at random from the set of even whole numbers less than 20. What is the set of possible outcomes?

a. {2, 4, 6, 8, 10, 12, 14, 16, 18} b.{0, 2, 4, 6, 8, 10, 12, 14, 16, 18, 20}

c. {0, 2, 4, 6, 8, 10, 12, 14, 16, 18} d.{1, 3, 5, 7, 9, 11, 13, 15, 17, 19}

#### **Answers**

1-b, 2-b, 3-a, 4-c

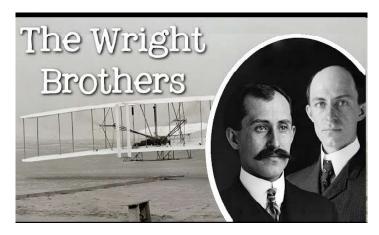
## Airplanes + Science = Sky Adventures



#### Who Invented the Aeroplane?

The Story of the Wright Brothers –
The Pioneers of Flight

Wright brothers, were American inventors and aviation pioneers who achieved the first powered, sustained, and controlled airplane flight (1903).



# The Physics behind this one The Four Forces That Make a Plane Fly

Every flying airplane is controlled by four main forces.

**Lift** – The force that pushes the airplane up.

**Weight (Gravity)** – The force that pulls the airplane down.

**Thrust** – The force that pushes the airplane forward.

**Drag** – The force that tries to slow the airplane down.

**Lift** – The Magical Upward Force"



It is created by the wings.

Air flows faster over the top of the wing and slower underneath, creating a pressure difference.

This pushes the plane upwards.

This is called **Bernoulli's Principle** – fast air has less pressure than slow air

### Weight – The Pull of Earth

Everything on Earth is pulled down by gravity.

Planes have mass, so gravity pulls them down too.

To fly, a plane needs enough lift to overcome weight.

#### Thrust – The Forward Push

Thrust is what moves the plane forward.

It's created by jet engines or propellers.

Like how you push a toy car to roll, engines push the air backward, and the plane moves forward (Newton's 3rd Law).

#### Drag

The Air That Slows It Down





Bernoulli



Birds use the same Bernoulli's principle to fly

As the plane moves, air pushes back against it. That's drag.

The shape of the plane is designed to be smooth and pointed to reduce drag.

Less drag = better speed and fuel use.

#### What Happens When a Plane Takes Off?

The engine creates thrust

The plane speeds up on the runway.

As it goes faster, the wings start to generate lift.

Once lift is stronger than weight, the plane rises into the sky

Wings are shaped like a curved top and flat bottom (called an airfoil).

This shape splits the air – the top airflow is faster, and the pressure is lower.

This creates lift – just like magic but explained by physics

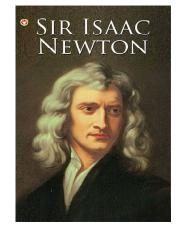
# Newton's Laws and Flight

# Sir Isaac Newton's 3 Laws of Motion help explain how planes fly:

1st Law: A plane stays still unless a force moves it (like engines).

2nd Law: The more mass a plane has, the more force (thrust) it needs to fly.

3rd Law: When engines push air back, the plane moves forward.



#### What About Landing?

To land, pilots slow down the engine.

Wings generate less lift, and gravity helps bring the plane down.

Flaps on the wings are used to increase drag and slow the plane safely.

A big plane like a Boeing 747 can carry over 400 passengers and fly at 900 km/h

## **Earth Science**

Earth Science is the study of our planet Earth—everything from the rocks beneath our feet to the clouds above our heads. Scientists who study Earth Science want to understand how our planet works, what it's made of, and how we can take care of it.

Earth Science has four main pieces:

Geology – The Story of Rocks and Land

Geology is all about rocks, mountains, volcanoes, earthquakes, and the ground beneath us.

Geologists study how mountains are formed, why earthquakes happen, and even search for dinosaur bones!

They also learn about the Earth's layers—like a giant onion with a crust, mantle, and core!



Mount Everest, the tallest mountain on Earth, was formed because of the movement of giant land plates

Earth is the third planet from the sun in our solar system

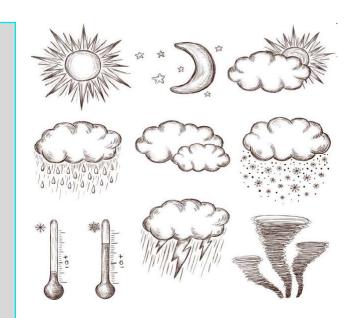
## Meteorology – Weather and Sky Watchers

Meteorology is the study of weather and climate.

Meteorologists look at the clouds, winds, rain, snow, and sunshine.

They tell us if it's going to be hot, cold, stormy, or sunny.

They even use satellites in space to track big storms like hurricanes





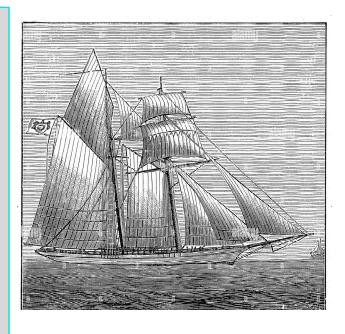
Clouds are made of tiny drops of water or ice.

Oceanography – Diving into the Deep Blue

Oceanography is the study of oceans, seas, and all the amazing creatures that live there.

Oceanographers explore deep underwater, using submarines and robots.

They study waves, tides, and how the oceans affect weather.



Scientists have calculated the Earth to be around 4.5 billion years old!

More than 70% of Earth is covered in water, but we've explored less than 10% of the deep ocean

Astronomy – Looking Beyond Earth"
Astronomy is the study of the stars, planets,
and space.

Earth Science includes learning about our planet's place in the universe.

Astronomers use telescopes to see galaxies far away and help us understand how Earth fits into space.



## Why Earth is a special planet in the solar system?

Earth is considered a special planet in the solar system for several important reasons, especially from the perspective of supporting life.

#### **Presence of Life**

Earth is the only known planet that supports life. It has all the necessary conditions—water, oxygen, moderate temperatures, and nutrients—for living organisms to thrive.



## **Abundance of Liquid Water**

climate and weather systems.

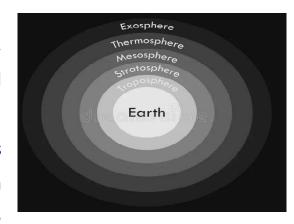
About 71% of Earth's surface is covered with water, primarily in liquid form. Liquid water is essential for all known forms of life and plays a major role in

Earth orbits the Sun at about 107,000 kilometers per hour

#### **Protective Atmosphere**

Earth's atmosphere contains 78% nitrogen, 21% oxygen, and traces of carbon dioxide and other gases.

It provides oxygen for breathing, helps regulate temperature, and shields us from harmful radiation like ultraviolet (UV) rays via the ozone layer.



#### 4. Perfect Distance from the Sun (The Goldilocks Zone)

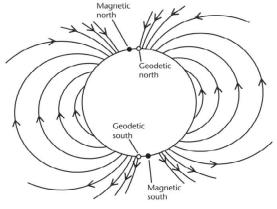
Earth is at an ideal distance (about 150 million km) from the Sun—not too hot, not too cold—allowing for liquid water and moderate temperatures.

#### 5. Magnetic Field

Earth has a strong magnetic field generated by its molten iron core.

This field protects the planet from harmful solar winds and cosmic radiation.

# 6.Stable Climate and Weather Systems"



Earth's tilt and rotation help regulate seasons and weather patterns, which are essential for agriculture and ecosystems.

#### 7. Plate Tectonics

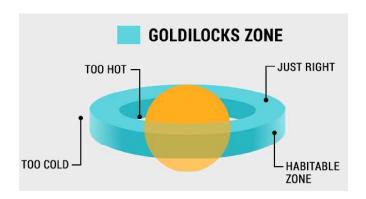
Earth's crust is divided into tectonic plates, which help recycle nutrients through volcanic activity and earthquakes—supporting long-term climate stability.

#### 8. Presence of the Moon

Earth's relatively large Moon stabilizes its axial tilt, leading to predictable seasons and stable climate over long periods.

## Why Earth is Called the Goldilocks Planet

Earth is called the Goldilocks planet because its conditions are just right to support life



It is the perfect distance where temperatures allow water to remain in liquid form. If Earth were any closer to the Sun, like Venus, it would be too hot and water would evaporate



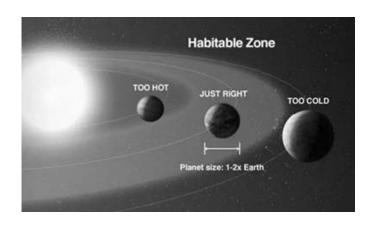
One of the most important reasons for this title is Earth's distance from the Sun. Earth lies in a region known as the "habitable zone" or the "Goldilocks Zone.

If it were farther away, like Mars, it would be too cold and water would freeze

But on Earth, the temperature is just right for oceans, rivers, and rain – all of which are essential for life.

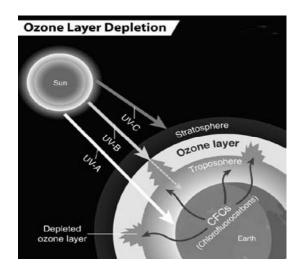
Like all the planets, Earth orbits (travels around) around the sun.

In addition, Earth has a moderate climate, not too extreme, because of its atmosphere, oceans, and its slightly tilted axis. This helps create seasons and weather patterns that are suitable for farming, ecosystems, and human life



Earth also has liquid water, which is another reason

Earth's atmosphere contains the right mix of gases—about 78% nitrogen, 21% oxygen, and small amounts of carbon dioxide and other gases. This composition supports breathing, protects us from harmful solar radiation through the ozone layer, and keeps the planet warm enough through the greenhouse effect

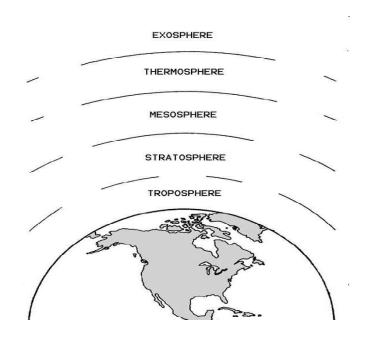


Lastly, Earth has a protective magnetic field and a stable rotation, both of which help in creating a safe environment for life to thrive. The magnetic field shields Earth from harmful cosmic rays and solar winds, while the rotation ensures day and night, helping maintain a steady temperature across the globe

The Earth is tilted 23.4 degrees on its 'axis

## What is the Stratosphere?

The Earth's atmosphere is made up of several layers, each with its own unique features and importance. One of these important layers is the stratosphere



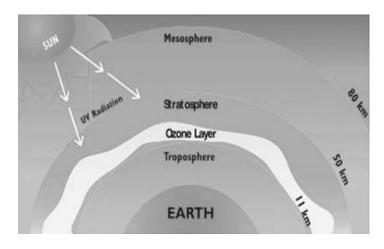
It is the second layer of the atmosphere, located just above the troposphere and below the mesosphere.

The stratosphere plays a vital role in protecting life on Earth and maintaining the planet's climate and weather balance.

The stratosphere starts at about 10 to 15 kilometers (6 to 9 miles) above the Earth's surface and extends up to around 50 kilometers (31 miles) high

The Earth's longest mountain range is underwater

One of the most important features of the stratosphere is the ozone layer, which is located roughly between 15 and 35 kilometers above the surface. The ozone layer acts like a protective shield, absorbing and filtering out most of the harmful ultraviolet rays from the Sun.



Without this layer, life on Earth would be exposed to dangerous levels of radiation, which could lead to skin cancer, eye damage, and harm to plants and animals



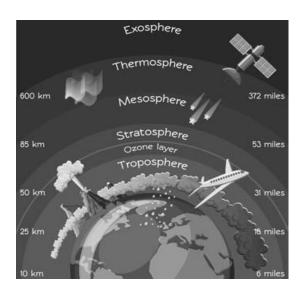
Large volcanic eruptions can sometimes send ash and gases into the stratosphere, which may affect the climate for a short time. It houses the ozone layer that protects all living beings from harmful UV rays, provides a stable environment for aircraft, and plays a key role in Earth's climate system

Understanding and protecting the stratosphere is essential for the health and safety of our planet.

The Earth is not only tilted on its imaginary axis, but it also spins. We have daytime and nighttime because of its rotation.

## Jet Planes and the Stratosphere

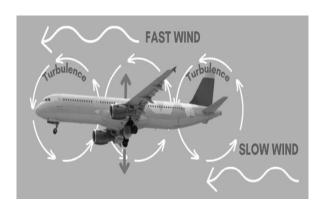
The stratosphere is also important for aviation. Commercial airplanes often fly in the lower part of the stratosphere because it is more stable and has less turbulence compared to the troposphereThis allows for smoother flights and better fuel efficiency





The stratosphere is one of the important layers of Earth's atmosphere and lies above the troposphere, extending from about 10 to 50 kilometers above the Earth's surface.

It is not the highest layer of the atmosphere, but it is the highest layer where jet planes can fly safely and efficiently



Seventy-one percent of the surface of the Earth is covered by water

Commercial and military jet aircraft often fly in the lower stratosphere, typically between 10 to 15 kilometers in altitude. This is because the air is thinner, which reduces air resistance and allows planes to travel faster while using less fuel



Also, the stratosphere is a very stable layer with little **turbulence** and almost no weather disturbances, providing a smoother flight experience for passengers

**Turbulence** in an airplane refers to sudden, irregular air movements that cause the aircraft to shake, jolt, or change altitude unexpectedly. It's essentially the bumpy ride many passengers experience during a flight. This can be caused by various factors, including changes in wind speed and direction, jet streams, thunderstorms, and even seemingly calm skies

In contrast, higher layers like the mesosphere, thermosphere, and exosphere are not suitable for jet planes due to extremely thin air and lack of oxygen needed for combustion engines

The Earth's atmosphere is mostly made up of oxygen and nitrogen. This allows us to breathe.

#### How Will the Sun End? A Peek into the Distant Future



The Sun was born about 4.6 billion years ago from a huge cloud of gas and dust in space.

Scientists believe the Sun will live for about 10 billion years in total. That means it still has around 5 billion years of shining left

#### What Is the Sun Made Of

Sun is a giant ball of hot gases

— mostly hydrogen and helium.

In its core, the Sun produces energy by turning hydrogen into helium through a process called nuclear fusion.

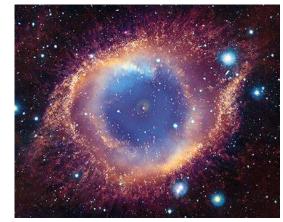
This is what gives us light and warmth.

But one day, the hydrogen in the Sun's core will run out.

In about 5 billion years, the Sun's hydrogen will start to run low.

Then, a big change will happen — the Sun will grow bigger and turn into a Red Giant

It will become so huge that it may even swallow Mercury and Venus, and possibly Earth too



After being a Red Giant for a while, the Sun will shed its outer layers and form a glowing shell

of gas called a planetary nebula — like a beautiful space bubble

At the center, what's left of the Sun will become a White Dwarf — a small, very hot star that slowly cools down over billions of more years.

The Sun is stable and healthy.

It rises every day and will continue to do so for billions of years.

The end of the Sun is a natural part of the life of stars, and it's something scientists love to study to understand our universe better

The Sun is so big, about 1 million Earths could fit inside it

It takes 8 minutes and 20 seconds for sunlight to reach Earth.

Without the Sun, life on Earth could not exist!

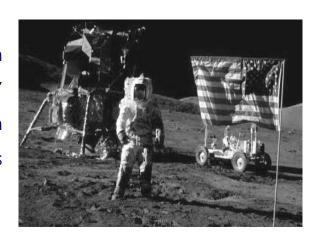
The moon's gravitational pull is what creates high and low tides in the oceans down here on Earth.

## Why Earth is Referred to as the Blue Marble



Our planet Earth has many beautiful nicknames, and one of the most famous is the "Blue Marble.

The term "Blue Marble" was first used in 1972 when the astronauts of the Apollo 17 mission took a stunning photograph of Earth from a distance of about 29,000 kilometers (18,000 miles) away



About 71% of Earth's surface is covered with oceans, seas, rivers, and lakes. Water reflects and scatters sunlight, especially the shorter blue wavelengths

Only 3 percent of the Earth's water is fresh! The rest — 97 percent — is salt water.

In addition to the blue color, the photograph also showed white swirls of clouds, green and brown landmasses, and the icy white of the polar regions. These colors added to Earth's marble-like appearance, making it look like a beautiful, polished sphere.

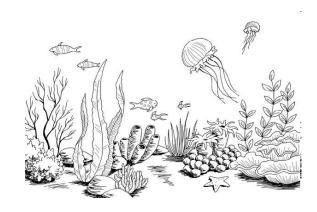
Earth is called the "Blue Marble" because of its breathtaking appearance when viewed from space – a glowing blue sphere dominated by oceans and clouds. T

The name captures both the visual beauty and the preciousness of our planet

Earth looks predominantly blue when viewed from space. No other planet in the solar system has such a vast amount of liquid water, making Earth visually and scientifically unique

It reminds us of how rare and special Earth is in the vast universe and encourages us to care for it with love and responsibility

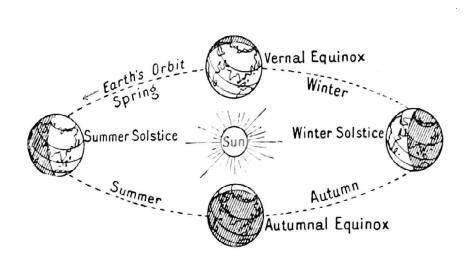
The Earth's largest living structures are coral reefs.



# Why Are the Seasons Different in the Northern and Southern Hemispheres?

The seasons are different in the northern and southern hemispheres because of the tilt of the Earth's axis.

Earth is tilted at an angle of about 23.5 degrees, and as it orbits



the Sun, different parts of the Earth get more sunlight at different times of the year.

When the northern hemisphere is tilted toward the Sun, it has summer, and the southern hemisphere has winter.

Six months later, the situation switches — the southern hemisphere gets more sunlight and has summer, while the northern hemisphere has winter.

So, when it's summer in India or the USA, it's winter in Australia or South Africa
— all because of Earth's tilt

#### Peacock Spiders: Nature's Tiny Dancers in Technicolor Armor



**Peacock spiders** are part of class Arachnida and are most prominent in Australia, though one species is present in parts of China.

Male peacock spiders have vibrant colors and are most known for their energy and mating dances.

Peacock spiders can leap over 20 times their body size.

Peacock spiders each have eight eyes that are equipped with a telephoto lens, tiered retina, and ultraviolet-sensitive photoreceptor.

Females have been observed to lay between 6 and 15 eggs per clutch

Male peacock spiders have black and white hind legs with vibrant red, orange, white, cream, and blue coloration on their bodies.



This coloration comes from microscopic scales found over their bodies. Females lack this color and have a plain brown color.

Peacock spiders also have 6 to 8 eyes, most of which are simple organs that convey information about movement and light and dark.

This is because their eyes have spherical lenses and an internal focusing mechanism with a four-tiered retina.

Their two central eyes are much more powerful, conveying information in fine detail and in color.

Some live in only one kind of habitat

Habitats include deserts, dunes, savannas, grasslands, and scrub forests.

Their diet consists of flies, moths, winged ants, and grasshoppers, as well as any small insects they can capture.

Females may also eat males if they are unimpressed by the males' dances

The Earth's crust is made up of massive rock plates. When these plates move and shift, they can cause mountains to form.

# Kakadu – Australia's Wild Classroom



#### Where is Kakadu

Kakadu National Park is in the Northern Territory of Australia, 171 km southeast of Darwin. It is the second largest national park in the world. The word "Kakadu" comes from the Aboriginal Gagudju language.

It is one of the world's most amazing places filled with wild animals, magical birds, ancient stories, and natural beauty

It is as big as some small countries – over 20,000 square kilometers – and is home to more than 2,000 plant species, 280 bird species, 117 reptiles, 60 mammals, and 10,000 insect species!

#### Meet the Animals of Kakadu

Saltwater Crocodile (Ginga):



The real king of Kakadu! These giant reptiles can grow up to 6 meters long and are often seen sunbathing on riverbanks or swimming in billabongs. Aboriginal people call them "Ginga.

#### 2. Agile Wallaby:

These cute kangaroo-like animals hop through the woodlands. They are fast and clever, using their long tails for balance.



#### 3. Dingoes:

Australia's wild dogs! They are clever hunters and usually roam in small groups, especially at night.

#### 4. Northern Quoll:

A small, spotted marsupial that is active during the night. Kakadu is one of their safe homes.



These furry animals love rocky cliffs and are expert jumpers

Amazing Birds of Kakadu "Kakadu is a birdwatcher's dream. It is one of the best places in the world to see tropical birds.

#### 1. Rainbow Bee-Eater

Bright green, orange, and blue – they look like flying jewels! They love to eat bees and wasps (but don't worry, they remove the sting first!).

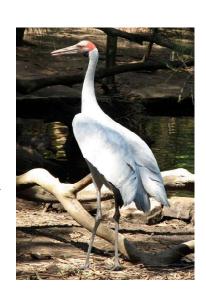
#### 2. Brolga:

A tall, grey bird famous for its graceful dancing. Brolgas spread their wings and leap in the air as part of their courtship dance.

### 3. Jabiru (Black-necked Stork):

The tallest flying bird in Australia, known for its long legs and beautiful black and white feathers.





#### 4. Magpie Goose

They fly in big noisy flocks and are often seen near wetlands. Aboriginal people have used them for food for thousands of years.

#### 5. White-bellied Sea Eagle

This majestic bird soars over rivers and sea, hunting fish with its powerful claws.

#### Reptiles & Frogs

Water Pythons – non-venomous and good swimmers.

File Snakes – look like eels, but they're actually snakes

Green Tree Frogs – bright green and love the rain!

Frill-necked Lizards – famous for their "frill" when scared or excited.

#### Why is Kakadu Special?"

It is a UNESCO World Heritage Site – for both nature and Aboriginal culture.

Aboriginal people have lived here for over 65,000 years





The park teaches us how to live with nature, protect animals, and respect ancient cultures.

Some birds travel thousands of kilometers just to visit Kakadu during the wet season

The crocodile population is so healthy here that Kakadu is sometimes called "Croc Country.

# Dive Deep with Sound – Meet the Fathometer Fathometer – Measure Ocean Depth



The **Fathometer** is a special instrument used to measure the depth of water, like how deep the sea, lake, or river is at a particular place.

It helps ships and boats know how far the bottom is, so they don't crash into underwater rocks or sandbanks.

#### Why is it called "Fathometer

The word comes from "fathom", an old unit used to measure water depth.



It uses sound! This instrument works using a method called echo sounding.:

A machine on a boat sends a sound wave (ping) down into the water.

The sound hits the ocean floor and bounces back up like an echo.

The Fathometer measures the time it takes for the sound to go down and



come back up.

It then calculates the depth of the water using this time and the speed of sound in water.

#### The Science Behind It – Echo and Sound Waves"

Sound travels in waves—just like when you shout in a big hall and hear your echo.

In water, sound travels much faster than in air—about 1,500 meters per second

The time it takes for the sound to return helps calculate how deep the water is.

#### Where is the Fathometer Used?

On ships and submarines to avoid underwater obstacles.

By scientists to study the shape of the ocean floor (marine geography).

In fishing, to find underwater schools of fish (because sound bounces off

them too!).

By port authorities to monitor water depth near harbors and shipping channels.

It may also be used to measure the rise and fall of the tides in areas where the water is shallow.

The Fathometer was first developed in the 1920s.

Today's modern versions are called echo sounders or part of sonar systems. Submarines use similar tech to "see" underwater using sound.

The Fathometer was invented by Herbert Grove Dorsey, an American engineer. He invented the practical fathometer in 1923, and it was later referred to as the Dorsey Fathometer.

## Vendayam



Indian households use combinations of different types of spices in their dishes, and each of these spices has its distinct taste and benefits.

A type of spice commonly found in Indian households is methi. It is also called **fenugreek** in English, and **Trigonella foenum-graecum** is its scientific language.

Fenugreek looks like a clover, with small yellow, white, or purplish-blue flowers and golden brown seeds inside a pod.

Fenugreek is native to the Mediterranean region, western Asia, and Europe. It's an herb people use for medicinal purposes as well as cooking.

Fenugreek seeds contain a substantial amount of fiber, phospholipids, glycolipids, oleic acid, linolenic acid, linoleic acid, choline, vitamins A, B1, B2, C, nicotinic acid, niacin, and many other all elements.

MAPLE

SYRUP



Fenugreek seeds

are similar in smell and taste to maple syrup, making them perfect to add to recipes where you want a hint of sweetness

The seeds of fenugreek have been used as an orally as insulin substitute for reduction in blood glucose, and the extracts from seed have been reported to lower blood glucose levels



Asia is the largest continent on Earth

## **Grasshopper – insect**



Grasshopper is an insect that belongs to the order Orthoptera.

There are over 11 000 species of grasshoppers that can be found worldwide

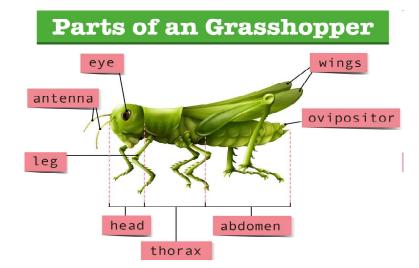
Grasshoppers can be found in the temperate forests, tropical rainforests, meadows, areas near the ponds and streams, rocky areas and even deserts

Size of grasshopper depends on the species. Smallest grasshoppers are only 0.5 inches long.

Grasshoppers are symbols of luck in Japan

Larger species can grow to 5 inches in length

Females are longer than males



Grasshopper can be green, brown, grayish and ochre in color.

Grasshoppers have a pair of antennas on the head. They serve as sensory organ which detects various stimuli from the environment

Grasshopper has an eardrum on the abdomen. Grasshopper can detect rhythm and intensity, but it cannot hear pitch of a sound. Grasshopper has long hind legs that are designed for jumping

String-like structure (located in knee) acts like a catapult which sends grasshopper 10 inches high in the air

Grasshopper can travel a distance that is 200 times longer than the body in a single jump

Front legs of grasshopper are much shorter than hind legs. They are used for walking and feeding.

Grasshoppers are active during the day

During the migration, grasshopper can remain in the air (without landing) three days

Grasshoppers have big appetite.

Daily intake of food overcomes grasshopper's body weight two times.

Grasshoppers are diurnal, meaning they are most active during the day. They tend to rest and are less active at night.

Diurnal animals are active during the daytime and sleep or rest at nighttime

All locusts are grasshoppers, but not all grasshoppers are locusts.



#### **Peanut**



Peanut is an annual plant, which means that it finishes its life cycle in one year

Peanut is herbaceous plant that can grow to the height of 1 to 1.6 feet.

Peanut grows in warm climates on a sandy soil. Oldest known peanut (dating back from 7600 years ago) originates from Peru Peanut produces small yellow flowers that grow above the ground. After self-pollination, flowers lose petals and move under the ground where they reach maturity and turn into the fruit (pods with seed).

The Earth's core is as hot as the Sun's surface and is made of iron.

There are 4 basic types of peanuts: Runner, Virginia, Spanish and Valencia. They differ in size, taste and in the content and amount of vitamins, minerals and proteins.



Runner,



Virginia

One plant produces around 40 pods. Each pod contains 1 to 4 seeds, better known as peanuts. Even though peanuts are known as nuts, they actually belong to the group of legumes.

Peanuts contain more than 30 nutrients that are essential for the human health. They are rich source of proteins, vitamins of the B group and dietary fibers.

Both the Earth and the moon experience earthquakes.

2/3 of globally produced peanuts originate from China and India.

Peanut oil is used for cooking. It is tasteless and contains healthy fatty acids. Since peanut oil doesn't absorb flavors of the food, same oil can be used couple of times.





Skin of peanut is used in the paper industry. Shell of peanut is used as food for animals.

Peanuts are one of the most popular snacks in the world. Besides that, peanuts are used for preparation of numerous salty and sweet dishes.

Peanut butter is very popular in the USA

Today, peanuts are integral part of human diet worldwide. Besides in food industry, peanuts are used in cosmetic, chemical and textile industry.

We have so much water on the Earth's surface that it's often called the "blue planet" or the "ocean planet."

# **Amazing Plant**

#### Rambutan

Rambutan is a medium-sized tropical tree The name also refers to the edible



It is closely related to several other edible tropical fruits, including the lychee,

longan, pulasan, and

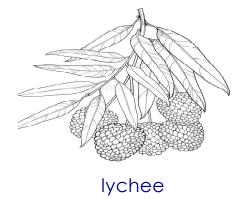




quenepa.

The name rambutan is derived from the Malay

word rambut meaning 'hair' referring to the numerous hairy protuberances of the

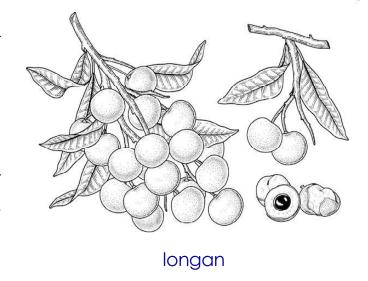


fruits.



It is an evergreen tree growing to a height of 15–24 m. The flowers are small. Trees grown from seed bear after five to six years.

In some areas, rambutan trees can bear fruit twice annually, once in late fall and early winter, with a shorter season in late spring and early summer



Rambutan roots, bark, and leaves

have various uses in traditional medicineand in the production of dyes.

Aromatic rambutan flowers are highly attractive to many insects, especially bees.

Rambutan fruit is 78% water, 21% carbohydrates, 1% protein, and has negligible fat. The fruits are prone to drying out and should be consumed immediately for the best quality and flavor.

#### **Nutritional Value**

Rambutans are a good source of copper to help maintain bones and nerves and provide vitamin C, an antioxidant that strengthens the immune system and reduces inflammation.

The fruits also contain fiber to regulate the digestive tract and contribute smaller amounts of iron, phosphorus, manganese, and magnesium.

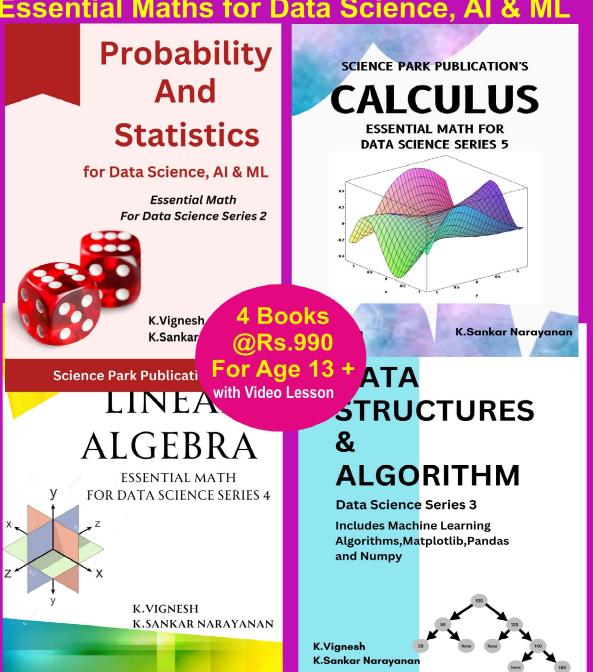
Rambutans are adapted to warm tropical climates, around 22–30 °C

Thailand was the largest producer of rambutans In India, rambutan is imported from Thailand

The first Earth Day was celebrated in 1970.

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