

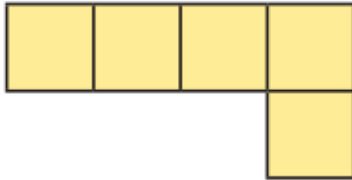
# Mathematics

In mathematics this term we will be looking at area and developing our multiplication and division, facts, focusing first on a deep understanding on how to multiply by 3, 6, 7, 9, 11 and 12.

## Area:

Pupils will encounter area for the first time. They learn that area is the amount of space taken up by a two-dimensional shape or surface. They explore different ways of working out the area of a shape, and it is important that children recognise that some ways are better than others. In this small step, area is found by practically counting squares and not through any formal calculations.

Here is a rectilinear shape.



Add 7 more squares to the shape to make a rectangle.

Is there more than one possible answer?

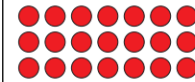


Here is an example of the problem solving questions they will encounter:

## Multiplication and Division:

During the term Multiplication and Division facts will be represented in a number of ways to deepen understanding. E.g.:

Complete the fact family to match the array.



\_\_\_\_ × \_\_\_\_ = \_\_\_\_

\_\_\_\_ × \_\_\_\_ = \_\_\_\_

\_\_\_\_ ÷ \_\_\_\_ = \_\_\_\_

\_\_\_\_ ÷ \_\_\_\_ = \_\_\_\_

Complete the number track.

14		28	35		49	56		70		84	91
----	--	----	----	--	----	----	--	----	--	----	----

3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9

During each maths lesson, your child will have the opportunity to complete a maths challenge linked to their learning for that day. Here is an example of the challenges we will set this term

Is the statement true or false?

$$6 \times 7 = 5 \times 7 + 5$$

Explain your reasoning.

**What you can do to help:** You can support your child with their learning by encouraging them to play TT Rockstars regularly at home. You can find this at [Times Tables Rock Stars \(ttrockstars.com\)](https://ttrockstars.com) or downloading the app. This will really help develop multiplication and division fluency. Your child has had their logins provided to them and should be in your yellow reading logs. Their yellow books also have their doodle logins for Maths homework <https://students.doodlelearning.com/>

## English

In English our two main writing genres will be **story writing** and **non-chronological reports**

Writing Genre:	Story	Non-chronological report
Work:	The children will be writing a story about being lost in the Amazon Rainforest.	Children will write a non-chronological report sharing all the information they have learnt this term about Brazil.
Main skills covered	<p>Pupils will look at the key features of story writing focusing on:</p> <p>Story structure—opening, build up, problem, resolution, ending</p> <p>Writing in the first person</p> <p>Paragraph structure</p> <p>Descriptive skills such as: expanded noun phrases, similes and personification</p> <p>Speech</p> <p>Feelings and thoughts of a character</p>	<p>Pupils will be taught how to write plan their non-chronological reports into different sections. They will look at how to write factual information with an element of description to help the reader understand and imagine the text.</p> <p>They will learn how to use:</p> <p>Headings</p> <p>Sub headings</p> <p>Pictures</p> <p>Captions</p> <p>Bullet points</p>
Ways to help at home:	<p>Talk about the Rainforest, discuss what it would feel like if you were there.</p> <p>Think about the different sounds, smells, tastes, or feelings you would have.</p>	As we progress through the term, talk to your child about their geography learning. Discuss the learning they find interesting and encourage them to research further.

**Spelling:** This term we will be covering: words with the c sound spelled ch, words with the sh sound spelled ch, adding the suffix –ion.

**Guided Reading:** Throughout the term we will read a range of non-fiction based texts that will help to teach and inspire the children about Brazil. If possible, share non-fiction text at home and discuss how the language, structure and purpose of the text is different to fiction.

Please continue to read at home. Pupils have been completing their accelerated reader quizzes when books have been finished. We have set pupils a target score to try to reach by end of this term.

**Other Subjects:** During the term in Computing, . In RE will be answering the question – ‘What can we learn from religions about deciding what is right and wrong?’ In PE we will be continuing hockey and then learning handball. Our PSHE lessons focus on respecting rights. In DT pupils will be making a slingshot racing car. In Art pupils will use glue and batik to create a design on fabric.

# Y4 - Sound

Prior Learning	
2	Properties of materials - 'find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching' - this will have introduced the idea that energy makes things happen and can be seen by its effects
3	Light - 'notice that light is reflected from surfaces' - this will have introduced the idea that light is a form of energy and how it travels.
I can	Sound - Year 4
•	identify how sounds are made, associating some of them with something vibrating
•	recognise that vibrations from sounds travel through a medium to the ear
•	find patterns between the pitch of a sound and features of the object that produced it
•	find patterns between the volume of a sound and the strength of the vibrations that produced it
•	recognise that sounds get fainter as the distance from the sound source increases

## VIBRATIONS

Sound is made when an object vibrates and therefore causes the air around it to vibrate too. These vibrations are carried to your ear for you to hear them.



Sound vibrations can travel through different materials:

### SOLIDS:

metals, stone, wood

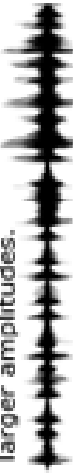
### LIQUIDS: water

### GASES: air

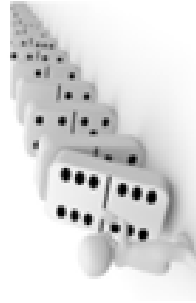
Sound travels better through some materials than others. It travels very well through metal pipes for example.

The louder the volume, the bigger the vibrations. The size of the vibration is called the **amplitude**.

Quieter volumes have smaller amplitudes and louder sounds have larger amplitudes.



Sounds travel in a **wave**. The vibrations make **air particles** close to the object vibrate, which then passes the vibrations to the particle next to it and so on - like dominoes falling!



## PITCH

The pitch of a sound is how high or how low it sounds. A high pitch has a high sound and a low pitch has a low sound.

### Stringed Instruments

Tighter, thinner or shorter strings make higher pitches. Faster vibrations make pitches high and slower vibrations make pitches low.



### Wind Instruments

The column of air inside the instrument causes it to vibrate. Shortening this makes a higher sound, lengthening it makes a lower sound.



### Percussion Instruments

The surface is struck and it therefore vibrates. Smaller instruments have higher sounds (smaller keys of a xylophone, hand bells etc.). The tighter or thinner the skin on a drum, the higher the pitch.



Key Vocabulary	
<b>Sound</b>	Sound is created when something vibrates and sends waves of energy (vibration) into our ears.
<b>Volume</b>	The volume of a sound is how loud or quiet the sound is.
<b>Energy</b>	Energy is "the ability to do work". Energy is how things change and move. It's everywhere around us and takes all sorts of forms. It takes energy to cook food, to drive to school, and to jump in the air.
<b>Pitch</b>	The pitch of a sound is how high or low the sound is. A high sound has a high pitch and a low sound has a low pitch.
<b>Vibrate</b>	Sound is caused by <b>vibrations</b> from a source such as a voice. <b>(Vibrate</b> means move from side to side)
<b>Waves</b>	invisible waves that travel through air, water, and solid objects as <b>vibrations</b>
<b>Travel</b>	How something moves around
<b>Medium</b>	something that makes possible the transfer of energy from one location to another
<b>Insulation</b>	An insulator is <b>a material which does not easily allow heat, electricity or sound to pass through it.</b>
<b>Decibel</b>	A measure of how loud a sound is

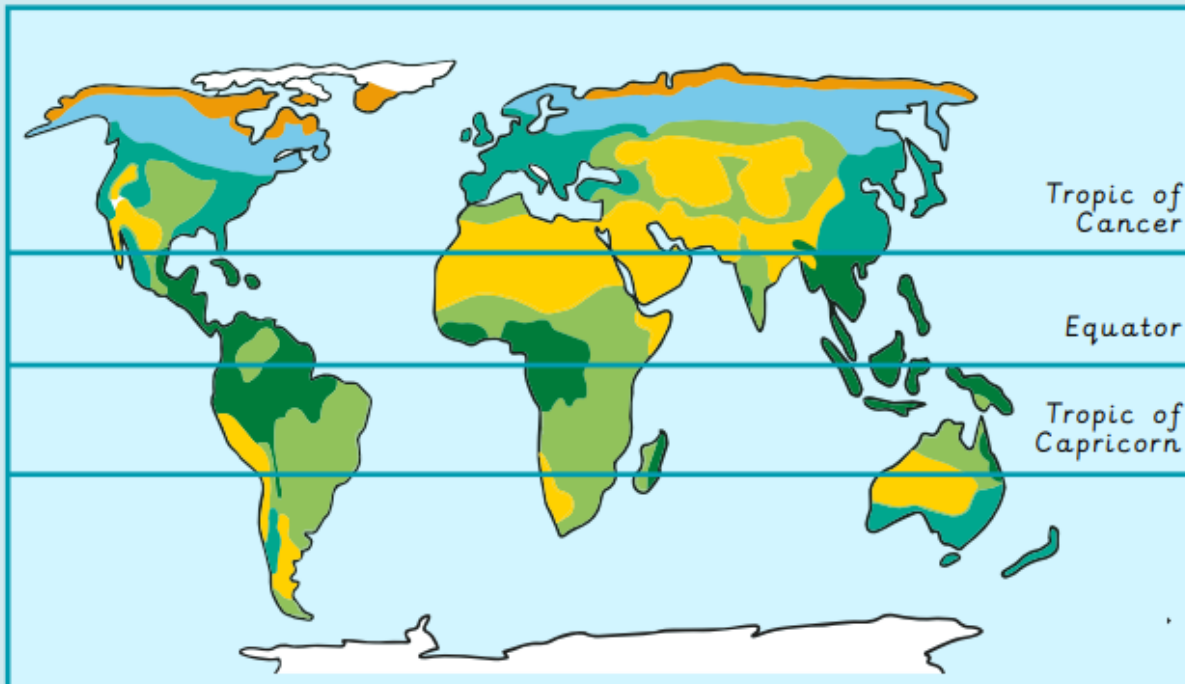


Map of the world's biomes

## biome

An area of the world with a similar climate and landscape, where similar plants and animals live.

- Tundra
- Temperate deciduous forest
- Tropical rainforest
- Savannah
- Desert
- Boreal forest

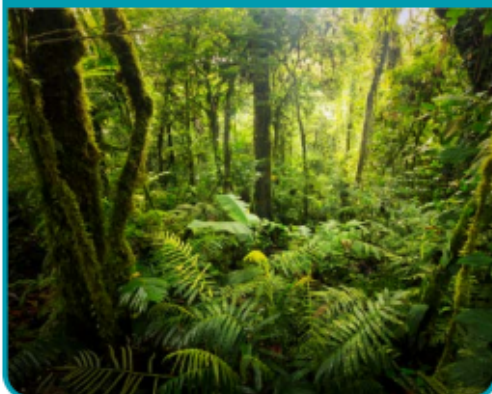


A line of latitude north of the Equator which marks the northernmost edge of the Earth's hottest regions.

An invisible horizontal line that splits the world into two hemispheres.

A line of latitude south of the Equator which marks the southernmost edge of the Earth's hottest regions.

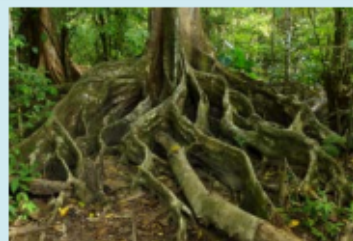
## Tropical rainforest



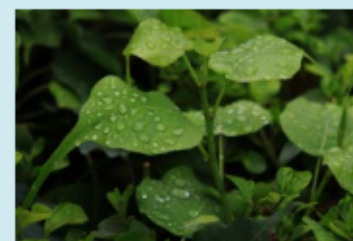
## How have plants adapted in the Amazon rainforest?



Thin, smooth bark ensures rain can run off trees easily.



Buttress roots keep tall trees stable in the wet soil and strong winds.



Drip tips mean rain can run off leaves without damaging them.



Lianas (vines) wind their way up other plants to reach sunlight.



## Map of the Amazon rainforest



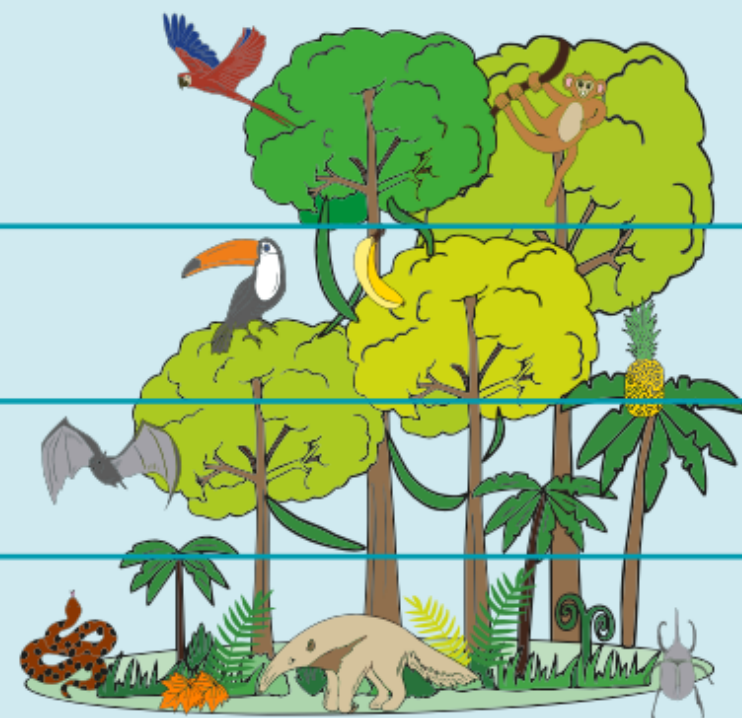
## Layers of the rainforest

emergent  
layer

canopy  
layer

understorey  
layer

forest  
floor

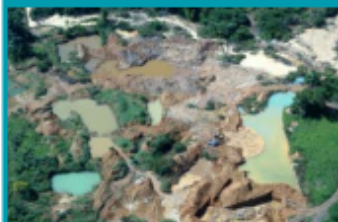


### global warming



When our Earth's temperature rises because of greenhouse gases.

### mining



The process of digging underground for precious metals and stones.

### logging



The cutting down of trees for their wood.

### deforestation



The cutting down of trees in a large area.

### emergent layer

The top layer of the rainforest with the tallest trees that get lots of sunlight, rain and wind.

### canopy layer

The layer of overlapping branches and leaves below the top of the rainforest that gets sunlight, rain and wind.

### understorey layer

The warm and damp layer above the forest floor that gets little light.

### forest floor

The ground layer of the rainforest where it is dark, wet and hot.