

Year 4 Maths Knowledge Organiser - Spring 2



Key Vocabulary
fraction
numerator
denominator
equivalent
hundredths
tenths
decimal
round
compare
decimal place

Fractions

numerator $\frac{3}{5}$ This is how many equal parts you have

denominator $\frac{3}{5}$ This is how many equal part there are altogether

Equivalent Fractions

Equivalent fractions have different denominators and numerators but are the same amount.

$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$

Equivalent fractions can be found by multiplying the numerator and the denominator by the same number.

$\frac{1}{3} \times \frac{2}{2} = \frac{2}{6}$ $\frac{1}{3} \times \frac{2}{2} = \frac{3}{9}$

Dividing by 10 and 100

TH	H	T	O	• 1/10	1/100
		2	9		
			2	9	2

To divide a number by 10, we move each digit 1 place to the right, using 0 as a place holder where needed.

TH	H	T	O	• 1/10	1/100
		5	2		
			0	5	2

To divide by 100, we move each digit 2 places to the right and use 0 as a place holder where needed.

Fractions Greater Than 1

There is one whole and one out of four coloured in.

We can write this as $\frac{5}{4}$

We could also write it as $1\frac{1}{4}$

Subtracting Fractions

When subtracting fractions with the same denominator, the denominator does not change. The numerators only are subtracted.

$\frac{8}{10} - \frac{5}{10} = \frac{3}{10}$

When subtracting from more than one whole, the whole will need to be divided into the number of parts shown by the denominator.

$1\frac{3}{8} - \frac{7}{8} = \frac{4}{8}$

Fractions of an Amount

$\frac{1}{4}$ of 12 = 3

$\frac{3}{4}$ of 12 = 9

$\frac{1}{4}$ of 12 = 3

How many fours are in 12?

Add Fractions

When adding fractions with the same denominator, the denominator does not change. The numerators only are added.

$\frac{5}{10} + \frac{4}{10} = \frac{9}{10}$

Sometimes when adding two fractions, the answer will be greater than one whole.

$\frac{6}{9} + \frac{5}{9} = \frac{11}{9} = 1\frac{2}{9}$

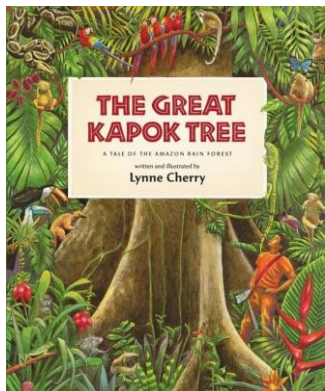


Year 4 English Knowledge Organiser - Spring 2

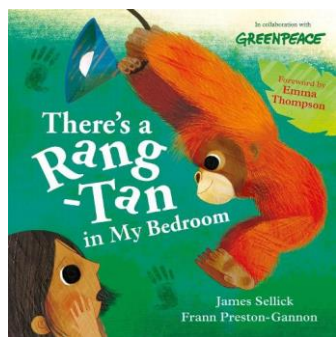


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Core Texts



The Great Kapok Tree
Lynne Cherry



There's a Rang-Tan in My Bedroom
James Sellick
Frann Preston-Gannon

Features of a Narrative

- **Fronted adverbials**, often demarcated with commas, give the reader detail (about when, where or how an action took place), and add variety to the start of sentences.
- Different sentence forms (**statements, questions, commands, exclamations**) and structures (simple, multi-clause) are used to express different purposes and to create variety for the reader.
- **Inverted commas** and the related punctuation rules indicate direct speech.
- Specific detail is added to nouns using precise **adjectives, nouns** and **preposition phrases** to provide clarity and to create vivid images for the reader.
- Time, place and cause are expressed using **conjunctions, adverbs** and **prepositions** to guide the reader through the text and create cohesion.

Features of a Persuasive Text

Persuasion can come in many different forms and text types (e.g. *letters, leaflets, posters, speeches, adverts, brochures*).

Persuasive texts are designed to convince someone of a particular way of thinking. A range of specific techniques and devices are used in persuasive speech and writing:

Rhetorical questions are used to get the reader thinking about the part they can play in the issue in question.

Repetition (e.g. 'day after day after day'), **alliteration**, and the '**power of 3**' (e.g. 'reduce, reuse, recycle') can be used to emphasise key points.

Facts and figures are used to back up and validate the key points being made.

Imperative verbs demand that the reader takes action (e.g. *Do it now! / Stop this!*).

Exaggeration can be used to shock or impress the reader (e.g. *the best/worst in the world*).

Emotive language and images are used to 'tug on the reader's heartstrings'.

The reader is often **directly addressed** to make them consider their own actions/ the personal impact they can have.

Flattery can be used to get the reader onside (e.g. *someone as intelligent as yourself can surely see....*).



Year 4 Science Knowledge Organiser - Spring 2



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Key Vocabulary

absorbs	when a material or object "takes in" the sound wave, it has absorbed the sound
high-pitched	examples of sounds that are high-pitched include a whistle, scream and mouse squeak
low-pitched	examples of sounds that are low-pitched include the sound of thunder and a bass drum
medium	something that is made of particles. Solids, gases and liquids are all mediums
pitch	how high or low a sound is. A mouse squeak is a high pitch sound.
transmit	to send something from one place to another
vibrate	to move back and forth very quickly
volume	how loud or quiet a sound is. Shouting is a loud sound and whispering is a quiet sound

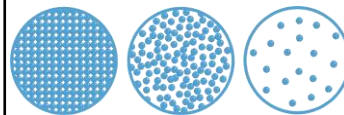
What is Sound?

- **Sounds** are made when objects **vibrate**. These vibrations cause the air **particles** surrounding them to vibrate, causing the vibrations to pass between particles.
- For sound to travel, there must be a medium (a solid, liquid or gas).
- The source is the object that produces the sound, and the detector detects the sound. Sound is transmitted from the source in all directions.
- Sounds get fainter as the distance from the source increases.

Changing Sounds

- **Volume** is how loud or quiet a sound is. The volume depends on the size of the vibrations. The bigger the vibration, the louder the sound.
- **Pitch** is how high or low a sound is. A mouse's squeak is high pitched, and a rumble of thunder is low pitched. The pitch depends on the speed of the vibrations. The faster the vibration, the higher the pitch.

Vibrations



solid | **liquid** | **gas**

The vibrations caused by the sound can travel through the air (gas) but can also travel through liquids and solids.

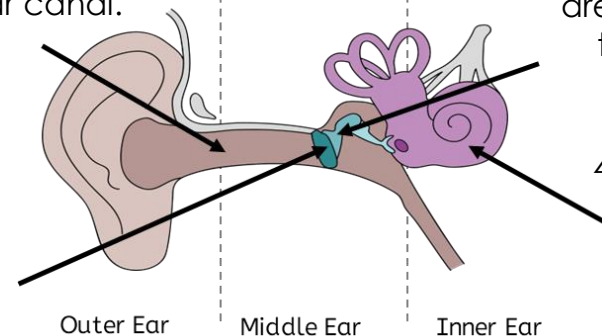
The Structure of the Ear and How We Hear

1. Vibrating air enters our ear canal.

2. This causes our ear drum to vibrate.

3. These vibrations are passed onto the ear bones

4. The ear bones pass the vibrations onto the fluid in the cochlea, which passes impulses to our brain to be interpreted.



Outer Ear

Middle Ear

Inner Ear



Year 4 Geography Knowledge Organiser - Spring 2



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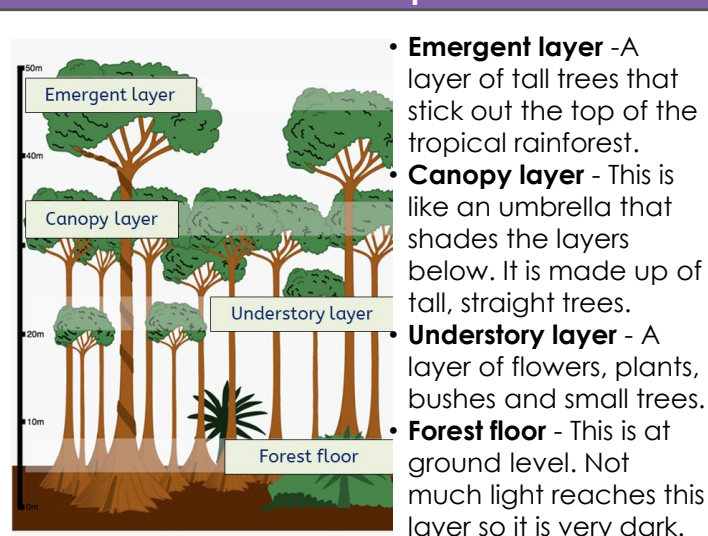
Key Vocabulary

biodiversity	the variety of living things in a given place.
biome	ecosystems on a global scale
COP26	a meeting between 200 countries, held in November 2021, to discuss how to improve the Earth's environment
deforestation	the action of chopping down trees to clear a wide area.
habitat	a place where an organism lives.
logging	the business of cutting down trees for wood.
tropics	the area between the tropic of Cancer and tropic of Capricorn.

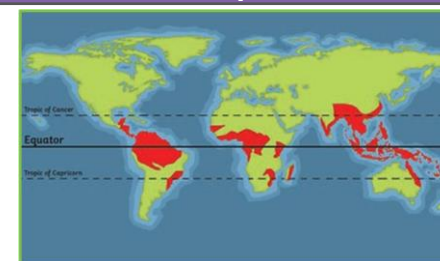
Tropical Rainforests

- Rainforests are found in areas with a climate that has high precipitation. Tropical rainforests have a wet and hot climate due to global atmospheric circulation.
- Tropical rainforests and they are home to more than half the world's total plant and animal species.
- Tropical rainforests provide a habitat for many species. At a global level, they absorb carbon dioxide and release oxygen which helps keep the planet healthy. Many medicines we use today had their origins in the rainforests. At a local level, indigenous tribes like the Kayapo people rely on the rainforest for food and medicines.
- Deforestation of the tropical rainforests is making way for agriculture, logging and mining.
- The United Nations COP26 introduced changes at a global scale that are aimed to protect rainforests around the world.

The structure of the tropical rainforest



Locations of tropical rainforests



- Most of the world's tropical rainforests lie between the Tropic of Cancer and the Tropic of Capricorn.
- Tropical rainforests are found on either side of the equator in South America, Central Africa, South East Asia and Northern Australia.
- The world's largest tropical rainforest (the Amazon) is found in South America.

