

Year 4 Maths Knowledge Organiser - Spring 1



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Key Vocabulary

multiply

groups of

lots of

times

divide

share

remainder

factor

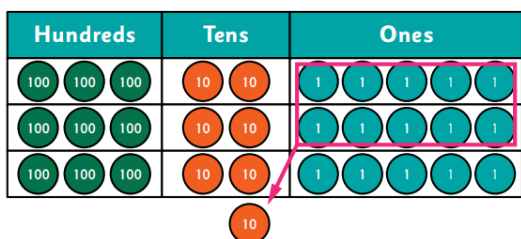
multiple

product

Multiply 2 and 3 digits by 1 digit – written method

$$325 \times 3$$

- 1) Multiply the ones x ones ($5 \times 3 = 15$ ones)
- 2) Exchange the one ten into the tens column
- 3) Multiply the ones x tens (3×2 (tens) = 6 tens)
- 4) Add the exchanged 10 ($6 + 1 = 7$ tens)
- 5) Multiply the ones x hundreds (3×3 (hundreds) = 9 hundreds)



| | H | T | O |
|---|---|---|---|
| | 3 | 2 | 5 |
| x | | | 3 |
| | 9 | 7 | 5 |
| | | | |

Multiplication and division facts up to 12×12

$$2 \times 3 = 6$$

$$3 \times 2 = 6$$

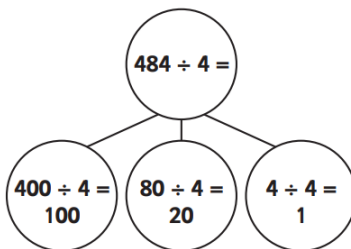
$$6 \div 2 = 3$$

$$6 \div 3 = 2$$

Divide 2 and 3 digits by 1 digit – sharing into equal groups

$$484 \div 4 = 121$$

| Hundreds | Tens | Ones |
|----------|-------|------|
| 100 | 10 10 | 1 |
| 100 | 10 10 | 1 |
| 100 | 10 10 | 1 |
| 100 | 10 10 | 1 |



Units of Measure for Perimeter

1 kilometre = 1,000 metres

1 metre = 100 centimetres

1 centimetre = 10 millimetres

Factors

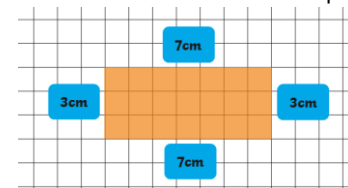
Factors are the numbers that are multiplied together to get a product.

$$3 \times 4 = 12$$

↑ ↑ ↑
FACTOR FACTOR PRODUCT

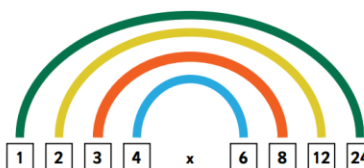
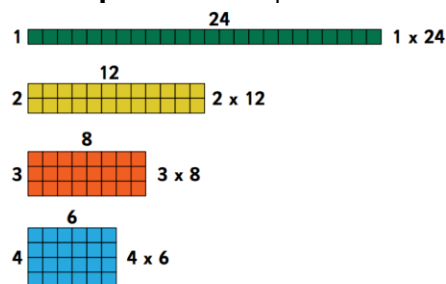
Perimeter

Perimeter is the total length of the outside of a shape.



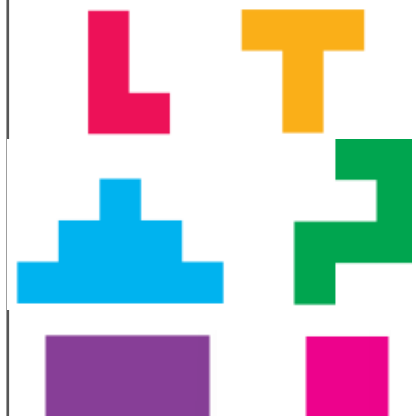
Factors Pairs

Example: Factor pairs of 24



Rectilinear Figures

A **rectilinear** figure is a 2D shape whose sides all meet at right angles (90°)

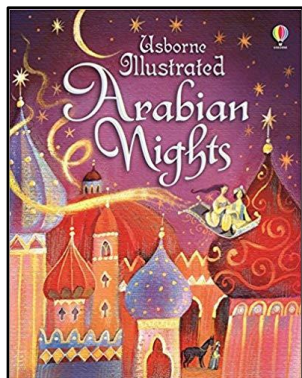


Year 4 English Knowledge Organiser - Spring 1

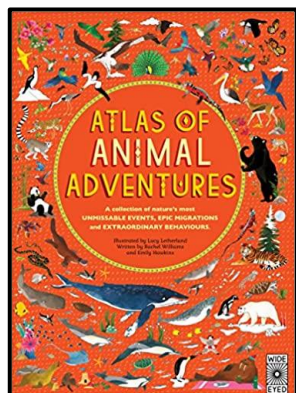


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Core Texts



Usborne Illustrated
Arabian Nights



Atlas of Animal
Adventures
Rachel Williams/ Emily
Hawkins

Features of a Traditional Tale

- **Traditional Tales are long-standing fairy stories**, myths, legends and fables that are well-known in a particular culture, having been passed down for many generations.
- **Introductions are a brief presentation of setting and character**, sometimes using well-known story phrases such as 'once upon a time' or 'there was once'.
- **Build up sections often contain a lot of dialogue** as new characters are introduced and the tension builds, hinting at an imminent problem.
- The **climax of the tale usually contains fast-paced action and suspense**, revealing a major problem -often the threat of death.
- In **the resolution of the tale, tension falls** as the characters plot and take action to overcome the problem, typically encountering more minor problems along the way.
- **Endings are concise** and leave the reader content and relieved, often with a '**happy ever after**' conclusion.

Features of a Dual Purpose Narrative

Like David Attenborough's voiceovers, the pages of 'Atlas of Animal Adventures' are designed to both inform (through writing) and entertain (through images).

In line with the primary purpose of informing, the text uses **formal language** and an **impersonal viewpoint**.

The text is written primarily in the **present tense** (as is often the case when writing to inform), giving the reader a sense that they are inside the pages of book, seeing and experiencing the creatures first-hand.

Facts are supported by **technical vocabulary**, statistical figures and informative detail.

Cohesion is built through the use of appropriate **pronouns** and **synonyms** for referencing, **conjunctions** to link related ideas, and **adverbials** to sequence material.

Precise vocabulary, **expanded noun phrases**, **adverbials** and **prepositional phrases** are used to provide the reader with vivid descriptive detail.

Year 4 Science Knowledge Organiser - Spring 1



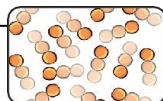
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Key Vocabulary

| | |
|----------------------|---|
| change | To make different |
| condensation | The process in which a substance changes from a gas to a liquid |
| evaporation | The process in which a substance changes from a liquid to a gas |
| freezing | When a liquid turns into a solid |
| melting | A process by which solids turn into liquids |
| particle | The smallest parts of matter |
| precipitation | Water falling to the Earth's surface as rain, snow, sleet or hail |
| temperature | A measure of how hot or cold something is |

States of Matter

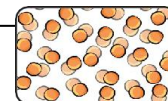
Gas



- Gases are **often invisible**.
- Gases do not keep their shape or always take up the same amount of space. They **spread out** and change their shape and volume to fill up whatever container they are in.
- Gases can be **squashed**.



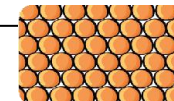
Liquid



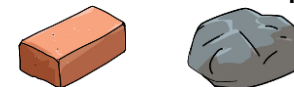
- Liquids can flow or be **poured** easily. They are not easy to hold.
- Liquids **change their shape** depending on the container they are in.
- Even when liquids change their shape, they always take up the **same amount of space**. Their volume stays the same.



Solid



- Solids stay in one place and you can hold them in your hand.
- Solids **keep their shape**. They **do not flow** like liquids.
- Solids always take up the **same amount** of space. They **do not spread out** like gases.
- Solids can be **cut** or **shaped**.

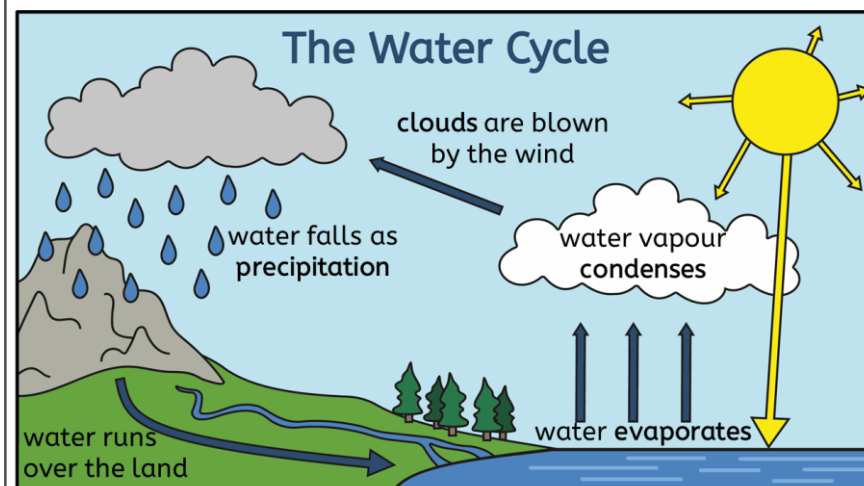


Measuring Temperature

- 1) Place the thermometer in the liquid.
- 2) Wait for the coloured centre to stop moving.
- 3) Read the scale precisely to find the temperature. Ask an adult for help if you are struggling.

Remember: We usually measure temperature in degrees Celsius which can be shortened to °C.

The Water Cycle



Year 4 History Knowledge Organiser - Spring 1



| Key Vocabulary | |
|----------------|---|
| caliph | A successor to Muhammad and the spiritual and political leader of Muslims. |
| caliphate | The area that is led by a caliph. |
| empire | a large group of countries or places ruled by one person |
| scholar | An expert in a particular subject or field of study. |
| significant | something that is historically significant is something that historians think is worth studying and learning about. |

| Key Knowledge |
|---|
| <ul style="list-style-type: none">The Early Islamic Civilisation began with the Prophet Mohammad in 610. It became an empire, led by the caliph.The House of Wisdom was founded in the capital city of Baghdad. It was a library and meeting place for scholars of all backgrounds.Early Islamic scholars built on the ideas of other civilisations and made new developments. For example, Al Khwarizmi gave us the word 'algebra' and introduced the numbers 0-9 into Europe. Ibn Al-Haytham who proved that we see when light enters our eyesIn 1258, a Mongol army attacked Baghdad. They killed scholars and threw books from the House of Wisdom into the river. |

Geography

733

Baghdad

The boundaries of the empire changed over time. At its peak (shown here), the empire covered parts of Asia, Africa and Europe.

Timeline

Stone Age Bronze Age Iron Age

Great Fire of London The first steam train Today

Ancient Egypt Ancient Greece Maya Civilisation

Early Islamic Civilisation

- 610 (7th century) Muhammad starts delivering message of Islam
- 762 (8th century) Baghdad founded
- 830 (9th century) House of Wisdom founded
- 1258 Baghdad destroyed by Mongols