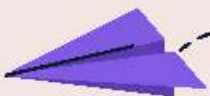




EUREKA¹



Compiled by: Farahnaz Fayaz
Seyedeh Farideh Saneie





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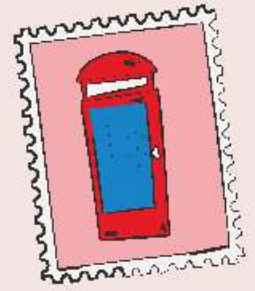
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INTRODUCTION



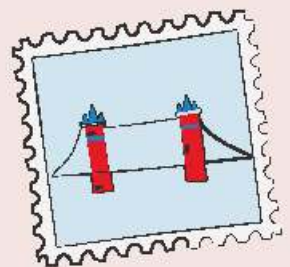
Eureka, is inspired by the ancient Greek word meaning “I have found it!” This exclamation of joy and discovery is famously attributed to the mathematician Archimedes, capturing the essence of intellectual breakthroughs. For Alavi students, Eureka represents the excitement and satisfaction of acquiring Academic English while raising scientific curiosity within a wide range of topics—from biological and historical concepts to fashion and style—broadening their horizons and uncovering limitless opportunities. Just as Archimedes celebrated his discovery, students will experience their own moments of triumph as they progress on this journey.



In today's interconnected world, developing skills in Academic English is no longer a luxury—it is an essential ingredient for success in education, career, and global citizenship. As the language of research, innovation, and higher education, Academic English serves as the foundation for communicating complex ideas clearly and effectively. For Alavi students, this proficiency goes beyond mere linguistic ability; it opens doors to prestigious universities, access to cutting edge knowledge, and participation in meaningful intellectual discourse.



The 21st century demands skills that extend far beyond rote memorization. Critical thinking, problem solving, collaboration, and digital literacy are at the heart of modern education. Academic English supports these competencies by fostering the ability to analyze, synthesize, and articulate ideas in diverse formats. Alavi schools recognize that equipping students with Academic English not only enhances their academic performance but also prepares them to thrive in competitive global environments.



Eureka is designed with the unique needs of Alavi students in mind. By incorporating real world examples, research based practices, and engaging topics, it provides a comprehensive framework for developing language skills at an academic level. Through this journey, students will not only build confidence in their language abilities but also cultivate a mindset that values learning, adaptability, and excellence—qualities essential for success in the 21st century.

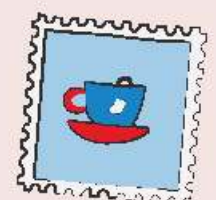
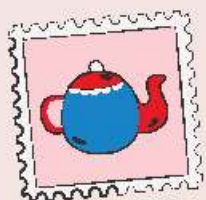




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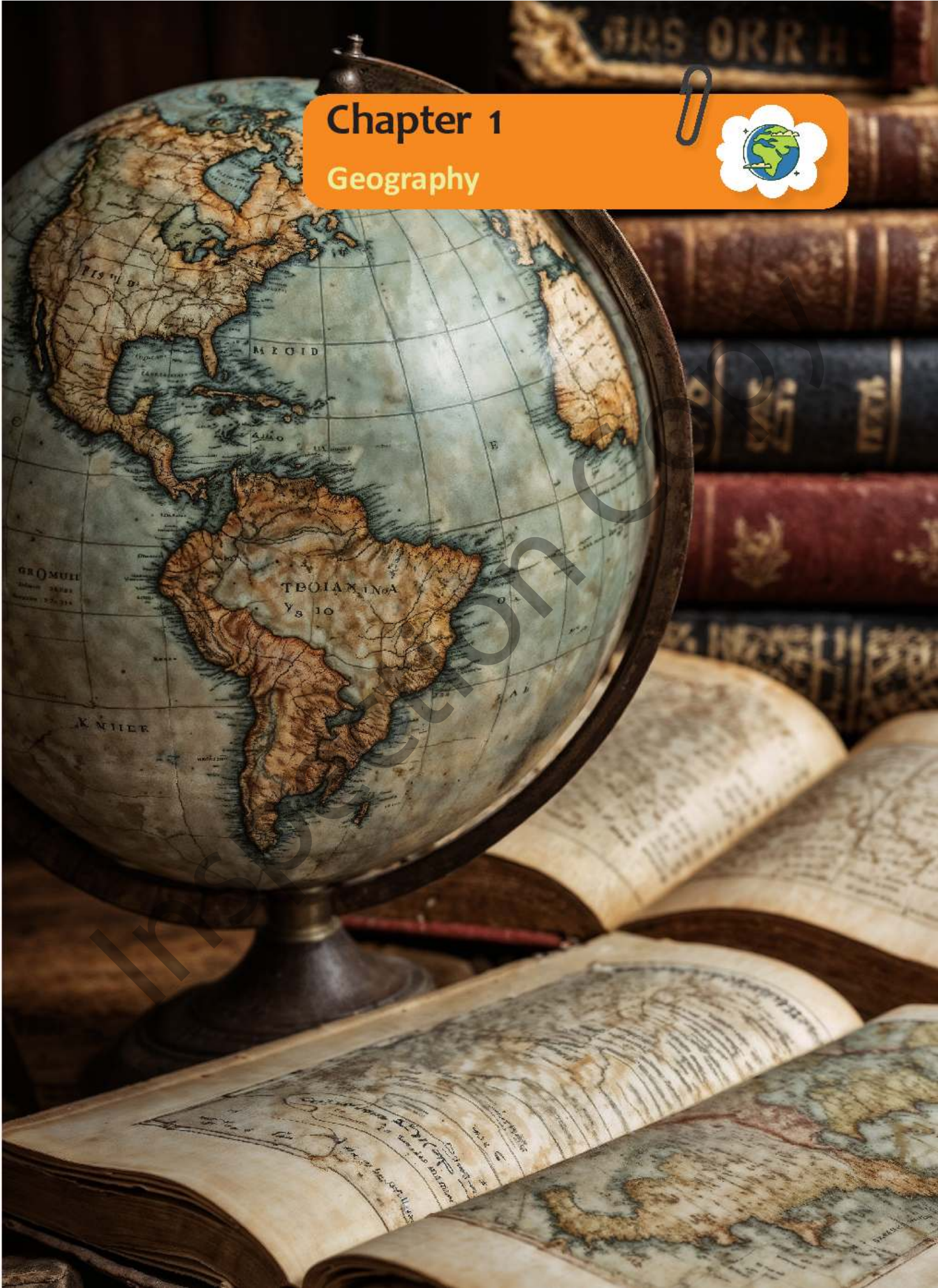
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Chapter 1

Geography





Around the World in 8 days

The Earth

The Earth is a fascinating planet, where endless oceans and vast lands come together to form seven unique continents.



Oceans

A Pacific Ocean

B Atlantic Ocean

C Indian Ocean

D Arctic Ocean

E Southern Ocean

Continents from largest to smallest

1 Asia

2 Africa

3 North America

4 South America

5 Antarctica

6 Europe

7 Australia





Oh! The Places You'll Go!

Asia

The largest and most populous continent, home to rich cultures, diverse languages, and historic landmarks.



Major countries and their capitals:



Russia
Moscow



China
Beijing



South Korea
Seoul



India
Delhi



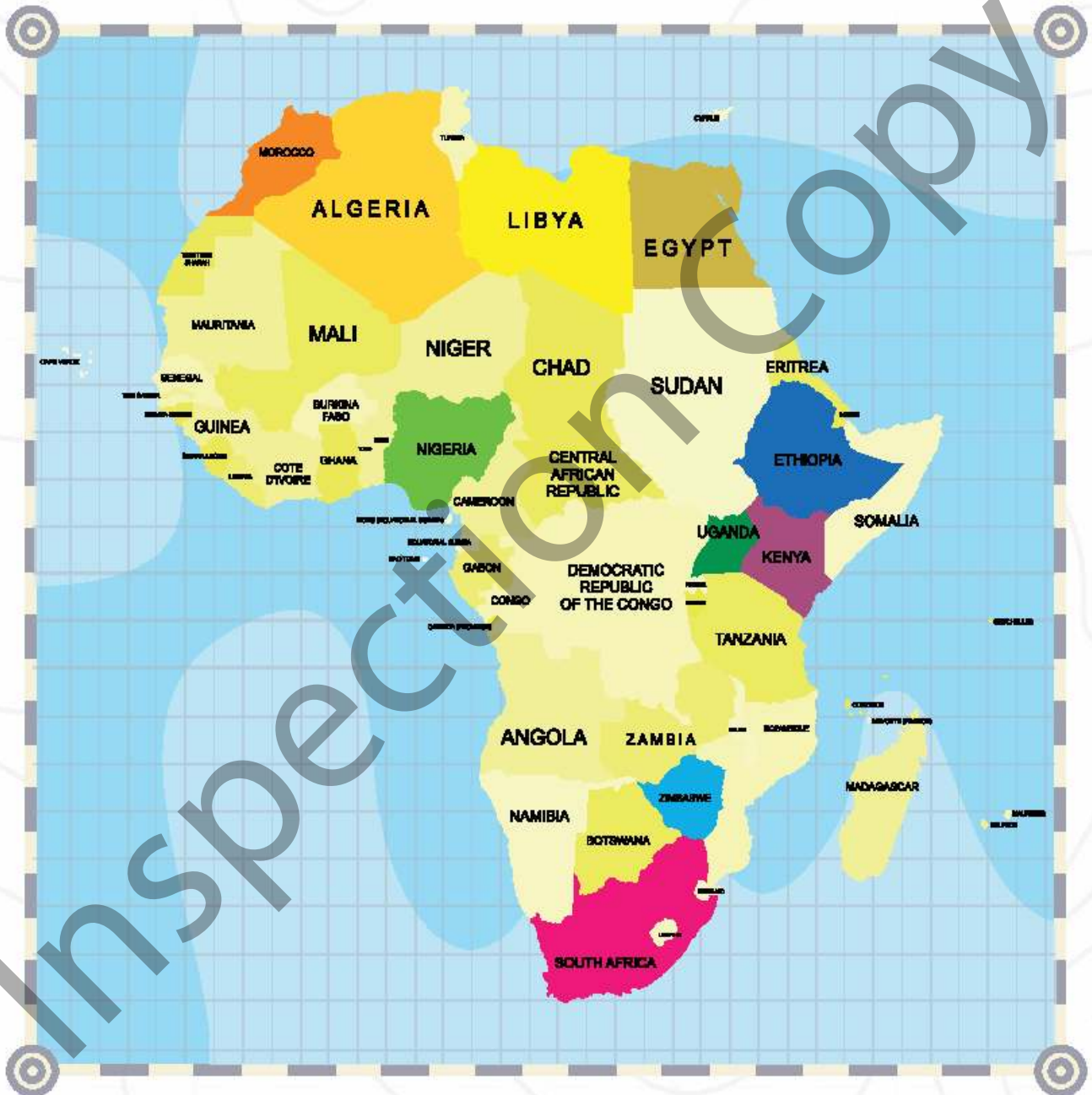
Iran
Tehran





Africa

The second largest continent, known for its rich wildlife and diverse cultures.



Major countries and their capitals:



Algeria
Algiers



South Africa
Pretoria



Zimbabwe
Harare



Egypt
Cairo



Nigeria
Abuja



Sudan	Tunisia	Djibouti	Mauritius	Somalia	Angola	Mozambique
South Sudan	Comoros	The Gambia	Cameroon	Madagascar	Rwanda	Tanzania
Malawi	Seychelles	Zambia	Chad	Benin	Mali	Senegal
Niger	Eswatini	Burundi	Congo	Eritrea	Botswana	Ivory Coast
Burkina Faso	Liberia	Sierra Leone	Mauritania	Cape Verde	Gabon	Ghana
Guinea-Bissau	Lesotho	Guinea	Nambila	Togo	Equatorial Guinea	
Central African Republic	São Tomé and Príncipe	Democratic Republic of the Congo				



Libya Tripoli	Kenya Nairobi	Ethiopia Addis Ababa	Morocco Rabat	Uganda Kampala



North America

A continent with a mix of advanced cities, vast forest, and towering mountains.



Major countries and their capitals:



United States
Washington DC



Mexico
Mexico City



Costa Rica
San Jose



Greenland
Nuuk



-  Jamaica
-  Bahamas
-  Barbados
-  Belize
-  Dominica
-  Panama
-  Grenada
-  Guatemala
-  Nicaragua
-  Haiti
-  El Salvador
-  Saint Lucia
-  Saint Kitts and Nevis
-  Trinidad and Tobago
-  Saint Vincent and the Grenadines
-  Antigua and Barbuda
-  República Dominicana



 
Canada
Ottawa

 
Guatemala
Guatemala City

 
Cuba
Havana



South America

A continent known for its tropical rainforests, rich cultures, and vibrant cities.



Major countries and their capitals:



Brazil
Brasilia



Argentina
Buenos Aires



Chile
Santiago



Bolivia



Ecuador



Guyana



Uruguay



Paraguay



Suriname



Peru
Lima



Colombia
Bogota



Venezuela
Caracas















Europe

A continent famous for its historic landmarks, diverse cultures, and advanced cities.



Major countries and their capitals:

											
	Germany		Italy		Greece		Spain		Denmark		France
	Berlin		Rome		Athens		Madrid		Copenhagen		Paris



- | | | | | | | |
|---------|----------------|------------------------|---------------------|------------|-----------|-----------------|
| | | | | | | |
| Romania | Lithuania | Liechtenstein | Latvia | Ireland | Belgium | Slovak Republic |
| | | | | | | |
| Estonia | Montenegro | Slovenia | Serbia | Croatia | Macedonia | San Marino |
| | | | | | | |
| Finland | Hungary | Iceland | Belarus | Luxembourg | Malta | Poland |
| | | | | | | |
| Norway | Monaco | Bulgaria | Austria | Moldova | Albania | Andorra |
| | | | | | | |
| Armenia | Czech Republic | Bosnia and Herzegovina | Portuguese Republic | | | |

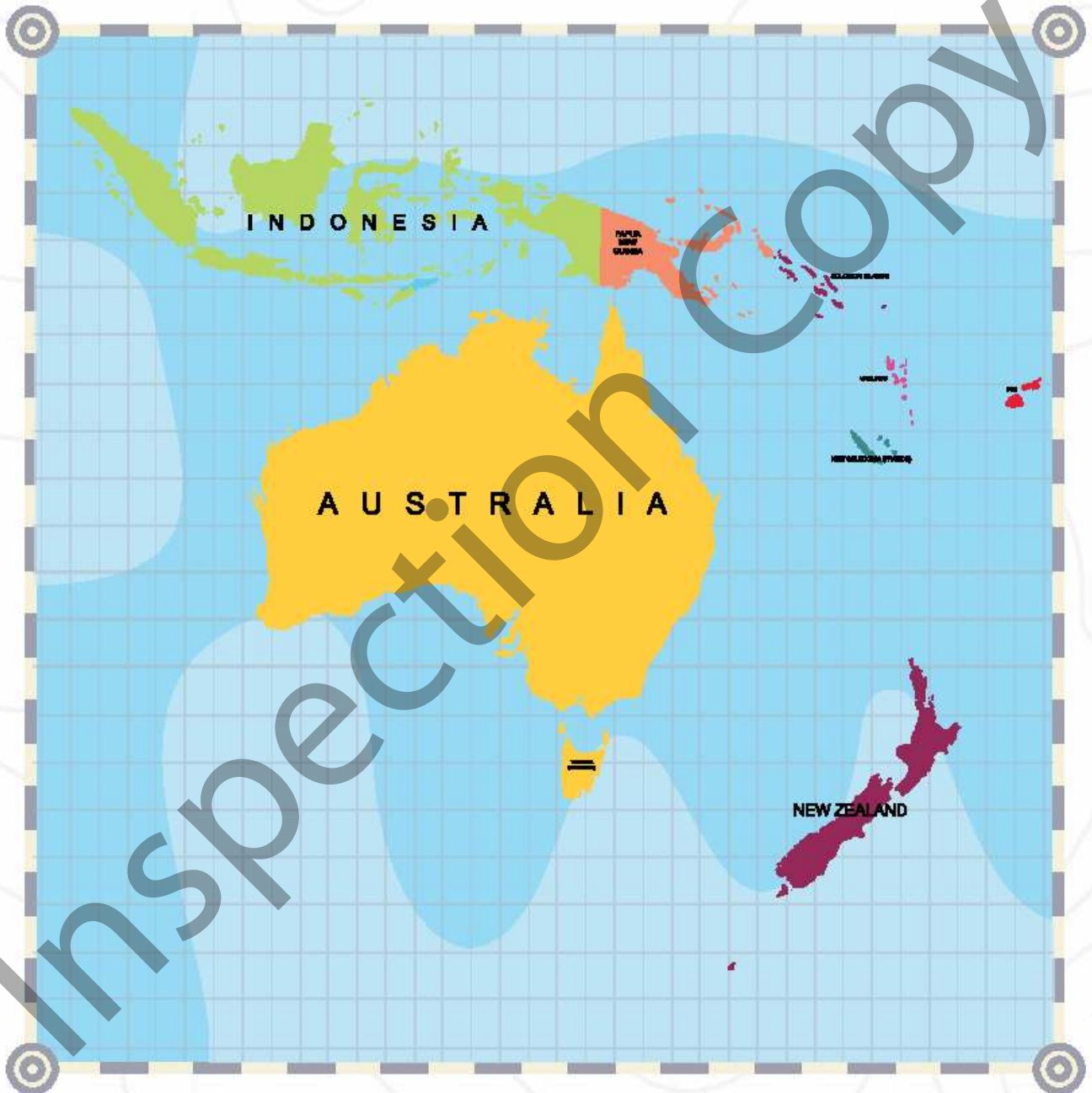


- | | | | | | |
|-------------|---------|---------|-----------|-------------|---------|
| | | | | | |
| Netherlands | England | Ukraine | Sweden | Switzerland | Georgia |
| Amsterdam | London | Kiev | Stockholm | Bern | Tbilisi |



Australia

The smallest continent, known for its unique wild life, stunning beaches and vibrant cities.



Major countries and their capitals:



Australia
Canberra



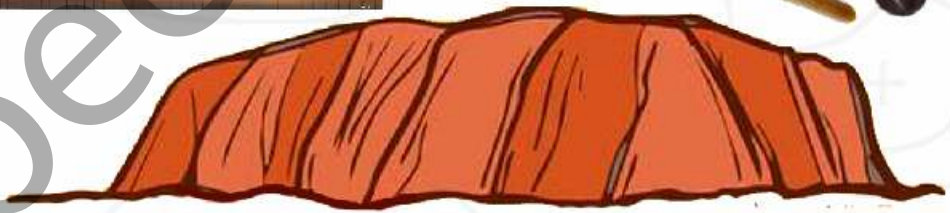
Indonesia
Jakarta



New Zealand
Wellington



Fiji
Suva



Antarctica

Antarctica, Earth's fifth largest continent, is almost entirely covered in ice and is the coldest, driest and windiest place on earth. It is home to a variety of wildlife, including penguins and seals.



Chapter 2

History and Archeology

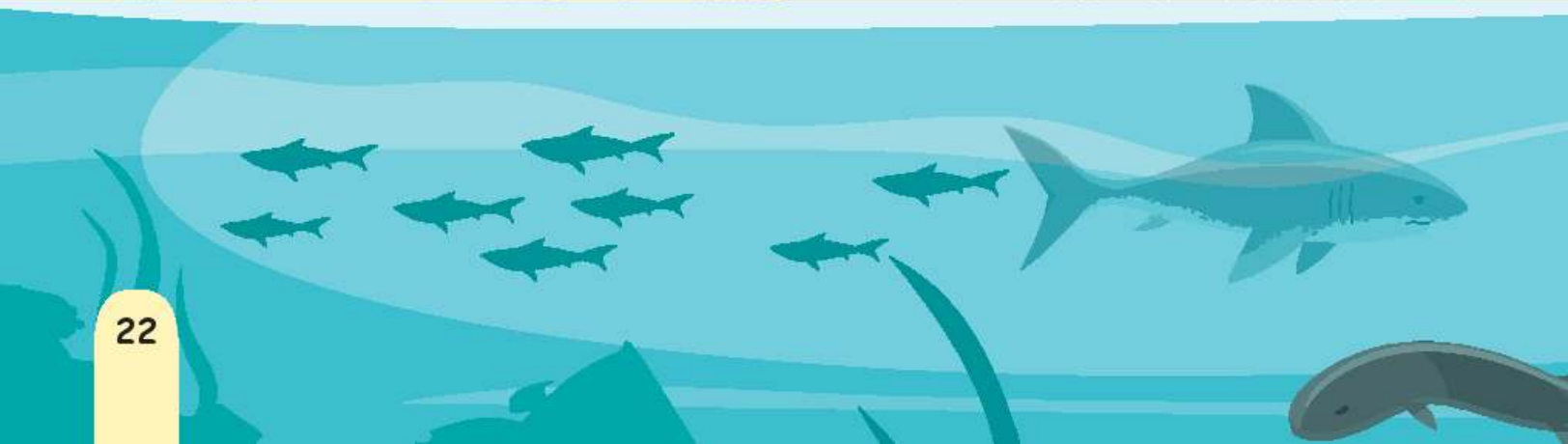




The Law of the Jungle

Food Chains:

A food chain is like a line that shows who eats whom in an ecosystem. It helps us understand how energy and nutrients flow from one organism to another.



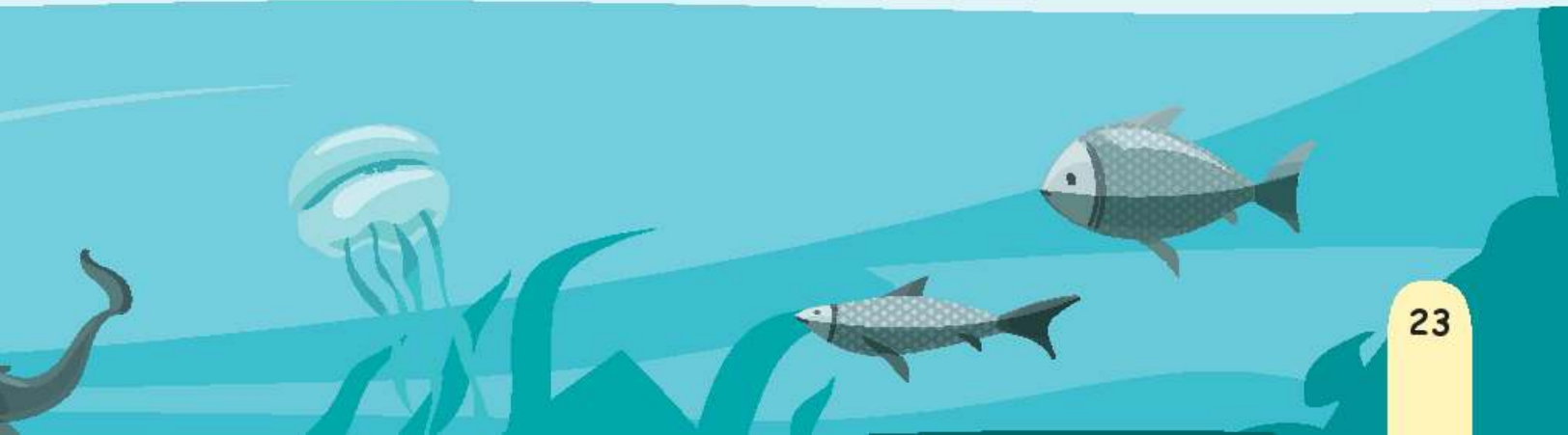


What is a Food Chain?

A food chain is a simple way to show how living things are connected because they eat each other.

It starts with plants, which are called producers because they make their food using sunlight, water, and nutrients from the soil.

Then, animals eat these plants or eat other animals that have eaten plants.





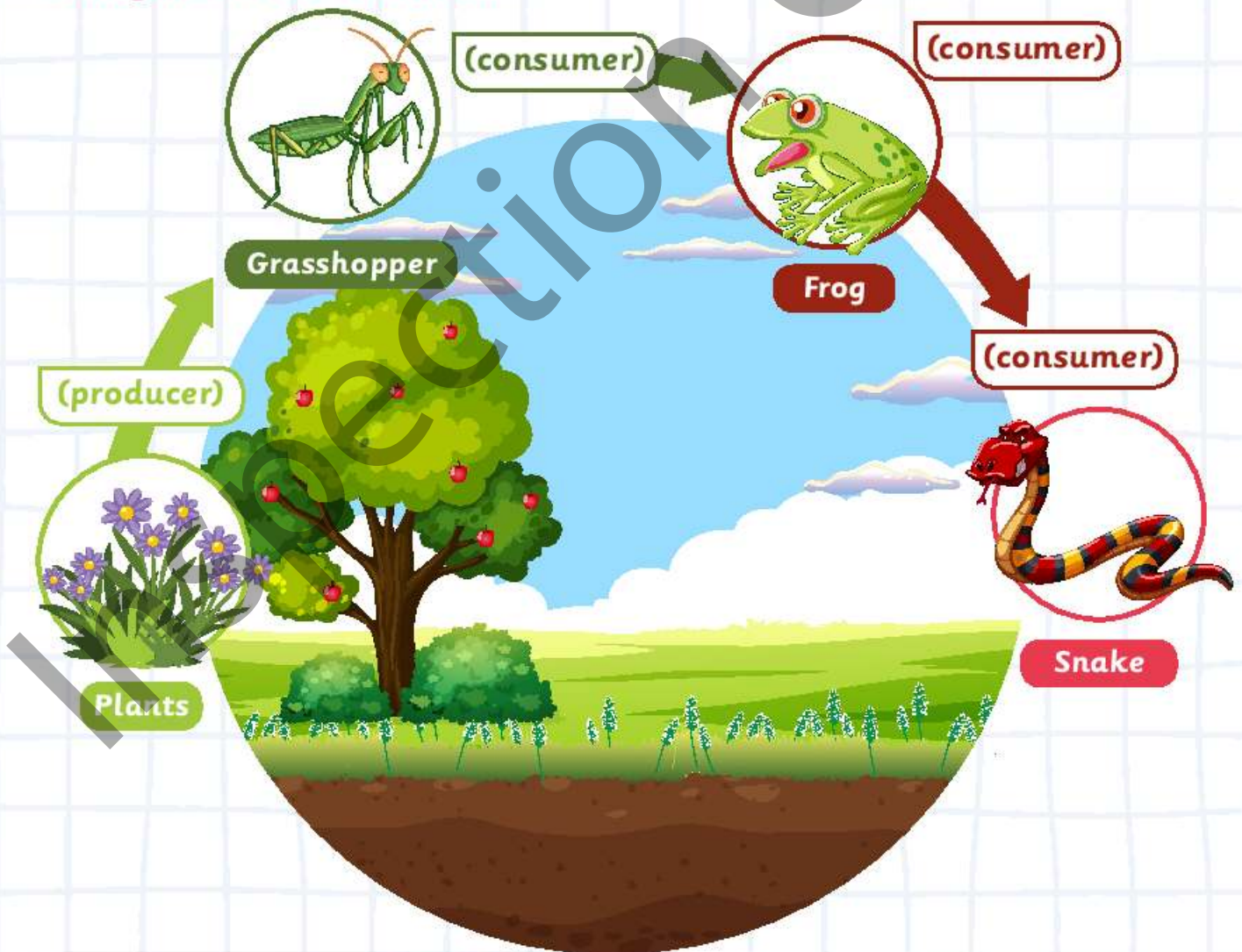
Examples of Food Chains

Simple Food Chains:



We say: the rabbit is eaten by the fox.

Complex Food Chains:



We say: the frog is eaten by the snake

Components of a Food Chain

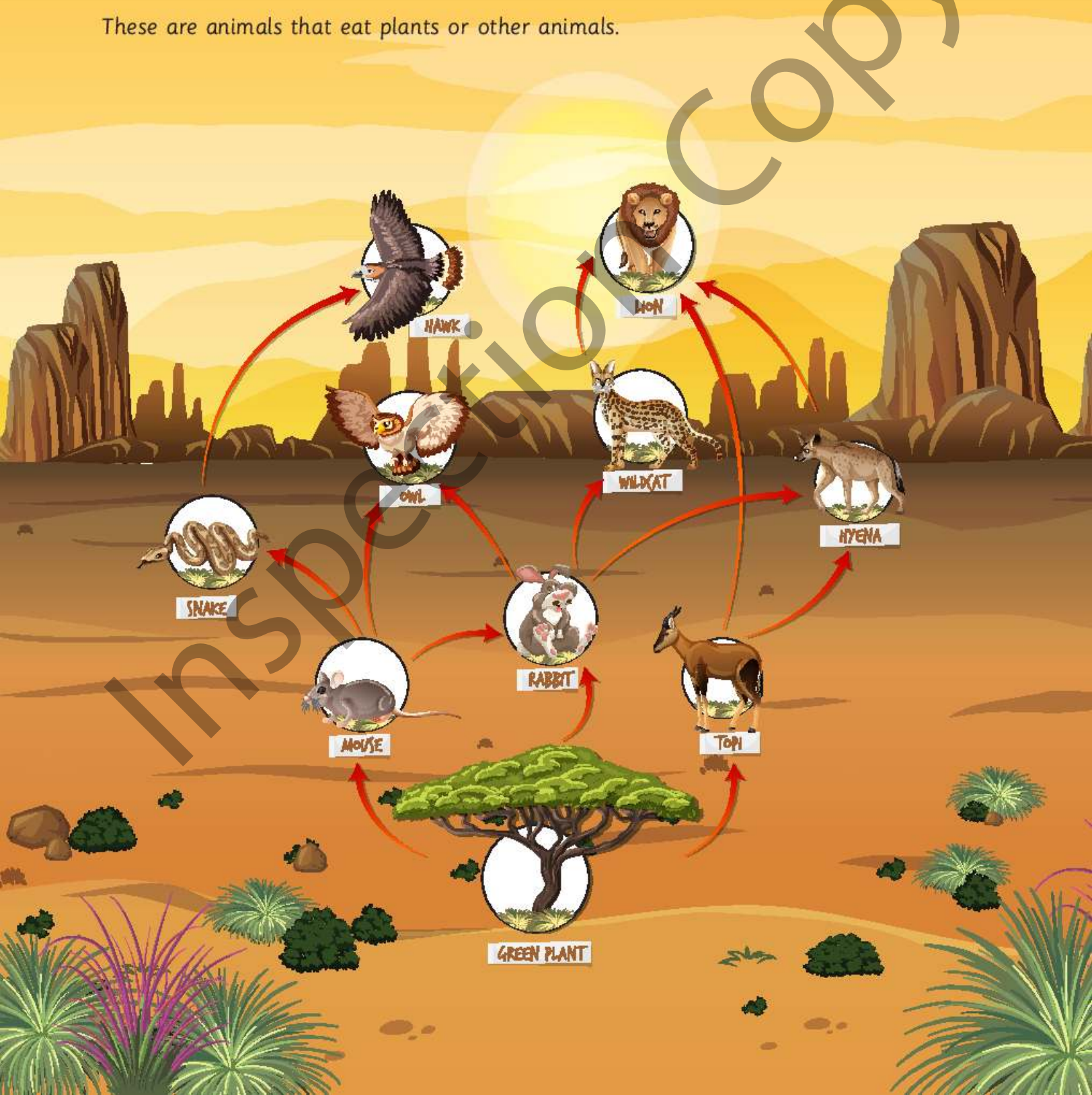
A food chain has two main components (parts): producers and consumers.

Producers:

These are plants or organisms that make their food using sunlight, water, and nutrients from the soil.

Consumers:

These are animals that eat plants or other animals.





Types of Animals

Herbivores: Animals that eat plants, such as rabbits and cows.



Carnivores: Animals that eat other animals, such as lions and tigers.



Omnivores: Animals (organisms) that eat both plants and animals, such as crows and bears.



Humans are also omnivores.

What Goes Around, Comes Around!

Life Cycle

A life cycle is like a story that tells us how a living thing grows, changes, and eventually becomes an adult. It's the journey from the beginning of life to the end, showing all the stages in between. Just like how we grow from babies to adults, plants and animals also have their own life cycles.



Life Cycle of a Butterfly

The life cycle of a butterfly shows how a tiny egg transforms into a beautiful butterfly. It's like a magical journey of change!

Stage 1



At this stage the butterflies meet

Stage 2



Egg Stage:

An egg is laid on a leaf.
The egg looks like a tiny ball.

Stage 3

Caterpillar Stage (Larva):

When the egg hatches, a caterpillar comes out, which is also called a larva. Caterpillars eat a lot and grow quickly. They munch on leaves and plants.



Butterfly Stage (Adult):

Finally, a beautiful butterfly emerges from the chrysalis. Now, the butterfly can fly and explore the world, sipping nectar from flowers and laying eggs to start the cycle all over again.



Stage 6



Stage 5



Stage 4



Chrysalis Stage (Pupa):

After eating lots of food, the caterpillar forms a cocoon around itself called a chrysalis, or pupa. Big changes happen inside the chrysalis that transform the caterpillar into a butterfly.



The Butterfly Life Cycle

A butterfly starts as an egg so small,
On a leaf it sits, not big at all.

Then out comes a caterpillar, long and thin,
It eats and eats, then sheds its skin.

It makes a shell, called a pupa tight,
It rests inside, out of sight.

Then it comes out, wings spread wide—
A butterfly now, it starts to glide!



Chapter 4

Mathematics and Geometry

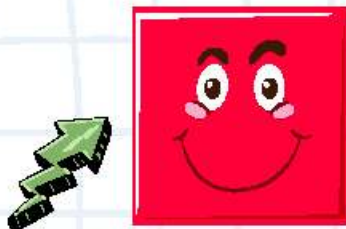




Math-e-Magic

2D Shapes

Basic 2D shapes and their properties include:



Square

- Sides: 4
- Corners: 4
- Angles: 4 (all right angles)
- Lines of Symmetry: 4
(2 diagonal lines and 2 horizontal/vertical lines)



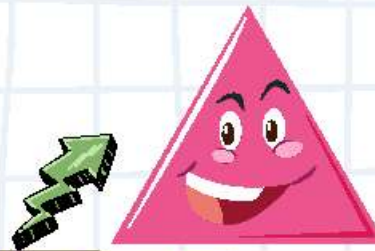
Rectangle

- Sides: 4
- Corners: 4
- Angles: 4 (all right angles)
- Lines of Symmetry: 2
(1 horizontal and 1 vertical)



Circle

- Sides: 0 (no straight sides)
- Corners: 0
- Angles: Infinite (all angles are 0 degrees)
- Lines of Symmetry: Infinite
(infinite lines of symmetry through the center)



Triangle

- Sides: 3
- Corners: 3
- Angles: 3
- Lines of Symmetry: 3
(1 line of symmetry for each side)

Pentagon

- Sides: 5
- Corners: 5
- Angles: 5
- Lines of Symmetry: 5
- (1 line of symmetry for each side)



Hexagon

- Sides: 6
- Corners: 6
- Angles: 6
- Lines of Symmetry: 6
- (1 line of symmetry for each side)



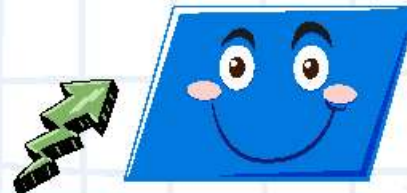
Rhombus (Diamond)

- Sides: 4
- Corners: 4
- Angles: 4 (all equal)
- Lines of Symmetry: 2
- (2 diagonal lines of symmetry)



Trapezoid

- Sides: 4
- Corners: 4
- Angles: 4
- Lines of Symmetry: 0
- (no lines of symmetry)



Parallelogram

- Sides: 4
- Corners: 4
- Angles: 4
- Lines of Symmetry: 0
- (no lines of symmetry)



Angles

An angle has two rays (sides) and one vertex. We measure the angles using a protractor.

Different types of angles include:

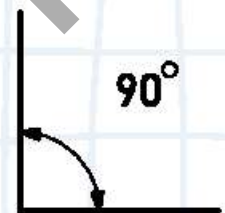
Acute Angle:

An angle that measures less than 90 degrees.



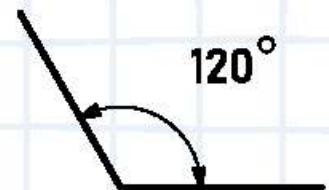
Right Angle:

An angle that measures exactly 90 degrees. It forms a perfect "L" shape.



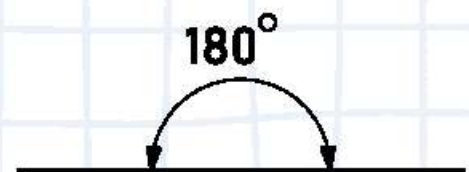
Obtuse Angle:

An angle that measures more than 90 degrees but less than 180 degrees.



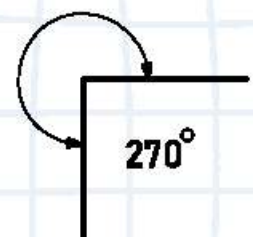
Straight Angle:

An angle that measures exactly 180 degrees. It forms a straight line.



Reflex Angle:

An angle that measures more than 180 degrees but less than 360 degrees.





Big Numbers

We write the big numbers (up to 9 digits) in figures and in words as below:

In figures: 5,876,392



In Words

Five million eight hundred seventy-six thousand three hundred ninety-two

In figures: 24,921,463



In Words

Twenty-four million nine hundred twenty-one thousand four hundred sixty-three

In figures: 832,247,589





In Words

Eight hundred thirty-two million two hundred forty-seven thousand five hundred eighty-nine





Math Equations



We read basic math equations as below:


$$2 + 3 = 5$$



Two plus three equals five.


$$8 - 4 = 2$$

Eight minus four equals two.


$$2 \times 3 = 6$$

Two times three equals six.
Two multiplied by three equals six.


$$4 \div 2 = 2$$

Four divided by two equals two.

Chapter 4

Fashion Design





What Should I Wear?

Clothes Items



Accessories





Alavi





Types of Patterns on Clothing Items

Pattern: striped



Pattern: polka dots



Pattern: checked



Pattern: floral





Pattern: paisley



Pattern: animal prints



Pattern: graphic



Pattern: plain





Talking about Clothes



I have a shirt with stripes in blue and green.



I have a shirt with polka dots in red and white.



He's wearing a check shirt.



I'm wearing a floral shirt, with pink earrings.



He is wearing a paisley tie.



I have a shirt with an animal print.

How to style clothes





Styling Tips

1

Match Colors

Tip: Try to wear clothes with colors that go well together.

Example: Pair a white T-shirt with jeans because they look nice together.

2

Add Layers

Tip: Add more clothes on top for extra style.

Example: Wear a jacket over a T-shirt to stay warm and look cool.

3

Choose the Right Size

Tip: Make sure clothes fit well, not too loose or too tight.

Example: If your shirt is too big, it might look funny. Get one that fits just right.

4

Add Accessories

Tip: Use things like hats, belts, or jewelry to make your outfit special.

Example: A colorful hat can make a plain outfit look fun.

5

Wear Comfortable Shoes

Tip: Choose shoes that are comfy for walking and playing.

Example: Sneakers are great for running and jumping.

6

Mix Patterns Carefully

Tip: Don't wear too many different patterns at once.

Example: If your shirt has stripes, try to wear plain pants.

7

Tuck In or Leave Out

Tip: Decide if you want to tuck your shirt into your pants or leave it out.

Example: Tuck in your shirt for a formal look, or leave it out for a casual look.

8

Match with the Occasion

Tip: Pay attention to where you are going and what the dress code is.

Example: Wear a nice dress for party and comfy clothes for playing.

9

Be Yourself, Keep it Clean and Smell Nice

Tip: Wear what makes you feel good. You don't need to buy expensive clothes, just make sure your clothes are clean and you smell nice.





Φ
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