

Chimate CHIMATE and Weather

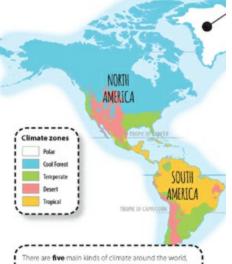
We all know how changeable weather can be – rain one minute, bright sunshine the next; two weeks of calm followed by sudden storms.

When we talk about the weather, we usually talk about short periods of time. Climate is like a longterm view of weather. We look at what the weather does in a particular area over a long period of time, work out the average temperatures, amount of rainfall and other figures, and these tell us what the climate is. Tropical rainforests, for example, have a hot, damp climate. Hot, dry deserts are – well – hot and dry! But they can also get very cold at night. So plants and animals have to be able to cope with the climate they live in.

Climates around the world differ for many reasons. At the equator, the central band running around the Earth, the Sun shines directly overhead. This makes the climate very hot. Away from the equator, the Sun's rays are more widely spread, making the climate cooler. Mountains are generally cooler than lower land nearby. The ocean protects the land close to it from extremes of temperature, because water releases heat more slowly than land. And climates can change over time, too. When we cut down part or all of a rain forest, the climate gets hotter. And it stays hotter for as long as it takes for the trees to grow back - if they do. This is a long-term climate change. Natural events can also change climate. El Niño, for example, is an area of unusually warm water in the Pacific Ocean that happens every two to seven years, and lasts for a few months to two years. It can cause severe drought (dry weather), floods and crop failure in countries close to the edge of the Pacific Ocean. Fortunately, though, this is a relatively short-term climate change

12 CLIMATE AND WEATHER

Five main climates

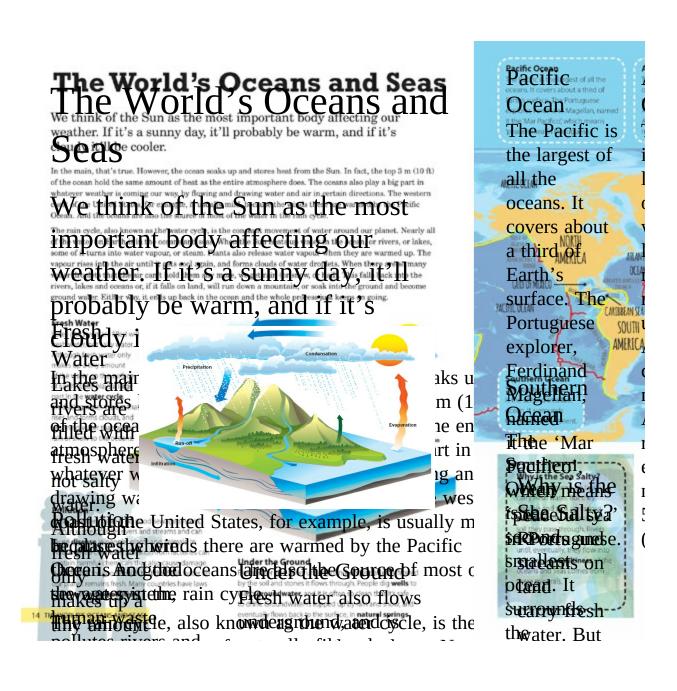


and they follow a rough kind of pattern. You can see this on the map above. At the extreme north and south of the globe are the freezing **polar climates**, named because these areas are close to the north and south poles. At the equator are the **hot**, wet tropics. The other climate areas are in between.



or cold air, are moved along by the wind. When two air masses meet, we get a **'front'**, and the weather changes.

Polaroles asc imate At or nea Five main climates Five main Veather poles. it's climates no lov changeable ther can be - rain one minute, bright sunshine We all knows NORTH AMERICA how changeable Climate zones weather can be Pola Cool Forest and other figures, and these tell us what the SOUTH Temperate Fatta and other operations, for example, have a hot, damp climate. Hot, dry deserts are - well - hot Desert AMERICA and dry But they can also get very cold at night. So minute they have in. TROPIC OF CAPRICOR Sunsianeound the poles! Tropical There are five main differ for many kinds of climate Hot during around the world, Merkspitcalm day, and n and they follow a followed bruning much cool rough kind of around as it takes for the trees to grow SUCCIEN STORMS. for the Earth, the Sun of the Isobars at night, ti pattern. You can see this Why Does shown as areas usua lines wines de tally about have rain indicate on the there Harpen a Highesir the afterno averbeather, hise usually the the the state of the state pressure, Rainforest makes the climate very measured pressuret tropical antemperature around the planet raque air is half hads grasslands figuator limate is like a



The World's Population If the Officient ry, Se total number of people in the world was less than 400 million.

Today there are more than seven billion (seven thousand million) of us! This might sound like a success story, but the more people there are, the more pressure there is on the environment, food supplies and other resources, such as energy. There are also more people living in poverty.

As you can see from the map on the right, people are not spread out evenly around the world. Some rich countries have a high population density, which you might expect, as they have good nutrition and health care, and enough work for most people.

Part of the problem is that our resources aren't spread out evenly, either. According to experts, we produce enough food to feed everyone, but it's not always in the right place. Some people have more than they need, and even waste food and water. More than 10 percent of the people in the world have too little food, and many have no access to clean water. Charities are doing their best to get food and water to those who need it, but it's a difficult job.



Cities are Great!

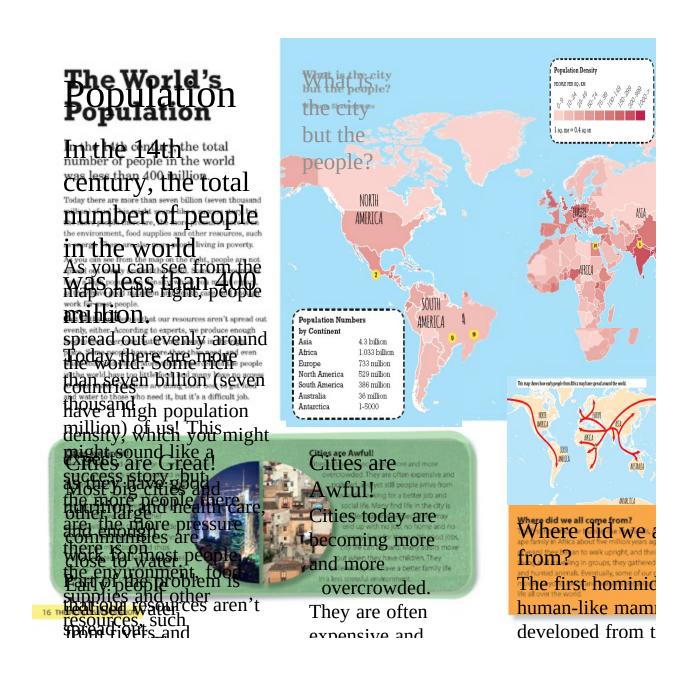
Most big ottes and other large communit close to water. Early people realised water from rivers and streams made it possible to grow cops, and feed and water animals land themselves!. They used boats to explore, and mee other people, with whom they could trade food and other supplies. For this they had to build more boats and ships – which created jobs Many major cities grew up on the same spots people had fins settled. Now, people still flock to them

Cities are Awful!



ecrowed. They are often expensive and polivited, and yet still people arrive from outside, looking for a better job and social life. Many find life in the city is harder than they expect. They may end up with no job, no home and no money. Even for those with good jobs, city life can be hard. Many adults move out when they have children. They believe they can have a better family life less streads devicement.

16 THE WORLD'S POPULATION



Mapping the World Mapping the World

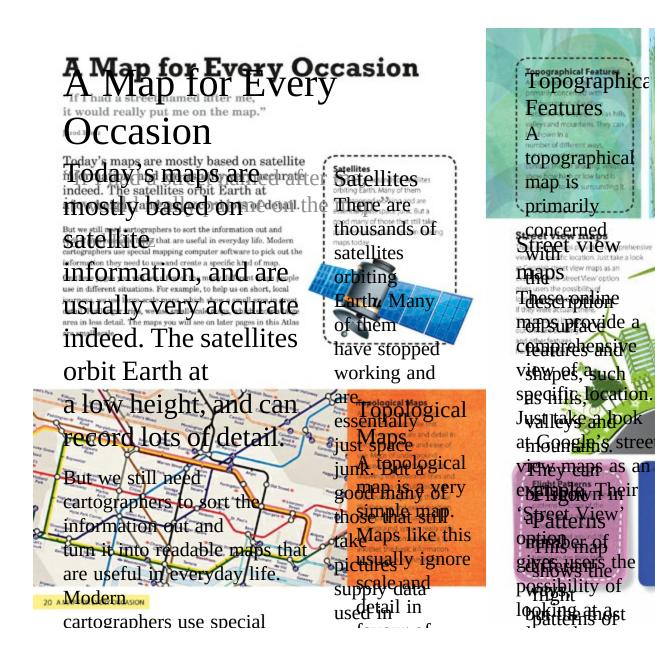
- maps are the most condensed humanised spaces of all...They "TRO the landscare fit indoor brack ustrastor of hights we can't see and spaces we can't cover." World on one sheet of paper

Maps ap graving figling stud us dense them to help us find somewhere we haven't been to before, and they've bue had and somewhere we haven't been to before, and they've bue had a somewhere we haven't been to before, and they've bue had a somewhere we haven't been to before, and they've

Early maps were very inaccurate compared with those we use today, but early cartographers (mapmakers) can't cover." had no detailed knowledge of the world, and very often had to guess what was beyond what **NAAPS** are drawings of places Gradually, better tools meant mapmakers, adout include the quality bratter maps. The usefind somewhere we haven't maps for example allowed more accuracy. The arrival of the printing press pearly inacound be copied many times, making maps more affordable.

For a map to be useful, it must be relatively easy to read. Cartographers use symbols, lines Mercator's projection, S projection In 1659, Flemis cartographer Gerardus Mercator made world map that presented the world as a flattened out cylinder (tube). It became the standard 'projection', or representation, the world in tw dimensions, especially for sailors, because showed the meridians as straight lines. T

made it easy to



Perspective

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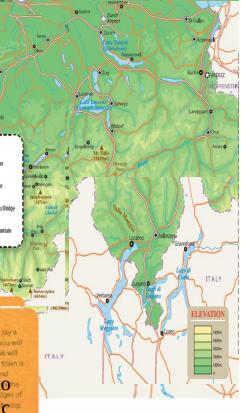
have been the equator if it had had its rights." Perspective

Physical maps of the world show Earth's surface features. These usually include large ones, such as e mountains, valleys, rivers and lakes, and sometimes smaller ones such as hills, nods and railway lines.

What to include really depends on hac the size of the map, and what it will The map on the gight is a physical map of part of Switzerland. On it you can see mais Des. USE dat OF works and cities, and even some of the shapes of the land. Because they are quite small, there found maps, but

maps in this atlas only show major Physical maps of the wor Bhown Farthistouerage study references feathres. Phiese usual yr you want to clude large onesa sucling specific e, say a mountainsevalleys, riv n or city, on The markers the right of net right ap in an map of the source of the sou Stinger and Special noted saced mailway dimestod

"civies, and codeing fore These shapes will ofitime blens dthat tell you the latitude (how far



Legend



A Political Perspective

You have brains in your head. You have feet in your shoes. You can steer yourself any direction you choose.'

Perspective

Political maps in a detailed atlas, like the one below, include statistic kinds af information ur head.

They are intended to show the nations or wared countries of the world, and the land that each controls, National and controls, and on the land that each controls, National and controls are clearly marked, and not only

The are marked Political marked

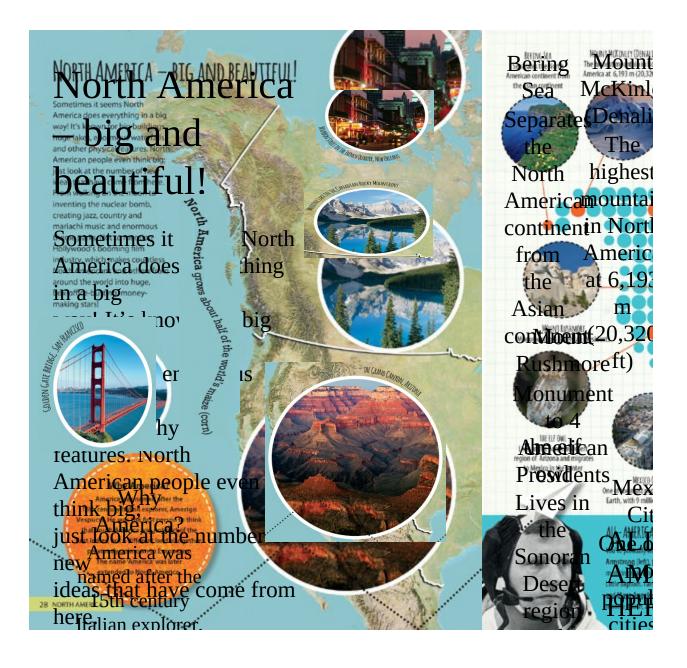


Things change a lot in the political world! After



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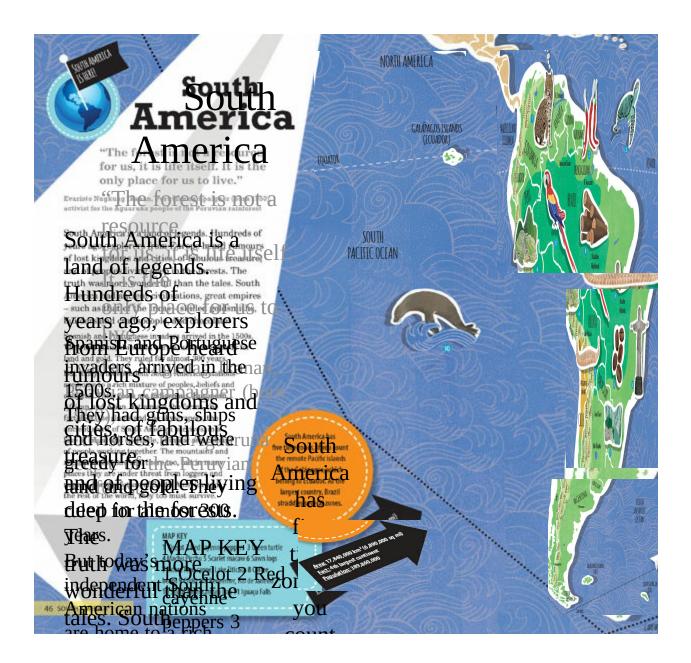
PEAKS AND REEFS The highest mount in Mexico is Pico Orizaba, a dormant volcano reaches 5,636 n

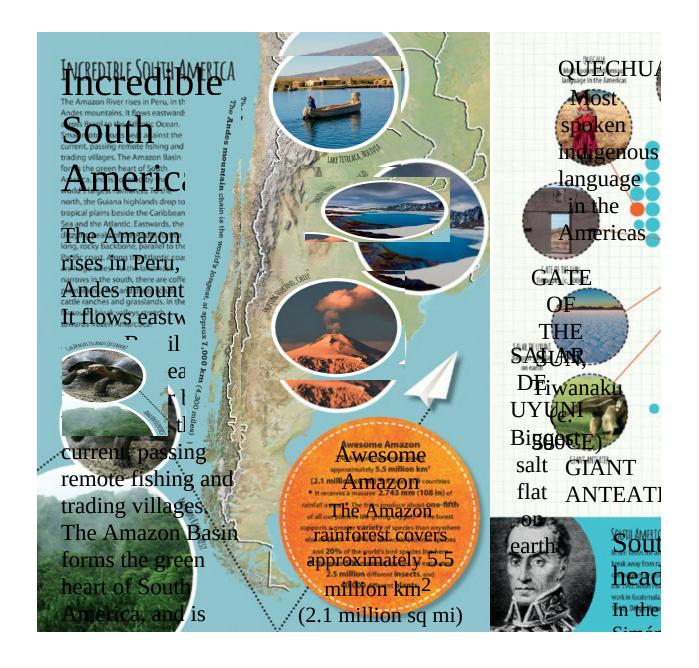
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Guyana - Peru -RICH AND Sociname - Venezuela BIGHT BIG Cities rise from the

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RECORD BREAKERS Kerepakupai Vená, Angel Falls, in Venezuela is the world's highest uninterrupted

ÍPAGOS ISLANDS (ECUADOR)

PACIFIC OCEAN



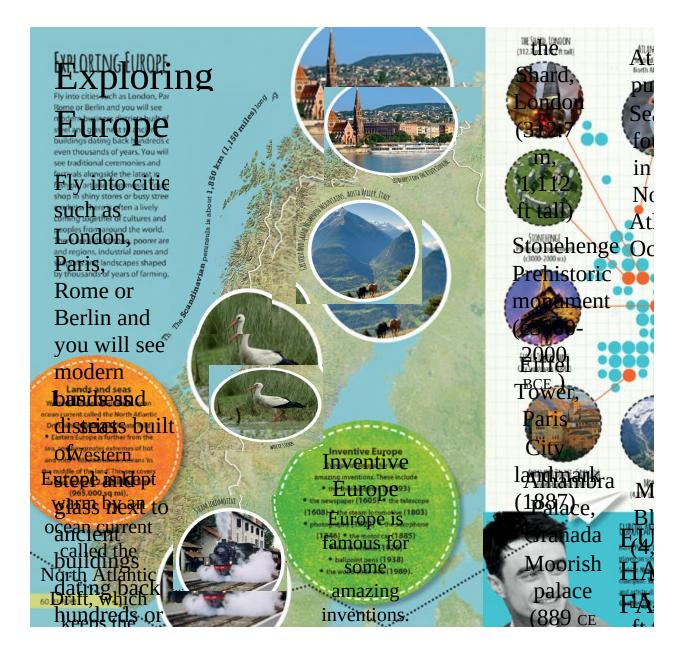
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THERN EUROPE

Denmark - Estonia -Finland - Iceland Latvia - Lithuania -Norway - Sweden

You know you're way up 'e Arctic Circle he sky flashes green and pink with the Northern Lights, when it stays light all night at midsummer and is dark during the doof midwinter. Northern

to Europe's far north

veden and

MARAUD **VIKINGS** About 1,200 years ago OEISLANDS navia DENMARK) me iu inc Vikings, who were brilliant seafarers and traders. They were fearsome warriors too, with Northernames moneykanakeks FishBroodabxe! North Sea

ATLANTIC OCEAN NORWEGIAN SEA



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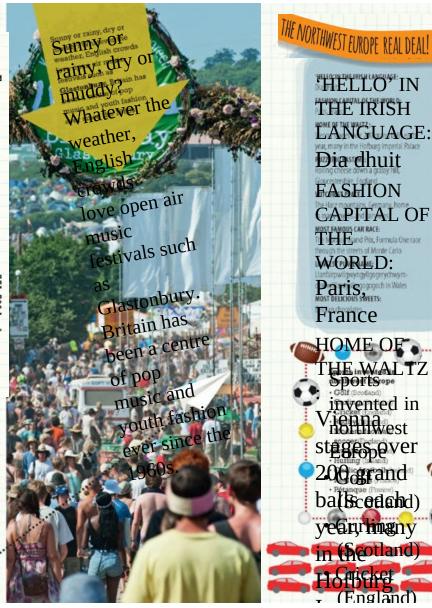
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SUPER STATS Monaco is the smallest country in the region, with an area of just





Southwest

Europe from France by the high mountains of the systemetry of the

A big slab of land juts out A constance into the Adlartic OREan, below the stokin pBay of Biscay. This is NAe^{it} Berian peninsula and Berleren

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France by the bigh mountains of the Pyrepees, where Couggists visit the mini-state Musento PalbSpain is France by the mountains ATLANTIC OCEAN

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Southeast Europe

Albania - Bosnia & Herzegovina - Croatia -Greece - Italy Kosovo - Malta - Montenegro - Republic of Macedor San Marino - Serbia -

Slovenia - Vatican City

Aleques Poto a patchwork across the yearseago,

while the River Po. The city of white rises from a shimmering blu

tagoo to thoig, buisgionses traffic swirts around ancient contrarofuins. This is Italy, a boot-shaped periphisman

Monthing from the Alps to the island of BattlassThetApennine mountains form in SUPER STATS The SUPER when to created as to begin the first of the states of the Roman Cathole Church is the The awesome the (110 acres) within the city of Rome Roman empire 19,573 (1) high The access to react



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Bulgaria - Czech Repu - Poland - Romania - Slovakia

Gdansk is a Polish port on the Baltic Sea. Poland lies across the huge plain which stretches eastwards into Russia, crossed by long rivers SMIARThe Oder and the Vistula. Here are farms **PRACE** Dotatoes or Feet, Cforests, lakes and industrial towns. In the trof is the busy pigale diay, Warsaw. Summers can be warm and inters very cold. uthern borders rise to the Sudeten and Tatra

Slovakia t

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SUPER STAT Balaton in Hungary in highlands is the biggest 11 lake in Central Europe (592 km²

9 sq mi) • Polan

POLAND

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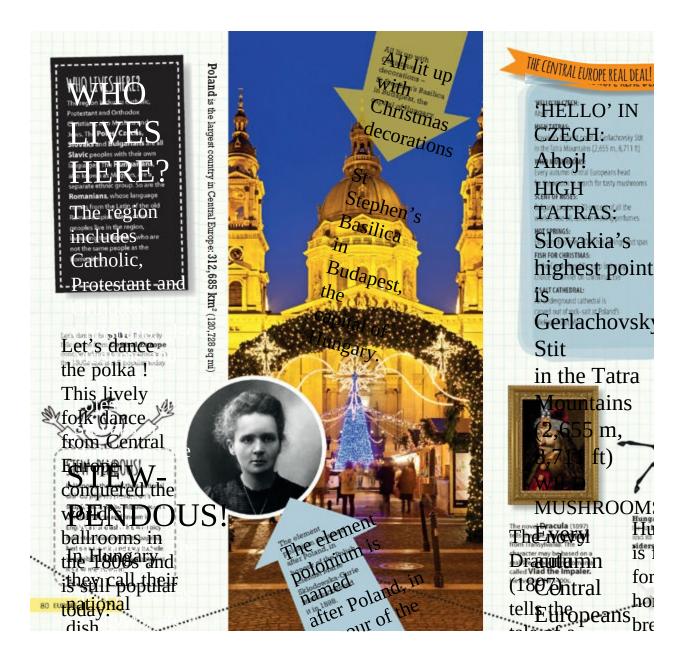
HUNGARY

PRAGUE CZECH REPUBLIC

ary

WARSAW

BUDAPEST



stern Europe

Belarus - Moldova- - diake. L Kviv or Kiev, looks out over the River Dr Ukraine nozem. This is perfect for growing orld's big 'bread baskets'. The south dering the Black Sea around the port of Odessa Let's travel east to the borders of Russia. Trains bound for Moscow peoples still wanted close ties with Russia, while others wanted to **CFOM** Western Europe. This has led to some big political pro

Berlin or Warsaw will take you via the industrial city of Minsk, capital of Belarus. Belarus is a low-lying, flat land with forests, marshes and lakes.

To the south is Ukraine. Its capital, Kyiv or Kiev, looks out over the

River Dnieper and over 3 million people live in or around the city. In the south, the

GRAIN HARVEST

ON THE STEPPES

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steppes (prairies) ha known as ch perfect for

SUPER STATS The River **Dnieper** flows enaliest and poorest - country in easter throughent of Russia.

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Central Asia

Afghanistan - Kazakhstan -Kyrgyzstan - Tajikistan -Turkmenistan - Uzbekistan

Central Asia lies at the crossroads of the continent, on the ancient trading

routes known as the Silk Ro To the north is Siberia, acro Irtysh river.

To the east, the high Pamir Tian Shan ranges form a mountain wall with

China. T

Sea and

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SUPER STATS The SUPER stats be capital of Adjunction which has a opulation of the state of a state of the sta

KA7AKHSTAN

TURKMENISTAN

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6

Where the All the 'stans'... All the 'stans' ... Kazakhstan is the largest country in the world with no access to the ocean:2,742,900 km space age began: '-stan' means Kazakhstan's 'place of', oww 'country' or One o 'land' in the finest Baikonur Cosmodrome -FPF? Persian ancier (run by breeds Peoples of Cer Russia) is language. Turkn the world's Asia have give Akhal the modern na first and largest famou the Turkme speed, space launch site. Azdeep power blue stonerg its inte of the The tomband its called ks of the hapis lazuli has been golden preces of gold. man was mined in found at kaleidoscope Issyk in vitom ady. The ce's (rut be 61 al calour Kazakhstan. He was a years. It is At a dyeworks made into in Kabul, men fantastic hang out Scythian are pringe frommed lery.



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China is ringed by the world's highest mountains. In the west is the Chinas' of th Japan: race Mongolia enzywards. Most Chinese live in the early south, harvesting who phate or rice on the North Korea - South Korea of Taiwan is claimed by China, but has its own government. China's iss ringed oby the world's sing highest mountains. In the west is the Tibetan vided. North Kore plateau, the 'roof of the world Long rivers such as the Yang wind eastwards.

TS, MONGOLIA

THE IMPERIAL PALACE ("FORBEDDENCO

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THE BIG AND THE SMALL

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China has the

top population

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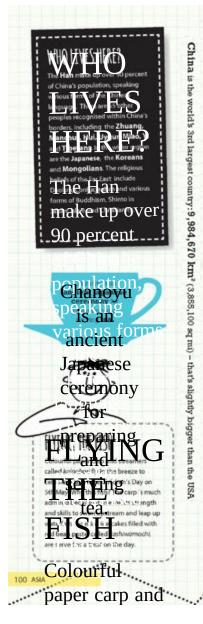
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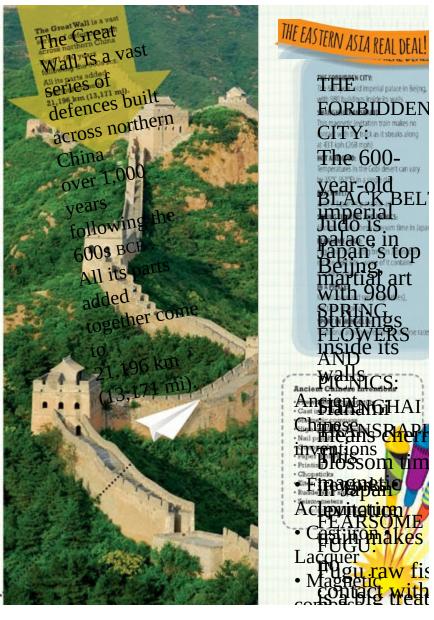
Most Chingse live in the east Shangharyesting wheat, maiz the worthes plains, or seeking work in CHINESE DRAGON DANCE



00 years, but these ng in China is

brongeKong and Macau are





Southern Asia

Bangladesh - Bhutan - India -Maldives - Nepal - Pakistan -Sri Lanka About 1.3 billion people live in India, the giant of Southern Asia. Its noisy

city streets and railway stations swarm with crowds. Markets sell MAJESTIC mangoes MACSOLEUM and fiery spices. Ancient Hindu

The Tai overlook hot, dusty fields

Agra in India the monsooil rains. Women in

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SUPER STATS STATS STATS STATS STATS State Himalayas Contention as 8,848 m (5.02 ft) have over 100 from head of from Table 7 the Rever Congen peaks higher than "7,200 m (23,600 ft)

PAKISTAN

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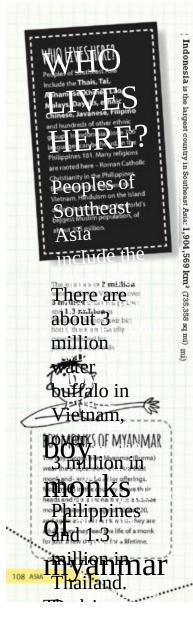
NEW DELHI

INDIA

INDI









Southwest Asia

Bahrain - Cyprus - Ira Israel & the Palestinian Territories - Jordan - Kuwait Lebanon - Oman - Qatar-Saudi Arabia - Syria - Tur United Arab Emirates (U. Yemen

Iranian herders lead their sheep and into the mountains through melting snows. Construction workers put the finishing gleaming new skyscram

skyscrap high abo the seaso called the Middle East

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BLACK SEA

SYRIA

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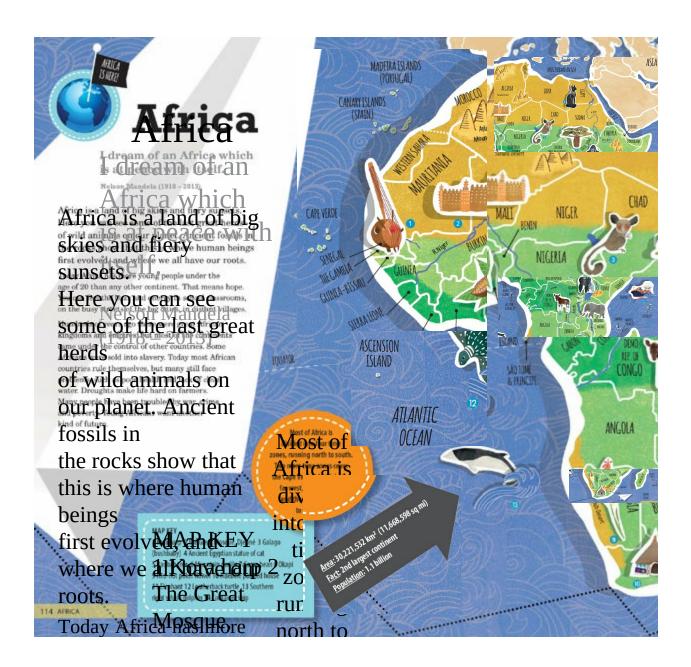
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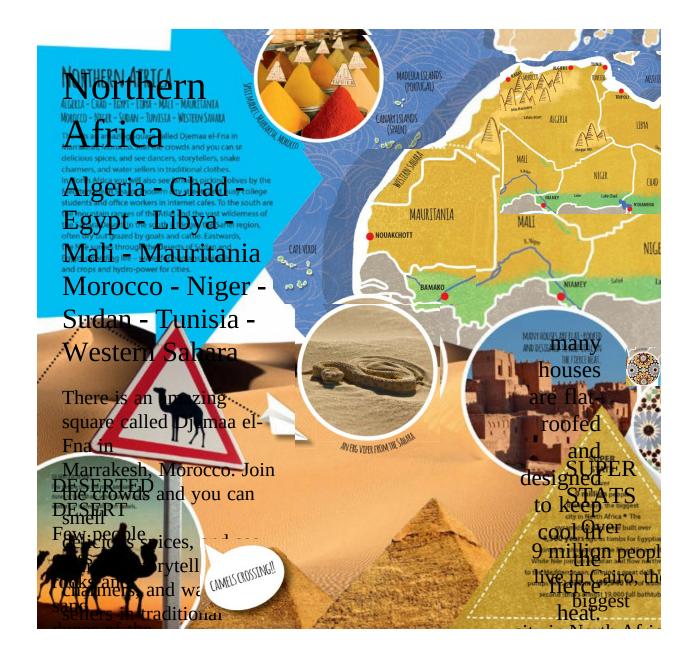
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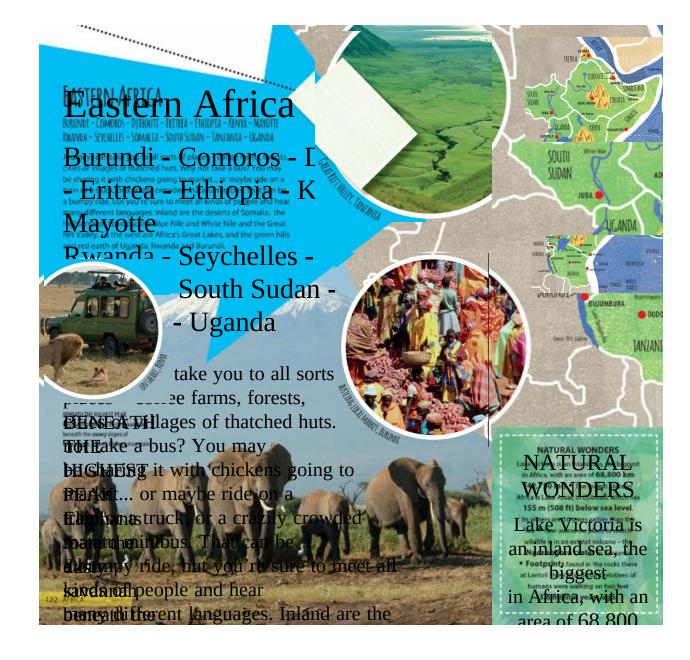


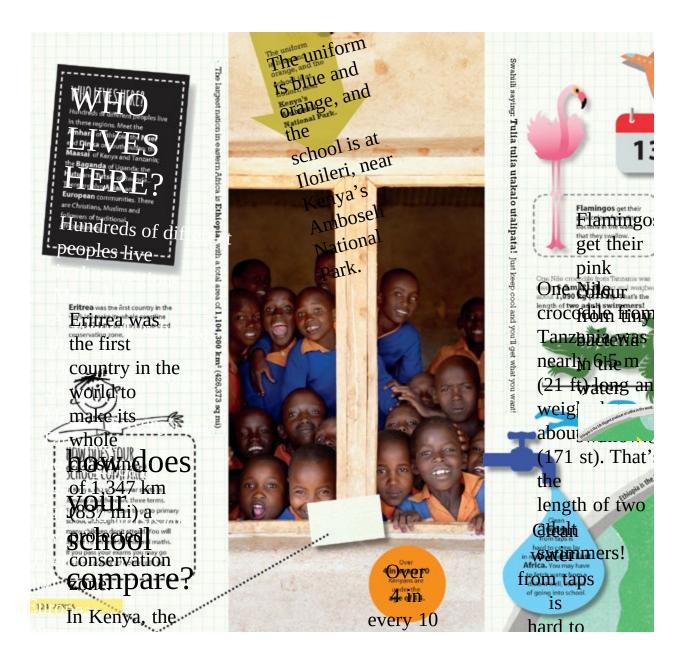


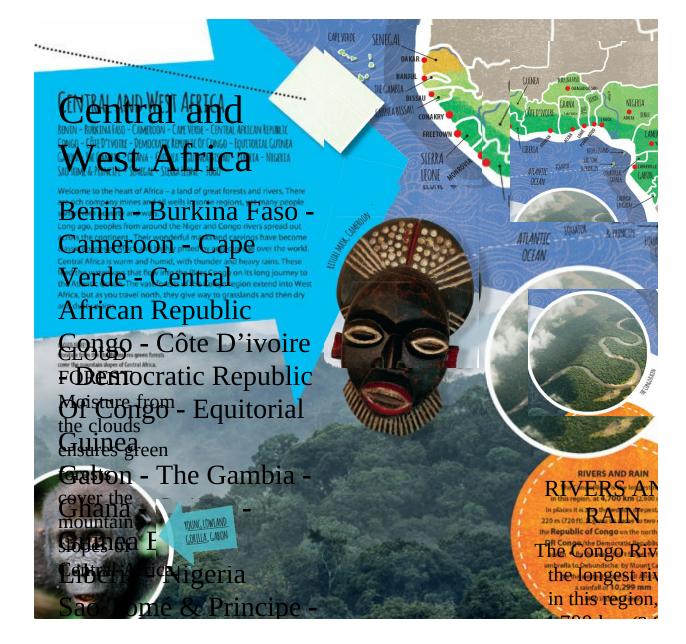


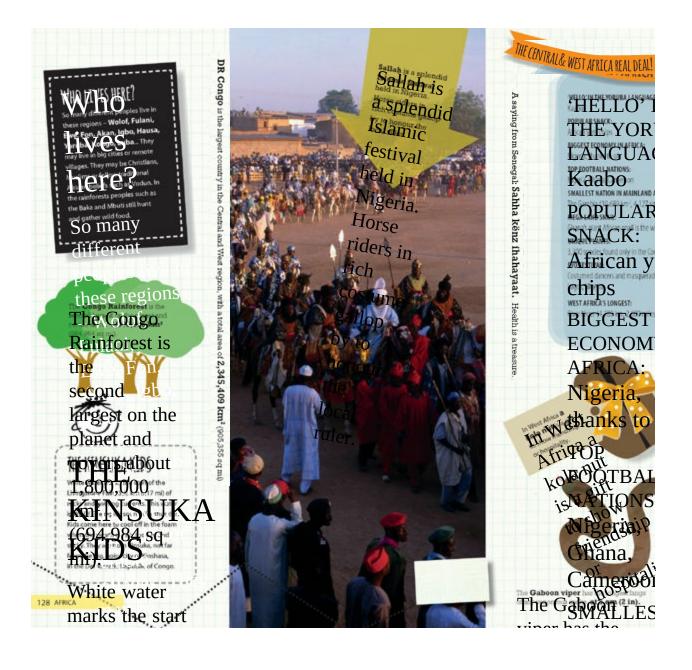






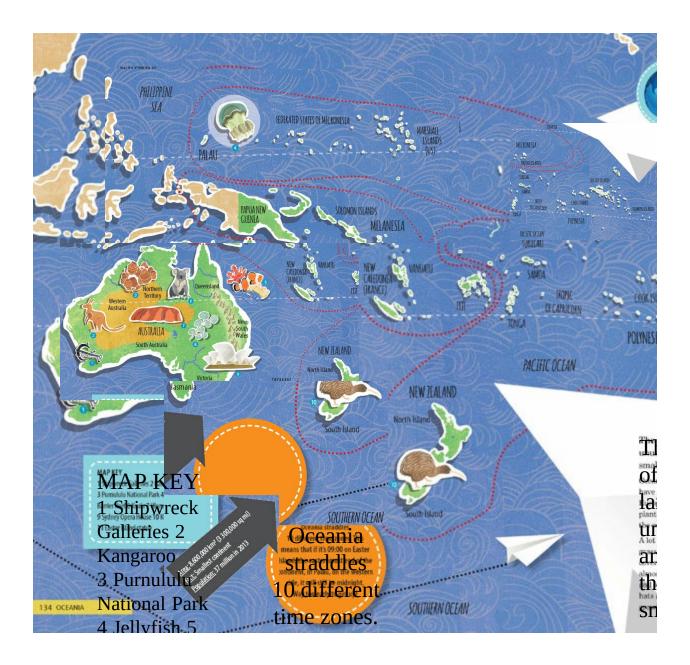












Oceania

nt. In fact, it conta Oceania really is an island derwater continent. In fact, it contains about 25,000 of them, spread over an area ent for large numbers of ocean larger than the whole of Asia. Most of them are very small, superlative o and are the to of underwater hern mount where a few ti are inhal Many Pacific July and Island ths, traditio ecember, 136 fishing anuary and



A Construction of Australia is famous for its unusual institle, including marsupials (nominals with pouches), such as a construction of a construction of the state of the state of the application of the state of t

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The enormous country of

Australia is famous for its unusual

wildlife, including marsupials (mammals with

), such as os and wallabies, enormous emu, a

Its people are famous for being tough and outdoorsy sports and barbecues on the beach are among Australians' favourite leisure

SUPER ST

TASMAN

Desert AUSTRALIA Desert

WAVE ROCK,

Sydney is the lar in Australia, home to the Sydn House and Sy Harbour Bridg bridge is the wide





New Zealand is a group of mountainous islands in the Pacifi Ocean. The

landscape is beautiful and varied, SNAMng volcanoes, snowy peak FORPED

Shores and lush green fields. The Mountainmals to have reached the Taranaki

shewinghuman help are bats, so



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st the ability to fly.

MAORTWOOD

SUPER STATS The Auckland Sky Tower opened in 1997

and is the tallest

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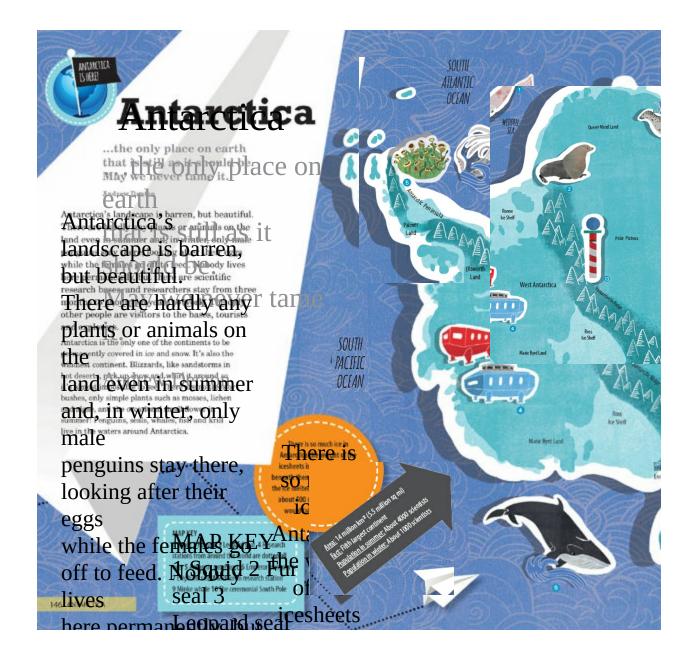
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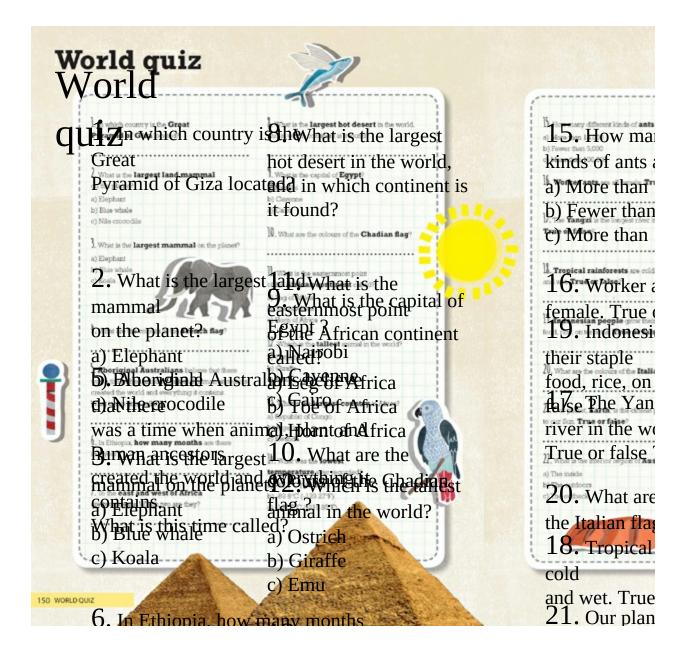
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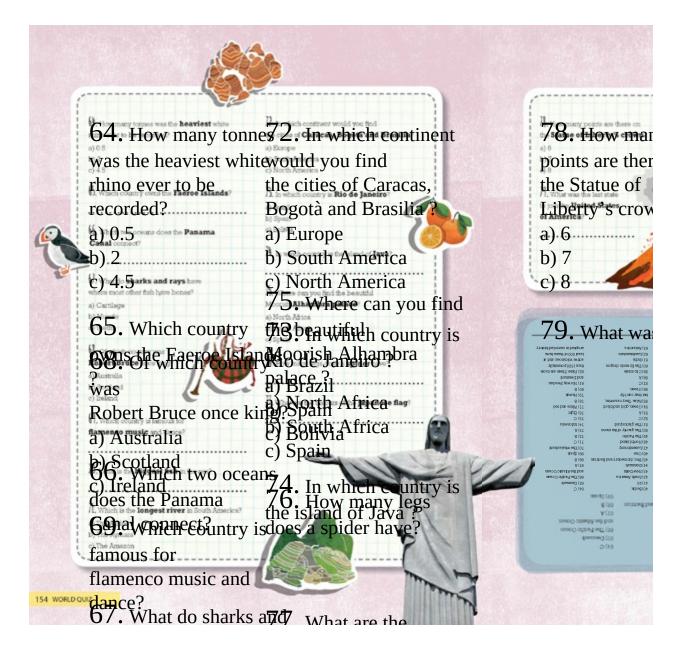




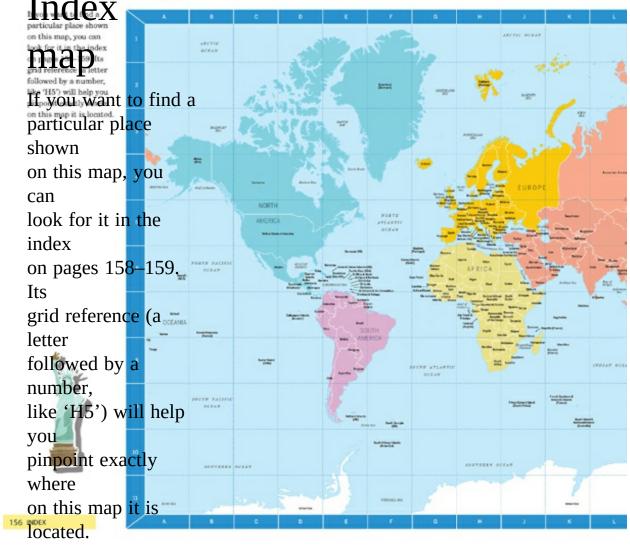








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