





KNOWLEDGE

ENCYCLOPEDIA



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SECOND EDITION

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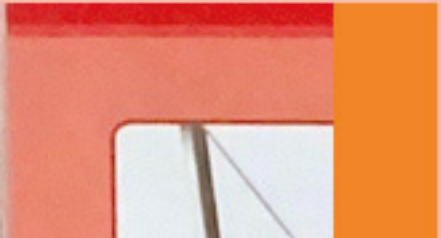
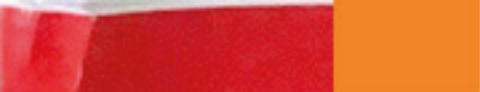
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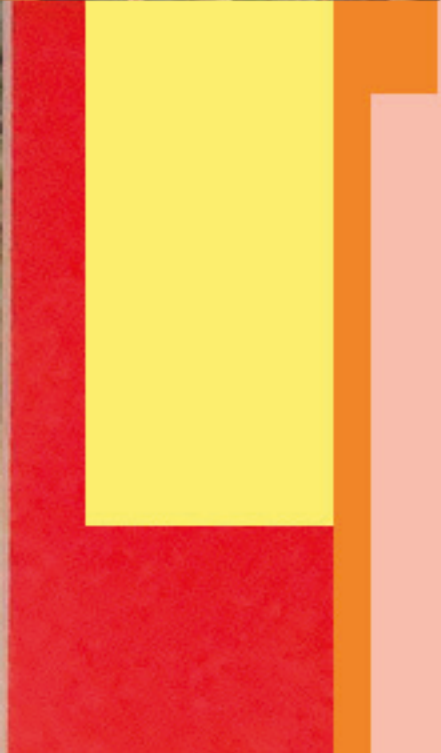
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LIFE CYCLE

The human life cycle begins as a single cell barely visible to the eye. Programmed by the genes it has inherited, this speck of life divides and multiplies to form a mass of cells, and a new human body begins to grow. We continue growing and developing for around 20 years, by which time we are old enough to have babies ourselves. Like all living things, from the tiniest virus to the tallest trees, human beings strive to create offspring before growing old – a process known as reproduction.

SEXUAL REPRODUCTION

Like many other animals, human beings reproduce sexually, which means that two parents are needed to create offspring. Sperm and eggs fuse to form a new cell, from which a new human being grows. This process is called sexual reproduction.

unique. The parents produce special cells called sex cells. Male and female sex cells fuse inside the mother's body to form an embryo. Over the following nine months, in the protective environment of the mother's uterus, the embryo develops into a baby ready for life in the outside world.

Sperm

Male sex cells, called sperm, are produced in the testes.

Sex cells

are produced through a process called meiosis, which occurs between chromosomes.



REPRODUCTIVE SYSTEM

The parts of the body dedicated to creating babies make up the reproductive system. The male and female reproductive systems are very different. Both produce sex cells, but the female reproductive system must also nourish and protect the growing baby.

Male reproduction system

Male sex cells (sperm) are produced in a man's body – at a rate of 50,000 per second – inside organs called testes. These have a protective covering called a bag of loose skin called the scrotum. Sperm are delivered into the penis, where they are mixed with semen after passing through the urethra. Sperm cells make up about 5% of semen.

Vas deferens carries sperm from the testes to the urethra.



SPEAKING THE SMALLEST HUMAN BODY, WHICH ARE THE LARGEST...



sex cells, each with a unique combination of chromosomes. When they fuse, the normal number of chromosomes is restored.

Uterus protects and nourishes foetus.

GENES AND DNA

All living cells carry a set of instructions that control the chemical activity inside the cell. These instructions, called genes, are stored as a four-letter code by the molecule DNA (deoxyribonucleic acid). Human cells contain about 20,000 genes. These genes direct the process of development that turns a single-celled embryo into a fully functioning human body made of trillions of cells.



Chromosome

Each chromosome is made up of tightly coiled DNA.

DNA is wound around balls of protein.



END OF LIFE

The human body is not made to last forever. In later life, many organs go into decline, and the risk of diseases such as cancer rises. Thanks to advances in medicine, hygiene, and diet, however, average life expectancy is higher today than it has ever been and is still rising. How long you can expect to live depends largely on where you live in the world.

Life expectancy

Average life expectancy varies greatly around the world, and is correlated with wealth. In rich regions, such as North America and Europe, two-thirds of people live into their 70s. In poor parts of the world, the average life expectancy is much lower, often because of a high rate of infant mortality. In the first few years of life, many children expect to die. In the rest of their life, they expect to live.



X and contains fewer genes than the Y chromosome. The Y chromosome has about 100 compared to the 2,000 genes on the X chromosome. A mother's egg cells always carry an X chromosome, whereas a father's sperm can carry either an X or a Y chromosome.

Determining gender

As a mother always passes on an X chromosome to her children, it's the father's sperm that determines the sex of a baby. If a sperm carries an X chromosome, the baby will be a girl. If it carries a Y chromosome, the baby will be a boy.

In many countries, infectious diseases like HIV/AIDS and malaria are the main killers. In poor countries, children are at risk of dying from malnutrition (poor diet) or from lack of clean water. In wealthy countries, heart disease is often spread by poor diet and lack of exercise. In poor countries, lack of clean water and sanitation can lead to disease.



Causes of death worldwide

- Infectious disease
- Heart disease
- Cancer
- Stroke
- Lung disease
- Accidental injury
- Digestive disease
- Deliberate injury
- Brain disease
- Other causes

HISTORY

The Universe is the whole of existence, matter, energy, and time. The Universe is almost as to be unimaginable, but we do know that it is steadily expanding following the Big Bang.

CELESTIAL BODIES
The Solar System consists of the Sun, eight planets, and numerous smaller objects. Floating in space are billions of other stars, each with its own family of planets and moons that formed from the same cloud of gas that gave birth to the Sun. In recent years, planets have been seen around thousands of other stars.

Asteroid
Rocky bodies left over from the formation of the Solar System are called asteroids. They range in size from tiny pebbles to bodies the size of a planet.

Evidence of human occupation in Nigeria dates back thousands of years.

probably has no centre or outer edge. Only a fraction of it - the observable Universe - is visible to us. The whole Universe may be vastly bigger than this, perhaps infinitely so.

closed shape. Traveling in a straight line would bring you back to your starting point.



Further because their light hasn't had time to reach us.
Farthest objects
The light from the faintest galaxies in this photo from the Hubble Space Telescope took 13 billion years to reach Earth.

The oldest fossil remains found by archaeologists in the southwestern area of Iwo Eleru, near Akure, have been dated to about 9000 BCE.

There are isolated collections of ancient tools and artifacts of different periods of the Stone Age, but the oldest recognizable evidence of an organized society belongs to the Nok culture (c. 500 BCE-c. 200 CE).

What's the matter?
The elements hydrogen and helium make up 98 per cent of the matter we can see in the universe. But there doesn't seem to be enough matter to account for the way stars and galaxies are pulled by gravity. As a result, astronomers think galaxies contain "dark matter", which we cannot see. There is also an unknown force making the universe expand, known as "dark energy".



astronomers use the speed of light as a yardstick. Light is so fast it can travel around Earth 7.5 times in a second. One light year is the distance light travels in a year: nearly 10 trillion km (6 trillion miles).

Earth and Moon
Earth is 12 756 km (7 926 miles) wide. Our nearest neighbour in space - the Moon - orbits Earth at a distance of 384 400 km (238 855 miles). If Earth were the size of a football, the Moon would be the size of a melon about 21 metres (69 ft) away.

Solar System
The Sun's family of eight planets and numerous smaller objects occupies a region of space 9 billion km (5.5 billion miles) wide. If Earth were a football, it would take five days to walk across part of the Solar System. The nearest star to our Solar System would be a 58-year walk away.





CULTURE

Named for the village of Nok, site of some of the finds, the ancient culture produced fine terra-cotta figurines, which were accidentally discovered by tin miners on the Jos Plateau in the 1930s. Initially Neolithic (New Stone Age), the Nok culture made the transition to the Iron Age. Its people raised crops and cattle and seem to have paid particular attention to personal adornment, especially of the hair.

Distinctive features of Nok art include naturalism, stylized treatment of the mouth and eyes, relative proportions of the human head, body, and feet, distortions of the human facial features, and treatment of animal forms.

The spread of Nok-type figures in a wide area south of the Jos Plateau, covering southern Kaduna state southeastward to Katsina Ala, south of the Benue River, suggests a well-established culture that left traces still identifiable in the lives of the peoples of the area today. Many of the distinctive features of Nok art can also be traced in later developments of Nigerian art produced in such places as Igbo Ukwu, Ife, Esie, and Benin City.



Comet Comets are chunks of ice from the outer reaches of the Solar System.
Moon Also called a natural satellite, a moon is a body that orbits a planet or dwarf planet.
Dwarf Dwarf planets are celestial bodies that are roughly spherical and orbit the Sun, but do not clear their orbital path.
Planet A planet is a large, nearly spherical object that orbits a star, such as the Sun, and is not a satellite of another planet.

Scientists have set up projects to watch and listen for signals from extraterrestrials, and messages have been sent to the stars to inform any aliens out there of our existence.

SETI

Astronomers search for intelligent life using radio telescopes in space and on Earth. The signals are sent out there of our existence.

DNA molecule, and the Solar System. Messages will take 25 years to reach Mars.

Galaxies are one of perhaps over two trillion galaxies in the observable universe. The Milky Way is part of the Local Group, which is a cluster of galaxies.

Supercluster Clusters of galaxies exist in even larger groupings called superclusters. We live in the Virgo Supercluster, which is one of millions of superclusters in the known universe. Between these are immense empty areas called cosmic voids.

Universe Superclusters are thought to form a vast web of filaments riddled with enormous voids containing no galaxies. The true size of the universe is a mystery, and only a fraction of it is visible to us. The universe may even be infinite in size.

igbo ukwu

Bronzes, which have been dated to about the 9th century CE, were discovered in the 1930s and '40s at Igbo Ukwu, near the southwestern city of Onitsha.

They reveal not only a high artistic tradition but also a well-structured society with wide-ranging economic relationships.

Of particular interest is the source of the copper and lead used to make the bronzes, which may have been Tadmekka in the Sahara, and of the coloured glass beads, some of which may have come from Venice and India, the latter via trade routes through Egypt, the Nile valley, and the Chad basin.

It is believed that the bronzes were part of the furniture in the burial chamber of a high personage, possibly a forerunner of the eze nri, a priest-king, who held religious but not political power over large parts of the Igbo-inhabited region well into the 20th century.

Kingdom and

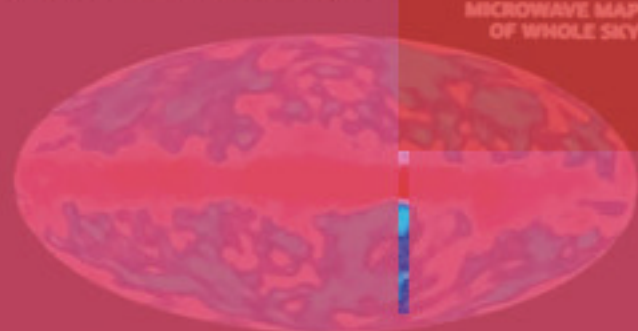
Empires



Discovery of the Big Bang
The first evidence of the Big Bang was found in 1929, when astronomers discovered that the light from distant galaxies is reddened. This colour change happens when objects are moving away from us, making the light waves stretch out and change colour. The more distant the galaxies are, the faster they are rushing away. This shows that the whole Universe is expanding.

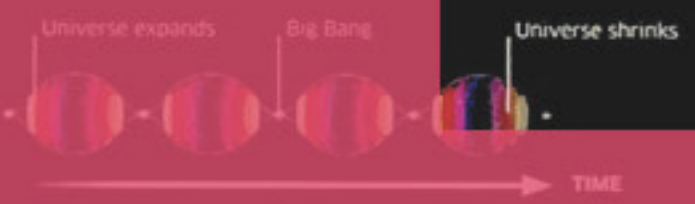


Big Bang afterglow
More evidence of the Big Bang came in the 1960s when astronomers detected faint microwave radiation coming from every point in the sky. This radiation is the faded remains of the intense burst of energy released in the Big Bang.



Many indigenous polities emerged in Nigeria before the British took control in the late 19th century.

Big Bounce theory
What caused the Big Bang? We may never know for sure, but some scientists have suggested that there may have been lots of big bangs, with the Universe expanding after each one and then shrinking again. This theory is called the Big Bounce because the process repeats itself.



micrometres (60 billion particles) make up the Universe. At the start of the Universe, the particles were so close together that they were indistinguishable from each other. As the Universe expanded, the particles cooled and began to clump together. Gravity pulled the matter together, forming stars and galaxies. The expansion of the Universe continues to this day, and is expected to continue for billions of years.

Now, 13.8 billion years old, the Universe is filled with vast clusters of galaxies, strung in threads, with gigantic voids between them. The voids get ever bigger as space continues to expand. At 8 billion years, the expansion of the Universe begins to accelerate.

Our Solar System forms at 9 billion years. When the Universe is 20 billion years old, the Sun will expand in size and destroy Earth.

The Universe will carry on expanding forever, becoming cold and dark everywhere.

Kanem Borno



The history of Borno antedates the 9th century, when Arabic writers in North Africa first noted the kingdom of Kanem, east of Lake Chad. The lake was then much larger than the present-day body of water, and its basin attracted settlements and encouraged exchange. A pastoral group, ancestors of the Kanuri, established a centralized state over those referred to collectively as the Sao. Initially, trading links extended to the Nile valley of Egypt. There is some evidence that Kanem had made contact with the Christian kingdoms of Nubia before it was overrun by Muslims, who gained a foothold in the ruling family of Kanem in the 11th century. From Kanem the rulers tried to dominate the areas south and west of the lake as well. By the 12th century they had been compelled by attacks from the Sao to move their capital to the region west of Lake Chad, and they gradually lost control of most of the original Kanem.

For a long time, Borno was the dominant power in the central Sudan, including much of Hausaland. The Bayajidda legend, concerning a mythical Middle Eastern ancestor of the Hausa, seems to suggest that the rise of a centralized political system in Hausaland was influenced from Borno. Though the rulers of Borno embraced Islam, the structure of the monarchy remained traditional, with the queen mother and other female officials exercising considerable power. The selection of the monarch, the coronation rites, and other bases of royal authority were dictated by pre-Islamic beliefs.

The princes and other members of the royal family were granted fiefs and posted away from the capital to govern frontier zones, while people of slave origin were preferred for the royal guard and palace officials.



7 trillion – the approximate number of galaxies in the observable Universe.

6,

length of time it would take to travel the Milky Way's stars at a rate of one a second.

Perseus Arm
This is one of the Milky Way's two major spiral arms. We see stars in this arm when we look towards the constellation Perseus.

Galaxy shapes
Astronomers classify galaxies into three main types.



Hausaland

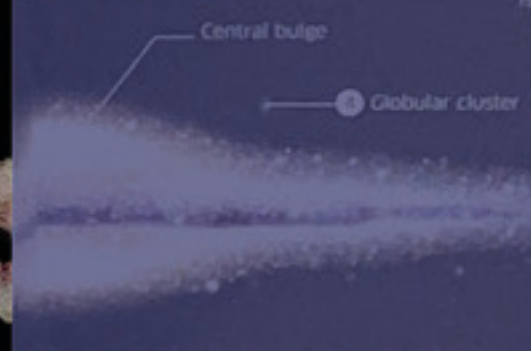
For centuries the Hausa have occupied the northern plains beyond the Jos Plateau, which were a crossroads open not only to Borno but also to the states of Mali and Songhai in the western Sudan, the trans-Saharan routes to northern Africa, and various trade routes to the forest areas of Borgu, Oyo, and Benin. Perhaps because of this strategic location, the Hausa developed a number of centralized states—such as Daura, Katsina, Kano, Zaria, Gobir, and, later, Kebbi—each with a walled city, a market centre, and a monarchical system of government.

Islam, which was introduced from the Mali empire in the 14th century, strengthened both the monarchical system and the commercial contacts, but it remained predominantly an urban religion until the beginning of the 19th century. Even within the walled cities, however, some pre-Islamic rites remained part of the ceremonies that sustained monarchical authority.

A considerable rivalry existed between the different states over agricultural land and the control of trade and trade routes, and Hausaland was periodically conquered by powerful neighbours such as Borno and Songhai.

Dark lane formed by dust

Carina Arm
This is the second of the two main spiral arms. The area where it joins the central bulge is rich in star-forming clouds.



End of the Milky Way
In 4 billion years our galaxy will collide with the Andromeda galaxy. This artist's impression shows what the sky might look like as they merge.

Yorubaland and Benin

Ife, which flourished between the 11th and 15th centuries, emerged as a major power in the forested areas west of the Niger and south of Hausaland. Some of the characteristic features of Yoruba culture emerged during that time: a monarchical system based on city-states and nucleated villages; a pantheon of gods, a few of which were recognized widely but with several local variations; and divination centred on the deity Ifa, with its corpus of sacred chants. Ife is best known for its potsherd pavements and for the great artistry of its terra-cottas and bronzes, especially the naturalism of many of its bronze figures.

Ife's influence on surrounding states is evident in the fact that all the monarchies of Yoruba states claim descent from Ife as a way of establishing legitimacy, sometimes borrowing regalia from Ife to use in coronation rites and sometimes sending remains of deceased rulers to Ife for burial.



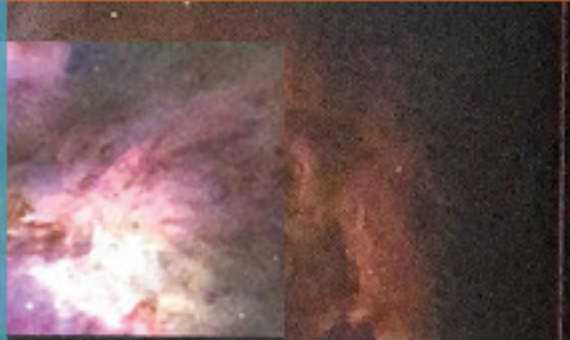
Oyo, founded in the 14th century and located in the savanna to the north of the forest, gradually supplanted the older kingdom of Ife. After more than a century of struggle with nearby Borgu and Nupe, it established itself strategically as the emporium for exchanging goods from the north—rock salt, copper, textiles, leather goods, and horses—with products from the south—kola nuts, indigo, parrots, and cowries.

By the 17th century it had built up a cavalry force with which it dominated people in western Yorubaland and in the dry gap to the coast; to the south, infestations of tsetse flies prevented kingdoms there from effectively utilizing horses.

When the Portuguese arrived in the kingdom of Benin in the 15th century, they found a monarchy, dating back many centuries, with a complex structure of chiefs and palace officials presiding over a kingdom that was expanding in all directions. In time, Benin dominated not only the Edo-speaking peoples to the north and south but also the area eastward to the Niger and, along the coast, to Lagos (which the Edo now claim to have founded) and even into present-day Ghana. It also exerted considerable influence on eastern Yorubaland and maintained trading connections with Oyo.

Benin art, which began to flourish in the 15th century, was characterized by naturalistic bronze sculptures and bronze door panels that covered the outside of the royal palace.

A protostar forms. Gravity pulls material into its core. Here the density, pressure, and temperature build up. The more matter the original cloud content contained, the greater the temperature and pressure as the protostar develops.



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Classifying
The Hertzs
diagram is a famous
graph that astronomers
use to classify stars. The
graph plots brightness
against temperature
and reveals that there
are distinct groupings of
stars, such as red giants
(dying stars) and main
sequence stars (ordinary
stars). Astronomers also
classify stars by colour,
which is linked to their
temperature: hot stars
are blue; cooler stars
are orange or red.

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Star begins to shine

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Igboland and the Delta City - States

Many Nigerian peoples did not develop centralized monarchical states. Of these, the Igbo were probably the most remarkable because of the size of their territory and the density of population. The Igbo characteristic decentralized society seems to have been a deliberate departure from the earlier traditions of Nri; monarchical institutions in such outlying cities as Asaba, Onitsha, and Aboh probably arose through the influence of the kingdoms of Igala and Benin.

Igbo lineages were organized in self-contained villages or federations of village communities, with societies of elders and age grade associations sharing various governmental functions. The same was true of the Ijo of the Niger delta and peoples of the Cross River area, where secret societies also played a prominent role in administration.

Monarchical structures began to emerge by the 18th century in response to the needs of the overseas trade. Initially, Portuguese contacts focused on Benin and Warri. By the 17th and 18th centuries, at the height of the slave trade, the delta city-states had become the principal outlets of that activity. Various coastal communities organized themselves as entrepôts of the slave trade, so that they would not also become its victims. Similarly, the Igbo, like the Benin and Yoruba kingdoms, supplied slaves to the coast, although Benin had largely ended its involvement in the Atlantic slave trade by the 18th century.

The deleterious effect of the slave trade on the society and the economy was felt everywhere, but, in terms of loss of population, those who suffered most appear to have been the noncentralized peoples of the middle belt. The trade also caused severe economic and political dislocations, intercommunal rivalries, and the forced migrations of millions of people out of Nigeria.



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At the beginning of the 19th century, Islam was well established at all the major centres of the Hausa states and Borno. The etsu (ruler) of Nupe had accepted Islam, and a few teachers and itinerant preachers were also known in parts of the Oyo empire.

A group of Muslim intellectuals, most of them Fulani led by Usman dan Fodio, were unhappy that in all these places the rulers allowed the practice of Islam to be mixed with aspects of traditional religion and that nowhere was Islamic law (the Sharī'ah) observed in full. After 20 years of writing, teaching, and preaching in Gobir and surrounding states, Shehu (meaning "chief" or "senior") Usman (as he was now called) withdrew his followers to Gudu, where they formally proclaimed him amīr al-mu'minīn ("commander of the faithful"), pledged their loyalty, and prepared for war. In 1804 he called on his followers and all lovers of true Islam to rise up and overthrow the unjust rulers. He appealed to the masses of slaves and to the pastoral Fulani as oppressed people to join the revolt.

The high degree of communication that existed at this time among the different peoples in the area that would become Nigeria was evidenced when the call to jihad ("struggle" or "battle")—made in Gudu, in the northwest—had repercussions throughout the entire area comprising the present-day country.

The Sokoto Jihad

As a result of the considerable interaction along trade routes and rivers draining the northern plains to the Niger-Benue valley, through the delta, and across the coastal lagoons, the call to jihad was answered not only in the Hausa states, such as Kano, Katsina, and Zaria, but also in Borno, Bauchi, Gombe, and Adamawa and eventually in Nupe, Ilorin, and other places where there were pockets of Fulani scholars. Thus was created a caliphate, with its seat at the newly established town of Sokoto.

Each emirate enjoyed autonomy but pledged loyalty to the amīr al-mu'minīn and made contributions for the upkeep of Sokoto. Disputes within or between emirates were referred to Sokoto for settlement by officials who traveled as often as possible to oversee developments.

Usman himself retired in 1811 to concentrate on the intellectual direction of the movement, which followed the teachings of the Qadiri brotherhood and strict adherence to the Maliki code of laws. His brother Abdullahi and his son Muhammad Bello carried on the jihad and laid the basis of administration. When Usman died in 1817, Muhammad Bello succeeded him as amīr al-mu'minīn, while Abdullahi, as emir of Gwandu, was given charge of the western emirates, notably Nupe and Ilorin. In this way, all the Hausa states, parts of Borno, Nupe, Ilorin, and Fulani outposts in Bauchi and Adamawa were drawn into a single politico-religious system. The rulers of Borno invited Shehu (Sheikh) Muḥammad al-Amīn al-Kānemī, a distinguished scholar and statesman who disagreed with the Fulani view that jihad was an acceptable tool against backsliding Muslims, to lead their defense of Borno against the Fulani jihad. In the process Islam was revived in Borno, and the old Seyfawa dynasty was eventually replaced by that of Shehu Muḥammad al-Kānemī.



Supergiant stars can grow to 1 billion times the volume of our Sun.

As the hydrogen in the core of the Sun fades away, the core is used up, and the outer layers expand and cool, becoming a red giant.

A star begins to shrink.

Medium stars, like the Sun, spend most of their lives fusing hydrogen into helium in their cores. When a Sun-like star runs out of hydrogen, its core contracts and heats up, causing the outer layers to expand and cool, making the star a red giant. The core continues to contract until it is hot and dense enough to fuse helium into carbon and oxygen. Eventually, the outer layers are blown away, leaving behind a white dwarf. Finally, it becomes a white dwarf, and the outer layers spread into space.

A star expands.

When a star is 100 times more massive than our Sun and their lives in strange and violent ways. The heat and pressure inside become so great that nuclear fusion not only fuses hydrogen atoms together to form helium but can fuse helium and larger atoms to create elements such as carbon or oxygen. As this takes place, the star swells to become the largest star of all: a supergiant.

crush
pinch

Star expands

teaspoonful of material from a red giant weighs less than a grain of salt.

1,600 light years - the distance from Earth to the nearest black hole.

Although the Fulani intrusion into Ilorin largely contributed to the collapse of the Oyo empire, it was not the only cause. Deep-seated conflicts arose between the alafin, or ruler, and his chiefs, including both provincial rulers and lineage chiefs and councillors at the capital. In spite of the external threat from the Fulani and others, the conflicts could not be resolved.

Fulani ascendancy at Ilorin cut off the supply of horses to Oyo and made the defense of the capital untenable. Large groups of people from Oyo had to migrate southward, where they established a new capital (at present-day Oyo) and other centres such as Ibadan and Ijaye. This pressure, in turn, pushed the Egba farther south, where they founded the town of Abeokuta about 1830. The collapse of the Oyo empire unleashed a major redistribution of the Yoruba people and precipitated a series of Yoruba wars that lasted until 1886.

The star begins to shrink and heat up.

A star becomes increasingly hot.

Finally, the fuel runs out and the light disappears. The star becomes a black hole.

BY CAROLANNE CRONIN

The Collapse of Oyo



Outer layers

Red supergiant

The star has grown into a supergiant. Nuclear fusion carries on inside the core, forcing atoms together to form heavier and heavier elements, until the star's core turns into iron. When this happens, the core no longer generates enough outward pressure to resist the crushing force of gravity, and the whole star suddenly collapses, causing a catastrophic explosion - a supernova.

...in an explosion brighter than 100 million suns. Its outer layers are blasted into space, but its massive core continues to collapse in on itself. What happens next depends on how massive the core is. A smaller core becomes a neutron star, but a massive core never stops collapsing. It shrinks until it's billions of times smaller than an atom and becomes a black hole.

Neutron star

Up to three times heavier than the Sun, yet just a few kilometres wide, neutron stars are unimaginably dense, fast-spinning stars.

Black hole

The force of gravity close to a black hole is so intense that nothing can escape from it - not even light. Anything falling inside is torn apart by gravity and then crushed into a point of infinite density.



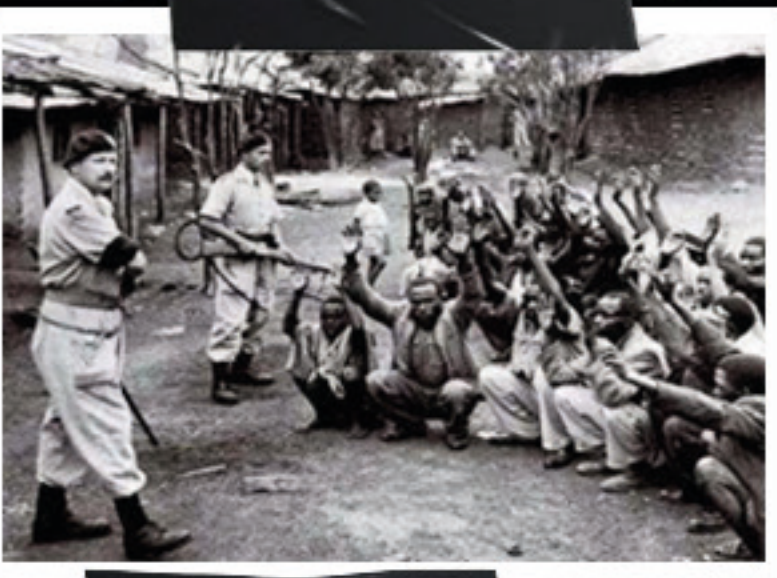


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The British are Coming !

The Sokoto jihad and the Yoruba wars stimulated the slave trade at a time when the British were actively trying to stop it. Slaves formerly had been traded for European goods, especially guns and gunpowder, but now the British encouraged trade in palm oil in the Niger delta states, ostensibly to replace the trade in slaves. They later discovered that the demand for palm oil was in fact stimulating an internal slave trade, because slaves were largely responsible for collecting palm fruits, manufacturing palm oil, and transporting it to the coast, whether by canoe or by human portage. The palm oil trade was also linked to the Sokoto jihad and the Yoruba wars, because many warriors recognized the importance of slaves not only as soldiers and producers of food to feed soldiers but additionally as producers of palm oil to trade for European dane guns and other goods.

Many of the slaves exported in the 1820s and '30s were intercepted by the ships of the Royal Navy, emancipated, and deposited in Sierra Leone under missionary tutelage. Some of them began to migrate back from Sierra Leone in search of home and trade. They invited missionaries to follow them and, in the 1840s, made themselves available as agents who allowed missionaries and British traders to gain access to such places as Lagos, Abeokuta, Calabar, Lokoja, Onitsha, Brass, and Bonny. In 1841 the British tried to settle some Egba on a model farm in Lokoja, but the plan was aborted because the mortality rate among European officials was so high. It was also partly to protect the Egba that the British shelled Lagos in 1851, expelled Kosoko, the reigning oba, and restored his uncle, Akitoye, who appeared more willing to join in a campaign to abolish the slave trade. The British annexed Lagos in 1861 in order to protect Akitoye's son and successor, foil Kosoko's bid to return, and secure a base for further activities.



The British were not yet willing to assume the expense of maintaining an administration in Nigeria. To reduce costs, Lagos was administered first from Freetown in Sierra Leone, along with Gold Coast forts such as Elmina, and later from Accra (in present-day Ghana); only in 1886 did Lagos become a separate colony. A consul was maintained at Fernando Po to oversee the lucrative palm oil trade in the region called the Oil Rivers. Missionaries were active: Presbyterians in Calabar and the Church Missionary Society (CMS), Methodists, and Baptists in Lagos, Abeokuta, Ibadan, Oyo, and Ogbomoso. The CMS pioneered trade on the Niger by encouraging Scottish explorer and merchant Macgregor Laird to run a monthly steamboat, which provided transportation for missionary agents and Sierra Leonean traders going up the Niger.

Rivalry between the Royal Niger Company and the Lagos Protectorate over the boundary between the emirate of Ilorin and the empire of Ibadan was resolved with the abrogation of the charter of the Royal Niger Company on January 1, 1900, in return for wide mineral concessions.

In the north Frederick Lugard, the first high commissioner of Northern Nigeria, was instrumental in subjugating the Fulani emirs. Some were deposed, some were defeated in battle, and others collaborated. By 1903 the conquest of the emirates was complete. The mud-walled city of Kano was captured in February, and, after a vigorous skirmish at Kotorkwashi, the sultan's capital, Sokoto, fell the next month. All the territories were now under British control, and the search for an identity began, first as Northern and Southern Nigeria and then with eventual amalgamation.

The British penetration of Nigeria met with various forms of resistance throughout the country. In the south the British had to fight many wars, in particular the wars against the Ijebu (a Yoruba group) in 1892, the Aro of eastern Igboland, and, until 1914, the Aniocha of western Igboland. In the north many emirates did not take military action, but the deposed caliph, Atahiru I, rebelled in 1903.

Resistance was strong in western Igboland, where a series of wars were waged against the British. The Ekumeku, who were well organized and whose leaders were joined in secrecy oaths, effectively utilized guerrilla tactics to attack the British. Their forces, which were drawn from hundreds of Igbo youth from all parts of the region, created many problems for the British, but the British used forceful tactics and heavy armaments (destroying homes, farms, and roads) to prevail. The Ekumeku, however, became a great source of Igbo nationalism.



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Nigeria as a Colony

After the British government assumed direct control of the Royal Niger Company's territories, the northern areas were renamed the Protectorate of Northern Nigeria, and the land in the Niger delta and along the lower reaches of the river was added to the Niger Coast Protectorate, which was renamed the Protectorate of Southern Nigeria. Lagos remained the capital of the south, with Zungeru the new capital of the north.

On January 1, 1914, following the recommendations of Sir Frederick Lugard, the two protectorates were amalgamated to form the Colony and Protectorate of Nigeria under a single governor-general resident in Lagos. Between 1919 and 1954 the title reverted to governor.

Following Lugard's success in the north, he set out the principles of the administrative system subsequently institutionalized as "indirect rule." Essentially, local government was to be left in the hands of the traditional chiefs, subject to the guidance of European officers. Native institutions were utilized and interference with local customs kept to a minimum, although the British did not always understand the local customs.

Further dislocation accompanied the outbreak of World War I. Locally this involved the immediate invasion of the German-held Kamerun (Cameroon) by Nigerian forces, followed by a costly campaign that lasted until 1916. Later Nigerian troops were sent to East Africa. (During World War II they again served in East Africa, as well as in Burma [now Myanmar].)

Although colonial rule appeared secure in the first two decades of the 20th century, the British struggled to keep control of their Nigerian colony and continued to do so until Nigeria became independent in 1960. The British, when faced with dissent, tended to grant political reforms in an effort to dispel the attractiveness of more-radical suggestions.

Early on in colonial rule, for example, Nigerians protested the manner in which water rates and head taxes were collected. Nigerians also requested more political representation. The Nigerian Legislative Council was established in 1914 and was given limited jurisdiction; it was replaced in 1922 by a larger one that included elected members from Lagos and Calabar, although its powers also were limited and the northern provinces remained outside its control.

Beginning in the 1920s, a number of Nigerians joined other Blacks in various parts of the world to embark on the wider project of Pan-Africanism, which sought to liberate Black people from racism and European domination. In 1923 Herbert Macaulay, the grandson of Samuel Ajayi Crowther, established the first Nigerian political party, the Nigerian National Democratic Party, which successfully contested three Lagos seats in the Legislative Council. Macaulay was despised by the British, but he came to be regarded as the "father of modern Nigerian nationalism."



25

THE UNIVERSE

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away.

Christianity Spread

Many changes accompanied British rule: Western education, the English language, and Christianity spread during the period; new forms of money, transportation, and communication were developed; and the Nigerian economy became based on the export of cash crops. Areas with lucrative crops such as cacao and peanuts (groundnuts) profited, while many people in different parts of the country had to migrate to work elsewhere as tenant farmers or use their newly acquired education and skills to work in cities as wage earners, traders, and artisans. Two tiers of government emerged, central and local. To prevent any united opposition to its authority, the British adopted a divide-and-rule policy, keeping Nigerian groups separate from one another as much as possible.

Traditional authorities were co-opted in the north, where the spread of Western education by Christian missionaries was strongly resisted by Muslim leaders. In the south the British occasionally created a political hierarchy where there had been none before; in most cases they ruled through those who were most malleable, whether these people had held traditional positions of authority or not.



Because Western education and Christianity spread rapidly in the south and not in the north, development was much slower in the north, and the growing disparity between north and south later caused political tensions.



VINTAGE

Nigerian Independence



Nigeria was granted independence on October 1, 1960. A new constitution established a federal system with an elected prime minister and a ceremonial head of state. The NCNC, now headed by Azikiwe (who had taken control after Macaulay's death in 1946), formed a coalition with Balewa's NPC after neither party won a majority in the 1959 elections. Balewa continued to serve as the prime minister, a position he had held since 1957, while Azikiwe took the largely ceremonial position of president of the Senate.

Following a UN-supervised referendum, the northern part of the Trust Territory of the Cameroons joined the Northern region in June 1961, while in October the Southern Cameroons united with Cameroun to form the Federal Republic of Cameroon. On October 1, 1963, Nigeria became a republic. Azikiwe became president of the country, although as prime minister Balewa was still more powerful.

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Kathrin Balk

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THE SOLUTION

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Big cities
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from overhead power lines.
When they slow down, their
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HOPE

Nnamdi Azikwe

After the 1930s, political activities focused primarily on ways to end British rule. A national party, the Nigerian Youth Movement, emerged in 1934, and its members won elections to the Legislative Council. After 1940, political activities were broadened to include more people. In 1944 Macaulay and Nnamdi Azikiwe, an Igbo who had been educated in the United States, united more than 40 different groups to establish the National Council of Nigeria and the Cameroons (NCNC). The forces unleashed against the British were now diverse, including soldiers who had served in World War II, the media, restless youth, market women, educated people, and farmers, all of whom became committed to the anticolonial movement. Political leaders resorted to the use of political parties and the media to mobilize millions of Nigerians against the continuation of British rule.

The British answered this activity by attempting to create a more representational colonial system. The Macpherson constitution, promulgated in 1951, provided for a central House of Representatives, but friction between the central and regional legislatures, related to the question of where supreme party authority lay, soon caused a breakdown. In response to Azikiwe and other nationalists, the Lyttelton constitution of 1954 created a fully federal system, comprising the three geographic regions of Nigeria, the Southern Cameroons, and the Federal Territory of Lagos. Each region had a governor, premier, cabinet, legislature, and civil service, with the significantly weaker federal government represented in Lagos by a governor-general, bureaucracy, House of Representatives, and Senate.



Chief Obafemi Awolowo

of the
Mars.



The southern protectorate was divided into two provinces in 1939—Western and Eastern—and in 1954 they, along with the northern protectorate, were renamed the Western, Eastern, and Northern regions as part of Nigeria's reconstruction into a federal state. Internal self-government was granted to the Western and Eastern regions in 1957. The Eastern region was dominated by Azikiwe and the Western one by Chief Obafemi Awolowo, a Yoruba lawyer who in 1950 founded the Action Group.

At its own request the Northern region was not given internal self-government until 1959, because northerners feared that their region might lose its claim to an equal share in the operation and opportunities of the federal government if it was not given time to catch up with the educationally advanced south. Among the problems needing attention before the British would grant full independence was the minorities' fear of discrimination by a future government based on majority ethnic groups.

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Civil War

On May 30, 1967, Ojukwu declared the secession of the three states of the Eastern region under the name of the Republic of Biafra, which the federal government interpreted as an act of rebellion. Fighting broke out in early July and within weeks had escalated into a full-scale civil war. In August Biafran troops crossed the Niger, seized Benin City, and were well on their way to Lagos before they were checked at Ore, a small town in Western state (now Ondo state). Shortly thereafter, federal troops entered Enugu, the provisional capital of Biafra, and penetrated the Igbo heartland. The next two years were marked by stiff resistance in the shrinking Biafran enclave and by heavy casualties among civilians as well as in both armies, all set within what threatened to be a military stalemate. Peacemaking attempts by the Organization of African Unity (now the African Union) remained ineffective, while Biafra began earning recognition from African states and securing aid from international organizations for what was by then a starving population. The final Biafran collapse began on December 24, 1969, when federal troops launched a massive effort at a time when Biafra was short on ammunition, its people were desperate for food, and its leaders controlled only one-sixth of the territory that had formed the Biafran republic in 1967. Ojukwu fled to Côte d'Ivoire on January 11, 1970, and a Biafran deputation formally surrendered in Lagos four days later.

General Gowon was able, through his own personal magnetism, to reconcile the two sides so that the former Biafran states were integrated into the country once again and were not blamed for the war. The oil boom that followed the war allowed the federal government to finance development programs and consolidate its power. In 1974 Gowon postponed until 1976 the target date for a return to civilian rule, but he was overthrown in July 1975 and fled to Great Britain. The new head of state, Brig. Gen. Murtala Ramat Mohammed, initiated many changes during his brief time in office: he began the process of moving the federal capital to Abuja, addressed the issue of government inefficiency, and, most important, initiated the process for a return to civilian rule. He was assassinated in February 1976 during an unsuccessful coup attempt, and his top aide, Lieut. Gen. Olusegun Obasanjo, became head of the government.



IFC

IT THE GOLD



SECRET SOCIETY

had no rights and had to obey their masters.

They were brought up to the surface in lifts and released into the arena through trapdoors.

The Second Republic

Obasanjo pursued Mohammed's desire to return the country to civilian rule. As a first step, a new constitution was promulgated that replaced the British-style parliamentary system with a presidential one. The president was invested with greater power but could assume office only after winning one-fourth of the votes in two-thirds of the states in the federation.

Many political parties emerged, but only five were registered: the National Party of Nigeria (NPN), the Unity Party of Nigeria, the People's Redemption Party (PRP), the Great Nigeria People's Party, and the Nigeria People's Party. All promised to improve education and social services, provide welfare, rebuild the economy and support private industry, and pursue a radical, anti-imperialist foreign policy. The PRP was notable for expressing socialist ideas and rhetoric. Shehu Shagari, the candidate of the dominant party, the right-wing NPN, narrowly won the 1979 presidential election, defeating Chief Obafemi Awolowo.

The NPN's party leaders used political power as an opportunity to gain access to public treasuries and distribute privileges to their followers. Members of the public were angry, and many openly challenged the relevance of a democracy that could not produce leaders who would improve their lives and provide moral authority. Even in this climate, however, Shagari was reelected president in August–September 1983, although his landslide victory was attributed to gross voting irregularities. Shagari was not able to manage the political crisis that followed or to end Nigeria's continuing economic decline, and the military seized the opportunity to stage a coup on December 31, 1983, that brought Maj. Gen. Muhammad Buhari to power.





Military Regimes 1983 - 99

Buhari justified his coup and subsequent actions by citing the troubles of the Second Republic and the declining economy. The regime declared a "War Against Indiscipline" (WAI), which resulted in the arrest, detention, and jailing of a number of politicians. When the WAI was extended to journalists and others not responsible for the social decay and economic problems, the government's popularity began to wane. Gen. Ibrahim Babangida assumed power following a bloodless coup in August 1985.

Babangida at first presented to the public and the media the image of an affectionate and considerate leader. He released political detainees and promised that public opinion would influence his decisions and those of the Armed Forces Ruling Council, the supreme governing body. The public, however, demanded an end to military rule. Babangida outwardly supported a return to civilian government but worked to undermine the process in order to retain power.

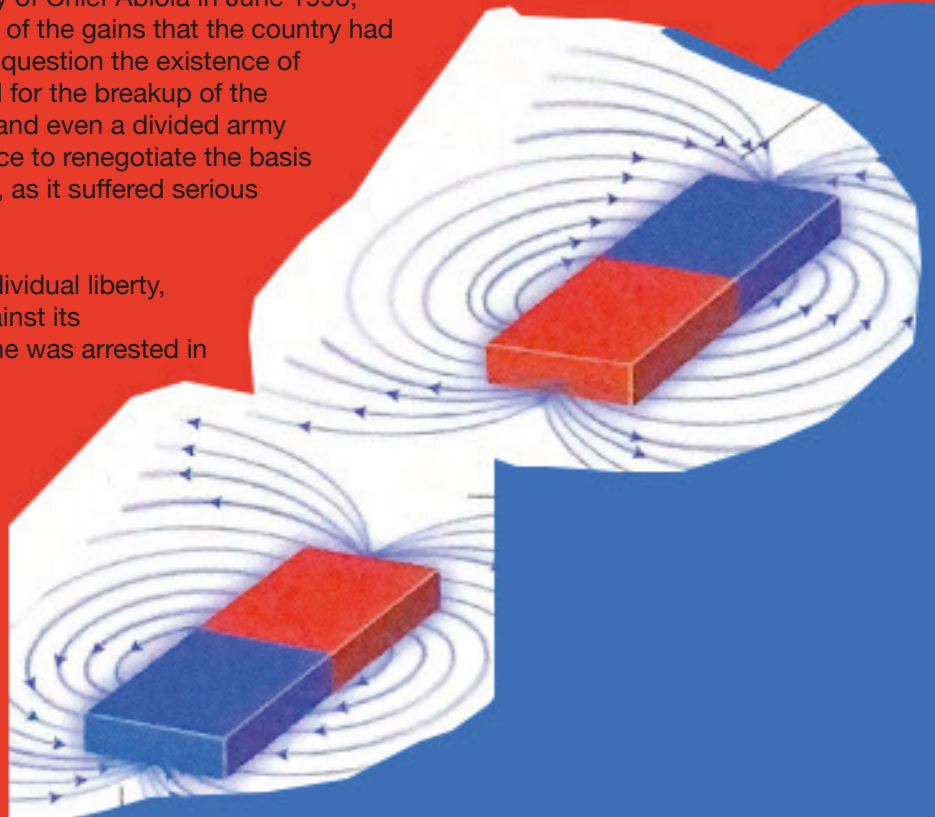
A transition program was announced in 1986 that was to terminate in 1990 (later extended to 1993), and the military controlled the process. The government created two political parties, the Social Democratic Party (SDP) and the National Republican Convention (NRC), and produced their agendas for them; freely formed parties were not registered, and many politicians were banned from politics. The 1979 constitution was modified by a Constituent Assembly, and a series of elections were then held for local government councillors, state governors, and legislatures.

Although Babangida voided presidential primary elections held in 1992, and all the candidates were banned from politics, a presidential election was slated for June 1993 between two pro-government candidates: Chief M.K.O. Abiola of the SDP and Alhaji Bashir Tofa of the NRC. The Babangida government believed that the elections would never take place and felt that, even if they did, the north-south divide would lead to a stalemate, as Abiola came from the south and Tofa from the north. Contrary to government expectation, however, the election was held on schedule, and it was free, fair, and peaceful. Chief Abiola won, but Babangida annulled the results before they became official. This turned out to be a serious miscalculation that forced him out of power in August 1993, and an Interim National Government (ING) was instituted, led by Yoruba businessman Ernest Shonekan. The ING faced opposition from all sides, and Gen. Sani Abacha, the defense minister under Babangida, overthrew it in November, reinstating military rule. Like Babangida, he promised a transition to civilian rule while pursuing the means to maintain power, but, unlike Babangida, he used excessive force to attain his ambition.

If the political future of Nigeria appeared bright with the victory of Chief Abiola in June 1993, Abacha's seizure of power and subsequent rule reversed most of the gains that the country had made since 1960. At no time since the mid-1960s did so many question the existence of Nigeria as a political entity. When leading politicians did not call for the breakup of the country, they advocated a confederacy with a weakened centre and even a divided army and police force. Opposition forces called for a national conference to renegotiate the basis of Nigerian unity. The country's international image was damaged, as it suffered serious condemnation and isolation.

The Abacha regime ignored due process of law, press freedom, individual liberty, and human rights. The government used violence as a weapon against its opponents and critics; when Abiola proclaimed himself president, he was arrested in June 1994 and died in jail in 1998. Trade union movements were suspended and protesters were killed, yet opposition to the government, particularly outside of the country, did not abate. Abacha and his loyalists again used the state as an instrument of personal gain. The decisive turning point in military disengagement came with Abacha's sudden death in June 1998. Gen. Abdulsalam Abubakar, appointed to replace him, promised to transfer power to civilians. He freed political prisoners, ended the harassment of political opponents, and set forth a timetable for the transition to civilian rule.

The country's international image improved, but economic performance remained sluggish.







Iwin Series - Susanne Wenger

the sword of Orion. In reality, it is a vast cloud of gas and dust thousands of times bigger than the Solar System.



stars will have dispersed and the cluster will no longer exist.

All Our Presidents

Dr Nnamdi Azikiwe



National Council of Nigeria and the Cameroons

1 October 1963
-
16 January 1966

Alhaji Shehu Shagari



National Party of Nigeria

1 October 1979
-
31 December 1983


Chief Olusegun Obasanjo



People's Democratic Party

29 May 1999
-
29 May 2007

Alhaji Umaru Musa Yar'Adua



People's Democratic Party

29 May 2007
-
5 May 2010


Dr Goodluck Jonathan



People's Democratic Party

5 May 2010
-
29 May 2015

Muhammadu Buhari



All Progressives Congress

29 May 2015
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Icumbent

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Portraits

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cut energy losses. Substations
along the route reduce the
voltage back to low levels.

Women in Politics

Women have participated in the government since the colonial period, especially in the south. Their political strength is rooted in the precolonial traditions among particular ethnic groups, such as the Igbo, which gave women the power to correct excessive male behaviour (known as "sitting on a man"). Igbo women, showing their strength, rioted in 1929 when they believed colonial officials were going to levy taxes on women. Yoruba market women exercised significant economic power, controlling the markets in such Yoruba cities as Lagos and Ibadan.

Some ethnic groups, such as the Edo who constituted the kingdom of Benin, also gave important political power to women; the mother of the oba (king) played an important part in the precolonial state. Women such as Funmilayo Ransome-Kuti (the mother of the musician Fela and human rights activist and physician Beko) actively participated in the colonial struggle, and several women have held ministerial positions in the government.

Although Nigerian women may wield influence and political power, particularly at the familial and local level, this has not always been reflected at the federal level: in the early 21st century, women made up about 5 percent of the House of Representatives and the Senate.



Political

Precolonial

Kuti

Power

Senate

Historical

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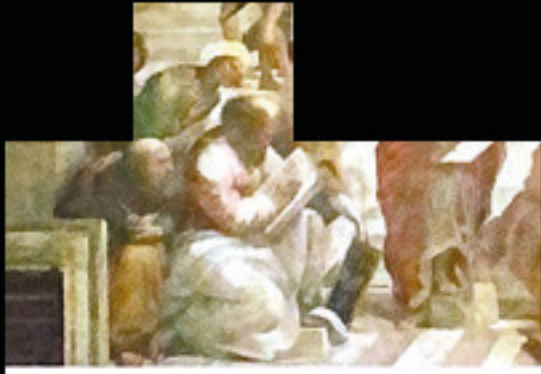
1999 Elections



After Abacha's death, political activity blossomed as numerous parties were formed. Of these, three emerged that were able to contest elections: the People's Democratic Party (PDP), the Alliance for Democracy, and the All People's Party. A series of elections were held in January–March 1999 in which councillors for local governments, legislatures for state and federal assemblies, and state governors were selected. The presidential election took place in February and was carefully monitored by an international team of observers. Olusegun Obasanjo of the PDP, who as head of state in 1976–79 had overseen the last transition from military rule, was declared the winner.

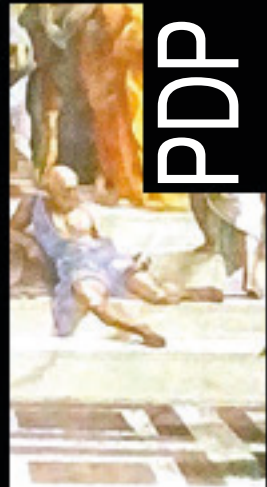
Winner

Abacha



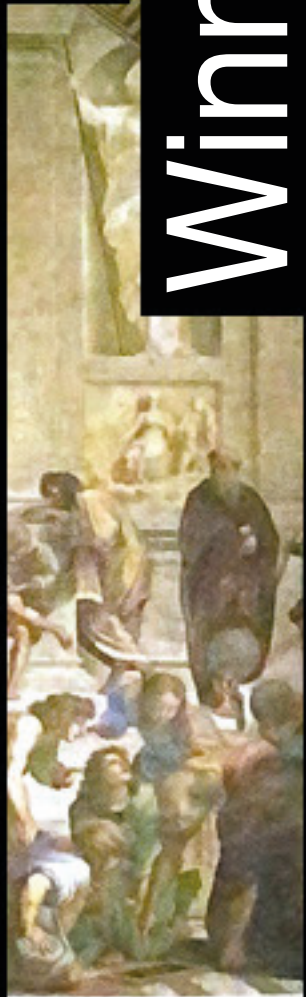
Death

Governors



PDP

Democratic



President Obasanjo

Obasanjo was sworn in on May 29, 1999. A new constitution was also promulgated that month.

Nigerians, tired of prolonged and crisis-prone military regimes, welcomed the change of government, as did the international community. In the first civilian-administered elections since the country achieved independence in 1960, Obasanjo was reelected in 2003, although there were widespread reports of voting irregularities.

Although conditions in Nigeria were generally improved under Obasanjo, there was still considerable strife within the country. Ethnic conflict—previously kept in check during the periods of military rule—now erupted in various parts of Nigeria, and friction increased between Muslims and Christians when some of the northern and central states chose to adopt Islamic law (the Sharīah). Demonstrations were held to protest the government’s oil policies and high fuel prices.

Their protests evolved into coordinated militant action in 2006. Petroleum companies were targeted: their employees were kidnapped, and refineries and pipelines were damaged as militants attempted to disrupt oil production and inflict economic loss. The Movement for the Emancipation of the Niger Delta (MEND) was the most active of such militant groups, although its activity decreased after the group declared a unilateral ceasefire, and the government introduced an amnesty program in 2009.



May



Crisis-prone

Constitution

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 is regarded as one of the most
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Petroleum



Kidnapped

Emancipation

Amnesty

Cameroon

Dispute

Obasanjo was also faced with resolving an ongoing border dispute with neighbouring Cameroon that included the question of which country had rights to the Bakassi Peninsula, an oil-rich area to which both countries had strong cultural ties. Under the terms of a 2002 International Court of Justice ruling, the region was awarded to Cameroon, and Obasanjo was criticized by the international community when Nigeria did not immediately comply by withdrawing its troops from the area in the subsequent years.

Nevertheless, Obasanjo eventually honoured the terms of the ruling in 2006 when Nigeria relinquished its claim to the peninsula and withdrew its forces.

The process of transferring the peninsula to Cameroon was not without its problems, including the ongoing issue of resettling Nigerians displaced by the transfer and the dissatisfaction of those who remained but were now under Cameroonian rule. In November 2007 Nigeria's Senate voted to void the agreement that had ceded the Bakassi Peninsula to Cameroon. However, this action did not affect the actual status of the peninsula, and a ceremony held on August 14, 2008, marked the completion of the peninsula's transfer from Nigeria to Cameroon.

Border



Bakassi Peninsula Dispute



2007 Presidential

Election

Meanwhile, Obasanjo was the subject of domestic and international criticism for his attempt to amend the constitution to allow him to stand for a third term as president; the proposed amendment was rejected by the Senate in 2006. With Obasanjo unable to contest the election, Umaru Musa Yar'Adua was selected to stand as the PDP's candidate in the April 2007 presidential poll.

He was declared the winner, but international observers strongly condemned the election as being marred by voting irregularities and fraud. Nonetheless, Yar'Adua was sworn in as president on May 29, 2007.

Obasanjo

Third

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Amendment

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Health

Yar'Adua - Goodluck

Yar'Adua's health was the subject of rumours, as he had traveled abroad for medical treatment several times in the years prior to his presidency and continued to do so after the election. His ability to serve as president while dealing with health issues was called into question after he went to Saudi Arabia in late November 2009 for treatment of heart problems and kidney problems.

After he had been absent from Nigeria for several weeks, critics complained of a power vacuum in the country, and there were calls for Yar'Adua to formally transfer power to the vice president, Goodluck Jonathan. Although a ruling by a Nigerian court on January 29, 2010, indicated that Yar'Adua was not obligated to hand over power to the vice president while he was out of the country for medical treatment, the controversy surrounding his prolonged absence remained. On February 9, 2010, the National Assembly voted to have Jonathan assume full power and serve as acting president until Yar'Adua was able to resume his duties. Jonathan agreed and assumed power later that day, but it was unclear whether or not the assumption of power was constitutional. When Yar'Adua returned to Nigeria on February 24, 2010, it was announced that Jonathan would remain as acting president while Yar'Adua continued to recuperate.

Yar'Adua never fully recovered, however, and he died on May 5, 2010; Jonathan was sworn in as president the following day. Jonathan's priorities for the rest of his term included tackling corruption, dealing with the country's energy problems, and continuing his involvement in peace negotiations with rebels in the Niger delta, something he had focused on while he was vice president.



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ENERGY

The explosion of the Krakatoa volcano, Indonesia, in 1883, is thought to be the loudest noise ever made. It was heard over 4,800 km (3,000 miles) away in Alice Springs, Australia.

How sound travels

If you bang a drum, its skin vibrates, shaking the air molecules around it



Rufus

you can hear on the ground

...ing balloons sound so loud because
...s faster than the speed of sound.

1.600 km (1,000 miles) - the
distance blue whales can hear.



Ogundele

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Their sound waves are more like a short burst
...om noise (white noise) than the precise wave
of a tuning fork.

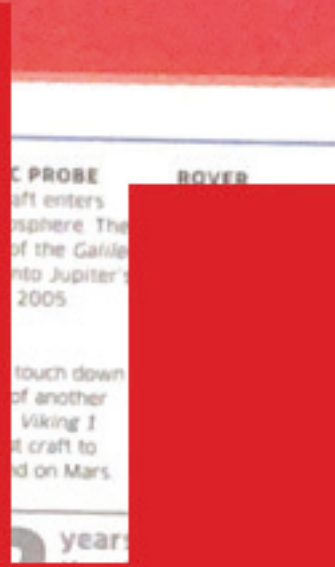
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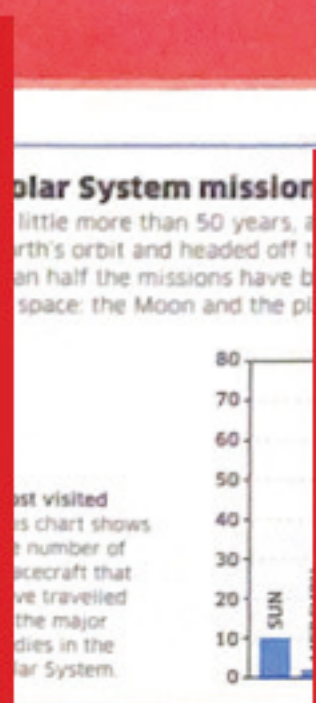
Electoral



Irregularities



Former



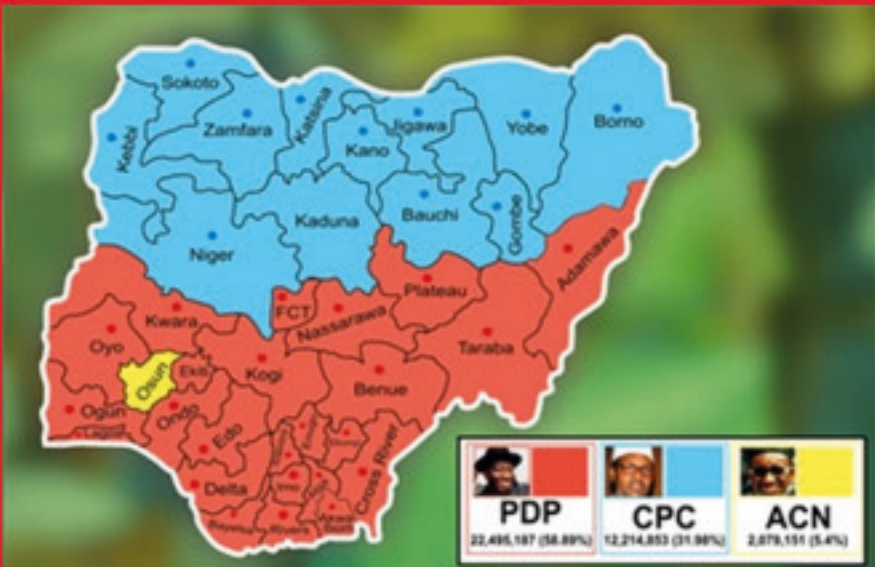
Controversy

Another area of focus cited by Jonathan was the reformation of the electoral process. Noting the irregularities associated with the 2007 presidential election, he vowed to make fair and transparent elections a priority, beginning with those scheduled for 2011. Voting in Nigeria's legislative elections began on April 2, 2011, but, because necessary electoral materials were not available in some areas, voting was halted and postponed until April 9 (April 26 in some locations). As a result, the presidential election that was scheduled for April 9 was delayed until April 16. Jonathan was the overwhelming winner of the presidential election, receiving almost 59 percent of the vote among a field of 19 other challengers.

Former military leader and head of state Muhammadu Buhari placed second, with about 32 percent of the vote. In other elections, the PDP did not fare as well as in previous years, but it managed to maintain control of the legislature and a majority of state governorship posts. International observers praised the elections as being largely free and fair. The polls were not completely without violence or controversy, however, as supporters of Buhari and other losing candidates rioted, primarily in the north, and accused the ruling PDP of electoral fraud.



2011



Elections





Challenges

Military

Criticised

The government's inability to eliminate the threat from Boko Haram was one of the key issues in the run-up to the 2015 presidential and legislative elections, along with the economy and the persistent complaint of corruption. Economic progress was mixed: Nigeria's economy grew to be the continent's largest in 2014, but the oil-reliant economy also experienced sharp decline later that year because of plunging oil prices on the world market.

Jonathan, who had been criticized along with the military for not doing enough to combat Boko Haram, accepted assistance from the neighbouring countries of Benin, Cameroon, Chad, and Niger. Plans were made for a regional force comprising troops from Nigeria and the aforementioned countries, and an offensive was launched against the militants. Marked progress was made in the fight against Boko Haram, with forces retaking much of the area previously held by the group.

Although there were 14 candidates standing in the March 28, 2015, presidential election, the real contest was seen as being between Jonathan, once again the PDP candidate, and Buhari, the former military head of state (1984–85) who was the All Progressives Congress (APC) candidate and enjoyed a reputation as being tough on corruption and adept at handling security issues. The election was the most closely contested ever in Nigeria. When it became clear that Buhari had won the election, Jonathan conceded. The election marked the first time that an incumbent had been defeated and power would be handed from one party to another. Buhari was inaugurated on May 29, 2015.

Buhari faced several challenges as president. In 2016, declining oil revenue led to Nigeria's first recession in more than 25 years. Although some recovery progress was evident by 2018, many Nigerian citizens did not see relief, and the country earned the unenviable distinction that year of having the most people in extreme poverty in the world. Many questioned whether Buhari was fit enough to serve as president, as he repeatedly left the country for medical treatment of an undisclosed ailment; in 2017 he was absent for several months. There was progress in the fight against corruption, but it was accompanied by criticism that efforts were focused on members of the opposition while ignoring the corrupt activities of APC allies.

Although the military had made progress against Boko Haram and ISWA by late 2016, attacks later resumed, crushing hopes that the militants would soon be eradicated. Other sources of insecurity were the ongoing clashes between herders and farmers in central Nigeria and unrest in the southeast stemming from the long-running issue of militants disrupting oil production as well as the resurgence of the Biafran secessionist movement. The latter group in 2017 observed the 50th anniversary of the region's declaration of independence.

Inability



Buhari

2019 Elections

Logistical

Leading

Candidates

Reelected

In the run-up to the February 2019 general elections, more than 70 candidates declared their intent to stand for president. Within that crowded field, the two leading candidates were Buhari, again the APC's candidate, and Atiku Abubakar, a seasoned politician who served as vice president under Obasanjo, representing the PDP.

The election was originally scheduled for February 16, but, because of logistical problems, it was postponed just hours before it was due to begin and was held a week later, on February 23. Buhari was reelected, taking 56 percent of the vote; Abubakar, his nearest challenger, won 41 percent.

He was inaugurated for his second term on May 29, 2019.

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End Sars



The #EndSARS movement has taken aim at SARS, a tactical police unit assembled in 1992 to curtail violent crimes such as armed robbery and kidnapping. Over the years, SARS has become the most flagrant source of state violence and corruption that citizens encounter. Youths, the demographic propelling #EndSARS, report harassment, bribery, and even kidnappings by SARS officers, who criminalise young people for “dressing like” prostitutes and Internet scammers, merely because they own smartphones and laptops, drive “flashy” cars, or have tattoos and dreadlocks. A 2020 Amnesty International report, “Nigeria: Time to End Impunity,” documented 82 horrifying cases between January 2017 and May 2020 of SARS extrajudicial killings, extortion, and torture methods, including “hanging, mock execution, beating, punching and kicking, burning with cigarettes, waterboarding, near-asphyxiation with plastic bags, forcing detainees to assume stressful bodily positions, and sexual violence.” Citizen reporting sites including End SARS and The POBIN (Police Brutality in Nigeria) Project score more testimonies of abuse.



On the morning of October 3, two days after Nigeria celebrated 60 years of independence, a tweet by Chinyelugo (@AfricaOfficial2) went viral, sounding an alarm that “SARS just shot a young boy dead.” Hours later, mobile phone recordings with the hashtag #EndSARS began trending, documenting the gruesome scene of the unidentified young man’s lifeless body abandoned on the roadside and citizens pursuing the officers, who they witnessed steal the man’s Lexus SUV.

Over the following days, many more Nigerians shared their own harrowing SARS experiences using the hashtag, which actually made its first appearance as a social media campaign and petition three years earlier, after a viral police murder in December 2017. This time around, with the mobilizing power of popular influencers on Twitter, the online protest moved to the streets. Since October 8, protesters in 26 of Nigeria’s 36 states have organized daily mass demonstrations, vigils, a sit-in of the National Assembly, and blockades of airports and major roads—until the tragedy on October 20.

What sets the 2020 #EndSARS movement apart from previous struggles in Nigeria is its inclusive, decentralized leadership and organizing approach.

Then, on October 20, hundreds of protesters staged a sit-in at the toll gate in Lekki, a rapidly gentrifying area of mega-city Lagos. Livestreams captured a crowd of youths jubilantly sitting on the ground singing the national anthem and waving the Nigerian flag. At nightfall, the chilling sounds of live gunfire and frantic screams rang out, with protesters running for their lives—many still faithfully singing the national anthem. Within hours, the Twitter account of the Nigerian army callously tweeted that stories of the military gunning down protesters were “fake news,” even while survivors shared images and videos of military-grade shell casings and the bodies of slain comrades.

Two days later, in his first televised address in response to #EndSARS, President Buhari called for an end to the protests, stating that the government would not “allow anybody or groups to disrupt the peace of the nation.” Even without directly acknowledging the killings, the message was clear: The Nigerian government is prepared to continue to use force to put down the #EndSARS movement.





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Plant and Animal Life

The main vegetation patterns run in broad east-west belts, parallel to the Equator. Mangrove and freshwater swamps occur along the coast and in the Niger delta. A short way inland, the swamps give way to dense tropical rainforests. Economically valuable, the oil palm grows wild and is usually preserved when forest is cleared for cultivation. In the more densely populated parts of the southeast, the original forest vegetation has been replaced by open palm bush. In the southwest large areas of forest have been replaced by cacao and rubber plantations. Tropical grassland occupies the area north of the forest belt and is studded with baobab, tamarind, and locust bean trees.

Gallery forests (narrow forest zones along rivers) are also characteristic of the open savanna in the north. In densely populated areas of the savanna, such as those around the towns of Sokoto, Kano, and Katsina, the vegetation has been removed by continuous cropping, overgrazing, and bush burning. In the far northern areas the nearly total disappearance of plant life has facilitated a gradual southward advance of the Sahara.

Camels, antelopes, hyenas, lions, baboons, and giraffes once inhabited the entire savanna region, and red river hogs, forest elephants, and chimpanzees lived in the rainforest belt. Animals found in both forest and savanna included leopards, golden cats, monkeys, gorillas, and wild pigs. The northern savanna abounds in guinea fowl. Other common birds include quail, vultures, kites, bustards, and gray parrots. The rivers contain crocodiles, hippopotamuses, and a great variety of fishes.

Hugh S. Webb
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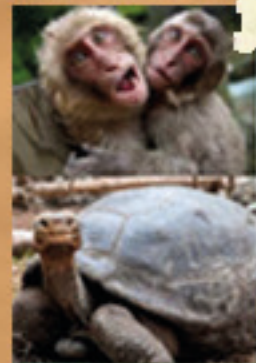
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@RJKAUR.XO



There are an estimated 250 ethnic groups in Nigeria. Each inhabits a territory that it considers to be its own by right of first occupancy and inheritance.

Individuals who are not members of a dominant group but who have lived and worked for several decades in the territory of the group are still considered to be aliens. In most rural areas, such aliens may not acquire outright title to land, yet considerable numbers of people have migrated from one ethnic territory to another in search of farmland.



Ethnic Groups

Internal combustion engines
In car engines, fuel (petrol or diesel) is injected into the combustion chamber and ignited by a spark plug. The resulting explosion forces the piston down, which turns the crankshaft. Piston engines go through four steps, called a four-stroke cycle.



There are three major ethnic groups in the country: the Hausa-Fulani, the Yoruba, and the Igbo.



Yoruba

The world's smallest internal combustion engine is the size of a penny.



Different types of engine

g needs to go, the more
d the quicker it must burn
arts cars need bigger engines
than standard cars, and
age jet engines.

3 Fuel is squirted
in and burns
with the air to
create power.

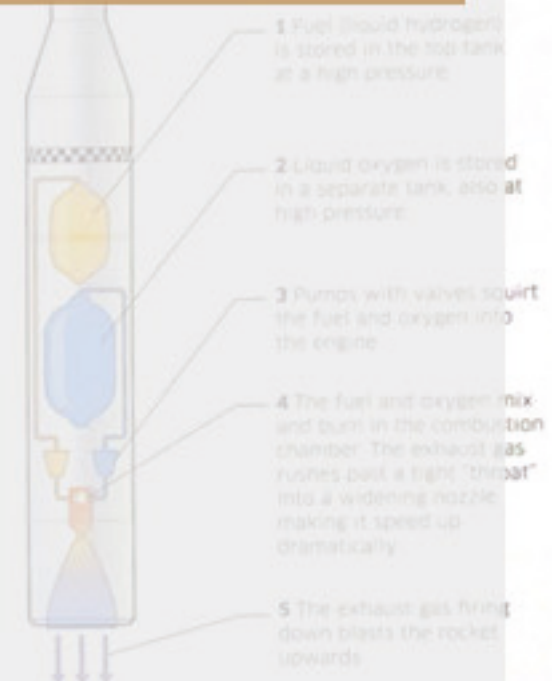
4 Hot exhaust
fires the plane
forward.



5 Exhaust goes
out a turbine
that powers the
compressor.

faster than cars just to
ire a lot more fuel. Instead
s and a four-stroke cycle,
ver by burning fuel in a
air.

Another large and politically dominant group is the Yoruba of southwestern Nigeria.



Rocket engine

Rockets are similar to jet engines but with one big difference - there is no oxygen in space so they must carry their own supply in a giant tank.

A ROCKET ENGINE AT LIFTOFF CREATES ABOUT AS MUCH FORCE AS 50,000 CAR ENGINES.

Most Yoruba are farmers but live in urban areas away from their rural farmland. Each Yoruba subgroup is ruled by a paramount chief, or oba, who is usually supported by a council of chiefs.

The ooni (oni) of Ile-Ife, who is the spiritual leader of the Yoruba, and the alaafin (alafin) of Oyo, who is their traditional political leader, are the most powerful rulers, and their influence is still acknowledged throughout the Yoruba areas.

3 Bang
A carefully timed burst of electricity makes the spark plug fire, igniting the mixture and causing it to explode. The explosion pushes the piston down and turns the crankshaft, which powers the engine.

4 Blow
When the fuel burns with oxygen, it turns into carbon dioxide gas, steam, and pollution that must be removed. The exhaust valve opens and the piston pushes up, driving the waste gases out, ready for the cycle to start again.



LIFE CYCLE

REPRODUCTIVE SYSTEM
The parts of the body dedicated to creating babies make up the reproductive system. The

The human life cycle is programmed and must follow a path to grow which things, create c

SEXUAL
Like most animals, human parents. Sexual reproduction is characterized by

Sperm
Male sex cells and female



Igbo



1 Normal cells have two sets of chromosomes: one from the mother (shown in red) and one from the father (green). Before meiosis, each chromosome copies itself, forming an X shape.

The third major ethnic group, the Igbo of southeastern Nigeria, lives in small decentralized and democratic settlements.



The largest political unit is the village, which is ruled by a council of elders (chosen by merit, not heredity) rather than by a chief. A smaller proportion live in large towns and are culturally much closer to the Edo of neighbouring Benin City (in Edo state) than to the Igbo east of the lower Niger valley.

SPERM ARE THE **SMALLEST** CELLS IN THE HUMAN BODY, WHEREAS EGGS ARE THE **LARGEST.**



Hausa - Fulani

GENES A

All living cells that control the cell. These are stored as molecules of DNA. Human cells contain these genes of development. These genes of development convert the embryo into a fully functioning human body made of trillions of cells.



Chromosome

Life expectancy

Average life expectancy varies greatly around the world and is much lower in poor parts of the world, such as Africa, the average is much lower, partly because of a high rate of death during infancy. Children who survive the first few hazardous years of life can expect to live much longer than average.

In later life, many people die of diseases such as cancer, heart disease, and diet. The average life expectancy is longer than it has been in the past.



The northern-dwelling Hausa, one of the most numerous groups in the country, have become integrated with the smaller Fulani group, whose members conquered Hausaland in the early 19th century; the great majority of both are Muslims.

Town-dwelling Fulani intermarry freely with the Hausa and other groups, and they continue to control the administration of the Hausa towns.

The cattle-herding rural Fulani, who generally do not intermarry, speak the Fulani language, Fula, rather than Hausa.



CONFIRMED THAT THE LIFE EXPECTANCY IN 1875 AND AT THE AGE OF 164 DAYS.



Causes of death worldwide

- Infectious disease
- Heart disease
- Cancer
- Stroke
- Lung disease
- Accidental injury
- Digestive disease
- Deliberate injury
- Brain disease
- Other causes

Chromosome, the baby will be a boy DAUGHTER



ation up to an electric kettle, you
in 50-millionths of a second.

Unstable atoms break up to release three types of

tricity by smashing atoms
by huge forces, and they
gy when they disintegrate.

ly different forms, called isotopes.
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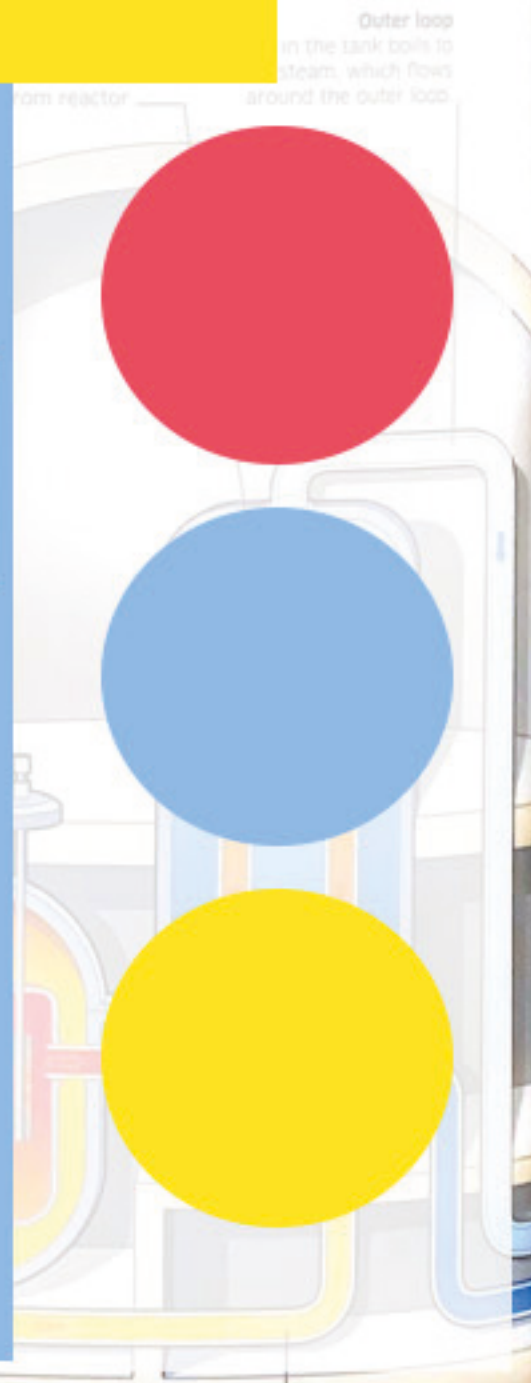
Religion

At the beginning of the 20th century, most Nigerians were followers of traditional religions, but British colonial policies discouraged this to such an extent that by the time of independence in 1960 the great majority of the people were classified as Muslims or Christians.

At the beginning of the 21st century, about half of the population was Muslim, slightly less than that was Christian, and only a small number claimed to follow traditional religions.

However, many of those professing to be Muslims and Christians also openly performed certain rites or rituals of traditional religions that were no longer condemned as they had been during the colonial period.

While a supreme god (called Olorun Olodumare in Yoruba, Chukwu in Igbo, Osalobua in Edo, and Abasi Ibom in Ibibio) is central to many of the traditional religions, the deity is worshipped through a number of intermediaries or lesser gods.



Penetrating power

Atoms release energy in two ways. When large, unstable atoms (such as uranium) are split into smaller atoms, energy is given off as heat. This process is called fission. Fission is used in nuclear power stations because the small amount of fuel that the energy from fission can produce. A second process is fusion (joining). Hydrogen atoms can be joined together, combining their energy. All of the world's nuclear power stations currently work by fission, but scientists are trying to build fusion power stations because they will produce more energy.



How fission works
A neutron strikes a uranium atom, splitting it into two smaller atoms and releasing energy.

How nuclear power is generated
In a nuclear reactor, a neutron strikes a uranium atom, splitting it and releasing energy. This energy is used to heat water, which turns into steam. The steam drives a turbine, which is connected to a generator that produces electricity. The turbine is cooled by water, which is then pumped back to the reactor to be heated again.



Turbine
Steam expands and spins the turbine at a high speed.

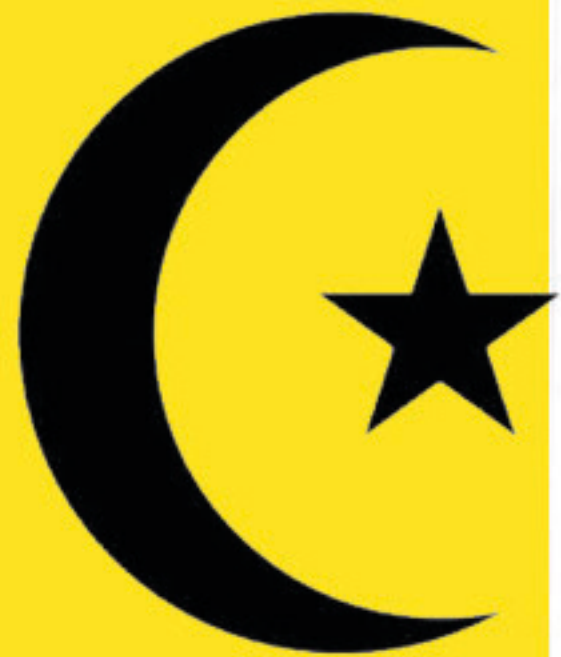
Pump drives water around outer loop

Religious freedom is guaranteed by the constitution, and Muslims and Christians live and work together, although there is continuing conflict between the two groups and between them and adherents of traditional religions. The greatest concentration of Muslims is in the northern states.

Three-fourths of the people profess the religion of Islam, which also is the dominant faith in a few of the southern states. Christians make up more than three-fourths of the population in the eastern states.

The main established Christian groups are Roman Catholics, Methodists, Anglicans, and Baptists. A growing number of breakaway Christian churches, which embrace indigenous cultural traditions, are gaining popularity—a development perceived as a threat by the older established churches.

The breakaway Christian churches often include drumming and dancing in their services, a practice since adopted by the established churches in an attempt to avoid losing members. Another issue has been how Islam and Christianity have chosen to incorporate the traditional practice of polygamy. Christianity has officially disallowed it, while Islam has allowed men to have up to four wives; however, breakaway Christian churches often have placed no limits on the practice.



The explosion of the Krakatoa volcano, Indonesia, in 1883, is thought to be the loudest noise ever made. It was heard 4,800 km (3,000 miles) away in Alice Springs, Australia.

When someone speaks, the vibrating molecules push and pull on the crowded air between them. This is how sound travels to your ear. If you could see the energy that squiggles through the air as they travel.

All sounds travel in waves. The molecules push and pull in the same direction as the wave travels.

Sound is ultimately made of vibrations. Like light or heat, it carries words and music. Without sound we wouldn't be able to hear the trees or the birds. It has the ability to attract our interest in the world.

How sound travels

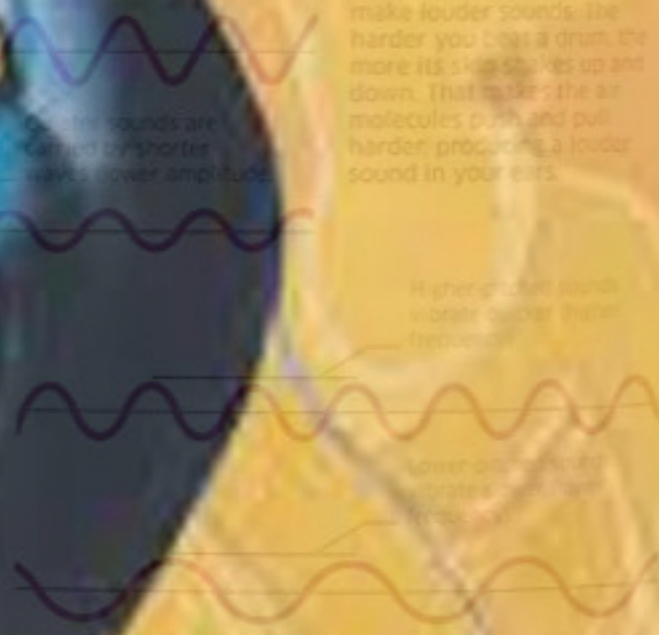
If you have a drum, its skin vibrates, shaking the air molecules around it. The air pushes outwards, spreading energy in all directions. When the energy finally reaches our ears, it makes the air inside them vibrate too and we hear sounds.

Louder sounds are carried by taller waves with higher amplitude.

Higher pitched sounds are carried by shorter waves with higher frequency.

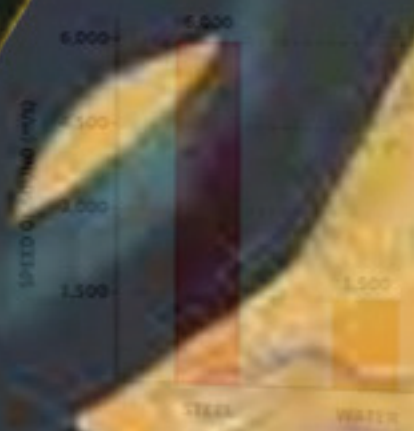
Loudness
It takes more energy to make louder sounds. The harder you beat a drum, the more its skin vibrates up and down. That makes the air molecules push and pull harder, producing a louder sound in your ears.

Pitch
The frequency of a sound is determined by how often it vibrates. A tight string vibrates more often than a loose one, making a higher pitched (higher frequency) sound. These are more often than lower frequency sounds.



Speed of sound

We see lightning and hear thunder. The sound travels slower than the light. At 20°C (68°F), sound travels at 343 m/s (1,125 ft/s). The speed of sound is the same in all materials, but it travels faster in solids than in liquids and gases.



Speed of sound in different materials
You can walk faster through air than through water. You might expect sound to travel faster in water than in air. Waves travel faster in solids than in liquids and gases. Sound travels about 15 times faster in steel than in air.

Supersound
By the time you hear the sound of a gunshot, the bullet has already traveled a long way. The bullet travels faster than the sound it makes.

Slow
Normal people can't hear sounds that are slower than 20 Hz.

Faster than sound
The speed of sound is 343 m/s. The speed of light is 300,000,000 m/s. Light travels much faster than sound.

Ben Enwonwu

faster

and.

1,600 km (1,000 miles) distance blue



The De

When an ambulance siren sounds, the sound waves get closer together as they approach your ears more frequently. After a sudden drop in pitch, the ambulance sound waves are therefore the "Doppler effect".

shifting

The pitch of an ambulance siren in the morning will hear

Musical

Our brain hears noise at a frequency of eight notes exactly the same noise waves to

Violin

When you are setting a wooden sharp a

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BEN JAWONNI R.B.A. 1967



VERTEBRATES

Most of the more obvious animals around us are vertebrates - animals with flexible backbones and internal skeletons. They are the mammals (which include humans), birds, reptiles, amphibians, and fish. But the list actually consists of three very different groups of animals that happen to live on land, breathe with lungs, and have similar body forms with four legs rather than gills. So scientists classify the vertebrates into seven main groups. These make up the vast majority of the phylum Chordata - animals with a spinal nerve cord reinforced by a tough, flexible rod called a notochord. In most vertebrates, the notochord is replaced by a bony spine at a very early stage in the animal's life.

THREE PER CENT

Animal life is divided into more than 30 major groups, each called a phylum. Just

Vertebrate groups

We generally think of the vertebrates as divided into five main types of animals - mammals, birds, reptiles, amphibians, and fish. But the list actually consists of three very different groups of animals that happen to live on land, breathe with lungs, and have similar body forms with four legs rather than gills. So scientists classify the vertebrates into seven main groups. These make up the vast majority of the phylum Chordata - animals with a spinal nerve cord reinforced by a tough, flexible rod called a notochord. In most vertebrates, the notochord is replaced by a bony spine at a very early stage in the animal's life.

Acanthostega

This was probably the first vertebrate animal to have feet and can



LEE-LIKE FIN



LEE WITH FOOT



Geographic

Marked differences exist between north and south, not only in physical landscape, climate, and vegetation but also in the social organization, religion, literacy, and agricultural practices of the people.

These differences form the basis of the division of Nigeria into three geographic regions: the south, or Guinea coastlands; the central region; and the north, or Nigerian Sudan.

Differences

SUPER

All the big vertebrates have skeletons of weight. Some were probably the only vertebrates to have

The largest living vertebrates include hippos, giraffes, bears, and big cats. They could have been dwarfed by some that lived in the distant past.



A blue whale can be 30 m (98 ft) long

DIPLODOCUS

One of the largest dinosaurs, this 25 m (82 ft) giant was a plant-eater. It lived during the Jurassic Period, about 150 million years ago.

BLUE WHALE

This is probably the heaviest animal that has ever existed - weighing anything up to 170 tonnes. Its heart alone is the size of a small car.

WHALE SHARK

This is the biggest fish in the sea, growing to 12 m (39 ft) long. Although a shark, it feeds on tiny shrimp-like creatures and small fish.

GIRAFFE

Its incredibly long neck gives the giraffe a total height of up to 6 m (20 ft). It towers above all other animals - even elephants.

JAWLESS FISH

43 species
Eel-like lampreys do not have jaws, and resemble the first vertebrates that evolved.

CARTILAGINOUS FISH

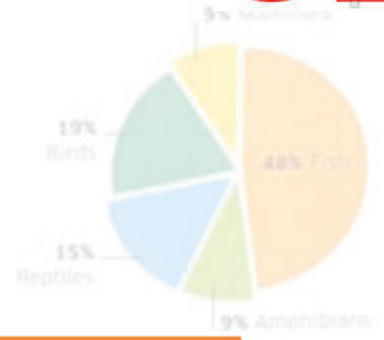
1,200 species
Sharks and rays have skeletons made of flexible cartilage instead of true bone.

BONY FISH

32,300 species
These fish, which include types such as salmon and herring, have skeletons of hard bone.

AMPHIBIANS

7,795 species
Frogs, salamanders, and newts have thin, moist skins and often breed in fresh water.



MAMMALS

5,625 species
Warm-blooded, usually furry or hairy, mammals are vertebrates that feed their young with milk.

REPTILES

10,450 species
These cold-blooded vertebrates have dry, scaly skin.

BIRDS

10,050 species
Adapted for flight, birds are warm-blooded, feathered vertebrates.

North and South

The north, or Nigerian Sudan, underwent significant change in the beginning of the 20th century, when a new economic pattern was created by the construction of a railroad that connected the region to the country's coastal ports. Before then, the Nigerian Sudan was more outward oriented through regular trans-Saharan contacts with North Africa, the Mediterranean, and the Middle East.

Except in the Lake Chad basin, where the Kanuri people established the state of Borno, the Nigerian Sudan has been dominated by a blend of the cultures of the Fulani and Hausa. The former are traditionally nomadic cattle herders, the latter settled cultivators; both groups are predominantly Muslim.

The south is the most economically developed part of Nigeria. Its forest resources are intensively exploited, and its tree crops are harvested on peasant farms and commercial plantations. All of the country's major industrial centres and oil fields, as well as its seaports, are concentrated in the region.

Important cultural centres are also found in the south, such as those of the Yoruba in the western part of the region, the Edo in the region's midwestern section, and the Igbo-Ibibio in the east. Parts of the country's Igbo and Ibibio-inhabited areas are the most densely settled areas in sub-Saharan Africa.

The Yoruba-inhabited areas where cacao is grown are also densely settled and attract many migrants from the congested Igbo and Ibibio-inhabited areas.

DIPLOMAT
INDICATED
36% OF
THIS
THE

The only bear that lives by hunting, the polar bear can kill a seal with a swipe of its paw.

Notorious for temper, the hippo is one of the most dangerous African animals.



AFRICAN ELEPHANT

African elephants are the largest land animals on Earth, with males weighing up to 7,000 kg (15,500 lb).

POLAR BEAR

The massively built polar bear is the most powerful carnivorous land mammal, with big males weighing up to 700 kg (1,500 lb).

HIPPOPOTAMUS

One of the largest and heaviest land mammals, the hippo can weigh up to 3 tonnes. Its closest living relatives are whales.

TIGER

The biggest of all cats, the tiger can grow to 3.3 m (11 ft) long from head to tail. It is a formidable predator, but now very rare.

Air supply

Every minute, without you thinking about it or even noticing, your lungs take in about 15 breaths of air. This vital process of breathing

keeps the life

Oxygen from your blood provides energy for your body. The air branches into tiny bubbles as the walls of blood vessels carry away carbon dioxide blood

Inside

The lungs are most of the surface area of the lungs is which The surface area of oxygen with ea

Nose
Most of the air we breathe travels through the nose. Inside the nose, hairs and sticky fluids trap dust and germs, preventing them from reaching the lungs.

The central region is the most sparsely settled and least developed part of Nigeria, comprising about two-fifths of the country's land area but supporting less than one-fifth of the total population.

Central
Region

Small pockets of dense population occur in the tin fields of the Jos Plateau and in the southern Tiv-inhabited area. The remaining, and by far the greater, part of this region is virtually uninhabited owing to the poor soil and climate.

Air pockets

The tiny air pockets in the lungs are called alveoli. Each single alveolus is a tiny sac about a millimetre across. A vast network of blood vessels surrounds each alveolus.

Breathing muscle
Under the lungs is a large

Abuja Lagos

Abuja, a planned city in the centre of the country, has been the official capital of Nigeria since 1991, although some government offices remain in Lagos, the former capital.

The decision to create a new capital was made in the mid-1970s, and work on it began in the 1980s.

The location was chosen so that no single ethnic group would be favoured over another, although one such group, the Gwari, was displaced by the construction.

Lagos, a cosmopolitan city consisting of islands and mainland areas, is the former capital of and the largest urban region in Nigeria.

It was founded (probably through the expansion of the kingdom of Benin) before the 15th century and had a population of about 250,000 when it was declared a British colony in 1861; that number increased to some 8,000,000 in the early 21st century. The creation of many states since 1967 diverted some of the industries and job-seeking migrants from Lagos to the new state capitals, especially the older and larger ones such as Ibadan, Kaduna, Kano, and Enugu. Some small towns, notably Minna, Uyo, Makurdi, Maiduguri, and Bauchi, experienced remarkable growth in population and economy after becoming state capitals.



15

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Atlas
This detector uses a huge doughnut-shaped system of magnets clamped around a beam pipe to watch collisions between protons. Already, it's found strong signs of a mysterious particle called the Higgs boson. Scientists hope this will help them to understand how other particles come to have their mass.

ation
Outer Case

10,000

The number of scientists, from 100 countries, involved in the project.

The super-powerful magnets in the LHC's tunnel contain enough cable to wrap around Earth six times.

1



Protons race around the loop more than 11 billion times a second.

Muon chambers detect particles called muons investigated here



The LHC's tunnel is the world's longest - cooled to a temperature that in outer space is maintained by a pump that keeps it at a constant



but the secrets of these things -

By smashing particles together, the LHC is the most powerful particle accelerator ever built. It's the first of its kind, and it's the most expensive. The LHC is the most powerful particle accelerator ever built. It's the first of its kind, and it's the most expensive. The LHC is the most powerful particle accelerator ever built. It's the first of its kind, and it's the most expensive.

African

The
ma

Kidneys
r waste
s blood

Backbone
The arched shape of
the elephant's backbone

Lungs
Big lungs draw in
air to extract oxygen.
Waste carbon dioxide



Economy

The Nigerian economy is one of the largest in Africa. Since the late 1960s it has been based primarily on the petroleum industry. A series of world oil price increases from 1973 produced rapid economic growth in transportation, construction, manufacturing, and government services.

In addition, from about 1975 Nigeria was forced to import such basic commodities as rice and cassava for domestic consumption. This system worked well as long as revenues from petroleum remained constant, but since the late 1970s the agricultural sector has been in continuing crisis because of the fluctuating world oil market and the country's rapid population growth. Although much of the population remained engaged in farming, too little food was produced, requiring increasingly costly imports.

In the late 1990s the government began to privatize many state-run enterprises—especially in communications, power, and transportation—in order to enhance the quality of service and reduce dependence on the government. Most of the enterprises had been successfully privatized by the beginning of the 21st century, but a few remained in government hands.

At the turn of the 21st century, Nigeria continued to face an unsteady revenue flow, which the government attempted to counter by borrowing from international sources, introducing various austerity measures, or doing both at the same time. As a result, an ever-increasing share of the national budget was needed for debt repayment, which, with corruption dominating government operations, meant that very little of Nigeria's income was being spent on the people and their needs.

Nigeria entered a recession in 2016, partly because of falling global oil prices, but saw progress with recovery within the next couple of years.



...of an elephant's trunk is as sensitive as our...
...s, and it uses it in much the same way.



A network of air spaces makes the skull lighter

Finance

The Central Bank of Nigeria issues the national currency, the naira, which has been devalued several times since 1980. The Central Bank has branches in all the state capitals and provides guidelines to all commercial and merchant banks in the country. In 1976 all foreign banks were compelled to sell 60 percent of their shares to Nigerians.

Banks proliferated in the 1980s, after the financial sector was liberalized. Many of these banks proved unstable, however, and in 1995 the government was forced to rescue some of them. Soon after, the government began privatizing banks and closing those that had violated banking regulations. By the beginning of the 21st century, the country had some 100 banks and financial institutions, and branch locations were widespread. There are a stock exchange and a securities exchange commission in Lagos.

100 Pounds Sterling \equiv 51,892.80 Nigerian Naira

100 United States Dollars \equiv 38,000.00 Nigerian Naira



...s keep in touch
...rumbling sounds that can
...e ground for 8 km (5 miles)
...ck up the vibrations
...itive soles of their feet.

Family ties

Female elephants and their young live in family groups led by the oldest, wisest female, who knows where to find food and water. They have a close bond, using their trunks to touch and caress each other. When young males reach their teens, they leave to form all-male groups, but they often meet up with the family.



Nigeria has a variety of both renewable and nonrenewable resources, some of which have not yet been effectively tapped. Solar energy, probably the most extensive of the underutilized renewable resources, is likely to remain untapped for some time. Resource extraction is the most important sector of the economy. The most economically valuable minerals are crude oil, natural gas, coal, tin, and columbite (an iron-bearing mineral that accompanies tin). Petroleum, first discovered in 1956, is the most important source of government revenue and foreign exchange. Most of the oil output comes from onshore fields in the Niger delta, although an increasing proportion of the crude is produced at offshore locations. There are oil refineries at Port Harcourt, Warri, and Kaduna. Nigeria has been a member of OPEC since 1971.

There are vast reserves of natural gas, but most of the gas produced is a by-product of crude oil. In the past this was burned off, as there was no market for it, but production has since increased, and Nigeria became a globally ranked exporter of this commodity.

Nigeria possesses significant reserves of coal, but these deposits are being developed gradually. Coal is used by the railroad, by traditional metal industries, and by power plants to generate electricity. Coal mining, initially concentrated around the city of Enugu and its environs, began in 1915. It declined after the late 1950s with the discovery of oil but subsequently increased. Substantial coal reserves of varying quality can be found in south-central states in a band that stretches from Benin to Cameroon. Deposits discovered more recently in the southwestern part of the country at Lafia-Obi are being developed for the Ajaokuta steel complex.

By the early 21st century, the country's tin-smelting capacity had not been reached, a result of diminished world demand in the late 1980s; production of columbite has also declined since the mid-1970s. Other mined minerals include gypsum, kaolin, barite, gold, sapphires, topazes, and aquamarines. There are also uranium deposits in the country.

Both renewable and nonrenewable



About one-fifth of the country's power is provided by hydroelectricity, although this source has the potential to provide an even greater amount of power.

The main sources of hydroelectric power are the dams at Kainji, Shiroro (Niger state), and Jebba (Kwara state). Thermal plants fired with natural gas and coal supply about four-fifths of the country's power and include those at Afam, Sapele, and Lagos and on the Oji River. Demand, however, always exceeds supply. Fuelwood (firewood and charcoal) is still an important energy source for domestic use.

Resources and Power

system work automatically, controlling your internal organs and reflexes without your conscious awareness.

Sheath of a fatty substance called myelin insulates axon, making signal travel faster

The concentration of people in the cities has created enormous sanitary problems, particularly improper sewage disposal, water shortages, and poor drainage. Large heaps of domestic refuse spill across narrow streets, causing traffic delays, while the dumping of garbage along streambeds constitutes a major health hazard and has contributed to the floods that have often plagued Ibadan, Lagos, and other cities during the rainy season. Lower respiratory infections, diarrheal diseases, malaria, and HIV/AIDS are among the leading causes of death. The Nigeria Centre for Disease Control was established in 2011 to support public health.

Health conditions are particularly poor in the shantytown suburbs of Greater Lagos and other large cities, where domestic water supplies are obtained from wells that are often polluted by seepage from pit latrines. Rural communities also suffer from inadequate or impure water supplies. Some villagers have to walk as far as 6 miles (10 km) to the nearest water point—usually a stream. Because people wash clothes, bathe, and fish (sometimes using fish poison) in the same streams, the water drawn by people in villages farther downstream is often polluted. During the rainy season, wayside pits containing rainwater, often dug close to residential areas, are the main source of domestic water supplies. Cattle are often watered in the shallower pools, and this contributes to the high incidence of intestinal diseases and guinea worm in many rural areas.

Medical and health services are the responsibility of all levels of government. There are hospitals in the large cities and towns. Most of the state capitals have specialized hospitals, and many are home to a university teaching hospital. There are numerous private hospitals, clinics, and maternity centres. Medical services are inadequate in many parts of the country, however, because of shortages of medical personnel, modern equipment, and supplies.



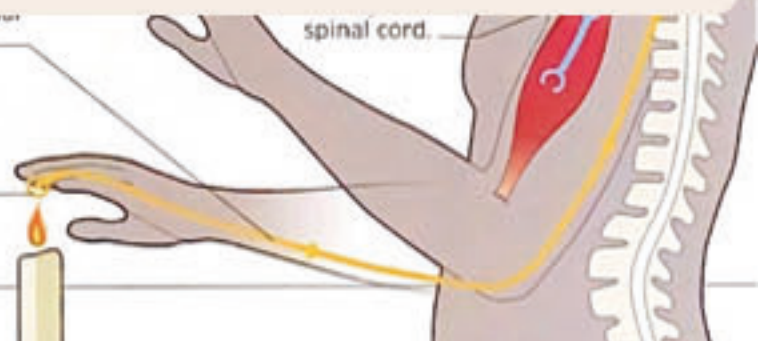
Medical and Health Services

Health

Synapses

Signals travel along nerve cell fibres as a wave of electric charge. When the charge reaches the end of a neuron, a tiny gap called a synapse prevents it from jumping across. Instead, chemicals called neurotransmitters flood into the gap and trigger a new signal in the next neuron.

1 Touching a flame triggers pain receptors in the skin.



Housing



Overcrowding in the Cities

The gatehouse

The castle entrance was heavily defended. It was often built as a narrow tunnel with wood or iron gates at either end. Holes in the ceiling (murder holes) could be used to pour boiling oil or water on attackers in the tunnel.

Lord's chambers

The lord and his family had private rooms in the strongest part of the castle, known as the solar.

Overcrowding in the cities has caused slums to spread and shantytown suburbs to emerge in most of the larger urban centres. Most houses are built by individuals, and, because banks do not normally lend money for home construction, most of these individuals must rely on their savings. A federal housing program provides funds for the construction of low-cost housing for low- and middle-income workers in the state capitals, local government headquarters, and other large towns.

House types vary by geographic location. In the coastal areas the walls and roofs are made from the raffia palm, which abounds in the region. Rectangular mud houses with mat roofs are found in the forest belt, although the houses of the more prosperous have corrugated iron roofs. In the savanna areas of the central region and in parts of the north, houses are round mud buildings roofed with sloping grass thatch, but flat mud roofs appear in the drier areas of the extreme north. Some mud houses are also covered with a layer of cement. Larger houses are designed around an open courtyard and traditionally contained barrels or cisterns in which rainwater could be collected.

During the colonial period, British officials lived in segregated housing known as Government Reserve Areas (GRA). After independence GRA housing became very desirable among the African population.

Moat

Cut into the rock and often filled by diverting a nearby stream, the moat kept attackers away from the walls.

Great Britain did little to promote education during the colonial period. Until 1950 most schools were operated by Christian missionary bodies, which introduced Western-style education into Nigeria beginning in the mid-19th century. The British colonial government funded a few schools, although its policy was to give grants to mission schools rather than to expand its own system. In the northern, predominantly Muslim area, Western-style education was prohibited because the religious leaders did not want Christian missionaries interfering with Islam, and Islamic education was provided in traditional Islamic schools.

Today primary education, free and compulsory, begins at age six and lasts for six years. Secondary education consists of two three-year cycles, the first cycle of which is free and compulsory. Although federal and state governments have the major responsibility for education, other organizations, such as local governments and religious groups, may establish and administer primary and secondary schools. Most secondary schools, trade centres, technical institutes, teacher-training colleges, and colleges of education and of technology are controlled by the state governments.

Nigeria has more than 400 universities and colleges widely dispersed throughout the country in an attempt to make higher education easily accessible. Many of the universities are federally controlled, and the language of instruction is English at all the universities and colleges.

3,500 soldiers defended Rhodes against a besieging army of 70,000 Ottoman Turks in 1480.



Education

Nigeria has more 400 universities and Colleges



Attempts by individuals and private organizations, including various Christian churches, to establish universities did not receive the approval of the federal Ministry of Education until the 1990s. Since then, dozens of private postsecondary institutions have been established.

Arrow slits

Defenders could fire arrows out, but attackers could not shoot in through these narrow holes.

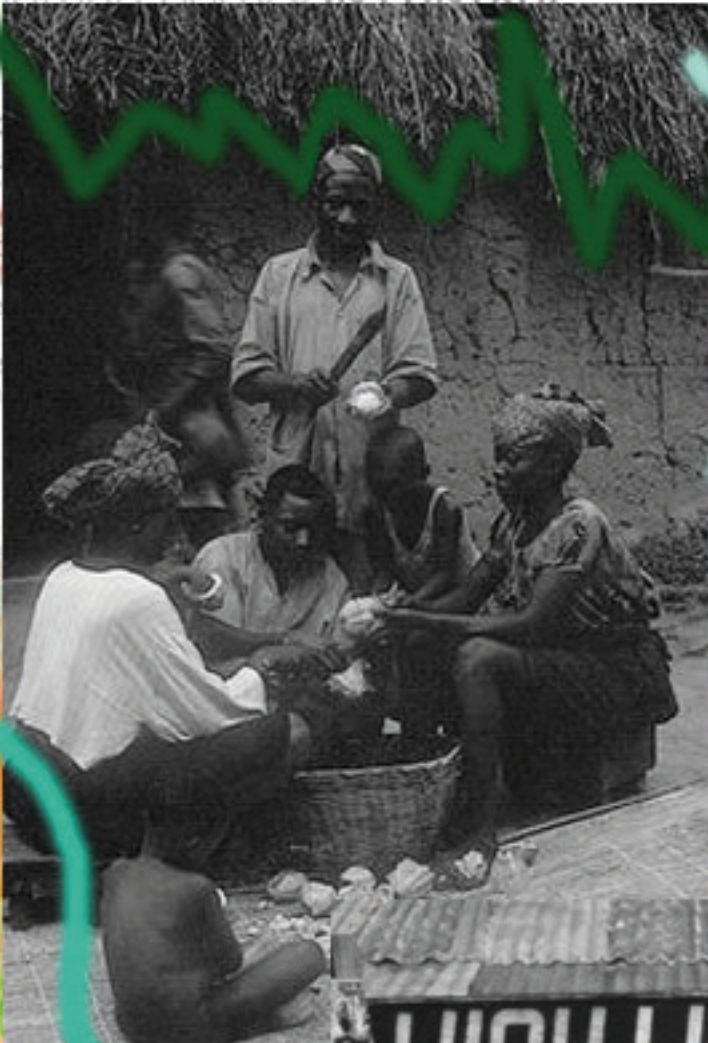
stones to damage defences, or to bombard defenders inside the walls.



TREBUCHET



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YOU
The human body is controlled by nerves called the nervous system. Nerve fibres carry messages up the nervous system. Your brain makes decisions and sends outgoing messages telling them what to do. You can choose how to react. However, many of the nervous system work automatically to control your organs and reflexes without your conscious awareness.



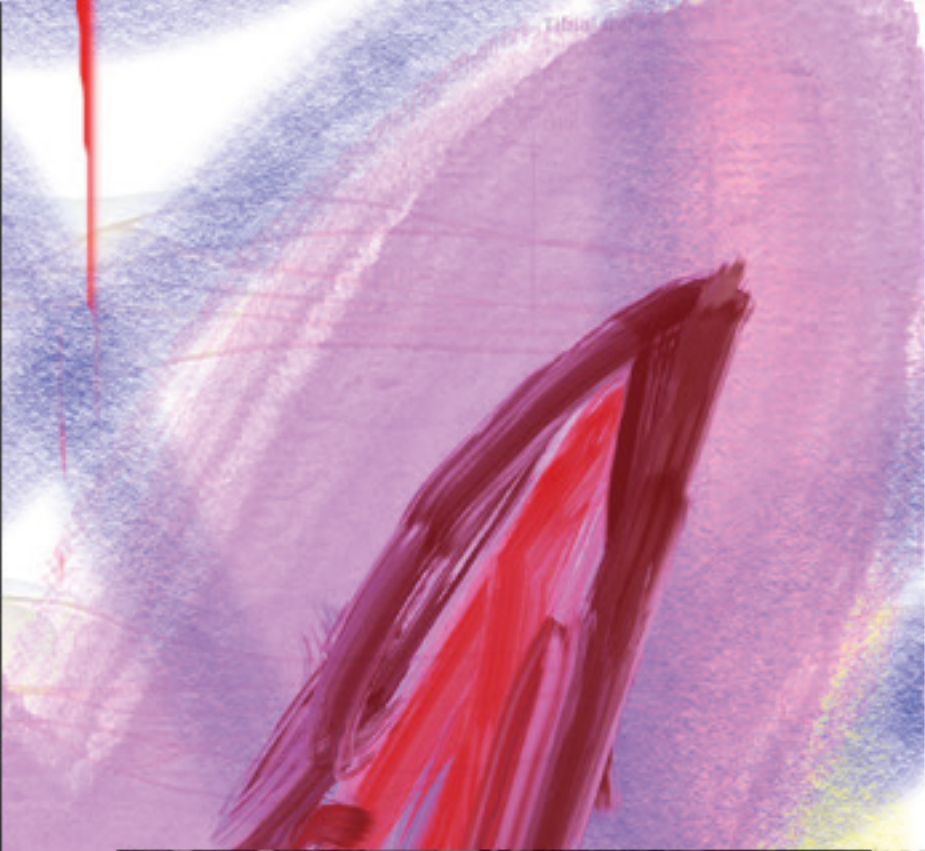
Myelin sheath is a substance called myelin that coats the axon, making signal travel faster

NEURON

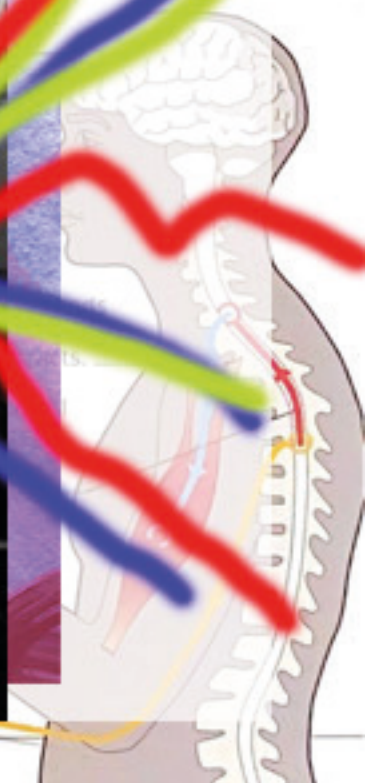
2 billion - the approximate number of nerve endings in your skin

100 trillion - the estimated number of synapses in your brain

The number of pain receptors in your brain



Like a nerve, the cells have long axons that can stretch up to 1 m in length. Axons are bundled together to form nerves, which are like wires. Each bundle is called an axon and carries an electric signal.



75

SCIENCE + ENERGY

0.00005

batteries created in a laboratory of the USA in 2011



Culture

29 JUN 2017



— AND THE —
adventure
— BEGINS —



Nigeria's rich and varied cultural heritage derives from the mixture of its ethnic groups with Arabic and western European influences. The country combines traditional culture with international urban sophistication.

In Ibibio territory, girls approaching marriageable age were confined for several years in bride-fattening rooms before they were given to their husbands. A girl was well-fed during this confinement, with the intent of making her plump and therefore more attractive to her future husband; she would also receive instruction from older women on how to be a good wife. These and other customs were discouraged by colonial administrators and missionaries.

Some of the more adaptable cultural institutions have been revived since independence; these include Ekpo and Ekong societies for young boys in parts of the southeast and the Ogboni society found in the Yoruba and Edo areas of southern Nigeria.



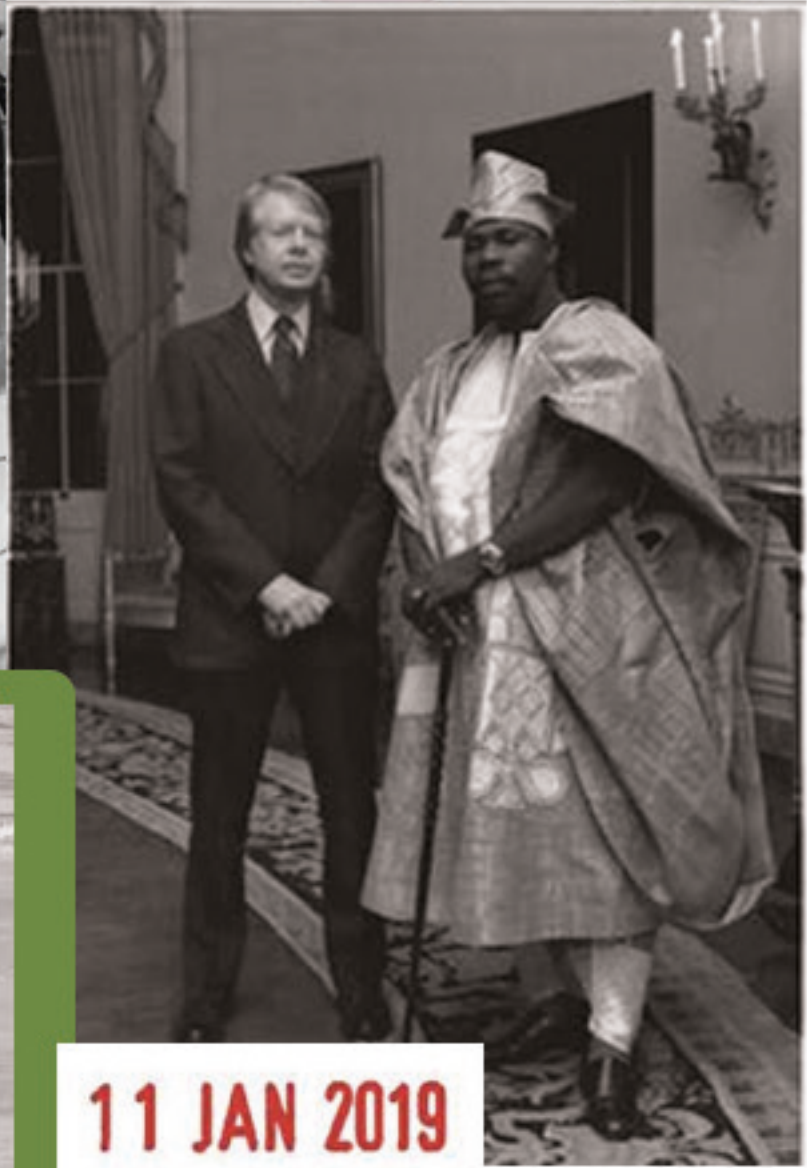
Nigeria's vibrant popular culture reflects great changes in inherited traditions and adaptations of imported ones. Establishments serving alcoholic beverages are found everywhere except where Islamic laws prohibit them. Hotels and nightclubs are part of the landscape of the larger cities. Movie theatres, showing mostly Indian and American films, are popular among the urban middle- and low-income groups. Radio, television, and other forms of home entertainment (e.g., recorded music and movies) have also grown in popularity, though their use is dependent on the availability of electricity.

Whether in urban or rural areas, the family is the central institution. Families gather to celebrate births and weddings. Funerals are also times when the family gathers. Because so many Nigerians live outside the country, funerals for non-Muslims are often delayed for a month or more to allow all the family members to make plans to return home.

Nigerians celebrate several holidays throughout the year, including Independence Day (October 1), Workers Day (May 1), and various Christian and Islamic holidays.



Customs



11 JAN 2019

17 AUG 2018

Lightning bolts
through the
322,000
(200,000,000 m)

High-voltage electricity into
the middle of the sphere.



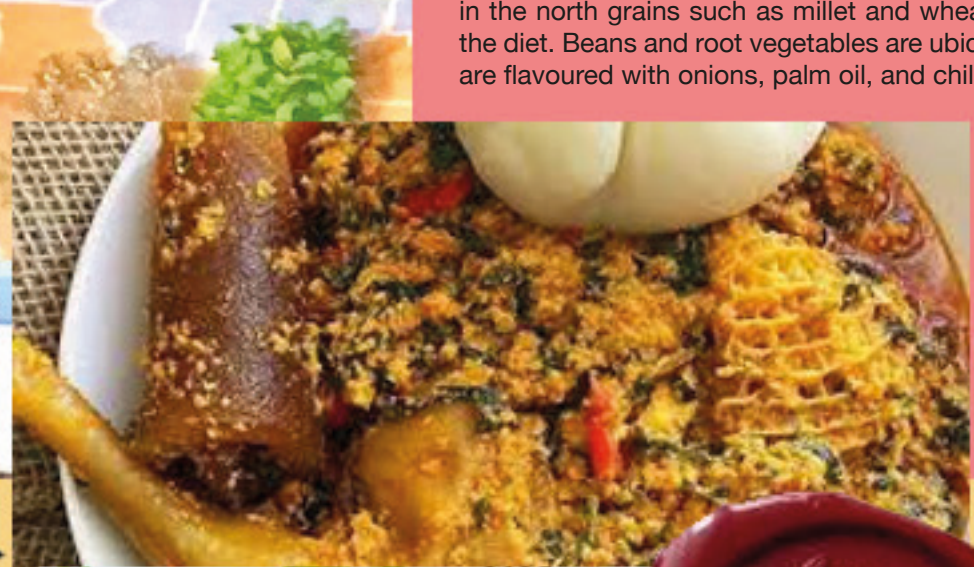
2019
2020
2021

By 1790, around 650,000 African slaves were taken to plantations in what is now the southern USA. In the north, which was more industrial, merchants sometimes took the place of Europe in the triangular slave trade, selling manufactured goods directly to Africa in exchange for slaves. The international slave trade was banned by the USA in 1808.

Food is an important part of Nigerian life. Seafood, beef, poultry, and goat are the primary sources of protein. With so many different cultures and regions, food can vary greatly. In the southern areas a variety of soups containing a base of tomatoes, onions, red pepper, and palm oil are prepared with vegetables such as okra and meat or fish.

Soups can be thickened by adding ground egusi (melon) seeds. Gari (ground cassava), iyan (yam paste), or plantains accompany the soup. Rice is eaten throughout the country, and in the north grains such as millet and wheat are a large part of the diet. Beans and root vegetables are ubiquitous. Many dishes are flavoured with onions, palm oil, and chilies.

Food



delicious!

**MORE THAN
50 DISHES**

*Home
Cooking*

is of ges. CROS
"Middle Passage". These slave to be sold in Europe. Many sla Americas, and those who surv conditions on the plantations. banned the Atlantic slave trad

Terrible conditions

Nigeria has a rich artistic heritage, including both traditional and contemporary art forms. From the naturalistic statues produced at Ife to the bronzes made for the king of Benin, Nigerian artists have crafted art that is world famous. The terra-cotta figurines of the Nok are some of the earliest statues in existence from sub-Saharan Africa. Ekpe masks and ikenga (personal shrines) from the Igbo in eastern Nigeria and ibeji (twin) sculptures from the Yoruba in western Nigeria are just three examples of the art produced in pre-colonial Nigeria. While many artists still work in these traditions, more-contemporary artists, who combine African and Western traditions, also abound.

Music and dance are integral to Nigerian culture, and each ethnic group has its own specialties. Traditional instruments include various types of flutes, trumpets, musical bows, xylophones, and wooden clappers, as well as many varieties of drums. Music is used to celebrate rulers and to accompany public assemblies, weddings and funerals, festivals, and storytelling.

Dance also has many varieties: Ishan stilt dancers in colourful costumes twist themselves in the air; one Tiv dance, called ajo, features male dancers who work in pairs, and another involves teams of women who perform a dance called icough while composing songs about current events. Dance for the Ubakala shows their value system, helps resolve conflicts, and also institutes change. Ekiti Yoruba dancers wear head masks so heavy that they can do only processional dances. The Hausa, who do not consider dancing to be an art, divide their dances into the categories of social dancing and ceremonial bòorii dances. Nigerian playwright and musician Hubert Ogunde, founder of Nigeria's first professional theatrical company (the Ogunde Concert Party), incorporated traditional instruments into his musical dramas of the 1940s in an effort to revive interest in indigenous culture.



OUR HISTORY



as high as one in four on the worst Atlantic voyages.

the inhumanity to its abolition in r countries soon al country to end so in 1888.

NEVER
ALL WE HAVE WIPED
S SCANDAL
CHRISTIAN NAME,
RSELVES FROM
ILT, UNDER WHICH
ENT LABOUR,
HED EVERY TRACE
ODY TRAFFIC."
LIAM WILBERFORCE
(VERY CAMPAIGNER)

The Arts





Sports



1 JUNE 2018

1993 Pulitzer Prize; Ken Geiger
Courtesy: Ken Geiger, William Snyder/ The Dallas Morning News

In precolonial times the sport of wrestling was a vehicle for expressing individual and social identity, status, and prestige. British colonizers introduced other sports to Nigeria in the early 20th century; football (soccer), boxing, athletics (track and field), and tennis were spread through mission schools, railroad companies, the armed forces, and the colonial bureaucracy. After independence in 1960, the Nigerian government used domestic and international sporting events to foster a sense of national identity among the various ethnic groups and to gain global recognition.

Football is a national obsession in Nigeria. The national team, the Super Eagles, led by such outstanding players as Nwanko Kanu and Jay-Jay Okocha, reached the World Cup finals in 1994, 1998, and 2002 and won the gold medal at the 1996 Olympics. Likewise, the national women's team has repeatedly reached the Women's World Cup finals. The acclaim won by many Nigerian footballers playing abroad was mirrored by Hakeem Olajuwon, who became a superstar in the National Basketball Association in the United States, sparking widespread interest in the sport in Nigeria by the end of the 20th century.

1901 The designer Sikorsky built the first helicopter, a model made from rubber bands.

The rotor of a large helicopter blows enough air each second to fill an Olympic-size swimming pool.

80

2 JUNE 2018

Arise, O Compatriots,
Nigeria's call obey
To serve our Fatherland
With love and strength and faith.
The labour of our heroes past
Shall never be in vain,
To serve with heart and might
One nation bound in freedom, peace and unity.



GOALS



O God of creation,
Direct our noble cause;
Guide our Leaders right:
Help our Youth the truth to know,
In love and honesty to grow,
And living just and true,
Great lofty heights attain,
To build a nation where peace and justice reign.



s cockpit
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Lions
hunters. Lions rely on their strength and speed to bring down their prey before launching a group attack. They spend the heat of the day resting in the shade.



Termite mound
The savanna swarms with termites that live in big colonies. Many build towering nests of sun-baked clay.

African savanna

The tropical grasslands of dramatic seasonal extremes support the most amazing wildlife.

Throughout the tropics, regions that are too hot and dry to support dense forest develop into grassy, tree-dotted plains. When they are hot, dry, and swept by wind, the grass gives way to a rainy season that revives the grass. This provides a source of food for the herds of grazing animals that roam the plains. They are often hunted by fearsome predators such as lions and hyenas.



...water, attracting thirsty animals from a wide area. These include leaf-browsing giraffes that eat the foliage of tall trees, and grazers such as wildebeest and gazelles. Hunters lie in ambush, hoping for an easy kill.



...al grasslands l...
...ly north and south...
...tropical forests, in hot regions
...distinct wet and dry seasons. There
...tropical grasslands in South America,
...ia, and India. But the African
...as are the largest, and have
...est wildlife.



Whistling thorn acacia
Hungry giraffes avoid the whistling thorn acacia because it is defended by an army of stinging ants. The ants live inside the tree's long, swollen thorns, getting in and out through holes that whistle in the breeze. If a leaf-eater comes too close, they swarm out to attack it with their stings.



Dwarf mongoose
This mongoose family has adopted an old termite mound as a den. They hunt by day for small animals.

African rock python
Reaching lengths of up to 7 m (23 ft), the rock python is Africa's biggest snake. The python can easily kill and eat an animal the size of a gazelle by coiling itself around its victim and suffocating it before swallowing it whole.



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use as food reserves for themselves or their young.

Grant's
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Unique color palette

KNOWLEDGE

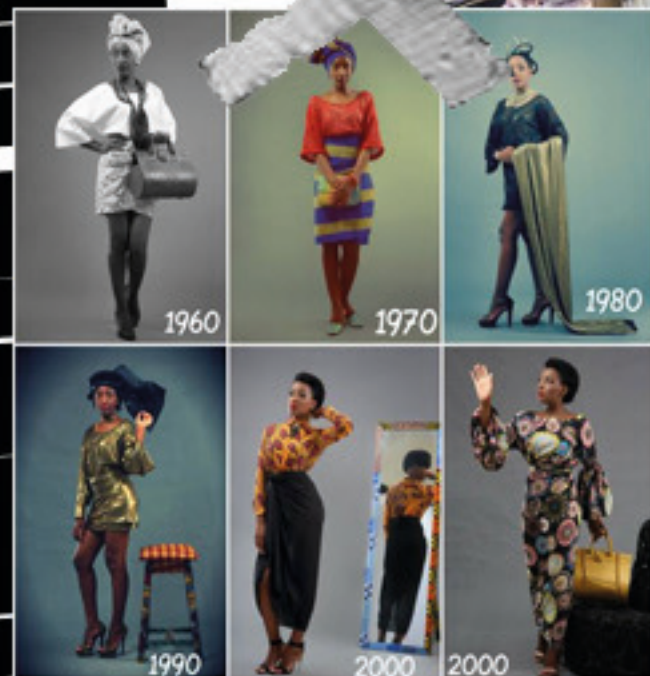
ENCYCLOPEDIA

DISCOVER

SEE

JOURNEY

INVESTIGATE



€25.00

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