Geography

HOMEWORK

7A Changing the way we see the world

Name

Tutor Group

Teacher

The homework booklet contains reading on

- **Ten people who've changed the way we see the world** *plus* **maps** of the world and the British Isles.

Your homework will be set and reviewed on ☑

☐ Monday ☐ Tuesday ☐ Wednesday

☐ Thursday ☐ Friday

People ● Places ● Pattern ● Process

Ten people who changed the way we see the world, Part 1.

From ancient Greece to the modern day **Geographers have sought to understand and explain our amazingly complex planet**. We seek to understand how places are shaped by people as well as natural processes. In this first homework you will read about four people who changed the way we view the world. **Be ready to answer questions about them next week.**

#10: Eratosthenes (276-194 BCE)

Eratosthenes was a scientist born in the town of Cyrene in North Africa. Cyrene, then a Greek city, is now the town of Shahhat in Libya. Eratosthenes became the Chief Librarian at the Library of Alexandria where, between 276 and 195 BCE, he created one of the earliest maps of the known world. Perhaps his greatest contribution at the time was the concept of latitude and longitude. He was also the first man ever to be able to calculate the size of the Earth. He did this without modern equipment was within 2% of the actual size. He also correctly calculated the Earth's axial tilt at 23.5°.

Even without these other remarkable accomplishments, Eratosthenes would still be notable as the man who invented the word *geography* by combining the Greek root words "geo" (the earth) and "graphein" (to write). His three volume work ***Geographika***, contained both physical and human elements and created the science of Geography that we know today.

#9: Al-Idrisi (1099-1165)

Abu Abdullah Muhammad al-Idrisi al-Qurtubi al-Hasani as-Sabti, or more simply **al-Idrisi**, lived from 1100 to 1165 and was an Arab Muslim geographer and cartographer (map maker). He lived in Palermo, Sicily, at the court of King Roger II. He was born in Ceuta, North Africa, and was responsible for drawing maps which were used by traders and explorers almost unchanged for the next 500 years.

Al-Idrisi collated the knowledge of Africa, the Indian Ocean and the Far East gathered by Islamic merchants and recorded on Islamic maps and combined this with the information brought by the Norman voyagers. He created the most accurate map of the world in pre-modern times. The ***Tabula Rogeriana*** was drawn by al-Idrisi in 1154 for King Roger II, during his eighteen year stay at the court. The map showed the whole of the Eurasian continent as well as parts of Northern Africa. The *Tabula* was produced over 70 double-pages and was the first ever atlas. King Roger was impressed: he had the map inscribed on a massive disc of solid silver, two metres in diameter.

#8: James Hutton (1726-1797)

James Hutton was born in 1726 and became an influential geologist. He was also a physician, chemical manufacturer, naturalist and experimental farmer. **Huttton developed the theory of 'uniformitarianism',** a fundamental principle of modern geology. This thoery explains the features of the Earth's crust through the action of natural processes over geological time.

Through studying the Earth, **Hutton came to believe that the surface of the planet was perpetually being formed and reformed through processes such as erosion and sedimentation; processes which we can observe in the present day.** His theories of geology and geological time became central to understanding how the surface of the Earth and the layers of rocks beneath our feet are the product of events stretching back millions of years. **His theories were in direct contradiction to the accepted religious view that God has created the Earth fully formed in days only a few thousand of years ago.** Hutton's work established the study of rocks as a science, and as a result he is known as the "Father of Modern Geology."

#7: Friedrich Alexander von Humboldt (1769-1859)

Born in 1769, Friedrich Alexander von Humboldt spent most of his early years disappointing his parents. He spent his time outdoors collecting insect and plants, while his parents wanted him to be respectable, get a proper job and uphold the family name. Humboldt described his family home as the 'Castle of Boredom.'

During his long life Humboldt was a geographer, naturalist and explorer. He travelled extensively in the Americas where he studied human migration and indigenous cultures. He wrote extensively about the evils of slavery and the defended the native cultures of South America against those who said they were inferior to European 'civilisation'. **He discovered ocean currents, the magnetic Equator and the origin of magnetic storms.** Humboldt's work laid the foundation for the field of biogeography, linking vegetation, geography and climate. **Humboldt was one of the first to suggest that the continents of Africa and South America could once have been joined together, a claim later proposed by Alfred Wegener.**

While Humboldt's parents may have disapproved of his childhood fancies they would no doubt be pleased with his legacy: his family name lives on everywhere. From the Humboldt penguin and Humboldt river dolphin to the Humboldt ocean current, four universities, a river, two glaciers, three mountain ranges, and even a 'sea' on the Moon, **no person has had more places, geographical features, plant and animal species named after him than Friedrich Alexander von Humboldt .**

Homework Nº2: Set date Check date

Learning about the meaning and spelling of key geography words.

For **Homework 2** you must read the following key words and definitions and practise the spelling. You must be ready to spell these words and remember what they mean for next week's homework check.

Practise the spellings on the next page. Fold this page in half along the dotted line to hide the words while you spell them.

Geography (geo-graph-y)	The study of the Earth: its landscapes, peoples, places and environments.
Environment (en-vi-ron-ment)	The surroundings or conditions in which a person, animal, or plant lives or operates.
Physical geography (phys-i-cal geo-graph-y)	The natural processes that shape the Earth's surface.
Human geography (hu-man geo-graph-y)	The study of how people live and interact with each other on our planet.
Environmental geography (en-vi-ron-ment-al geo-graph-y)	The study of how humans impact on and affect the natural world.
Atlas (at-las)	A collection of maps within a book, which represent the world and its regions.
Ordnance Survey (ord-nance sur-vey)	A mapping agency, which produces highly detailed, accurate maps for the UK.
Symbol (sym-bol)	A simplified picture to represent a feature on a map.
Contour line (con-tour line)	Lines on a map, which join up areas of equal heights.
Grid reference (grid ref-er-ence)	A number, which represents a specific area on a map, using eastings and northings and the coordinates.

Practise your spellings

Practise your spellings on this page. Spell the word on the line above the definition and then check. If you get it wrong you can try again.

The study of the Earth: its landscapes, peoples, places and environments.

The surroundings in which a person, animal, or plant lives or operates.

The natural processes that shape the Earth's surface.

The study of how people live and interact with each other on our planet.

The study of how humans impact on and affect the natural world.

A collection of maps within a book, which represent the world and its regions.

A mapping agency, which produces highly detailed, accurate maps for the UK.

A simplified picture to represent a feature on a map.

Lines on a map, which join up areas of equal heights.

A number, which represents a specific area on a map.

Part 2. In this homework you will read about four more people who changed the way we view the world. Be ready to answer questions next week.

#6: Charles Darwin (1809-1882)

In 1834 a young scientist departed the shores of England on a ship called the Beagle. The trip lasted five years and **Charles Darwin spent the journey studying geology and collecting plant and animal specimens.** By the time he returned his letters were already making waves amongst the scientific community.

Through the journey Darwin was developing his ideas about the origin of species, slowly moving towards what today we refer to as 'the theory of evolution.' During Darwin's journey across the Pacific he studied the different volcanic and coral islands and developed a theory of formation which stills stands the test of time today. **Darwin was not to publish his work on evolution for more than thirty years after his return from the Beagle voyage, deciding to build up a greater body of evidence.** In the end Darwin was bounced into publication by the intervention of a young and enthusiastic naturalist, Alfred Russel Wallace.

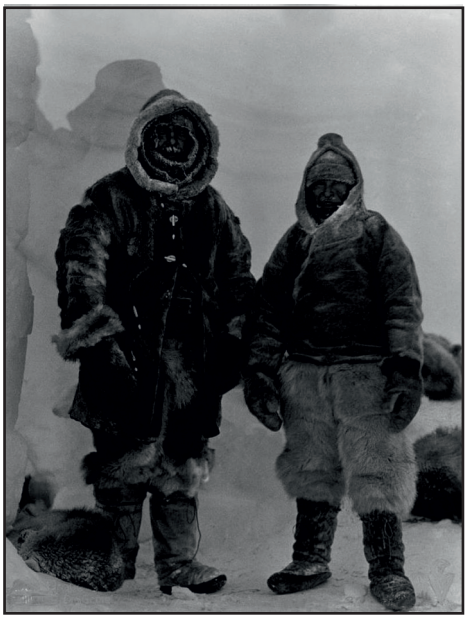
#5: Alfred Russel Wallace (1823-1913)

In 1848, inspired by Humbolt and Darwin, a young and ambitious naturalist named Alfred Russel Wallace set sail for South America with the aim of collecting insects and animal specimens for Victorian collectors. Wallace was to spend much of the next 14 years travelling through Amazonia and the Malay Archipelago (today called Indonesia). Lacking the personal wealth of his heroes, Wallace had to pay for his journeys by selling specimens sent back to England along with his observations.

Travelling in the Malay Archipelago, Wallace discovered the **greatest boundary between animal species on the planet**. In the western islands on Borneo, Java and Sumatra, Wallace found animals with an Asian heritage: Orang Utan, elephant and rhino. To the east he found animals with similarities to those of Australia, such as cockatoos and marsupials. This caused Wallace to challenge the accepted view that all animal species had been created by God, as described in the Book of Genesis. Wallace came to believe that each species developed over time with those best adapted to the environment being more successful: the "survival of the fittest."

In 1858 Wallace sent a paper on his ideas to Charles Darwin, who had spent the previous eight years in a detailed study of barnacles. Fearful of being "forestalled", Darwin jointly published his own ideas alongside the paper from Wallace. **The theory of evolution was born.** The zoogeographical division identified and described in Wallace's notes is today known as the Wallace Line (see page 9).

#4 Alfred Wegener (1880-1930)



Wegener (left) November 1930.

Alfred Wegener was a German polar researcher born in 1880. During his lifetime he was primarily known for his achievements in meteorology and as a pioneer of polar research. **Today he is most remembered as the originator of the theory of 'continental drift'** by suggesting that the continents are slowly moving over the surface of the Earth. His hypothesis was controversial at the time and not widely appreciated until the 1950s. By then numerous discoveries provided support for continental drift, and laid the basis for the theory of plate tectonics.

Wegener fought in World War One but was soon injured and retired from the war front. **He completed his first book called *The Origin of Continents and Oceans* in 1915. While it was mostly ignored during the chaos of global war, those who did read it mostly dismissed its contents.**

While Wegener was a respected climate scientist, most rejected his theory of continental drift. In November 1926 Wegener presented his continental drift theory at a meeting of the American Association of Petroleum Geologists in New York. His ideas were again was rejected by everyone at the conference except the chairman. Wegener didn't give up. Three years later, the fourth and final expanded edition of *The Origin of Continents and Oceans* appeared in print.

Wegener died in Greenland, in November 1930 during his fourth polar expedition. His 23 year-old colleague, Rasmus Villumsen (pictured right) buried Alfred's body, marking the grave site with a pair of skis. In temperatures below minus 60°C, Villumsen resumed his journey. He was never seen again. Six months later, on 12 May 1931, Wegener's body was discovered. The team that found him reburied his body in the same spot. Wegener had been 50 years old and a heavy smoker. It is thought he had died of heart failure brought on by over-exertion.

Wegener's theory has proved longer-lived. By the 1960s several developments in geology led to the resurrection of his continental drift theory. It was reborn in the form of its direct descendant, the now near **universally-accepted science of plate tectonics**. Wegener's memory lives on. The Greenland peninsular where he died now bears his name, alongside two craters: one on the Moon and another on Mars. In 1992, a 3.7 kilometre wide asteroid, number 29227, was officially named Wegener.

Part 3. In this homework you will read about two women who have changed the way we view the world. Be ready to answer questions about them next week.

#3 Rachel Carson (1907-1964)

Rachel Carson, author of *Silent Spring*

Rachel Louise Carson was an American marine biologist and conservationist whose book, *Silent Spring* is credited with advancing the global environmental movement. Carson worked for the US government during World War Two. Here she came into contact with the most recent scientific material regarding the sea. She brought this to the public in a book, *The Sea Around Us* (1951), which was effectively a biography of the oceans. It became an international best seller and made Rachel Carson the trusted voice of science in America.

Late in the 1950s, **Carson turned her attention to conservation, especially problems that she believed were caused by synthetic pesticides.** Her book *Silent Spring* (1962), brought these environmental concerns to an unprecedented number of the American people. **Carson argued that pesticides accumulated within ecosystems, and had a profoundly damaging impact as they moved up through food chains.** She linked one pesticide, DDT, to the sudden and unexplained decline in birds of prey, such as the iconic Bald Eagle and Peregrine Falcons.

***Silent Spring* was met with fierce opposition by the powerful chemical corporations.** Legal action was threatened and Carson was condemned both publicly and privately at the highest levels of the US government. But Rachel Carson's science was irrefutable. ***Silent Spring* spurred a reversal in US pesticide policy and led to a nationwide ban on DDT.** It also inspired a grassroots environmental movement. Silent Spring sold over 6 million copies in the USA and it has been translated into thirty languages.

Sadly Carson died of a heart attack, weakened by breast cancer, just two years after the publication of *Silent Spring*. **She was posthumously awarded the Presidential Medal of Freedom by US President, Jimmy Carter.**

#2 Suzanna Arundhati Roy (1961)

Suzanna Arundhati Roy, author and campaigner

Suzanna Arundhati Roy was born in Shillong, in Meghalaya, India. Roy completed her first novel, ***The God of Small Things***, in 1996. The book is semi-autobiographical and captures her childhood experiences in India. The publication of ***The God of Small Things*** catapulted Roy to international fame. It received the 1997 Booker Prize for Fiction and was listed as one of *The New York Times* 'Notable Books of the Year,' reaching fourth position on *The New York Times* Best-seller list for Independent Fiction. From the beginning, the book was also a commercial success: Roy received half a million pounds as an advance. *The God of Small Things* was published in May and the book had been sold in 18 countries by the end of June.

Most successful novelists would have thrown themselves into writing their next best seller. Instead, Roy threw herself into campaigning for a better world.

Arundhati Roy has used her celebrity, and her ability to write beautifully, to champion those who have no voice, in particular the poor and dispossessed of the Global South**.** She has campaigned against India's development of nuclear weapons and for independence for war-torn Kashmir. She has defended the rights of landless Indian peasants and other minority groups. **This bought her into conflict with powerful forces in Indian politics.** She was charged with sedition by the New Delhi Police, a crime which carries a maximum penalty of life in prison. However, these charges were eventually dropped by the Indian central government.

On the international scene, Roy campaign against the wars in Afghanistan and Iraq, and in defence of the rights of the Palestinian people. In 2003, she was awarded "special recognition" as a Woman of Peace at the **Global Exchange Human Rights Awards.**

The Ministry of Utmost Happiness, **Roy's second novel was published in 2017**, twenty years after *The God of Small Things*. Once again set in India, the award-winning novel threads through some of the darkest days in recent Indian history. **It is clear that the world has not heard the last of Arundhati Roy.**

Homework N°6: Set date Check date

Part 4. This homework is about a single man who has helped change the way millions see the world. Be ready to answer questions about him next week.

#1 Sir David Attenborough (1926)

David Attenborough, in the late 1950s

Switch on the television to watch a wildlife programme and there's a good chance you will hear his voice, describing and explaining the amazing diversity of the natural world. **David Attenborough is the voice many of us associate with natural history.** Attenborough's BBC 'Life' series, which began in 1979 and spanned over twenty years of filming, was the first TV series to fully document all the major groups of animals on Earth. Further series, Planet Earth, the Frozen Planet and Blue Planet followed, creating a wealth a visual images capturing our amazing planet.

Attenborough would be the first to admit that he is just a tiny part of the large team of researchers, film teams and producers who work to create these amazing programmes. **But it is perhaps because Attenborough has been narrating those prograames for so long that most of us now think of him as the 'voice of nature.'**

Attenborough started work for the BBC in the early 1950s and was soon fronting his own show, ZooQuest. In the early 1960s, he resigned from the BBC to study for a degree in social anthropology at the London School of Economics. **However, he accepted an invitation to return to TV as controller of BBC Two in 1965**. He never finished his degree. However, since that time **Attenborough has been awarded 32 honorary degrees from British universities, more than any other person in history.** He has also had at least 15 species names after him, including a Namibian lizard (*Platysaurus attenboroughi*), a Peruvian frog (*Pristimantis attenboroughi*), and one of only four species of echidna (*Zaglossus attenboroughi*). In May 2016, it was announced that a new British Polar research ship would be named ***RRS Sir David Attenborough*** in his honour.

In December 2018 David Attenborough addressed the United Nations climate talks in Poland. **"Right now,"** he said**, "we are facing a man-made disaster of global scale. Our greatest threat in thousands of years; climate change. If we don't take action, the collapse of our civilisations and the extinction of much of the natural world is on the horizon."** Addressing world leaders he continued, **"The world's people have spoken. Their message is clear. Time is running out. They want you, the decision-makers, to act now."**

Homework N°7 Set date Check date

This homework is about major cities in the British Isles. Using the list below and an atlas label the cities shown on the map and learn their locations.

- Edinburgh
- Glasgow
- Dundee
- Aberdeen
- Belfast
- Dublin
- Cardiff
- Newcastle
- Leeds
- Liverpool
- Manchester
- Birmingham
- Norwich
- Dover
- Portsmouth
- Plymouth
- Bristol
- London

Homework Reviews: 1 to 3

Review Number One: Changing views, Part 1		✓ ✗
1		
2		
3		
4		
5		
Review Number Two: Geography spellings	score	
1&2		
3&4		
5&6		
7&8		
9&10		
Review Number Three: Changing views, Part 2	score	
1		
2		
3		
4		
5		
	score	