

YEAR 8 GEOGRAPHY – RUSSIA

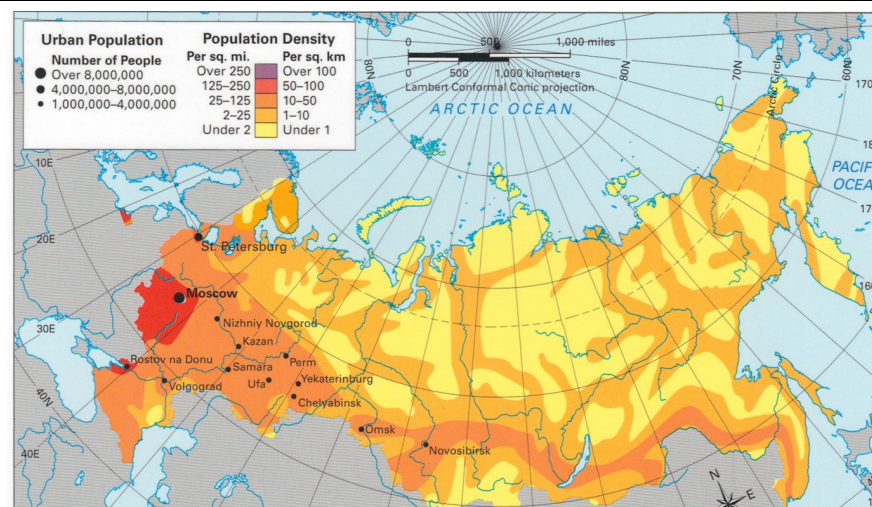
1 KEY VOCABULARY

Asia	The continent occupying the area between Japan in the East, Turkey in the west, India in the South and the Arctic in the North.
Biome	A large area with common flora, fauna and climate characteristics
Chemical Waste	Toxic chemicals released as a by product of industrial activity, often have negative effects on the environment
Dense Population	An area where many people are found per square km
Dzerzhink	The most polluted city on earth
Geopolitics	An politics, especially international relations, as influenced by geographical factors
Permafrost	Permanently frozen subsoil
Sparse Population	An area where few people are found per square km
Superpower	A country which exercises political, economic or military power over a large area beyond its own national borders
Toxicity	The level to which a substance is harmful to humans and wildlife

2 BIOMES OF RUSSIA



3 POPULATION DENSITY OF RUSSIA



4 CHERNOBYL NUCLEAR DISASTER

- In the early morning of the 26th of April 1986, engineers were running safety tests at the Chernobyl nuclear power station.
- There were four reactors at the station and they were testing reactor number four.
- During one of the tests something went wrong and there was a massive power surge which meant that the reactor gave out more power than normal.
 - The power output was 100 times more than what the reactor normally released.
- This sudden release of such a huge amount of power led to a massive and violent explosion and fire!
- The explosion was so powerful that the 1,000 tonne concrete top of the reactor was blown off!
- With no top on the reactor this meant that radioactive material from the reactor was blasted in the air (like a volcanic explosion) with huge chunks of radioactive material landing on the ground around the reactor and radioactive material going up into the atmosphere.

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5 IMPACTS OF THE CHERNOBYL NUCLEAR DISASTER

- 2 people died when the reactor exploded, 29 people died of over exposure to radioactive material within 5 days of the explosion.
- It is not known for sure how many people have died as a result of the Chernobyl nuclear explosion.
- It is certain that statistics show that the accident at Chernobyl has had a devastating effect on the populations of nearby areas.
- It is unknown how many of the 600,000 people exposed to the radioactive material were later diagnosed with cancer.
- Since the accident the number of cases of thyroid cancer have risen dramatically.
- In 2014 there had been 12,000 cases of thyroid cancer diagnosed, most of those diagnosed where children or teenagers who were exposed at the time of the accident.
- It has been claimed that people who were exposed had issues with their DNA but this has never been proven by scientists.

6 SALISBURY NERVE AGENT ATTACK

On 4 March 2018 emergency services received a phone call from members of the public in Salisbury who had seen an old man and a young woman ill on a bench. It was a call that would set in motion a chain of events leading to a major crisis with Russia.

A few hours later, the next call went to Porton Down, home to Britain's biological and chemical research establishment. A rapid-response team was quickly deployed. Samples analysed in labs on-site identified A234, a military-grade nerve agent from the Novichok family developed by the Soviet Union in the Cold War.

7 THE MOST POLLUTED CITY IN THE WORLD

Located about 400 kilometres east of Moscow, the city has been given the title of the most polluted city in the World. Russia has two of the world's top ten most polluted cities, the other being, Noril's.

- During the Soviet period, Dzershinsk was one of Russia's most vital sites for chemical manufacturing, including chemical and biological weapons.
- Production of various chemical weapons started in the 1940s, including mustard gas. In addition to arsenic-based weapons production, prussic acid and phosgene were also produced. Chemical weapons production at Dzerzhinsk ceased in 1965, the city, Until recently, officially closed to foreign visitors.
- The soils is contaminated, the river water full of chemicals, in short, the whole environment is contaminated.
- It is estimated that around 190 identified chemicals in the course of Dzerzhinsk's history have been released into the groundwater and when water samples were taken within the city they showed levels of dioxins and phenol thousands of times above recommended levels.
- Between 1930 and 1998, about 300,000 tons of chemical wastes were dumped in the surrounding areas.
- These sites include landfills, toxic waste burial grounds, and a so-called "white sea", composed of disposed chemical wastes.
- Today, modern-day Dzerzhinsk is still a significant center of the Russian chemical industry. There are currently 38 large industrial enterprises, which export their goods worldwide. About one thousand varieties of chemical products are produced in Dzerzhinsk.
- High concentrations of toxic phenol in the air have led to residents of Dzerzhinsk suffering from increased levels of diseases and cancers of the eyes, lungs, and kidneys. Sulfur dioxide in the air also remains a big problem.

8 RUSSIA ANIMAL ADAPTATIONS

Arctic Fox—thick fur that changes during summer and winter months. Summer thinner, brown coat and winter whiter thick coat. Paws are curved to push away snow when running. Tail acts as extra insulation to keep warm whilst sleeping. Short legs so they are close to the ground.



Arctic Ground Squirrels—hibernate for 8 months underground when it is coldest. They keep their body temperatures low. They slide along the ground to keep away from predators by doing the 'tundra glide'



Caribou— They have a thick double coat to keep them warm and dry. Their coat can trap air which makes them buoyant whilst swimming. They have a stocky body and a short tail. Their noses can retain heat and moisture.



Arctic Terns — Tend to migrate during Winter to warmer Locations. They nest with Other birds for protection And then have a higher metabolic rate than other birds to gain energy for long distance flights.

