|  |  |
| --- | --- |
| Europe: Natural Resources 2-1 on-l  and Environmental Issues | |
| Climate | Climate is the general pattern of temperature, wind, and precipitation in an area.  (**Weather** is the climate on a particular day.) Climate is determined by latitude: a country near the equator. Climate is influenced by landforms: high mountains are cold and snowy. |
| Natural Resources | Natural resources are gifts from nature that people valule. Minerals deep under the ground are iron, gold, zinc, diamonds. Rivers, lakes, and oceans can provide food, transportation, and energy. Oil and coal under the ground are desirable energy sources. Soil for farming is a natural resource; so are forests. People can manage natural resources; we cannot create them. |
| Population Distribution | *Population* comes from the Latin word for *people*. Distribution is how spread-out or clumped-together people are. Do most people in a country live in cities, or is everybody scattered in small villages and farmland? A population distribution map can show you. |
| United Kingdom | The United Kingdom is an island off the northwest coast of Europe. Warm air blowing from the Atlantic Ocean brings mild temperatures with plenty of rain. Mountains in the western part of the country contain large amounts of coal and iron, and the soil is good for farming. Over 80% of the population lives in cities; eight million people live in the capital, London. |
| Russia | Most of Russia is big, cold, and empty. It is the largest country in the world in size. It is extremely cold; the average yearly temperature is below freezing. Over 60% of the Russian land is frozen solid all year. Russia has huge forests, and farmland on the European Plain. Most Russians (75%) live in cities. Around 77% of Russians live on the Europe side. |
| Germany | Germany is in the northern center of the European Plain. On the northern Atlantic Ocean coast, the temperatures are mildly cool and warm; in the southern region near the Alps, high mountains create cold and snow. Germany has coal in the mountains and farming on the Plain; these products can be shipped anywhere. Around 75% of Germans live in cities. |
| Air Pollution  in the United Kingdom | Coal is a soft rock that burns easily and produces steady heat. Coal is mined under the ground and burned in furnaces to produce energy. The land of the UK contained some of the highest-quality coal on earth. Coal provided the energy for industrialization in the 1800’s.  When coal is burned, it produces smoke and dust pollution. For four days in 1952, a winter fog settled over the city of London. When the fog combined with pollution from coal, smoke + fog = smog. The smog was so thick that people could not see. Over 4000 people died. |
| Chernobyl Nuclear Explosion  1986 | A nuclear power plant uses chemical reactions to create electricity. Nuclear power plants do not create pollution, but there is a great risk to nuclear power. Because the chemical reactions happen at extremely high temperatures, a nuclear power plant must be managed with strict safety rules. The used fuel rods must be disposed of safely.  In 1986, part of the huge nuclear power plant in Chernobyl exploded. (In 1986, Chernobyl was part of the Soviet Union; it is now in Ukraine.) Tons of poisonous radioactive chemicals spilled out of the plant. Toxic smoke blew into the air and all over Europe. People died from radiation poison and land was ruined. Thirty years later, Chernobyl is still uninhabited. |
| Acid Rain  in Germany | Air pollution rises up and reacts with water in clouds to create acid rain. The rainfall becomes highly acidic, damaging trees and soil. Rivers and streams flow with acidic water that kills fish and plants. Many countries struggle to manage the effects of acid rain.  Starting around 1950, Germany increased its production of cars. The pollution caused acid rain and harmed the forests, rivers, crops, and animals of Germany. Now Germany is a leader in wind and solar energy. Germany has passed a law to prohibit the sale of new gas-powered cars by 2040. Germany gets 35% of its energy from renewable sources like solar and wind; it has a goal of using 45% green energy by 2030. (US uses 12% renewable energy) |

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Europe: Natural Resources and Environmental Issues N 2-1 on-l  D C | | | | | | | | | | | | | |
| Label the map:  Germany  United Kingdom  Russia  Ural Mountains  Mediterranean Sea  English Channel  Atlantic Ocean  (Pacific Ocean?) | | | | | | | | | | | | | |
| country | | | location | | | climate | | | natural resources | | | population distribution | |
|  | | | island off NW coast of Europe | | |  | | |  | | |  | |
|  | | |  | | |  | | | Plain for farming, coal and iron in mountains | | |  | |
|  | | |  | | | average national temperature is below freezing | | |  | | |  | |
| Solve these riddles. | | | | | | | | | | | | | |
| My location is far to the north, but ocean breezes keep my climate pleasant. | | | | | | | | | | | | | |
| I am mostly big, cold, and empty. | | | | | | | | | | | | | |
| Central location, farmland, ocean coastline, coal and iron: | | | | | | | | | | | | | |
| What percent of Europeans live in cities? \_\_\_\_\_\_ Color in the bar graph to show the percentage. | | | | | | | | | | | | | |
| 10% | 20% | 30% | | 40% | 50% | | 60% | 70% | | 80% | 90% | | 100% |

Use the scientific facts and your imagination to describe these three environmental problems.

|  |  |  |
| --- | --- | --- |
| You are in London, UK, in 1952. You are coughing. Why? | You are in a forest in Germany. The leaves are brown. Why? | You are near Chernobyl, Ukraine in 2017. It’s deserted. Why? |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |