

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE

GEOGRAPY

6– 9 forms

**Education program
for general education institutions ¹**

6th form

¹ This program is ratified by the Order of Ministry of Education and Science of Ukraine as of 07.06.2017 No. 804

GEOGRAPHY
General Geography
(70 hours, 2 hours per week)

Learning outcomes	Syllabus
INTRODUCTION (2 hours)	
<p>Knowledge component: <i>names</i> object of geographic studies, components of geography as a science, main sources of geographic knowledge and methods of geographic research.</p> <p>Activity component: <i>finds</i> geographic information from different sources and <i>defines</i> its significance; <i>does</i> observation of nature changes; <i>makes</i> list of sources of geographic information available at home.</p>	<p>Geography as a science of the Earth, its nature, population and their economic activity, interaction of human and nature. Significance of geographical knowledge and skills for human life. Main printed and digital sources of geographic information, their significance. Methods of geographic research. Peculiarities of own geographic observations.</p> <p>Study Observation of nature changes.</p>
SECTION I. Study of geographical knowledge on the Earth (4 hours)	
<p>Knowledge component: <i>names</i> peculiarities of Earth depiction on ancient maps.</p> <p>Activity component: <i>finds</i> additional information on understanding and studying of the Earth in ancient times from different recourses; <i>compares</i> maps of Eratosthenes and Ptolemy to modern map; <i>makes</i> short reports on understanding the Earth in ancient times (in cooperation with family members).</p>	<p>Topic 1. Understanding the Earth in ancient times. Conceptualization of the shape of the Earth. Image of the Earth of maps of Eratosthenes and Ptolemy.</p>
<p>Knowledge component: <i>names</i> famous explorers and travellers (Marco Polo, Christopher Columbus, Ferdinand Magellan), who made outstanding geographic discoveries in different times.</p> <p>Activity component: <i>finds</i> additional information on understanding and studying of the Earth from different recourses; <i>follows travel</i> routes of famous explorers and travellers on the map.</p>	<p>Topic 2. Discovering new lands and travelling around the world. Vikings voyages. Travels of Marco Polo. Searching for marine way to India. Discovery of America by Christopher Columbus. The first voyage all around the world led by Ferdinand Magellan. Discovery of Australia and Antarctica</p>

<p>Knowledge component: <i>names</i> modern geographic studies.</p> <p>Activity component: <i>finds</i> additional information on understanding and studying of the Earth in modern times from different recourses; <i>analyzes</i> information on geographic studies in XX and at the beginning of XXI century <i>compares</i> modern and ancient studies of the Earth;</p> <p><i>makes</i> short reports on own travels with the help of family members and illustrates them with pictures, photos or mini-presentations.</p>	<p>Topic 3. Modern studies Modern studies of the Earth in XX and at the beginning of XXI century</p>
<p>SECTION II. The Earth on plans and maps (12 hours)</p>	
<p>Knowledge component: <i>names</i> different ways of position finding; <i>explains</i> different ways of position finding.</p> <p>Activity component: <i>uses</i> compass to determine cardinal points and azimuth; <i>determines</i> azimuth and direction to different object near the school; <i>makes</i> route plan; <i>compares</i> instrumental and visual ways of position finding.</p>	<p>Topic 1. Position finding Different ways of position finding. Orientation on the ground. Compass. Concept of azimuth.</p>
<p>Knowledge component: <i>names</i> ways of depicting the Earth, scale types, differences between plan, topographic plan and map, difference between absolute and relative elevation, locations according to the plan and their symbols; <i>can</i> read plan and map, using symbols and explanatory notes; <i>explains</i> differences of scale types and position finding.</p> <p>Activity component: <i>determines</i> scales of plans and maps, absolute and relative elevation with land lines and scale of height; <i>measures</i> distances on plans and maps using scale; <i>solve</i> problems with different scale types; <i>compares</i> depicting locality surface on the globe, aerial photographs, space photographs, plans, maps.</p>	<p>Topic 2. Ways of depicting the Earth Similarities and difference of the depicting Earth surface on the globe, aerial photographs, space photographs, plans, maps. Scale and its types. Plan symbols. Absolute and relative elevation, their determination with land lines and scale of height Plan and its main peculiarities. Determination of directions on the plan. Reading the plan. Geographic objects, their elements. Explanatory notes. Map scale. Geographic atlas Practical importance of maps.</p> <p>Practical work 1. Problem solving using different scale types</p>

<p>Knowledge component: <i>names</i> lines of grade frame: parallels, meridians, equator, zero meridian, concepts of geographic latitude and geographic longitude, coordinates of own locality; <i>explains</i> differences between geographic latitude and geographic longitude.</p> <p>Activity component: <i>uses</i> grade frame to determine geographical coordinates; <i>determines</i> geographical coordinates of objects and localities; <i>compares</i> geographic latitude and geographic longitude according to grade measurements.</p>	<p>Topic 3. Geographic coordinates Grade frame on the globe and geographic map. Concept of geographical coordinates. Rules of reading geographic latitude and geographic longitude. Geographical coordinates of own locality.</p> <p>Practical work 2. Determining geographic coordinates on geographic map.</p>
SECTION III. Earth's Spheres (41 hours)	
<p>Knowledge component: <i>names</i> inner layers of the Earth, composition of inland and oceanic crust, concepts of lithosphere, the Earth's crust, minerals, rock formations, mineral deposits, relief, plains, mountains, relief form of locality; <i>gives examples and shows on the map</i> lithosphere plates, seismic belt, the biggest volcanoes, and unique relief forms; <i>knows</i> safety rules in the time of earthquake; <i>gives examples of</i> magmatic, sedimentary and metamorphic rocks.</p> <p>Activity component: <i>determines</i> absolute and relative elevation of plains and mountains according to scale of height <i>marks</i> on contour map: volcanoes: <i>Klyuchevskaya Sopka, Etna, Krakatau</i>; mountains: <i>the Carpathian, the Crimean, the Alps, the Ural, the Cordilleras, the Caucasus, the Himalayas and Chomolungma, the Andes</i>; plains: <i>Eastern European, West Siberian, Amazonian plane, Laurentide upland, Central Siberian Plateau, Plateau of Brazil</i>; <i>differentiates</i> magmatic, sedimentary and metamorphic rocks; <i>compares</i> plains and mountains by height, origin, location on land or in ocean</p>	<p>Topic 1. Lithosphere Inner structure of the Earth. Structure and properties of lithosphere. Lithosphere plates, consequences of its motion. Inner processes causing changes in the Earth's crust and surface. The Earth's crust motion. Earthquakes. Volcanism and volcano, geysers. Seismic belts on the Earth. Outer processes causing changes in the Earth surface. Geologic weathering, impact of wind, flowing and underground water, glaciers. Minerals and rocks. Mineral deposits and their significance for human life and activities. Main forms of land relief – mountains and plains. Variety of plains and their planation. The biggest plains by area. The highest and the longest mountains in the world. Relief of ocean bottom. Mid-oceanic ridges are the highest and the longest mountains of the world ocean. Unique relief forms of the Earth, their protection.</p> <p>Practical work 3. Making plains, mountains and land volcanoes on contour map</p>

<p>Knowledge component: <i>names</i> essential features of concepts ‘weather’, ‘climate’, ‘meteorological chart’, weather elements, thermal belts of the Earth, world centers of weather observations; <i>gives examples</i> of different clouds, weather forecasts. main types of climate; <i>explains</i> reasons and consequences of weather and climate change;</p> <p>Activity component: <i>observe and fixes</i> change of weather elements: temperature, pressure, wind, air humidity, clouds, cloud cover, rain and snow; <i>determines</i> factors of temperature and pressure and their change with height change, wind speed, weather types of locality; <i>constructs</i> temperature graphics, diagram of rain and snow for the period, wind rose; <i>finds</i> relevant sources of geographic information to get to know atmospheric processes; <i>uses</i> thermometer, barometer and hygrometer; <i>compares</i> different weather of the locality in different seasons and its impact on human health; <i>analyzes</i> changes in temperature and pressure during the day and night, season and year and their distribution on the Earth according to the map; <i>solve problems of</i> temperature and pressure changes with height change.</p>	<p>Topic 2. Atmosphere Structure of atmosphere, air properties in troposphere. Annual and diurnal temperature range, causes of its changes. Climate map. Thermal belts of the Earth. Practical significance of temperature measurement. Atmospheric pressure: causes and consequences of its change in troposphere. Pressure measurement. Wind: causes, directions, force, speed and their determination by modern tools and visually. Breeze formation. Water in atmosphere: evaporation, humidity and its changes. Clouds and fog, changes in their formation. Forms of clouds, cloud cover. Rain, snow and other weather elements from clouds and air, their types and measurement. Map of weather elements. Weather, its elements and vagaries. Typical weather according to season and location. Weather services, practical significance of weather forecasts. Climate and basic climate forcing. Climate belts map. Climate changes. Human impact on atmosphere.</p> <p>Practical works 4. Solving problems on temperature and pressure changes with height changes. 5. Construction graphics of temperature, rain and snow, wind rose and their analysis.</p>
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Knowledge component:

names essential features of concepts ‘oceans’, ‘sea’, ‘bay’, ‘strait’, ‘island’, ‘ocean current’, ‘river’, ‘lake’, ‘marsh’, ‘glacier’, ‘perpetually frozen ground’, ‘underground water’;
gives examples of seas, bights, straits, islands, rivers, lakes, artificial water bodies;
explains causes and consequences of water movement in the World Ocean, peculiarities of nutrition and water administration of the land;
knows and understands negative consequences of overflowing, floods and tsunami.

Activity component:

determines peculiarities of water distribution between the World Ocean and land waters according to specific diagram, depth of oceans and seas according to depth scale, dependence of direction and character of river flow on relief, nutrition types and water land regime on climate;
differentiates way of marking land waters on plans and maps, lakes according to origin of their kettles and flowing; types of marshes, land and mountain glaciers, artificial water bodies, types of underground water;
marks the following names *on the contour map*
seas: *Black, Mediterranean, Red, Baltic, Barents*;
straits: *the Strait of Gibraltar, the Strait of Magellan, Drake Strait, the Bering Strait*;
bights: *Biscay, Bengal, Mexican, Gulf of Guinea*;
islands: *Great Britain, Greenland, Madagascar, New Guinea*;
peninsulas: *Scandinavian, Crimean, Arabian, Hindustan, Somali, Labrador*;
trenches: *Mariana Trench*;
rivers: *Dnipro, Danube, Yangtze, Nile, Amazon, Missisipi*;
lakes: *Caspian, Great Lakes, Baikal, Victoria*.

Topic 3. Hydrosphere

General amount of water on the Earth; its distribution for different parts of hydrosphere.
The World Ocean and its parts: oceans, seas, straits, bights. Scale of depth, determination of depth of oceans and seas. Ocean islands.
Peculiarities of waters of the World Ocean.
Water flow in the World Ocean. Life in oceans and seas. Wealth of waters in the World Ocean. Ocean and Human.
Open and underground land water.
River: river system, basin, valley.
The longest, the biggest and the most water-rich rivers on the world. Rapids and waterfalls.
Nutrition, water conditions and river operations.
Lakes, their types according to area, kettle origin and salinity. The biggest and the deepest lakes of the Earth.
Marshes, peculiarities of their formation and extension.
Artificial water bodies and water courses: ponds, water reservoirs, channels.
Glaciers as lasting natural ice accumulation, peculiarities of their formation and extension.
Perpetually frozen ground as a underground ice accumulation, its formation and extension. Underground waters, conditions of their formation and occurrence in the Earth’s crust. Thermal and mineral waters.
Significance of land water for human and nature. Protection of the World Ocean and land.

Practical work

6. Marking names of oceans, seas, bights, straits, islands, rivers, lakes on contour map.

<p>Knowledge component: <i>names</i> biosphere parts, essential features of concepts ‘biosphere’, ‘soils’, ‘flora’, ‘fauna’, species of animals and plants in the locality; <i>explains</i> peculiarities of soil and plant extension on the Earth by maps, human impact on biosphere parts.</p> <p>Activity component: <i>compares</i> species of animals and plants in the whole world</p>	<p>Topic 4. Biosphere and soils Biosphere parts, peculiarities of their extension of the Earth. Soil properties. Soil covering, soil map. Impact of human actions of soil covering, land and ocean flora and fauna.</p>
<p>Knowledge component: <i>names</i> essential features of concepts ‘natural complex’, ‘geographical environment’, ‘natural area’, parts of natural complex; <i>gives examples of</i> nature complexes and complexes modified by humans in the locality; <i>explains</i> interaction of lithosphere, atmosphere, hydrosphere and biosphere using specific examples</p> <p>Activity component: <i>compares</i> peculiarities of basic natural areas of the Earth; <i>stick to rules of</i> life safety on the excursions.</p>	<p>Topic 5. Natural complexes Natural complexes as a consequence of interaction of nature elements. Geographical environment as the biggest natural complex of the Earth, its boundaries and properties. Natural areas of the Earth, their peculiarities.</p> <p>Practical work 7 . Description of a natural complex of the locality (according to the typical plan).</p>
<p>SECTION IV. Human Planet (5 hours)</p>	

<p>Knowledge component: <i>names</i> number of population on the Earth and in Ukraine, human races; <i>can</i> read political map</p> <p>Activity component: <i>analyzes</i> maps of density population and human races; <i>shows</i> largest in area and population world countries and countries which borders Ukraine on the map; <i>characterizes</i> types of economic activities and their consequences in his/her city/village; <i>compares</i> human races by appearance, population density in different parts of the world.</p>	<p>Topic 1. Number and displacement of population on the Earth Number of population of the Earth. Displacement of population on the Earth, its density. The most populated territories of the Earth. Human races. Investigation of Mykola Mickluha-Maklai The biggest populations of the world.</p> <p>Topic 2. World countries Largest in area and population world countries and countries which borders Ukraine on the political map of the world.</p> <p>Topic 3. Human impact on nature. Change of parts of geographical environment when affected by human. Change of natural complexes of the Earth. Pollution of environment and its protection.</p> <p>Practical work 8. Marking boundaries of the biggest countries in the world and their capitals on contour map.</p> <p>Study Mini-project on utilization of domestic waste.</p>
<p>RESERVE HOURS (6 hours)</p>	

7th form
GEOGRAPHY
CONTINENTS AND OCEANS
(70 hours, 2 hours per week)

Learning outcomes	Syllabus
INTRODUCTION (2 hours)	
<p>Knowledge component: <i>names</i> of continents, parts of the world, oceans, different types of maps.</p> <p>Activity component: <i>compares</i> continents and ocean by area, different maps by scale and spatial reach; <i>differentiates</i> maps in atlases; <i>shows (finds)</i> different continents, parts of the world and oceans on the map.</p>	<p>Continents and oceans as object of regional geography. Correlation of continents and oceans on the Earth. Continents and parts of the world. Sources of geographic information on continents and oceans. Maps of continents and oceans, their classification by scale, spatial reach, content and purpose.</p>
SECTION I. Patterns of formation of continents and oceans (9 hours)	
<p>Knowledge component: <i>knows and imagines</i> shape of the Earth, equilibrium and solstice ; <i>understands and gives examples of</i> diurnal and annual rhythms caused by axial rotation and orbital motion of the Earth.</p> <p>Activity component: <i>finds</i> equator, lines of tropics and polar circles on the map; <i>explains</i> impact of form of the Earth and its motion on continents and oceans;</p>	<p>Topic 1. Shape and motion of the Earth Elliptical form of the Earth its geographical consequences. The Earth's motion and its consequences.</p>

<p>Knowledge component: <i>knows and understands</i> main stages of development of geological history of the Earth, consequences of motion of lithosphere plates, the biggest platforms and folding areas; <i>gives examples</i> of relief forms on continents and oceans, platforms and folding areas, different by properties air and water bodies, types of climate, hot and cold currents, natural areas on continents; <i>knows and understands</i> continental drift hypothesis, general atmospheric circulation and their impact on environmental conditions.</p> <p>Activity component: <i>finds and shows on maps</i> the biggest lithosphere plates, districts of extension of trade winds, monsoons, west winds of middle latitudes and east polar winds, climate zones, the biggest hot and cold surface currents, natural areas; <i>explains</i> impact of air masses on weather conditions of the Earth of the locality; <i>analyzes</i> patterns of relief forms on continents and in oceans, causes of ocean currents, nature complexes on continents and oceans, interaction and mutual impact of oceans and continents; <i>can</i> apply information from topical maps practically: tectonic, climate and geographic belts of natural areas.</p>	<p>Topic 2. Continents and oceans are big natural complexes of geographical environment</p> <p>Origin of continents and oceanic depth as a result of motion of lithosphere plates. Geological eras and periods of mountain forming. Tectonic structures: platforms and folding areas. Patterns of relief forms on continents and in oceans. Climate forcing. Distribution of solar energy on the Earth. Impact of geological substrate on climate. Patterns of weather change and surface waters of oceans. Air masses, their properties and displacement. General atmospheric circulation. Climate zones and types of climate on the Earth. Patterns of distribution of atmospheric precipitation. Water bodies, their properties. Ocean currents. Natural complexes of continents and oceans. Horizontal zonality and altitudinal (vertical) zonation.</p> <p>Practical work</p> <ol style="list-style-type: none"> 1. Analysis of tectonic and physical maps of the world: connection between tectonic structure and relief forms. 2. Study Interaction of the World Ocean, atmosphere and land, its consequences.
<p>SECTION II. Tropical continents (21 hours)</p>	

<p>Knowledge component: <i>knows</i> explorers of the continent, peculiarities of tectonic structure, main relief forms, geographic arrangement of climate types, internal waters, natural areas on the continent; <i>understands</i> peculiarities of current level of social and economic development of the countries.</p> <p>Activity component: <i>characterizes</i> geographical position of the continent; <i>analyzes</i> patterns of location of relief forms, climate zones, land water, natural areas, zonal soil types; <i>describes</i> nature of the most famous national parks in Africa; <i>determines</i> climate types according to climate card and climate diagrams; <i>defines</i> main ways of practical use of continent natural complexes; <i>finds and shows on maps</i> the following geographic objects: seas: <i>Mediterranean, Red</i>; bights: <i>Gulf of Guinea, Gulf of Aden</i>; straits: <i>Mozambique Channel, Gibraltar, Bab el Mandeb</i>; island <i>Madagascar</i>; peninsula <i>Somali</i>; mountains: <i>Atlas, Drakensberg, Outeniqua</i>; volcano <i>Kilimanjaro</i>; Ethiopian <i>Highlands</i>; Eastern African <i>plateau</i>; rivers: <i>Nile, Congo, Niger, Zambesi, Orange</i>; lakes: <i>Victoria, Tanganyika, Nyasa, Chad</i>; waterfall <i>Victoria</i>; deserts: <i>Sahara, Namib</i>; countries and their capitals: <i>Egypt, Nigeria, South Africa</i>.</p>	<p>Topic 1. Africa Geographical position. Discovery and exploration of the continent. Tectonic structure, relief, mineral deposits. General climate features. Climate zones and types of climate. Land waters. Using water resources. Natural zones, patterns of their displacement. Acts of God. Ecological problems. The most famous objects which are part of World Heritage Sites by UNESCO. Population. Countries. Cooperation of Ukraine with the states of African continent.</p> <p>Practical works</p> <ol style="list-style-type: none"> 2. Setting coordinates of end points and continent length from north to south, from east to west. 3. Marking of main geographic objects of Africa on contour map. 4. Determination of climate types in Africa according to climate diagrams.
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<p>Knowledge component: <i>knows</i> explorers of the continent, peculiarities of tectonic structure, main relief forms, geographic arrangement of climate types, internal waters, natural areas on the continent;</p> <p>Activity component: <i>characterizes</i> population and their activities in different countries of the continent; <i>analyzes</i> peculiarities of location of mineral deposits on the continent and their influence on human economic activities; <i>finds and shows on maps</i> the following geographic objects: <i>Caribbean Sea;</i> <i>bights: La Plata;</i> <i>straits: the Strait of Magellan, Drake Strait;</i> <i>islands: Land of Fire, Falkland Islands, Galapagos Islands;</i> <i>plains: Amazonian, Orinoko, La Plata, Plateau of Brazil, Guiana Highlands;</i> <i>mountains: the Andes (Aconcagua);</i> <i>volcanoes: Lulllaillaco, Cotopaxi;</i> <i>mountains: Amazon, Parana, Orinoko;</i> <i>waterfalls: Angel, Iguacu;</i> <i>lakes: Maracaibo, Titicaca;</i> <i>deserts: Atakama;</i> <i>countries and their capitals: Brazil, Argentina, Chile;</i> <i>compares</i> peculiarities of natural conditions of South America and Africa; <i>explains</i> patterns of location of relief forms, temperature and rain on the continent, horizontal zonality of the Andes; <i>determines</i> climate types according to climate card and climate diagrams.</p>	<p>Topic 2. South America</p> <p>Geographical position. Discovery and exploration of the continent. Tectonic structure, relief, mineral deposits. General climate features. Climate zones and types of climate.</p> <p>Land waters. Using water resources.</p> <p>Natural zones, Altitudinal zonation of the Andes. Changes of continent nature made by humans. Current ecological problems. The most famous objects of South America which are part of World Heritage Sites by UNESCO. Population. Countries. Cooperation of Ukraine with the states of South America.</p> <p>Practical works</p> <p>5. Marking of geographic objects of the continent on contour map.</p> <p>6. Determination of climate types in South America according to climate diagrams.</p> <p>Study</p> <p>Unique nature of South America</p>
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<p>Knowledge component: <i>knows</i> explorers of the continent, peculiarities of tectonic structure, main relief forms, geographic arrangement of climate types, internal waters, natural areas on the continent.</p> <p>Activity component: <i>finds and shows on maps</i> the following geographic objects: seas: <i>Coral, Tasman</i>; bights: <i>Gulf of Carpentaria, Great Australian</i>; islands: <i>Tasmania, Great Barrier Reef</i>; peninsula <i>Cape York</i>; <i>Western Australian Plato</i>; plains: <i>Central</i>; mountains: <i>Great Dividing Range (Kosciusko)</i>; rivers: <i>Murray, Darling</i>; lakes: <i>Eyre</i>; deserts: <i>Great Sandy Desert, Great Victoria Desert</i>; state <i>the Commonwealth of Australia</i> and its capital; <i>characterizes</i> peculiarities of geographical position, main characteristics of people and their economic activities; <i>compares</i> geographical position of Australia and Africa.</p>	<p>Topic 3. Australia.</p> <p>Geographical position. Discovery and exploration of the continent. Tectonic structure, relief, mineral deposits. Climate. Land waters. Unique flora and fauna. Natural zones. Changes of continent nature made by humans. The most famous objects in Australia which are part of World Heritage Sites by UNESCO. Population, its composition and location. Australia is a continent country. Ukraine and Australia.</p> <p>Practical works:</p> <p>7. Marking of geographic objects of the continent on contour map.</p> <p>8. Determination of climate types in Australia according to climate diagrams.</p>
<p>SECTION III. Polar continent of the planet (2 hours)</p>	
<p>Knowledge component: <i>knows</i> history of discovery and exploration of the continent, explorers of the continent Thaddeus von Bellingshausen, Mikhail Lazarev, Roald Amundsen, Robert Scott, and countries taking part in modern research; <i>gives examples</i> of significance of international cooperation in Antarctica research; <i>explains</i> differences between Arctic and Antarctic,</p> <p>Activity component: <i>characterizes</i> peculiarities of geographical position of the continent; <i>marks and shows on the map</i> the following geographic objects: <i>Antarctic peninsula, Weddell Sea, Ross Sea.</i></p>	<p>Topic 1. General information on Antarctic</p> <p>Geographical position. Arctic and Antarctic. Exploration of the continent. Ukrainian research station ‘The Vernadsky Research Base’ International status of the continent.</p>

<p>Knowledge component: <i>knows and explains</i> representative of Antarctic flora and fauna, peculiarities of their adaptation.</p> <p>Activity component: <i>characterizes</i> nature of Arctic and Antarctic. <i>characterizes</i> peculiarities of tectonic structure and climate; <i>explains</i> causes of creation of complete glaciation, and its impact on nature of the continent.</p>	<p>Topic 2. Nature of the continent</p> <p>Tectonic structure, relief, climate, flora and fauna of Antarctic. Natural resources and their usage. Ecological problems of the continent.</p>
<p>SECTION IV. Continents of the Northern hemisphere (23 hours)</p>	

<p>Knowledge component: <i>knows</i> explorers of the continent, peculiarities of tectonic structure, main relief forms, geographic arrangement of climate types, internal waters, natural areas on the continent.</p> <p>Activity component: <i>characterizes</i> geographical position of the continent; <i>explains</i> patterns of location of relief forms, climate zones, land water, flora and fauna, natural areas, impact of human economic activities on nature of the continent; <i>analyzes</i> peculiarities of location of mineral deposits and their impact on economic activities; <i>finds and shows on maps</i> the following geographic objects: bights: <i>Hudson, Mexican, Californian, Alaska;</i> islands: <i>Greenland, Newfoundland, Greater Antilles (Cuba, Haiti, Jamaica), Lesser Antilles, Arctic Archipelago;</i> peninsulas: <i>Labrador, Florida, California, Alaska, Yucatan;</i> plains: <i>Central, Great, Laurentian Highlands, Mexican Lowlands;</i> mountains: <i>the Cordilleras, Delaney (McKinley), the Rocky Mountains, the Appalachian Mountains;</i> rivers: <i>Mississippi, Mackenzie, Ukon, Colorado;</i> <i>Niagara falls;</i> lakes: <i>Great Lakes (Superior, Michigan, Huron, Erie, Ontario), Great Salt Lake;</i> countries and their capitals: <i>the USA, Canada, Mexico;</i> <i>compares</i> relief and climate of South and North America; <i>defines</i> main ways of using natural complexes of the continent; <i>studies</i> object of North America which are part of World Heritage Sites by UNESCO..</p>	<p>Topic 1. North America</p> <p>Geographical position. Discovery and exploration of the continent. Tectonic structure, relief, mineral deposits. General climate features. Climate zones and types of climate. Land waters. Natural zones, Altitudinal zonation of the mountains. Changes of continent nature made by humans. Current ecological problems. The most famous objects of North America which are part of World Heritage Sites by UNESCO. Population. Countries. Ukraine and the states of North America.</p> <p>Practical work</p> <p>9. Marking of geographic objects of North America on contour map.</p> <p>Study</p> <p>Development of route through objects of North America which are part of World Heritage Sites by UNESCO.</p>
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Knowledge component:

knows explorers of the continent, peculiarities of tectonic structure, main relief forms, geographic arrangement of climate types, internal waters, natural areas on the continent;

Activity component: *characterizes*

geographical position of the continent;

explains patterns of relief forms, climate, rivers and lakes, types of soils, flora and fauna, natural areas of the continent;

analyzes peculiarities of location of mineral deposits and their impact on economic activities;

finds and shows on maps the following geographic objects:

seas: *North, Baltic, Mediterranean, Black, Azov, Barents, East Siberian, Yellow, Sea of Japan, Bering, South China, Arabian;*

bights: *Biscay, Bay of Bengal, Persian;*

straits: *Bosporus, the English Channel,*

islands: *Great Britain, Ireland, New Land, Sakhalin, Japan, Greater Sunda (Borneo, Sumatra, Java), Philippine, Sri Lanka, Taiwan;*

peninsulas: *Balkan, Apennine, Iberian, Scandinavian, Taimyr, Chukotka,*

Kamchatka, Korea, Indo-China, Malacca,

Hindustan, Arabian, Asia Minor

plains: *Eastern European,*

Western Siberian, Great Plain of China, Peri-Caspian Low Land, Pannonian, Indo-Gangetic, Mesopotamian, Deccan, mid-Siberian, Kazakh Hummocks;

mountains: *Pyrenees, Alps, Apennines, Carpathians, Scandinavian, Ural, Caucasus, Tenshu, Himalayas (Jomolungma);*

uplands: *Tibet, Iranian;*

volcanoes: *Hekla, Vesuvius, Klyuchevskaya Sopka, Fujiyama;*

deserts: *Kara Kum, Gobi, Great Sandy Desert;*

rivers: *Rhein, Danube, Dnipro, Volga, Ob, Yenisei, Lena, Amur, Huang He, Yangtze, Mekong, Gang, Indus, Euphrates, Tiger;*

lakes: *Caspian, Lake of Geneva, Svityaz, Ladoga, Baikal, Dead Sea;*

countries and their capitals: *Ukraine, Germany, France, Great Britain, Italy, Russia, China, India, Japan, Turkey;*

compares types of climate in Eurasia temperate zone, altitudinal belts in different mountain systems;

defines reasons of nature diversity in Eurasia.

Topic 2. Eurasia

Geographical position. Division of Eurasia into two parts of the world. Discovery and exploration of the continent. Tectonic structure, relief, mineral deposits.

General climate features. Climate zones and types of climate.

Land waters. Using water resources. Natural zones. Altitudinal zonation.

Changes of continent nature made by humans.

The most famous objects which are part of World Heritage Sites by UNESCO.

Population. The biggest countries of Europe and Asia.

Cooperation of Ukraine with the states of Europe and Asia.

Practical works:

10. Marking of geographic objects of Eurasia on contour map.

11. Determination of climate types in Eurasia temperate zone according to climate diagrams.

Study

Imaginary trip along 50th Parallel: route map with marking of countries, natural objects and natural complexes.

SECTION V. Oceans (5 hours)	
<p>Knowledge component: <i>names</i> big water objects – seas, bights, straits; different islands, natural resources.</p> <p>Activity component: <i>characterizes</i> peculiarities of geographical position of the Pacific Ocean; <i>studies</i> origin of relief, currents, islands; <i>finds and shows on maps</i> the following geographic objects: currents: <i>North and South trade current, Kuroshio, West Winds, Californian, Peruvian, North Pacific, Eastern Australian</i>; islands: <i>New Zealand, New Guinea, Hawaii, Mariana</i> <i>compares</i> properties of water masses of different parts of the Pacific Ocean.</p>	<p>Topic 1. The Pacific Ocean Geographical position. Islands in the Pacific Ocean, their origin and peculiarities. Bottom relief. Climate and waters. Organic world and natural resources. Protection of ocean nature. Impact of ocean on human life on adjoining territories.</p> <p>Practical work 12. Marking of geographic objects and ocean flows on contour map (gradually after each topic on oceans)</p>
<p>Knowledge component: <i>names</i> big water objects – seas, bights, straits; different islands, natural resources.</p> <p>Activity component: <i>characterizes</i> peculiarities of geographical position of the Atlantic Ocean; <i>studies origin of</i> relief, currents, representatives of the organic world; <i>finds and shows on maps</i> the following geographic objects: currents: <i>Gulf Stream, North Atlantic, Canaries, Labradorian, Brazilian, Benguela</i>; island: <i>Iceland</i>; <i>characterizes</i> peculiarities of ocean climate; <i>compares</i> displacement of ocean currents in the northern and the southern parts of the ocean.</p>	<p>Topic 2. The Atlantic Ocean Geographical position. Bottom relief. Climate and waters. Organic world and natural resources. Protection of ocean nature. Impact of ocean on human life on adjoining territories.</p>

<p>Knowledge component: <i>names</i> big water objects – seas, bights, straits; different islands, natural resources.</p> <p>Activity component: <i>characterizes</i> peculiarities of geographical position of the ocean and its natural resources; <i>studies origin of</i> relief, currents, representatives of the organic world; <i>finds and shows on maps</i> the following geographic objects currents: <i>Madagascar, Monsoon, Western Australian, West Winds</i>; <i>compares</i> peculiarities of geographical position of the Indian Ocean, the Pacific Ocean and the Atlantic Ocean; <i>explains</i> impact of ocean and continent nature on human life.</p>	<p>Topic 3. The Indian Ocean Geographical position. Bottom relief. Climate and waters. Organic world and natural resources. Protection of ocean nature. Impact of ocean on human life on adjoining territories.</p>
<p>Knowledge component: <i>knows</i> history of ocean exploration; <i>names</i> big water objects – seas, bights, straits; different islands, natural resources.</p> <p>Activity component: <i>characterizes</i> peculiarities of geographical position of the ocean, peculiarities of ice covering; <i>studies origin of</i> relief, currents, representatives of the organic world; <i>explains</i> impact of geographical position of the ocean on climate.</p>	<p>Topic 4. The Arctic Ocean Geographical position of the Arctic Ocean in polar latitudes. History of geographic research of the ocean. Bottom relief. Climate and waters. Organic world and natural resources. Ice regime Impact of ocean on human life on adjoining territories.</p>
<p>SECTION VI. Human impact on nature of continents and oceans (2 hours)</p>	
<p>Knowledge component: <i>knows and understands</i> types of natural resources of continents and oceans.</p> <p>Activity component: <i>explains</i> changes of natural complexes caused by human activities and origin of anthropogenic landscapes.</p>	<p>Topic 1. Using natural resources of continents and oceans Natural resources of continents and oceans, their types. Consequences of human use. Ecological disturbance. Anthropogenic landscapes.</p>

<p>Knowledge component: <i>knows and understands</i> sources of environmental pollution, significance of international organizations for environmental protection</p> <p>Activity component: <i>differentiates</i> types of environmental pollution: chemical, radiation, biological, thermal, sound; <i>finds and shows on the map</i> known natural reserves, regions of environmental accidents; <i>forecasts</i> changes of natural conditions caused by human activity; <i>analyzes</i> level of environmental pollution on continents and oceans upon results of ecological monitoring.</p>	<p>Topic 2. Ecological problems of continents and oceans. Environmental pollution. Types and sources of pollution. International cooperation for solving ecological problems. International organizations for environmental protection.</p> <p>Study Possible ways to solve ecological problems.</p>
<p>RESERVE HOURS (6 hours)</p>	

8th form
GEORGAPHY
Ukraine in the world: nature and population
(70 hours, 2 hours per week)

Learning outcomes	Syllabus
INTRODUCTION (2 hours)	
<p>Knowledge component: <i>names</i> objects of course studied; <i>gives examples of</i> geographical research of the territory of Ukraine in the past and present times; <i>explains</i> peculiarities of modern geographical research.</p> <p>Activity component: <i>characterizes</i> research methods of physical and human geography <i>differentiates</i> essential differences of physical and human geography; <i>can</i> use sources of geographic information.</p>	<p>Objects of studies and research methods of physical and human geography of Ukraine. Sources of geographic information.</p> <p>Geographical information on the territory of Ukraine in the past. Studies of Herodotus, Guillaume Beauplan, Stephan Rudnitskiy, modern geographical research.</p>
SECTION I. Geographic map and work with it (7 hours)	
<p>Knowledge component: <i>names</i> sources of geographic information; map objects; <i>explains</i> differences between different maps and map projections.</p> <p>Activity component: <i>differentiates</i> maps according to spatial reach, scales, content and purpose; <i>characterizes</i> methods and ways of receiving geographic information from general and thematic maps; <i>determines</i> objects, directions, distances, geographic coordinates according to educational maps; <i>can</i> use educational maps and atlases, map data sources; <i>applies</i> modern navigation systems practically.</p>	<p>Topic 1. Geographical map</p> <p>Image of Ukraine in cartographic works. Educational maps and atlases. National Atlas of Ukraine, digital maps. Map data sources. Geo informational and modern navigation systems. Map objects and map projections. Deformations of geographic maps. Classification of maps. Ways to depict geographic objects and phenomenon on maps.</p>

<p>Knowledge component: <i>names</i> objects of topographical map; <i>explains</i> peculiarities of reading of topographical map.</p> <p>Activity component: <i>reads</i> topographical maps, city maps, traffic plans; <i>characterizes</i> methods and ways to receive information from topographical maps; <i>determines</i> objects, directions, distances, geographic and rectangular coordinates, height of points according to topographical map; <i>can work</i> in teams; <i>applies</i> knowledge for position finding with the help of position finding, plans and schemes.</p>	<p>Topic 2. Topographical map Reading and practical application of topographical maps</p> <p>Practical work 1. Determination of directions, distances, areas, geographic and rectangular coordinates, height of points according to topographical map</p> <p>Study Making routes according to topographical maps and explanations to them.</p>
<p>SECTION II. Geographical space of Ukraine (6 hours)</p>	
<p>Knowledge component: <i>names</i> essential features of political map карти, elements of state territory;</p> <p><i>explains</i> differences between concepts ‘country’, ‘state’, ‘subject territory’</p> <p>Activity component: <i>characterizes</i> geographical position of Ukraine; <i>differentiates</i> physical-, economic-, political-geographic position of the state; <i>shows on map the following geographical names:</i> land and sea borders: land and territorial waters, extreme points of Ukraine, neighboring countries of Ukraine; geographical centers of Ukraine; geographical center of Europe in Ukraine. <i>determines</i> length of territory of Ukraine in grades and kilometers with the help of map.</p>	<p>Topic 1. Ukraine on the political map of Europe and the world Political map of the world, its parts. Geographical positions (physical-, economic-, political-geographic). State territory of Ukraine. State borders. size of territory, extreme points, geographical centers of Ukraine and Europe.</p> <p>Practical work 2. Marking of borders of neighboring countries, extreme points, geographical centers of Ukraine and Europe and their names on contour map; determination of coordinates and length of Ukraine in grades and kilometers.</p> <p>Study Comparative evaluation of geographical position of Ukraine with countries of the world (<i>choose 2 – 3</i>).</p>
<p>Knowledge component: <i>names</i> administrative and territorial units of Ukraine; <i>explains</i> peculiarities of modern administrative and territorial structure of Ukraine; <i>gives examples of</i> administrative and territorial units of Ukraine according to geographical position on the map of Ukraine.</p> <p>Activity component: <i>analyzes</i> changes of territorial borders of Ukraine in the XX century; <i>forecasts</i> economic and social consequences of changes of modern administrative and territorial structure of Ukraine; <i>shows on the map</i> administrative and territorial</p>	<p>Topic 2. Administrative and territorial structure of Ukraine Territorial changes of Ukraine borders from the XX centuries. Peculiarities of modern administrative and territorial structure, their problems and ways of improvement on different territorial levels.</p>

<p>units of Ukraine; changes of borders of Ukraine in the XX century.</p>	
<p>Knowledge component: <i>names</i> different types of time, which exist in the international system of its keeping; <i>gives examples of</i> timing in the world; <i>explains</i> differences between local time and zone time</p> <p>Activity component: <i>characterizes</i> peculiarities of timing in the world; <i>analyzes</i> time-zone map of the Earth; <i>shows on the map</i> line of date changes; <i>determines</i> local time and zone time, time in the world and Ukraine.</p>	<p>Topic 3. Ukraine on the map of time zones International system of time keeping. Time zones. Local time. Zone time. Summer time. Peculiarities of regulation of time keeping system in the world. Time in Ukraine.</p> <p>Practical work 3. Analysis of map of time zones of the Earth. Time problem solving.</p> <p>Study Planning of route of travelling the world specifying time differences.</p>
<p>SECTION III. Natural conditions and resources of Ukraine (34 hours)</p>	
<p>Knowledge component: <i>names</i> forms of the earth's surface; <i>gives examples of</i> mineral deposits and their usage; <i>defines</i> concepts of 'platform', 'shield', 'plate', 'folding area'</p> <p>Activity component: <i>Finds and shows on maps</i> the following geographic objects: lowlands: <i>Prydniprovskya, Prychornomorska, Zakarpatska, Poliska</i>; highlands: <i>Prydniprovskya, Podilska, Donetsk, Azov, Khotyn (Berda)</i>; mountains: <i>Ukrainian Carpathians (Hoverla), Crimean (Roman-Kosh)</i>; tectonic structure: <i>Eastern European Platform, Ukrainian Shield, Volyn-Podilsky Plate, Dnieper-Donetsk Basin, Black Sea Basin, Scythian platform, Donetsk folding area, Carpathian and Crimean folding systems</i>; basins and mineral deposits; <i>Donetsk and Lviv-Volyn coal basins, Dnieper lignite basin, Western, Eastern, Southern oil and gas districts, Kryvyi Rih iron ore basin, Kremenchug iron ore district, Dnieper manganese ore basin, Irsha titanium ore deposit, Artemivske, Slovyanske rock salt deposits, Zavallivske graphite deposit</i>; <i>analyzes</i> dissemination of deposits different by age according to geological card;</p>	<p>Topic 1. Relief, tectonic and geological structure, mineral resources</p> <p>Forms of the earth's surface. Stretching of lowlands, highlands, mountains, rivers, valleys. Map 'Physical surface'. Geological history of the Earth. Geological chronology. Geological eras. Map 'Tectonic structure'. Basic tectonic structures. Connection of a relief with tectonic structures. Geological structure. Neo-tectonic motions. Influence of geological structure and tectonics on human activity.</p> <p>Formation of relief. Inner and outer factors and processes of relief formation. Type of relief according to origin. Relief and human activity. Mineral deposits of Ukraine, their classification according to usage, patterns of their dissemination.</p> <p>Fuel minerals. Existing and perspective basins and areas of coal, oil, natural gas, peat extraction. Ore and non-metallic minerals: basins, areas of occurrence and extraction. Mineral water and mud.</p> <p>Problems of rational use of mineral resources. Features of geological structure, relief and mineral resources of the area.</p> <p>Practical work 4. Determination of correlation between tectonic, geological structure, relief and mineral deposits according to maps (tectonic, geological, physical)</p>

<p><i>explains</i> influence of tectonic movements of relief formation.</p>	
<p>Knowledge component: <i>names</i> main climate forcing, climate indices, climate types; <i>gives examples of</i> natural hazards and their consequences; <i>defines</i> weather, climate, atmospheric front, cyclone, anticyclone; <i>explains</i> action of climate forcing.</p> <p>Activity component: <i>characterizes</i> peculiarities of dissemination of solar energy, directions of atmospheric fronts, cyclone and anticyclone, annual distribution of climate indices in Ukraine; <i>determines</i> peculiarities of temperature, air, rain and snow according to climate maps; <i>compares</i> peculiarities of humidifying different parts of Ukraine, climate conditions of locality to conditions of other region and their impact on agriculture; <i>analyzes</i> weather conditions of different regions of Ukraine using the Internet resources.</p>	<p>Topic 2. Climate and climate resources</p> <p>Climate forcing: solar energy, atmospheric circulation, underlying surface, their interaction. Distribution of solar energy in the earth's surface. Air masses affecting the territory of Ukraine. Atmospheric fronts, cyclones and anticyclones. Climatic indicators: temperature, humidity, precipitation, humidification coefficient and their distribution on the territory of Ukraine. Annual and seasonal course of climatic indicators. Climate map. Regional climate differences. Climatic resources. Season weather conditions and phenomenon. Contrary weather and climatic phenomena. Meteorological service. Weather forecast according to the weather map, folk signs. Influence of weather and climatic conditions on human health and economic activity. Atmospheric air protection. Climatic features of the area.</p> <p>Practical works</p> <p>5. Determination of air humidity according to specified criteria. 6. Determination of causes for differences in climate indices on different region of Ukraine according to analysis of climate map and climate diagrams.</p> <p>Study</p> <p>Nature forecasts according to weather wisdom and their comparison with forecasts from the Internet.</p>
<p>Knowledge component: <i>names</i> parts of land waters in Ukraine; <i>defines</i> concepts of 'river', 'lake', 'marsh', 'underground waters', 'channel', 'river bends', 'benches', 'water regime', 'stream flow', 'water flow rate', 'solid flow', 'fall of stream', 'slope of rivers'; <i>explains</i> peculiarities of nutrition and water regime of rivers and lakes;</p> <p>Activity component: <i>Finds and shows on maps</i> the following geographic objects: river systems: <i>Dnipro, Siverski Donets, South Bug, Dniester, Danube, West Bug</i>; lakes: <i>Yalpuh, Sasyk, Shatsky Lakes, Synevyr</i>; coastal salt lakes: <i>Dnieper-Bug, Molochnyi</i>,</p>	<p>Topic 3. Land waters and water resources</p> <p>Composition of land waters. Surface waters. Rivers. Structure of river valleys. Main river basins and systems. Relief impact on rivers. Flow characters. Fall and slope of rivers. Impact of climate on the formation of river system. Nutrition and regime of rivers, the density of the river network. River flow, water consumption. Lakes, their types; marshes, their types and dissemination, causes of becoming marshy. Reservoirs and channels. Ground waters. The main artesian basins. Water resources of Ukraine, ways of their rational use and protection. Land waters of locality.</p>

<p><i>Dniester;</i> water reservoirs: <i>Kyiv, Kaniv, Kremenchug, Kakhovka, Dnipro, Dniprodzerzhynsk;</i> <i>Dniester; Pechenig;</i> channels: <i>North Crimean, Dnipro – Donbass, Kakhovka;</i> <i>determines</i> flow and slope of rivers; <i>characterizes</i> water objects of Ukraine, ways of rational use on water resources; <i>compares</i> hydrographic peculiarities of water objects; <i>analyzes</i> possible use of water resources</p>	<p>Practical work 7. Marking of the longest rivers, lakes, water storages and channels on contour map.</p>
<p>Knowledge component: <i>names</i> main causes of soil formation and soil types; <i>explains</i> conditions of soil formation and peculiarities of soil dissemination.</p> <p>Activity component: <i>characterizes</i> soil resources of Ukraine; <i>analyzes</i> soil map of Ukraine.</p>	<p>Topic 4. Soils and soil resources. conditions of soil formation, soil structure, soil horizons, soil fertility. Main soil types, patterns of their dissemination. Soil map. Soil resources of Ukraine. Soils of locality. Changes of soils caused by human economic activities. Rational use of soils and protection of soil resources.</p> <p>Practical work Comparative analysis of different soil types in Ukraine.</p> <p>Study Human impact on land fertility of locality.</p>
<p>Knowledge component: <i>names</i> plant species; <i>gives examples of</i> plant groups from the Green book of Ukraine, endemic and extinct species of plants.</p> <p>Activity component: <i>characterizes</i> main types of plant formation of Ukraine; <i>identifies</i> plants from the Red Book of Ukraine; <i>analyzes</i> plant map of Ukraine, impact of human economic activity on plant formation; <i>observes</i> changes of plants on locality;</p>	<p>Topic 5. Flora Diversity of flora. Patterns of dissemination of plant formation in Ukraine. Plant groups. The Red and the Green Books of Ukraine. Plant groups, their protection and reproduction. Plants of locality.</p>
<p>Knowledge component: <i>names</i> animal species; <i>gives examples of</i> animal acclimatization and reclamation.</p> <p>Activity component: <i>characterizes</i> fauna composition of forests, meadows, steppes, marshes, water objects; <i>identifies</i> animals from the Red Book of Ukraine; <i>analyzes</i> animal map of Ukraine.</p>	<p>Topic 6. Fauna of Ukraine. Diversity of fauna. Patterns of dissemination of fauna in Ukraine. Animals from the Red Book of Ukraine. Human impact on animal world. Animal resources of Ukraine, their protection and reproduction. Fauna of locality.</p>

<p>Knowledge component: <i>names</i> factors of formation of natural landscapes, natural countries, natural zones; <i>explains</i> interaction of nature elements in the landscape on specific examples.</p> <p>Activity component: <i>Finds and shows on maps</i> the following geographic objects: natural areas, mountain countries, Black Sea, Azov Sea, <i>islands</i> Zmiyinyi, Dzharylhach <i>peninsulas</i> Crimean, Kerch, sand bars: Aranbastskaya, Karkinitska Bay, Kerch Strait;</p> <p><i>characterizes</i> plane forests, forest-steppes, steppes and mountain landscapes, natural marine complexes; <i>analyzes</i> landscape maps, interaction of natural and anthropogenic landscapes in locality.</p>	<p>Topic 7. Landscapes of Ukraine. Landscape as an integral system. Map ‘Landscapes of Ukraine’. Zoning of natural landscapes, their markings on maps. Anthropogenic landscapes. Plain landscapes, their diversity. Natural areas of Ukraine: mixed forests and broad-leaved forest, forest-steppe, steppe. Use and protection of plain landscapes. Mountain landscapes of the Ukrainian Carpathians and the Crimean mountains, properties of their change with height, use and protection. Natural conditions and resources of the Black and Azov seas, issues of their rational use.</p> <p>Practical work 9. Comparative characteristics of natural areas of Ukraine (<i>at option</i>).</p> <p>Study (at option) Landscapes of locality, their development and usage. Landscapes in the world similar to landscapes of Ukraine.</p>
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<p>Knowledge component: <i>names</i> parts of natural resource potential of Ukraine, types of environmental pollution; <i>gives examples of</i> objects of nature reserve fund of Ukraine; <i>explains</i> concepts of ‘ecological situation’, ‘environmental monitoring’, ‘reserve’, ‘national park’.</p> <p>Activity component: <i>finds and shows on maps</i> the following geographic objects: biosphere reserves: <i>Ascania Nova, Carpathian, Dunaiskiy, Chornomorskiy</i>; natural reserves: <i>Karadag, Ukrainian steppe, Medobory, Kaniv, Polissya</i>; national nature parks: <i>Carpathian, Shatsky, Synevir, Podislki Tovtry</i>; <i>regional landscape park ‘Meotyda’</i>; <i>characterizes</i> current ecological situation in Ukraine; <i>analyzes</i> natural resource potential in different regions of Ukraine, aspects of use of natural resources, impact of ecological situation on human health; <i>identifies</i> objects of nature reserve fund of locality; <i>stick to the safety rules and code of conduct</i> in nature</p>	<p>Topic 8. Use of natural resources Use of natural resource potential of Ukraine. Main types of environmental pollution in Ukraine. The impact of the environmental situation on the lives of the population. Nature Reserve Fund of Ukraine. National ecological system. Environmental monitoring. Basic measures for the rational use of natural resources and environmental protection. Nature reserves of locality. Use of natural resources following patterns of sustainable development.</p> <p>Study (at option) Impact of nature components on human health. Changes of nature of locality caused by human activities.</p> <p>Practical work 10. Marking of objects of nature reserve fund on contour map.</p>
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SECTION IV. Population of Ukraine and the world (12 hours)

<p>Knowledge component: <i>names</i> population of the world and Ukraine; the largest countries in terms of population; <i>understands</i> concepts of ‘natural population changes’, ‘natural growth of the population’, ‘demographic explosion’, ‘demographic crisis’, ‘demographic policy’, ‘emigration’, ‘immigration’; <i>explains</i> demographic situations in different parts of Ukraine.</p> <p>Activity component: <i>determines</i> births and deaths rates, natural and mechanical movements, the share of women and men, certain age groups in the population structure of the country (region); <i>shows on the map and names</i> regions of the world, countries, regions in Ukraine with the largest and the smallest population, natural growth of population, countries with the largest Ukrainian diaspora; <i>finds</i> information of different resources characterizing population of the world, some countries, Ukraine and its regions; <i>analyzes</i> gender and age pyramids of Ukraine and some countries (<i>at option</i>); <i>characterizes</i> demographic characteristics of country population by cartographic and statistic materials, migratory movement in Ukraine.</p>	<p>Topic 1. Demographic processes, gender and age composition of population in the world and Ukraine Quantity of population in the world and Ukraine. Factors influencing quantity of population: natural population changes, migrations.</p> <p>Gender and age composition of population in the world and Ukraine. Life expectancy. Population change in the world and Ukraine. Regional differences in demographic processes. Demographic policy. Migratory movement: causes and types of migration, the main directions of migration flows in the world and Ukraine. Ukrainian diaspora. Migration policy.</p> <p>Practical works 11. Analysis of gender and age pyramids of Ukraine and some countries of the world.</p>
<p>Knowledge component: <i>names</i> average density rate in Ukraine and determines the most (the least) populated countries of the world; <i>understands</i> concepts of ‘urbanization’, ‘suburbanization’, ‘agglomeration’, ‘megalopolis’ ‘megapolis’</p> <p>Activity component: <i>determines</i> rates of territory urbanization level; shows on the map and names regions of the world, countries, regions in Ukraine with the highest and lowest population density and urbanization level, the largest agglomerations, world cities, the largest cities in Ukraine; <i>finds</i> information which characterizes peculiarities of displacement of population in Ukraine and its regions, in the world and some countries in different sources; <i>differentiates</i> rural and urban settlements, types of cities by density and functions, cities, agglomeration, megalopolis, megapolis, levels and rates of urbanization; <i>compares</i> levels and rates of urbanization in Ukraine and the world.</p>	<p>Topic 2. Displacement of population Density of population. Territorial differences of population density in the world and Ukraine. Rural and urban settlements. Their criterions in Ukraine and countries of the world. Classification of urban settlements according to population and functions. Rural and urban population. Urbanization and its causes. Urban conglomeration. Megapolises. World cities. Differences between levels and rates of urbanization in Ukraine and the world. Suburbanization. False urbanization.</p>

<p>Knowledge component: <i>names</i> the most common language families; <i>understands</i> concepts of ‘race’, ‘nationality’, ‘ethnic group’, ‘people’, ‘language family’</p> <p>Activity component: <i>characterizes</i> national composition of the population of Ukraine by cartographic and statistical materials; <i>compares</i> ethnic composition of the population in different regions of Ukraine; <i>shows on the map and names</i> monoethnic and multinational countries, regions of displacement of national minorities in Ukraine; <i>finds information</i> characterizing ethnic composition of population of Ukraine and some countries using different resources.</p>	<p>Topic 3. Ethnic makeup Ethnic groups. The most common language families. Monoethnic and multinational countries. National composition of the population of Ukraine: properties and regional differences. National minorities and ethnic groups, the main areas of their settlement.</p>
<p>Knowledge component: <i>names</i> world religions; <i>understands</i> concept of world religion.</p> <p>Activity component: <i>shows on the map and names</i> regions of dominating world religions; <i>finds information</i> characterizing religious composition of population of Ukraine and some countries using different resources; <i>characterizes</i> the most common religious confessions in Ukraine.</p>	<p>Topic 4. Religious composition of population. Religions as a cultural phenomenon. World religions. The most common religious confessions in Ukraine.</p>
<p>Knowledge component: <i>names</i> amount of labor force in Ukraine; <i>understands</i> concepts of ‘labor resources’, ‘economically active population’, ‘public employment’; <i>explains</i> causes of unemployment.</p> <p>Activity component: <i>determines</i> factors of unemployment; <i>shows on the map and names</i> regions of Ukraine with the biggest and the smallest labor force; <i>finds</i> information on employment issues of population in Ukraine and its regions, in the world and some countries in different sources; <i>characterizes</i> quality and quantity of labor force of Ukraine and some countries; <i>compares</i> structures of public employment of Ukraine and some countries.</p>	<p>Topic 5. Public employment in the world and Ukraine Labor force. Quality and quantity of labor force. Economically active population. Public employment. Issues of public employment.</p>
<p>SECTION V. Nature and population of administrative region (3 hours)</p>	
<p>Knowledge component: <i>explains</i> interaction of natural elements, impact of natural conditions and resources on displacement of population in region and locality</p>	<p>Topic 1. Geographical position, administrative and territorial structure, history of formation and development.</p>

<p>Activity component: <i>characterizes</i> relief and geological structure, climate, surface and underground water, soil covering, flora and fauna, landscapes, population, administrative region of locality; <i>analyzes</i> using of natural resources, ecological consequences of natural use.</p>	<p>Topic 2. Nature of region. Peculiarities of natural conditions and resources. Use of natural resources. Objects of nature reserve fund.</p> <p>Topic 3. Population of region. Quantity and structure of population. Ethnic composition. Peculiarities of public employment.</p> <p>Study (excursion) Introducing nature objects of locality.</p>
<p>RESERVE HOURS (6 hours)</p>	

9th form
GEOGRAPHY
UKRAINE AND INTERNATIONAL ECONOMICS
(52 hours, 1,5 hours per week)

Learning outcomes	Syllabus
INTRODUCTION (1 hour)	
<p>Knowledge component: <i>names</i> object of research of economic geography; <i>understands</i> concept of geographical environment; <i>gives examples of</i> interaction of economic geography with other sciences; <i>explains</i> importance and significance of economic geography; <i>shapes</i> reasonable opinion on role of economic geography for solving many social issues.</p> <p>Activity component: <i>defines</i> role of economic geography in the system of geographic sciences.</p>	<p>Object of research of economic geography. Interaction of economics and nature in geographical environment. Economic geography in the system of geographic sciences. Significance of knowledge in economic geography.</p>
SECTION I. National and international economics (9 hours)	
<p>Knowledge component: <i>names</i> features of concepts ‘national economics’, ‘gross domestic product’, ‘Human Development Index’; <i>understands</i> impact of natural and social factors on location of economic activity (natural, raw materials-based, fuel and power, water, labor, consumer, transport, scientific, ecological, military strategic).</p> <p>Activity component: <i>differentiates</i> sectors of national economics (primary, secondary, tertiary), forms of spatial organization of economic activity (economic districts, elements of territorial structure of economics, agriculture etc.); <i>analyzes</i> sectorial model of economics of Ukraine and compares it with other countries.</p>	<p>Topic 1. National economics National economics. Concept of ‘economic development’ and its rates: Gross Domestic Product (GDP), structure of GDP, Human Development Index (HDI). Sectorial model of economics. Forms of social organization of economics. Forms of spatial organization of national economics. Factors of location of economic activity</p> <p>Practical work 1. Analysis of sectorial model of economics.</p>
<p>Knowledge component: <i>names</i> features of concepts ‘territorial (locality, district, region, country), specialization, international division of labor’, ‘world economics’, ‘world market’, type of economic systems; <i>gives examples of</i> world countries with different levels of economic development (according to UN typification), transnational corporations in Ukraine; <i>knows and understands</i> significance of</p>	<p>Topic 2. World economics World economics, world market. Concepts of ‘territorial specialization’, ‘international division of labor’. Types of economic systems. Typification of world countries according to level of economic development, place of Ukraine. Multiple-level system of world economics, its spatial structure according to the concept ‘Center – periphery’. Current trends of development of world economics.</p>

<p>international organizations for world economics; <i>understands</i> development trends of world economics (internationalization of production, informatization, globalization, regional economic integration), multiple-level system of world economics; <i>explains</i> impact of globalization on development rates of world economics and national economics of different countries.</p> <p>Activity component: <i>finds and shows on maps</i> countries of the Big Seven (G-7), the Group of Twenty (G-20); <i>can</i> receive and analyze information on typization of countries by the level of social and economic development.</p>	<p>Globalization and regional economic integration. Transnational corporations and their impact on world economics. International economic organizations.</p> <p>Practical work 2. Marking countries of Group of Twenty (G-20) on contour map and defining their places by the level of economic development.</p>
SECTION II. Primary industries (10 hours)	
<p>Knowledge component: <i>names</i> activities for agriculture, types of agricultural lands; <i>gives examples</i> of impact of natural and social factors on level of development and agricultural specialization in region of the world and country; countries with international agricultural specialization; <i>explains</i> development of pig breeding, poultry farming forming of special regions for cattle breeding, sheep breeding.</p> <p>Activity component: <i>shows on the map</i> of the world the following zones (districts): cultivation of wheat, corn, rice, cotton, linen flax, sunflower, soybeans, olives, oil palm, sugar cane, sugar beet, potatoes, tea, coffee, cocoa beans, and on the map of Ukraine – agricultural zones, mountain and suburban agricultural areas;</p> <p><i>characterizes</i> peculiarities of plant growing and breeding locations; <i>analyzes</i> maps of plant growing and breeding locations; <i>defines</i> place of Ukraine on world agricultural markets</p>	<p>Topic 1. Agriculture Agriculture, its importance in the modern world. Agrarian societies in the modern world. Agrarian relations. Components of agriculture. The role of natural factors (land and agro-climatic resources) in the development and location of agricultural production. Land security. Agriculture of Ukraine. Structure of agricultural lands in Ukraine. Location in Ukraine of production of grain and technical crops, potato growing, vegetable growing, melon growing, winegrowing. Development of food reserve of livestock breeding. Structure and location of livestock breeding. Zonal specialization of agriculture of Ukraine. Mountain and suburban agricultural areas. Agriculture of locality. Agriculture of the world. Geography of major cereals and industrial crops and livestock breeding products. Zoning of world agriculture. The largest producers and exporters of agricultural products.</p> <p>Practical work 3. Determination of basic cereal and technical crops, grown in moderate and tropical climate zones and explanation of their differences.</p>
<p>Knowledge component: <i>names</i> main forest belts of the world; <i>explains</i> location of forest belts of the world, forest lands in Ukraine.</p>	<p>Topic 2. Forestry Forestry. Main forest belts of the world. Wood supply. Forestry in Ukraine.</p>

<p>Activity component: <i>shows on the map</i> of the world forests on moderate climate zones, wet equatorial and tropical forests, forestry regions in the world and Ukraine; <i>compares</i> wood supply of Ukraine, the world and some regions of the world.</p>	
<p>Knowledge component: <i>names</i> types of mineral resources according to their usage; <i>gives examples of</i> the biggest importers and exporters of oil, natural gas and coal; <i>understands</i> patterns of location of mineral deposits basins; <i>explains</i> leadership of some countries on markets of mineral deposits according to natural and social causes, displacement of mining industry to district with complicated natural conditions, to the shelf of the World Ocean.</p> <p>Activity component: <i>finds and shows on maps the following</i> basins of oil and natural gas – <i>Persian bights, Western Siberian, Sunda, Sahara, Guinea bights, Texas, Mexican bights, Western Canadian, North Sea</i>, main locations of natural gas and oil extraction in Ukraine; the biggest basins and locations of coal mining – <i>Verkhiosilezkyi (Poland), Kuznetsk (Russia), Karaganda (Kazakhstan), South-Eastern (China), Eastern (India), Appalachian (the USA), South-Eastern (Australia), Donetsk and Lviv-Volynskiy (Ukraine)</i>; countries with the largest volumes of iron ore mining – <i>Brazil, Australia, Canada, China, India, Ukraine</i>, basins and areas of iron and manganese ore mining in Ukraine; the biggest locations of nonferrous metal ores mining – <i>Cordilleras-Andes, tungstic tin belt of Asia, copper belt of Africa</i>; main deposits of nonferrous metal ores produced in Ukraine; main centers of rock salt production in Ukraine.</p>	<p>Topic 3. Mining Industry Classification of mineral deposits according to their usage. Indicators of resource availability of countries with mineral deposits. Coal, oil and natural gas extraction. Patterns of location of coal, oil and natural gas fields. The world's largest basins and countries according to coal, oil and natural gas extraction. The main and perspective areas of coal, oil and natural gas in Ukraine. Ways to cover fuel shortages in Ukraine. Mining of metal ores. Patterns of location of metal ore deposits. Countries with the largest volumes of iron, manganese ores, nonferrous, rare earth and precious metal ores. Development and location of iron and manganese ore production in Ukraine. Development of non-ferrous metal ore deposits in Ukraine. Extraction of other types of natural raw materials in the world and Ukraine. Extractive industries of locality.</p> <p>Practical work Marking the biggest basins of coal, oil and natural gas extraction on contour map.</p> <p>Study Issues and perspective of natural gas and oilfield development on the shelf of the Black and the Azov Seas.</p>
<p>SECTION III. Secondary industries (16 hours)</p>	

<p>Knowledge component: <i>names</i> types of electrical stations according to the source of energy reserves, ways of energy conservation; <i>gives examples</i> of the biggest producers and consumers of electrical energy, countries with dominating electricity production on thermal power plants, nuclear thermal power plant or hydro power plants; <i>explains</i> locations of energy generating capacities in Ukraine.</p> <p>Activity component: <i>finds and shows on maps the following</i> geographic objects: hydro power plants – hydroelectric power chain on Dnipro, Dniester, Tashlytska; nuclear energy stations – Zaporizhzhzia, South Ukrainian, Rivne, Khmelnytskyi. thermal power plants – Zaporizhzhzia, Prydniprovsk, Trypilska, Zmiyivska, Slovyansk, Ladyzhynska, Burshtynska; <i>compares</i> structural of electrical energy production in Ukraine and leading countries of the world.</p>	<p>Topic 1. Electrical production and supply</p> <p>Significance of electrical supply. Types of electrical stations, main causes of its location. Fuel and energy balance. Electrical energy industry of Ukraine. The biggest thermal power plants, nuclear thermal power plant, hydro power plants, power transmission lines. Use of renewable energy sources. Electric power companies of locality. Electrical energy industry in the world.</p> <p>The largest producers and consumers of electricity in the world. Differences in the structure of electricity production at different power plants in the world.</p> <p>Practical work (on teacher's choice)</p> <p>5.1. Marking of the biggest electrical stations and explanation of their location on contour map of Ukraine.</p> <p>5.2. Constructing and analyzing diagrams of electrical energy production on different electrical plants in Ukraine, European countries and in the world.</p>
<p>Knowledge component: <i>names</i> types of ferrous and non-ferrous metals; <i>gives examples of</i> the biggest producers of cast iron, steel, provided with raw materials or directed at significant volumes of consumption; countries producing the biggest volumes of aluminum, titanium, copper; <i>understands</i> impact of raw, fuel, electrical energetic, transport, consuming ecological factors on location of metallurgy productions, place of Ukraine in the world production of aluminum from raw materials; <i>explains</i> locations of ferrous and non-ferrous production in Ukraine.</p> <p>Activity component: <i>finds and shows on maps the following</i> geographic objects: centers of ferrous metals in Ukraine – Kryvyi Rig, Dnipro, Kamianske, Zaporizhzhzia, Nikopol, Mariupol, Kramatorsk, Alchevsk; centers of non-ferrous metals in Ukraine – Mykolayiv, Zaporizhzhzia, Irshansk, Kyiv, Pobuzke, Bakhmut, Kamianske; <i>analyzes</i> statics on volumes of production and export of metallurgical products in Ukraine and in the world.</p>	<p>Topic 2. Metallurgical production</p> <p>Significance of metallurgical production for economics. Modern technologies of production of cast iron and steel. Combining in ferrous metallurgy. Modern tendencies of location of ferrous metallurgy productions. Non-ferrous metallurgy. Features of production technology and factors of location of enterprises for copper, aluminum, titanium. Production of cast iron, steel, rolled metal in Ukraine: dominant technologies, set of factors of productions location, main centers, Ukraine's place in the world market of ferrous metals. The main centers of production of non-ferrous metals in Ukraine.</p> <p>Metallurgical production in the world.</p> <p>The biggest producers and consumers of ferrous metals. Modern tendencies of location of cast iron, steel, rolled products productions. The biggest producers and consumers of non-ferrous metals.</p> <p>Practical work</p> <p>6. Marking raw material bases and main centers of ferrous metals production in Ukraine on contour map.</p>

<p>Knowledge component: <i>names</i> types of mineral fertilizers, chemical production; <i>gives examples of</i> the biggest producers of mineral fertilizers and polymers, wood and paper; <i>explains</i> impact of different factors on location of chemical productions, productions of wood and paper.</p> <p>Activity component <i>finds and shows on maps the following geographic objects:</i> the biggest productions of mineral fertilizers, rubber ware, household chemicals, pharmaceutical products in Ukraine - <i>Kostiantynvka, Severodonetsk, Kamianske, Cherkassy, Sumy, Zaporizhzhia, Odessa, Yany Kapu (Krasnoperekopsk), Bila Tserkva, Kharkiv, Kyiv, Uman</i>, centers of production of wood and paper in Ukraine; <i>characterizes</i> raw material base of chemical products, paper; <i>analyzes</i> connections between chemical, metallurgical and other types of production.</p>	<p>Topic 3. Chemical production. Production of wood and paper. Significance and properties of chemical production technologies. Factors of location of the main productions of chemicals and chemical products, pharmaceutical products, rubber ware and plastic products. Chemical production in Ukraine. Main centers of chemical production and factors of their formation. The biggest producers of mineral fertilizers, polymers, pharmaceutical products in the world. Production of wood and paper: significance, technologies and factors of location of main productions. Production of wood and paper in Ukraine. The biggest producers of wood and paper in the world.</p>
<p>Knowledge component: <i>names</i> types of products of machinery engineering, factors of location of some machines and equipment; <i>gives examples of</i> the biggest producers of planes, cars, ships, benches, electronics; <i>explains</i> location of productions of transport and production equipment, agricultural equipment, household electrical and electronic products; <i>understands</i> causes of problems with production of machinery and equipment in Ukraine.</p> <p>Activity component: <i>finds and shows on maps the following geographic objects:</i> the biggest producers of machinery and equipment – <i>the USA, Canada, EU countries, Japan, China, New Industrial Countries</i>, the biggest centers of machinery engineering in Ukraine; <i>characterizes</i> current trends of development and location of production of machinery and equipment.</p>	<p>Topic 4. Production of machinery and equipment Significance of machinery engineering in modern world. Diversity of productions and factors of their location. Specialization and cooperation in machinery engineering. Machinery engineering in Ukraine. The biggest centers of production of transport and production equipment, agricultural equipment, household electrical and electronic products. Production of machinery in locality. Production of machinery in the world. Correlation between the level of economic development of the region, country and level of machinery engineering. The biggest producers of planes, cars, ships, benches, computers, robot engineering.</p> <p>Practical work 7. Marking centers of machinery production and explanation of factors of its location on contour map of Ukraine.</p>
<p>Knowledge component: <i>names</i> types of textile and raw materials for their production; <i>gives examples of</i> the biggest producers and exporters of fabrics, clothing and footwear in Europe and the world;</p>	<p>Topic 5. Production of textile, clothing, footwear Peculiarities of production process and factors of location of productions of textile of various types, clothing, leather and footwear products.</p>

<p><i>understands</i> influence of labor and consuming factors on development of production of textile, clothing, footwear</p> <p>Activity component: <i>finds and shows on maps the following geographic objects:</i> the biggest centers of fabrics, clothing and footwear production in Ukraine, centers of the most famous folk crafts in Ukraine; <i>analyzes</i> map of textile, clothing and footwear industry of Ukraine.</p>	<p>Factors of location and centers of textile, sewing, leather, footwear production in Ukraine. The biggest producers and exporters of textile, clothing and footwear. Folk crafts in Ukraine.</p> <p>Study Big and small cities of Ukraine as centers of clothing manufacture</p>
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<p>Knowledge component: <i>names</i> structure of food production; <i>gives examples</i> of traditional food production in different countries of the world; <i>understands</i> impact of agriculture, consuming factor and transnational corporations on development of food industry; <i>explains</i> location of food productions in Ukraine, in villages, towns and cities; <i>knows</i> consumer rights on quality goods and services.</p> <p>Activity component: <i>finds and shows on maps the following geographic objects:</i> the biggest centers of food and drink productions in Ukraine; <i>characterizes</i> peculiarities of some food products; <i>analyzes</i> map of food industry of Ukraine.</p>	<p>Topic 6. Production of food and drinks Factors of location of manufactures of food products. Food industry in Ukraine. Peculiarities of technologies and factors of location of manufacturing of beet-sugar, oil, butter and cheese, fruit and vegetable canning, fish, baking, pasta, flour, cereals, confectionery, brewing, winemaking, bottling of soft drinks, mineral waters. Production of food in location. Production of food in the world: current trends, impact of globalization and national traditions, interaction with agriculture. Traditions of food production in different countries of the world.</p> <p>Study 1. Ukrainian and import products in the consumer goods basket of one’s family. Traditional food in Ukraine and neighboring countries.</p>
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SECTION IV. Tertiary industries (10 hours)

<p>Knowledge component <i>names</i> types of transport, significant features of concepts ‘transport hub’, ‘transport highway’, ‘volume of traffic’, ‘freight turnover’; <i>understands</i> peculiarities of every transport type and its significance for transportation of goods and passengers in Ukraine; dominating transport for export of services in Ukraine; <i>gives examples</i> of the biggest transport hubs in Ukraine.</p> <p>Activity component: <i>finds and shows on maps the following geographic objects:</i> the largest seaports in terms of cargo turnover in East Asia and Europe; maritime navigable canals - Panama, Suez, Kiel; the largest airports in the world in terms of passenger turnover; countries with high-speed railways; countries</p>	<p>Topic 1. Transport Transport, its significance for national economics and formation of world economics. Types of transport, their advantages and disadvantages. Transport of Ukraine. Railway transport as the main transport in Ukraine. The most important highways of Ukraine. Waterways, the largest sea and river ports in Ukraine. Air transport. Transport hubs. International transport corridors on the territory of Ukraine. World transport. Countries with a high level of development of the railway network and highways. The largest seaports, their impact on the location of industry. The largest navigable rivers in the world. The biggest airports of the world. International transport corridors.</p>
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<p>with the longest roads; main railways, highways, sea and river ports, airports, international transport corridors in Ukraine.</p>	<p>Study Urban ways of transport of one's regional center.</p>
<p>Knowledge component: <i>names</i> types of trade, features of concept 'foreign trade', foreign trade figures.</p> <p>Activity component: <i>finds and shows on maps</i> main regions of world trade.</p>	<p>Topic 2. Trade Trade as a service. Type of trade. Foreign trade figures. Trade in Ukraine. Volumes and structure of exports and imports of goods and services. Factors of concentration of retail trade in settlements, regions. World market of goods and services. The main directions of foreign trade relations. World Trade Organization. Regional free-trade areas (NAFTA, ASEAN etc.).</p>
<p>Knowledge component: <i>names</i> types of tourism, features of concepts 'tourism', 'recreational resources,', 'tourism infrastructure'; <i>understands</i> impact on natural and social factors on tourism development.</p> <p>Activity component: <i>characterizes</i> peculiarities of main tourist regions of the world; <i>finds and shows on maps</i> main tourist regions in Ukraine.</p>	<p>Topic 3. Tourism Tourism as a component of the national economy, its types. Factors of tourism development in the region, country. Tourist infrastructure. Tourism in Ukraine. Features of natural recreational resources. World Heritage Sites by UNESCO in Ukraine. Tourist areas in Ukraine. International tourism. The main tourist regions of the world. Countries of the world with the largest number of World Heritage sites by UNESCO.</p>
<p>Knowledge component: <i>understands</i> impact of factors on development of science and education in the country.</p> <p>Activity component: <i>proves</i> levels of education and science, healthcare in some regions of the world, countries and Ukraine; <i>finds and shows on maps</i> the most famous centers on education and science in the world and Ukraine.</p>	<p>Topic 4. Scientific activities. Education. Healthcare Significance of science and education for society. Features of scientific and educational activities as types of economic activity. Forms of spatial organization of research and education: technopolises, technoparks. The most famous research centers in the world and Ukraine. Healthcare. The most famous health centers in the world and Ukraine.</p>

<p>Knowledge component: <i>names</i> features of concepts ‘credit’, ‘financial center’, ‘offshore’, ‘outsourcing’; <i>understands</i> interaction of level of economic development and economic services of the country; <i>explains</i> significance of financial sector of state economics and significance of financial knowledge for welfare of every person.</p> <p>Activity component: <i>finds and shows on maps the following geographic objects:</i> the biggest international financial centers – London, New York, Singapore, Hong Kong, Tokyo, Shanghai, Mumbai, Frankfurt am Main, Chicago; offshore countries, leading countries on software market.</p>	<p>Topic 5. Financial services. Computer programming Financial services. World centers of banking and finance. The impact of globalization on the location of financial institutions. Offshore countries. Features of placement of financial institutions in Ukraine. Outsourcing, its advantages and disadvantages. Information technology outsourcing (IT outsourcing). Computer programming, consulting and related activities. Leading countries in the global computer programming market.</p>
SECTION V. Global problems of humanity (3 hours)	
<p>Knowledge component: <i>names</i> global problems of humanity; <i>gives examples of</i> conflict-prone regions of Europe and the world; <i>characterizes</i> extension of global problems and their displays of the territory of Ukraine, structure and main ideas of sustainable development.</p> <p>Activity component: <i>analyzes</i> essence, causes and peculiarities of development of global problems; <i>finds and shows on maps</i> countries with nuclear weapons, the biggest regions of environmental accident in the world</p>	<p>Concept of global problems of humanity, their reasons. The problem of war and peace. The problem of terrorism. Environmental problem. Raw materials and energy issues. Demographic and food problems. The problem of overcoming the backwardness of developing countries. Interaction of global issues. The role of the world community and international organizations in solving global problems. Sustainable development as a strategy of humanity of the XXI century. Study Displays of global problems in one’s region.</p>
RESERVE HOURS (3 hours)	