

## Geography

(Year 11)

(35 hours, 1 hour a week)

<b>Contents</b>	
1.	<p><b>Introduction</b></p> <p>Geography as a system of sciences. Object of study of geography. The concept of "geosystem". Levels of geosystems. Cognitive and constructive role of geography</p>
2	<p><b>Topography and cartography</b></p> <p>Topographic map: projection, delineation. Geographical and rectangular coordinates. Rectangular (kilometer) grid. Basic symbols of topographic maps for depicting locations and terrain. Measurements on a topographic map by scale and kilometer grid. Use of azimuths. Plans of settlements. Practical use of topographic maps, plans. Modern cartographic works. Mathematical basis of maps. Methods of cartographic representation of objects and phenomena on general geographical and thematic maps. The essence of generalization. Electronic maps and globes. Cartographic online sources. Navigation maps. Geographic information systems (GIS), remote sensing of the Earth, areas of their practical application.</p>
3.	<p><b>General laws of the geographic shell of the Earth</b></p> <p>Geoid. Indicators of the Earth's motion around its axis. The main types of time. Determination of local and zone time, transition from local time to zone time. Lighting zones on Earth. Coriolis force. Variability of the Sun's height above the horizon and the length of daylight. Seasonal changes in the Northern and Southern Hemispheres. Composition, boundaries and structure of the geographic shell. Regularities of the geographic shell. Current stage of development of the geographical shell. Anthroposphere. Properties of the lithosphere. Processes in the subsoil and on the Earth's surface, their effects. Terrain. Resource properties of the lithosphere. Rocks and patterns of their distribution. Availability of mineral resources. Human impact on the lithosphere. The global resource problem of humanity. Solar-terrestrial interactions. Troposphere: temperature, change in atmospheric pressure, winds, humidity, precipitation. Weather. Weather maps. Climate. Climatic factors. Climate map. Map of climatic zones. Characteristics of climate types by climatograms. Climatic conditions. Natural atmospheric phenomena, their forecasting and means of counteraction. Climate change on the planet.</p>

	<p>Water reserves on Earth. World ocean and its components. Influence of lithosphere processes on the nature of oceans. The role of oceans in the formation of rocks and coastal terrain.</p> <p>The impact of atmospheric processes (phenomena) on the oceans.</p> <p>Fresh water as a resource and a factor in population distribution and manufacturing.</p> <p>Mineral and thermal waters: distribution, use. Water supply of regions and countries of the world. Modern water purification systems. Desalination of sea water.</p> <p>Biosphere and its components. Regularities of distribution of living organisms on land and in the oceans. Resources. The role of living organisms in soil formation. Soil as the "mirror" of the landscape. Types of soils. Influence of soils on specialization of the economy of a region, country.</p> <p>Natural areas. Comparison of maps of soils and natural areas of the world and Ukraine.</p>
4	<p><b>General socio-geographical regularities of the world.</b></p> <p>World system. Geographical space, its system-forming role and features.</p> <p>World population dynamics. Natural, social, economic and environmental factors and spatial features of natural population movement in the world. Demographic transition, its phases. Gender, marital and family structure of the population. Demographic aging of the population. Characteristics of the demographic situation in the countries by age-sex pyramids.</p> <p>Migrations, their indicators, factors and impact on reproduction of the population and its redistribution in the world. Demographic factors of economic development and specialization of countries. Demographic forecasts.</p> <p>The concept of "global economy". World market of technologies, patents and licenses, information technology services. System of production. International market of goods: essence, infrastructure, pricing.</p> <p>World agricultural production.</p> <p>Extraction and consumption of fuel and mineral resources, global markets for coal, oil and natural gas. Global value-added chains in production of ferrous metals, aluminum, copper; factors and forms of specialization of countries.</p> <p>Modern geography of production of vehicles, electronics, pharmaceuticals. Production of textiles, clothing, footwear: modern spatial organization, factors of international specialization.</p> <p>Modern transport and logistics systems, information and communication networks.</p> <p>World investment and finance market. Tourism.</p> <p>Geographical components of political geography: geographical space, territories, geographical places. Political components: political institutions, political relations, "power".</p> <p>Territorial and political systems of national and supranational levels. Geopolitics, its components.</p>
5	<p><b>Social geography of Ukraine</b></p> <p>Ukrainian state and territory of the state of Ukraine. Political and geographical position of Ukraine: global, regional, neighborhood. Political and economic assessment of the state border of Ukraine. Reforming the administrative-territorial structure of Ukraine.</p> <p>Population of Ukraine. Population reproduction. Age- and sex-related aspects of the population of Ukraine.</p>



Migration processes in Ukraine. Ukrainians in the global and regional labor market. Demographic policy in Ukraine.

Modern features of the national economy of Ukraine. Competitive advantages of Ukraine in the world markets of agricultural products, ore raw materials and metals.

Current trends and regional differences in development of the energy sector in Ukraine.

Closed technological cycle of development and production of aircraft in Ukraine, export and import of aircraft missiles.

Ukraine's place in global added value chains of production and sales of electronic products.

Production of pharmaceutical products and household chemicals. Features of development and spatial organization of production of furniture, textiles, clothes, footwear, foodstuffs.

International transport corridors on the territory of Ukraine.

Ukraine's place in the world market of investments and borrowings. Transnational financial corporations (banks, financial companies) in Ukraine. Experience in implementing sustainable (balanced) development plans in different countries and the strategy of sustainable development of Ukraine.

## Expected results

### A student should be able to:

- understand the geographical shell as a system;
- explain its origin, functioning, structural and developmental patterns;
- solve complex problems related to geographical situations in a particular area;
- model natural, socio-economic and geo-ecological phenomena and processes;
- display familiarization with problems of territorial organization of society, its interaction with nature;
- treat the environment responsibly during daily work and household activities.