Geography Syllabus

for

Grade 10

Grade level learning outcomes for grade 10 Geography

After completing grade 10 the students will be able:

1. To develop understanding and acquire knowledge of:

- The use of magnetic compass
- Geographical grid origin of Ethiopia
- Methods of showing relief on maps
- The term contour lines and its properties as well as its difference from isolines
- Ways of showing specific heights on contour maps
- The term slope, its types, and gradient
- The concept of universe and the position of the earth in the solar system
- The origin and structure of the earth
- Geological time scale and major events in the world and in Ethiopia
- The concept of continental drift theory, components of the earth's physical environment and major components of lithosphere
- Term rock, its classification based on nature of rock formation and its distribution in Ethiopia
- The term soil, its types, formation and composition
- Causes and consequences of soil degradation as well as ways of soil conservation in Ethiopia
- The criteria used for classifying climate and climatic classification
- Causes of climatic change and its consequences
- Spatiotemporal variation of temperature in Ethiopia
- Rainfall distribution of Ethiopia and factors why Ethiopia experienced different climate from other tropical countries
- Climatic zones of Ethiopia
- Reasons for the occurrence of drought, and drought coping mechanisms
- The concept of ecosystem
- How climate affect the distribution of ecosystem, the effect of latitude on its distribution and factors that affect the diversity of fauna, and flora in the ecosystem
- Factors that affect soil characteristics in the ecosystem
- Population size of the world on continental bases and the leading populous countries of each continent
- Population growth trend, its doubling time, components of its change and population pyramid of developing and developed countries
- Factors that affect population distribution
- The causes and types of human migration
- The term urbanization, its level and factors that affect its process
- The spatial population distribution of Ethiopia
- The concept and types of economic systems
- The concept of sustainable economic development and its indicators
- World economic organization
- Concept of globalization, its advantages and disadvantages

2. To develop skills and abilities of:

- Finding direction on a map
- Showing the direction of a given place on a map
- Showing the position of places on maps
- Computing the scale of the enlarged or reduced map
- Enlarge or reduce map using pantograph or square method
- Calculating altitude of points between contour lines
- Computing the gradient of slope
- Calculating field distance
- Computing natural increase of population
- Computing population density and agricultural density based on a given data
- Showing demographic characteristics of the Ethiopian population
- Analyzing population structure of Ethiopia

3. To develop the habits and attitude of:

- Willingness to communicate people using maps
- Appreciation to the origin & structure of the earth
- Appreciation for varied climatic conditions experienced in Ethiopia
- Concern for environmental protection
- Developing positive thinking to wards the implementation of family planning
- Realization of the population policy of Ethiopia
- Realization of the contribution of world economic organizations
- Sense of urgency towards the need for sustainable development
- Mental readiness of facing opportunities and challenges of globalization

Unit one: Map reading *(21 periods)*

Unit Out comes: **The Students will be able to:**

- Develop the skills of identifying direction and measuring distances on map, and practice, map enlargement and reduction
- Acquire basic skills of locating places and objects on maps using different methods
- Understand the different ways of representing relief on maps

Competencies	***Main contents***	***Suggested activities***
Students will be able to: • Acquire the skill of finding direction on a map • Show direction of a given place on a map by means of compass direction and bearings	***1. Map reading*** **1.1 Directions on map** *(3 periods)* • Identification of direction • Measurement of direction and bearing	• Draw arrows indicating four cardinal points and twelve subsidiary points and give their degree values, justify these degree values by using geometric concept. Let students practice how to find direction and distance on maps.
• Explain the use of magnetic compass • Practice how to find direction and bearings of points on maps • Define what geographical grid system mean • Demonstrate the position of a given place by means of geographic grid system • Define what national grid system mean • Show the position of places on maps using national grid references(four and six digits grid) • Demonstrate the national grid origin of Ethiopia	**1.2 Position on maps** (4 *periods*) – Geographic grid – National grid	• .Brain storming: Ask students to tell what they know about latitudes and longitudes with the geographical grid origin. Identify the location of a given place using the coordinate of latitude and longitude/geographical girds/. • Draw vertical and horizontal lines to display national grids system and its origin (using the Ethiopian national grid system). • Let learners demonstrate the position of a point on maps using four/six digit grid reference system (facilitate conditions for such activities.)

Competencies	*Main contents*	*Suggested activities*
• Enlarge and reduce maps using a pantograph or square methods • Compute the scale of enlarged or reduced map	**1.3 Map enlargement and reduction** (4 *periods*)	• Let students discuss on the procedure used to enlarge and reduce map and encourage students to practice enlarging and reducing maps independently.
• Describe methods of showing relief on maps • Define the term contour lines • Discuss the properties of contour lines • Distinguish contour lines and isolines • Identify the different ways of showing specific height on contour map • Compute the altitude of points between contour lines	**1.4 Relief on maps** *(10 periods)* • Traditional methods of representing relief on map • Contour as methods of representing relief • Properties of contours • Specific heights on contour map • Methods of findings altitudes of points between contour lines	• Ask students what they know about traditional methods of showing relief on map and demonstrate these ways of representing relief on map. • Facilitate condition to students so that they arrive at correct definition and properties of contour line. • Assist students to distinguish different ways of representing specific heights on contour maps in small group and then let them calculate altitude of points between contour lines individually.
• Explain the term slope • Demonstrate types of slope • Describe the term gradient of slope • Compute gradient of slope • Express gradient in different ways • Calculate field distance	• Slopes and gradient • Slope and its types • Gradient • Field distance	• Assign students to group discussion dealing with types of slopes by relating to properties of contour lines. • Help students describe gradient along various slopes so that they can compute and express gradient in different ways. • Ask students to recall what they know about finding distances on map and then guide them to calculate field distance between points.

Assessment

Students' performance has to be assessed continuously over the whole unit. The assessment will be made by comparing students' performance with the specified level of competencies. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly. Thus

A student at a minimum requirement level will be able to explain the use of magnetic compass, define geographical grid and national grid systems; and demonstrate the position of a given place using geographical grid system and national grid references (of four and six digits grid references); demonstrate the national grid origin of Ethiopia and practice how to find direction and bearings of points on maps. Enlarge and reduce maps using a pantograph or square methods, compute the scale of enlarged or reduced map, describe methods of showing relief on maps, define the term contour lines and discuss their properties. Identify in different ways of showing specific heights on contour map and compute the altitude of points between contour lines. Explain the term slope and types of slopes, compute gradient of slope and express it in different ways and calculate field distance.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to measure direction on maps using protractor, calculate magnetic declination of varied maps and find deviation from the true North. Compute scale of map using national grid references, construct a relief map using physiographic diagrams, and distinguish types of slopes from contour map of a given area.

Students working below a minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfill the higher achievers' competencies also need special support to continue and achieve more.

Unit Two: Physical Environment of the World and Ethiopia *(26 periods)*

Unit Out comes: Students will be able to:

- Understand the origin of the earth and its tectonic movements
- Describe the movement, composition of the earth and components of its physical environment
- Discuss climatic classification, change and climate of Ethiopia
- Explain world factors that affect the diversity of Fauna, flora and soil in the ecosystem

Competencies	***Main contents***	***Suggested activities***
Students will be able to: • Discuss the concept of universe • Identify the position of the earth in the solar system • Explain the origin of the earth • Demonstrate the structure of the earth • Describe the geological time scale and major events • Describe the concept of continental drift theory • Realize the major geological events of Ethiopia	***2. Physical environment of the world and Ethiopia*** **2.1 The earth in the universe** *(10 periods)* • Origin and structure of the earth • The geological time scale and major events • Movement of the continent • Geological events in Ethiopia	Brain storm: • Start the lesson by questioning students about the concept of universe and let students discuss the position of the earth in the solar system. This has to be followed by discussion on the earth. • Help students to discuss theory of continental drift and demonstrate using the huge continent of Laurasia and Gondwanaland. • Assist students when discussing the major geological events of the earth and Ethiopia.

Competencies	***Main contents***	***Suggested activities***
• Distinguish the components of the earth's physical environments • Discuss major components of lithosphere	• Components of the earth's physical environment – Atmosphere – Biosphere – Hydrosphere – Lithosphere	• Ask students what they know about the components of the earth's physical environment and let them list the names and in particular list the structural elements of Lithosphere (rock and soil).
• Define rock • Describe characteristics of each type of rocks • Classify rocks based on their formation • Demonstrate major rocks distribution in Ethiopia	• Lithosphere – Rocks – Soil • Rocks – Definition – Types, formation & characteristics – Distribution of major rocks in Ethiopia	• Let students collect and bring different types of rock specimen and classify accordingly. • Encourage students to demonstrate the major rocks distribution on the map of Ethiopia.
• Define soil • Identify types and formation of soil • Sort out the composition of soil • List the major soil types of Ethiopia • State causes and impacts of soil degradation in Ethiopia • Analyze the ways of soil conservation in Ethiopia	• Soil – Definition – Types and formation of soil – Composition of soil – Major soil types of Ethiopia – Soil degradation and conservation in Ethiopia	• Ask the students to define soil and then assign students to collect soil specimen as to identify the types of soils. • Students are assigned in groups to discuss major types of soil in Ethiopia then present case study that shows soil degradation and soil conservation in Ethiopia.
• Realize the criteria used for classifying climate	**2.2 climate** (6 *periods*)	• Ask students to review the concept of climate and open classroom discussion that enable students understand the criterion used for classifying climatic regions using Greeks and Khoppen classification model.

Competencies	*Main contents*	*Suggested activities*
• Compare the climatic classifications of the Greek's and Khoppen's	**2.2.1 Classification of climate of the world (2 perods)** • commonly used criteria for classifying climate – The Greek's – Khoppen's	• Present Greek's and khoppen's climatic classifications to students using world map (the presentation has to be short and precise). Then allow students to compare them in groups. The result of the group work to be presented to the whole class. Teacher, will direct the discussion so that learners can catch at the desired points.
• Express causes of climatic change • Explain major consequences of climatic change	**2.2.2 Climatic change (4 periods)** • Causes of climate change – Natural cause – Human related causes • Consequences of climatic change – Global warming – Drought and desertification – Raising of sea level and flood – Shift of the direction of global winds – loss of biodiversity	• Organize students into small groups to prepare a short report on the causes and consequences of climatic change then let them discuss on what they submit and finally give a summary and consolidate the main points
• Describe the spatio temporal variation of temperature in Ethiopia • Compare rainfall distribution of Ethiopia by place and time • Discuss factors why Ethiopia experiences different climate from other tropical countries • Differentiate climatic zones of Ethiopia	**2.3 climate of Ethiopia** *(6 periods)* • Distribution of major elements of climate in Ethiopia • Major climate controls in Ethiopia • Major seasons and climatic zones of Ethiopia • Drought in Ethiopia – Drought prone areas	– Provide students with maps of rainfall regions of Ethiopia. – Use the experiences of four travelers to deal with the spatio-temporal variation of temperature and rainfall and then discuss factors and conditions of climatic aspects of Ethiopia. – Person A traveling from Ogaden to top of Bale mountains – Person B traveling from Ogaden to top of Mt. Intoto – Person C traveling from Gambella to Gore – Person D traveling from Semera to the highlands of Shewa& Wollo. – Let students discuss in groups and report about the experience of drought in Ethiopia and help them to identify drought prone areas in Ethiopia. Lead the discussion to deal on drought copying mechanism in agriculture and on why famine is not necessarily related to drought.

Competencies	*Main contents*	*Suggested activities*
• Show appreciation for varied climatic conditions experienced in Ethiopia otherwise found in tropical and temperate zone • Explain the reasons that drought is not necessarily followed by famine • Identify drought prone areas of Ethiopia • State drought coping mechanism in agriculture	– Drought coping mechanisms	
• Review the concept of ecosystem • Discuss how climate affects the distribution of ecosystem • Realize the effect of latitude on the variation of ecosystem • Explain the role of altitude on the distribution of ecosystem • Relate factors that affect the diversity of fauna & flora in the ecosystem • Identify factors that affect soil in the ecosystem	**2.4 Ecosystem** (4 *periods*) – Factors that affect the distribution of ecosystem – Diversity of fauna, flora and the soil of ecosystem	• Present sample ecological areas (Congo basin, Kilimanjaro and Sahara desert) and let students discuss and report on the factors and variation of the characteristics of Fauna, Flora and Soil of each ecosystem

Assessment

Students' performance has to be assessed continuously over the whole unit. The assessment will be made by comparing students' performance with the specified level of competencies. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly. Thus

A student at a minimum requirement level will be able to discuss the concept of universe and identify the position of the earth in the solar system. Explain the origin of the earth and demonstrate the structure of the earth. Describe the geological time scale and major events and realize the major geological events of Ethiopia. Describe the concept of continental drift theory. Distinguish components of the earth's physical environments & discuss the major components of lithosphere. Define rock, describe its characteristics by types, classify rocks based on their formation, and demonstrate major rock distribution in Ethiopia. Define soil, identify formation and types of soils and list the major soil types of Ethiopia. State causes and impacts of soil degradation in Ethiopia and analyse ways of soil conservation in Ethiopia. Realize the criteria used for classifying climate, compare climatic classification of the Greek's and khoppen's. Express causes of climatic change, Explain major consequences of climatic change. Describe and compare the spatio-temporal variation of temperature and rainfall in Ethiopia, discuss the unique climatic experience of Ethiopia compared to other tropical countries. Differentiate climatic zones of Ethiopia, Explain the reasons that drought is not necessary followed by famine, and state drought coping mechanisms in agriculture. Review the concept of ecosystem and realize the effect of latitude and altitude on the variation of ecosystem. Relate factors that affect the diversity of fauna and flora in the ecosystem in the ecosystems.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to evaluate the convergence, divergence and transgress of continents in relation to the continental drift theory. Associate the distribution of major rocks of Ethiopia with its major geological events and state major soil characteristics of Ethiopia and suggest varied ways of soil conservation for each human intervention in urban and rural areas, in agricultural and industrial sectors. Compare and contrast the contribution of natural human factors for the aggravation of climatic change in Ethiopia. Argue for against various possible mechanisms of food self-sufficiency programs.

Students working below a minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfill the higher achievers' competencies also need special support to continue & achieve more.

Unit Three: World Population *(15 periods)*

Unit Out comes: The students will be able to:

- Understand interpret size and trend of population growth of the world
- State the components of population change and compare the characteristics of population structure between developed and developing countries
- Show factors affecting spatial distribution of population and compute population densities
- Recognize and appreciate the process and development of urbanization
- Explain the general characteristics of population of Ethiopia

Competencies	***Main contents***	***Suggested activities***
Students will be able to: • Describe population growth trend of the world to show doubling time • Compare population size of the world on continental bases • Identify three leading populous countries in each continent • Compare the population growth trend between Africa and Europe.	***3. World population*** **3.1 Size and trend of population growth** *(2 periods*)	• Provide students with population size of the world starting from early time and encourage them to describe the doubling time. • Let students compare the population size of the world based on the given data and identify the three leading populous countries of each continent.
• Describe components of population change • Compute natural increase rate of population	**3.2 Components of population change** (3 *periods*)	• Let students discuss components of population change and then compute natural increase of the population of the world.
• Interpret population pyramids of developed and developing countries	**3.3 Population structure** *(2 periods*)	• Demonstrate population pyramid of developing and developed countries, then interpret the data represented by pyramid. Finally discuss factors that affect population distribution. In addition, they discuss causes and types of human migration and compute population density and agricultural density based on the given data.

Competencies	*Main contents*	*Suggested activities*
• Discuss the factors affecting the spatial distribution of world population • Compute crude and agricultural population density • Realize cause and types of human migration	**3.4 Spatial distribution of world population and Population density** (4 *periods*) • Population distribution • Population density – Crude population density – Agricultural population density • Human migration – Causes – Types	• Present world population distribution map to the worlds and motivate students to discuss the factors affecting population distribution of the world. Then provide learners with data of population size so that they can compute crude and agricultural population density of some selected areas. • In relation to this activity help learners to identify and realize causes and types of human migration through discussion in small groups.
• Compare level of urbanization at continental level • State factors affecting urbanization process	• Urbanization	• Let students discuss the process and development of urbanization and then compare level of urbanization at continental levels. In addition, they discuss factors that influence urbanization process.
• Compare present population size of Ethiopia with the past • Describe the spatial distribution of Ethiopia's population • Show the demographic characteristics of Ethiopia's population • Analyze population structure of Ethiopia	**3.5 Population of Ethiopia** *(4 periods*) – Population size distribution and growth rate – Birth and death rate – Measures of fertility and mortality – Population structure	• Arrange a time table showing series of population size of Ethiopia and let students compare the differences and deal with facts of population growth of the country. Similarly, select geographical areas from Ethiopia which show remarkable variations on population distribution and let learners discuss and reason out the possible causes for the variation in population distribution of Ethiopia. • Motivate learners to recall what they learned about birth and death rates and structure of human population. Then facilitate conditions that enable students show demographic characteristics of Ethiopia's population and analyze its structure
• Realize population policy of Ethiopia	• Population policy	• Students discuss size, distribution, demographic characteristics of Ethiopian population in groups and then the teacher summarizes the discussion by relating to the population policy of Ethiopia.

Assessment

Students' performance has to be assessed continuously over the whole unit. The assessment will be made by comparing students' performance with the specified level of competencies. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly. Thus

A student at a minimum requirement level will be able to compare population size of the world on continental bases and identify three leading populous countries in each continent. Describe population growth trend of the world to show doubling time and comport population trend between Africa and Europe. Describe components of population change and compute natural increase rate of population. Interpret population pyramids of developed and developing countries, discuss factors affecting the spatial distribution of population compute crude and agricultural population densities, and. realize causes and types of human migration. Compare level of urbanization at continental level and state factors affecting urbanization process compare present population size of Ethiopia with the past and describe the spatial distribution of populations of Ethiopia. Show and analyze demographics characteristics of Ethiopia's population. Realize population policy of Ethiopia.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to compute doubling time of world population to predict future population of the world and justify why and how population trend of Africa varies from that of Europe. Relate population pyramids with level of development and suggest possible mechanisms for the implementation of Ethiopian population policy in their locality.

Students working below a minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfill the higher achievers' competencies also need special support to continue and achieve more

Unit Four: Economic System and Development *(6 periods)*

Unit Out comes: The students will be able to:

- Recognize types of economic systems
- State the concept of sustainable development and its indicators
- Recognize the role and contribution of economic organization and realize the concept of globalization

Competencies	***Main contents***	***Suggested activities***
Students will be able to: • Discuss the concept of different economic systems • Compare the types of economic system	**4.*Economic system and development*** **4.1 Types of economic system** (2 *periods)* • Traditional • Free market • Command • Mixed	• Assign students to discuss on different economic systems in groups and let them make a comparison between the economic systems and then let the teacher summarize the main points.
• Explain the concept of sustainable economic development • Justify the indicators of economic development.	**4.2 Sustainable economic development** *(2 periods)* • Concept and indication of economic development	• Assist students to explain the concept of sustainable economic development and then let them identify the indicators of development in small groups.
• Identify world's economic organization • Realize the contribution of world economic organization to development • Discuss the concept of globalization • Compare and contrast the advantages and disadvantages of globalization	**4.3 Economic organization of the world** *(2 periods)* – World Bank, IMF,WTO – Globalization	• Let students write a short report on the role of world, economic organizations and discuss their functions and contributions. • Let students debate on the merits and demerits of globalization.

Assessment

Students' performance has to be assessed continuously over the whole unit. The assessment will be made by comparing students' performance with the specified level of competencies. Besides, the teacher has to recognize the level of performance of each student and provide assistance accordingly. Thus

A student at a minimum requirement level will be able to discuss the concept of different economic systems and compare them, explain the concept of sustainable economic development and justify some indicators of economic development. Identify world economic organization and realize their contribution to development. Discuss the concept of globalization and compare and contrast the pros and cons of globalization.

In addition, a student working above the minimum requirement level and considered as higher achiever should be able to distinguish major similarities and differences among varied economic systems. Argue for/against the concept of sustainable economic development in relation to resource utilization and evaluate how world economic organizations contribute to the implementation of sustainable economic development.

Students working below a minimum requirement level will require extra help if they are to catch up with the rest of the class. Students reaching at the minimum requirement level but achieve a little bit higher should be supported so that they attain the higher achiever competencies. Students who fulfill the higher achievers' competencies also need special support to continue and achieve more