REPUBLIC OF RWANDA

MINISTRY OF EDUCATION

NATIONAL CURRICULUM DEVELOPMENT CENTRE (NCDC)

P.O.B: 608 KIGALI

GEOGRAPHY CURRICULUM FOR ADVANCED SECONDARY SCHOOL

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I. INTRODUCTION

Geography is an important and popular subject for all students at advanced level of Education in Rwanda. This programme has therefore has been prepared for students at advanced secondary school level with geography as an option in Rwanda.

This programme covers four major areas:

1. Principles of physical geography, with reference to examples from Great Lakes region of Africa.
2. Practical geography, this includes statistics, Field work, map and photographic interpretation.
3. Human and economic geography focusing on the world problems and development.
4. The geography of Rwanda, specifically looking at physical and social- economic aspects of Rwanda.

This will help students taking geography as a core subject to use simple enquiry scientific skills and principles to investigate geographical and environmental concepts and processes.
Generally, this programme will help the students to demonstrate geographical and environmental knowledge and understanding which will help them make informed decisions about social and environmental issues as well as problems.

II. GENERAL ORIENTATIONS

The knowledge of the environment is the main objective of teaching geography. Thus, by help of field studies and case studies, the teacher will help students to understand problems associated with human and physical aspects in their environment, country and in the world. The students will acquire skills and behaviours facing the problems related to population, environment, economic activities, and settlements.

The structure of this programme:

- **In senior four:** The syllabus mainly covers part of physical and human geography. This includes the knowledge of the Earth, weather, climate, vegetation, population, rural settlement, urbanisation, agriculture, forestry, fishing, mining, power and industrialisation. This will provide a strong background to students and help them draw attention to all the main components of the physical environment as well as the associated interrelationships with human environment.

- **In senior five:** The syllabus covers topics: geomorphology, practical geography (statistics), human and economic geography with case studies in and outside Africa i.e. in America, Europe, and Asia.

- **In senior six**: The syllabus covers the practical geography (map and fieldwork) and geography of Rwanda.

  Each chapter has a specified duration to cover it. This duration will help a teacher to teach within that given time interval.

III. GENERAL OBJECTIVES

The General objectives of teaching geography at this level are to:

1. Enable the student gain greater understanding of the basic geographical concepts, skills and knowledge in physical and human geography.
2. Stimulate the student to put into practice the acquired principles and methods of Geographical study.
3. Help the student understand and appreciate the geographical background to development and contemporary problems and prospects of the world today.
4. Create in the student an awareness of the causes of world problems and their effects to the social economic life of the people.
5. Enable the student perceive more articulately on how the current world problems can be solved.
6. Assist to internalize the problems peculiar to the Great Lakes Regions of Africa and how to remedy them.
7. Help the student gain more concrete understanding of his own home country Rwanda.
8. Help the student strike an analytical correlation between physical environment in Rwanda and man's modification on it.
9. Guide the students to acquire the knowledge, skills and techniques to read and interpret maps and photographs.
10. Familiarize the students with the field work procedures in collecting geographical data and satisfy his own curiosity in studying geography.

IV. GEOGRAPHY SYLLABUS FOR SENIOR FOUR.

A. GENERAL OBJECTIVES FOR SENIOR FOUR.

By the end of senior four, learners should be able to:

1. Explain the basic geographical concepts in physical geography
2. Appreciate the interdependence between the elements of physical, human and economic geography.
3. Compare different modes of development in the world
4. Identify the world development problems in the physical, economic and human environment.
5. Suggest possible solutions to world problems and challenges.

PART ONE: PRINCIPLES OF PHYSICAL GEOGRAPHY

CHAPITER 1: THE EARTH IN THE UNIVERSE
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Locate the solar system planets in the universe - Distinguish between component of the universe and solar system	1. The Universe • Definition of the universe • Components of the universe • Constellations and galaxies. Examples of galaxies e.g. the milk way (light year)	- Ask students the things they see in the sky at night and during day - Help learners to distinguish such elements in the atmosphere.
- Explain solar system , galaxy, and Constellation - Explain the influence of the sun on the Earth	2. The solar system 2.1.Definition 2.2. Component of the solar system ➢ The sun, description and influence on the earth: e.g tides ➢ The planets and satellites - Successive order, principle characteristics and description of every planet. - Earth a). Definition of the Earth b). Peculiar elements of the earth i.e. atmosphere, biosphere, hydrosphere and lithosphere	- Use atlas, photos and diagrams to explain the solar system - use sketches and illustrations to explain the planets and their successive order - guide the students to observe the environment and state influence of sun on the earth - By brain storming ask students to name the elements of the earth

- Explain the revolution period, speed, diameter, density, force of gravity and atmosphere of the moon. - Explain the influence of the moon on the Earth - Mention the elements in the solar system	- The Moon : The natural satellite of the earth The Moon (Revolution Period, The speed of rotation, Average orbit, Diameter, Density, Gravitational Force, Surface and atmosphere of the moon, Influence of the moon upon the earth: e.g eclipses and tides. ➢ Others heavenly bodies: asteroids, comets, meteors and meteorites.	- use photos to explain how the moon is a satellite of the earth - use diagrams, sketches to explain how and stating precisely revolution period, the speed of rotation, average orbit, diameter, density, gravitational force, surface and atmosphere of the moon. - Use the diagrams to explain how the moon affects the earth - With help of diagrams, guide the students to mention things they observe at night and help them to differentiate between comets, meteors, asteroids.

CHAPTER 2: UNDERSTANDING THE EARTH
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Explain the origin and gravity of the earth - Describe the shape, size, diameter of earth	1. Origin of the earth - Theories which explain the origin of the Earth: the Big Bang theory, Biblical /creation theory, etc. 2. The shape and evidences to prove that the earth is spherical, size, diameter, circumference, volume, mass and gravity of the Earth.	- ask students through brain storming the theories that explain the origin of the earth - use the globe and diagrams to explain the size shape and diameter of the earth - Perform a simple experiment by letting freely a piece of chalk to land, to explain gravity of the earth; allow students to explain
- Locate the continents and oceans of the earth	3. Superficial configuration of the Earth - Continents	- By brain storming, ask students to name

	- Oceans 4. Chemical composition	continents and oceans of the world
- Describe the geological time scale - Distinguish between rotation and revolution - explain the effects of rotation and revolution - Identify different time zones	5. Geological time scale 6. Earth's movements - Rotation and its effects plus time zones - Revolution and its effects	- Use text books to explain geological time scale - Use a globe in class to explain the rotation of the earth. - Demonstrate by using a ball to explain the revolution that is, students rotate around the ball as they change positions

CHAPTER 3: WEATHER AND CLIMATE
DURATION: 42 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Describe the atmosphere and main (layers) - Suggest the importance of the atmosphere.	1. The atmosphere 1.1. The structure of the atmosphere (troposphere, stratosphere, mesosphere, thermosphere). 1.2. Description and composition of the atmosphere 1.3. Importance of the atmosphere	- using a diagram explain the layers of the atmosphere - Through brain storming let students name elements of the atmosphere and identify the importance of atmosphere
- Distinguish between weather and climate - Mention the elements of weather - Calculate the temperature values - Explain factors for temperature variation.	2. Elements of the weather and climate 2.1. Temperature - How temperature is measured and represented on diagrams - Factors influencing temperature - Impact of temperature on the environment	- Guide students to observe the atmosphere and list elements of weather - Guide learners to describe the weather during day and night - Visit a weather station and demonstrate how different weather instruments are used.

- Explain the process of water cycle - Distinguish different types of rainfall - Describe the global distribution of precipitation	2.2. Rainfall - Forms of precipitations: rainfall, snow, fog, dew, hail, rime, haze, sleet. - Water cycle: Global water supply system and mechanics of condensation and precipitation). - Types of rainfall: orographic rain fall, convectional rainfall and frontal rainfall. - Factors of rainfall formation. - Global distribution of precipitation and rainfall. - Instruments used to measure rainfall, presenting rainfall distribution on diagrams, measurements and isohyets.	- Using illustrations explain different stages and states of water and ask students what they see in the cycle. - Guide students to observe morning weather, allow students to list what they see and explain forms of precipitation - Use an atlas , or wall maps to explain the distribution of precipitation
- Explain how to measure wind - Distinguish between local and global winds - Explain the characteristics of cyclones , anti-cyclones and depressions	2.3.Wind - Instruments used and units in which it is measured - Local winds: breezes, fohn, sirocco. - Global winds or planetary winds: trade winds, westerlies, monsoons. - Air masses, cyclones (depressions) Anticyclones	- use illustrations and diagrams to show different types of winds.
- Explain how to measure humidity	2.4. Humidity - Instruments used and units - Types of humidity: relative humidity, absolute humidity and saturated humidity. - Factors influencing humidity.	- Using a glass, demonstrate by blowing air in it and ask students what they see - Using illustrations and diagrams explain how humidity is measured.
- Distinguish different types of clouds - Explain the effects of clouds on weather	2.5. Cloud cover - Types of clouds - Effects of clouds on weather - Factors influencing the formation and	- Using photographs and observation, guide students to distinguish different types of clouds

- Explain how to measure sunshine	the shape of clouds. 2.6. Sunshine - Instruments used to measure and units. - Importance of sunshine.	- Discuss the importance of sunshine.
- Describe how to measure atmospheric pressure. - Explain the factor which affects atmospheric pressure. - Locate zones of high and low pressure on the earth's surface	2.7. Atmospheric pressure - Instruments used and units - - Factors influencing atmospheric pressure - Lines joining places of same atmospheric pressure	- Use a balloon to explain low pressure and high pressure and guide learners to discuss the factors influencing atmospheric pressure.
- Explain various factors influencing climate - Describe different climatic types - Locate the climatic zones on world map.	**3. Factors that influence climate** - Latitude, altitude, presence/absence of water bodies, Ocean currents, wind circulation (polar winds, westerlies, trade winds, and monsoon). 4. Climatic changes: - Causes - Effects on physical and human environment 5. Types of climate and their characteristics - Tropical zones. (equatorial, tropical, deserte, monsoon) - Temperate zone (mediterranean, marine, continental, ..) - Cold zones (cold desert, polar climate) - Mountain climate (azonal climate)	- In small groups, guide learners to discuss the factors influencing climate - Guide students to identify climatic types on the world map/ atlas - In small groups guide learners to discuss the characteristics of each climatic type.

CHAPTER 4. VEGETATION
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Identify different types of natural vegetation. - Explain the characteristics of different types of vegetation	1. Classification of natural vegetation 1.1. Forests and their characteristics. a) Tropical zone: - Equatorial rainforests, - Tropical monsoon forests, - Tropical Mountain forests. b) Temperate zone: - Mediterranean forest, - Coniferous, deciduous forests, 1.2. Grasslands and their characteristics. - Tropical zone: savanna humid and savanna dry(steppe) - Temperate zone: steppe, prairies, pampas, downs and velds. 1.3. Desert vegetation and their characteristics: - Cold desert vegetation, Tundra -Hot desert vegetation 1.4. Mountain vegetation and their characteristics. 1.5. Aquatic/ marsh Vegetation and their characteristics: - Swamp vegetation e. g. mangrove vegetation.	- Carryout a guided tour around the school to observe different vegetation types that exist. - Use an atlas; draw the world map on a manila paper showing vegetation distribution - Explain to students world vegetation zones - In small groups, guide learners to discuss the characteristics of different types of vegetation.

- Explain factors which influence vegetation - Locate different vegetation types on the world map - Mention the importance of vegetation	2. Factors influencing vegetation distribution 3. World map showing vegetation distribution 4. Importance of vegetation.	- Guide the students in their small groups to discuss factors influencing vegetation distribution - In small groups, learners should discuss the importance of vegetation.

PART TWO: HUMAN AND ECONOMIC GEOGRAPHY

CHAPTER 1. POPULATION
DURATION: 21 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Explain human diversity and population concepts	**I. INTRODUCTION** - Human diversities (race, Religion, languages and states). - Population concepts: (optimum population, under population, over population, birth rate, death rate, growth rate, fecundity, life expectancy, etc)	- With illustrations, photos, guide learners to differentiate types of human diversity
- Describe world population distribution. - Identify factors for population - distribution - Identify characteristics and effects of densely and sparsely populated areas	**II. World population distribution** 1. World population density, densely populated areas and sparsely populated areas 2. Factors for distribution 3. Characteristics and effects of densely and sparsely populated areas	- Using world population maps, guide students to identify densely and sparsely populated zones - In small groups, learners should identify the factors for population distribution.
- Calculate population growth rate - Explain causes and effects associated	**III. Population growth and Migrations** 1. Population growth - Factors influencing birth rate, death rate and rate of population growth	- In a guided group discussion, learners should identify causes and problems of population growth.

with population growth - Explain control measures of population growth	- Causes of rapid population growth - Effects associated with rapid population growth - Ways of controlling population growth	- Using brain storming, guide students to identify and explain the world population structure - Help learners to debate on the population effects of developed and underdeveloped countries.
- Describe the structure of world population - Explain the population of underdeveloped and developing countries	2. Population structure and composition (age, sex, population pyramid, active population, inactive population, education, standard of living). 3. Under population, overpopulation and related effects • Population effects of under developed countries • Population effects of developed countries (- Ageing population, urbanisation, small work force, rural depopulation)	- Identify case studies from both developed and underdeveloped countries, and help learners to discuss and compare their population effects
- Describe types, causes and effects of migration	4. Migrations - Types of migrations - causes of migration - Effects of migration - Control on movements (migrations) 5. Case studies on population: - Developed countries: Germany, U.K, U.S.A. - Under developed countries: Nigeria, DRC, Bangladesh, Peru, Columbia.	- In a guided group discussion, help learners to identify and explain types, causes and effects of population movements. - The teacher should identify and develop a case study from both the developed and the developing countries and guide students to discuss the state of population in other countries emphasizing on issues like population growth, structure, problems and population policy of respective countries.

CHAPTER 2. RURAL SETTLEMENTS AND URBANISATION
DURATION: 16 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Describe the type and morphology of rural settlements - Explain factors and effects of rural settlements. - Suggest solutions for the problems affecting rural settlement.	I. **Rural settlements.** 1. types of rural settlement 2. Factors influencing rural settlements 3. Effects of rural settlements 4. Solutions to the problems affecting rural settlements	- Using illustrations demonstrate to learner the types of rural settlement patterns and explain rural morphology. - In group discussion, guide students to identify factors influencing rural settlement, effects and solutions to the problems.
- Differentiate between location and urban morphology - Explain the importance and factors influencing the development of urbanization - Explain the consequences of urbanization - Explain the relationship between towns and slums - Discuss the characteristics, causes,	**II. Urbanisation:** 1. Definitions (trading centres, town, Town board, municipality, city, agglomeration, conurbation, mega polis, suburbs, slums) 2. Location and characteristics of urban centres (example of towns) 3. functions of urban centres 4. Factors influencing urban development 5. Consequences of urbanisation - General problems of urban centres and solutions 6. Development of slums - Relationship between towns and slums • Characteristics of slums • Causes of slums development • Advantages and disadvantages of slums (advantages: cheap accommodation, labour,	- Using illustrations and photos, describe the location and morphology of urban centers. - In group discussions, guide learners to explain different functions of urban areas, factors influencing urban development and consequences of urbanization. - In group discussion, guide to learners identify advantages, disadvantages/ problems associated with slums and suggest solutions. - Organize a field trip for students to observe and learn slum areas.

advantages and disadvantages of slums - Identify problems and suggest solutions of urbanization	commodities) • Problems of slums • Solutions to the problems of slums **7. Case studies**: - Developed countries: London, Paris, New York, and Tokyo. - Developing countries: Brasilia, Johannesburg, Beijing, Nairobi.	- Identify a case study in developed and developing countries and help learners to compare urbanisation and challenges in either category.

CHAPTER 3. AGRICULTURE
DURATION: 28 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Distinguish between subsistence crop cultivation and commercial crop cultivation - Identify factors that influence agricultural practices - Mention the characteristics, advantages, disadvantages of each agricultural type. - Identify the agricultural problems that hinder development and suggest solutions	**I. CROP CULTIVATION** 1. Type of crop cultivation (characteristics, factors favouring the type of crop cultivation, advantages, problems and solutions) • Subsistence cultivation (bush fallowing, shifting cultivation). • Small holder farming • Cooperative farming • Plantation farming • Commune farming • Collectivisation - commune farming in China - cooperative farming in Russia • Market gardening and horticulture 2. Factors influencing agricultural activities 3. Problems affecting agriculture in	- In groups, guide learners to differentiate between forms of modern crop farming and subsistence crop growing and determine factors that influence agricultural activities - With aid of photos, guide learners to distinguish between agricultural forms and give their characteristics. - By brainstorming, help learners to explain the advantages and disadvantages of each form of agriculture. - By brainstorming, guide students to

	developing countries **4. Case studies**: Comparison of crop farming in Rwanda with China, Egypt e.g. Irrigation farming	identify the problems of crop farming and suggest their solutions - Identify a case study in different countries and help learners to compare crop farming and its challenges in either category
- Compare intensive and extensive livestock farming - Explain the types of livestock farming in the world - Mention the characteristics and advantages of each type of farming - Identify the factors that influence livestock farming - Identify problems affecting and suggest solutions.	**II. LIVESTOCK FARMING** 1. Type of livestock farming (characteristics, advantages, problems and solutions) - Pastoralism : Nomadism and Free Range - transhumance - Ranching: beef farming - Dairy farming - Zero-grazing - Tethering - Aquaculture - Poultry farming - Apiculture (beekeeping) 2. Factors influencing Livestock farming 3. Problems of Livestock farming and solutions 4. Case studies: Comparison of livestock farming in Rwanda with Botswana, Kenya, Argentina, Holland	- With help of photos, illustrations, guide learners to distinguish livestock extensive farming from intensive livestock farming - In group discussion, guide students to distinguish between types of livestock farming in the world and identify characteristics of each type. - By brainstorming, guide students to identify factors that influence livestock farming, advantages, problems and suggest their solutions. - Identify a case study in developed and developing countries and help learners to compare Livestock farming and its challenges in either category.

CHAPTER 4. FORESTRY
DURATION: 12 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Differentiate types of forests in the world - Mention the importance of forestry - Explain the methods used in exploitation of forests. - Explain factors for development of lumbering and problems affecting forest exploitation - Discuss ways of forest conservation and management.	1. Major types of forests of the world and their characteristics 2. Importance of forestry 3. Lumbering/ forest exploitation • Methods of forest exploitation • Factors affecting forest exploitation • Problems of forest exploitation in • developing countries (Amazon forest) 4. Forest conservation and management 5. Case studies: Comparison of forest exploitation in Rwanda with Sweden, British, Columbia, Gabon.	- Using images, photos and illustrations, distinguish the major types of forest and give their characteristics and importance of forestry to man - Using photos, illustrations and observation, explain to learners methods used in forest exploitation and factors influencing forest exploitation - By brainstorming, help students to give problems affecting forest exploitation. - In discussion groups, guide students to suggest ways and means of conservation and management of forests. - Identify a case study in developed and developing country and help learners to compare forest exploitation, conservation and management challenges in either category.

CHAPTER 5. FISHING
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Locate major fishing zones of the world.	1. Location of major marine and inland fishing grounds of the world. a) Major marine fishing grounds	- Using world economic map, guide students to locate major world fishing zone

- Describe methods used in fishing - Identify types of fish - Explain problems affecting marine and inland fishing. - Explain methods of conserving and preserving fish.	- Southern pacific - North pacific - North Atlantic - South Atlantic - African coast b) Inland fishing grounds: Lakes, rivers and swamps 2. Methods used in Fishing 3. Types of fishing 4. Factors influencing development of fishing 5. Problems affecting marine fisheries and Solutions 6. Problems of inland fisheries and solutions 7. Fish conservation and preservation 8. Case studies: Comparison of fishing in Rwanda with Norwegian fisheries, Peru, Japan, Morocco, South Africa and Uganda	- Using illustrations demonstrate and distinguish methods of fishing. - By brainstorming, guide students to identify types of fish, factors favoring development of fishing and problems facing marine and in-land fishing. - Identify a case study in developed and developing countries and help learners to compare fishing, fish conservation and preservation challenges in either category.

CHAPTER 6. MINING
DURATION: 14 PERIODS

OBJECTIVES	**CONTENT**	**TEACHING/LEARNING ACTIVITIES**
At the end of the topic, students should be able to; - Identify major minerals and mining regions. - Describe the methods used in mining - Explain factors that favour mining	1. Classification of minerals 2. Major world minerals - Coal (USA, Russia, China, UK) - Petroleum in Middle East, Caribbean countries, Africa oil producing, countries e.g. Nigeria. - Iron ore: USA, Russia, Liberia etc. - Copper, Zambia, DRC etc.) 3. Methods of mining	• Using maps students should locate major minerals and mining zones

- Identify problems affecting mining and their solutions - Identify effects of mining	4. Factors affecting exploitation of mineral resource 5. Effects of mining 6. Problems affecting mining and solutions	- Guide students to discuss the methods of mining , effects and problems of mineral exploitation

CHAPTER 7. POWER / ENERGY
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Differentiate between renewable and non- renewable resources. - Identify sources of power - Explain factors that favour power production - describe methods used in power production - Explain the importance of power - Identify problems associated with power production and solutions	1. Types of Energy - Renewable Energy - Non renewable Energy 2. Sources of energy : - Water (hydro electricity power) - Oil and gas - Forests (wood/charcoal) - Coal - Sun (solar energy) - Waste products (biogas) - Wind, tidal - Uranium (nuclear energy) 3. Factors favouring power production 4. Methods used in power production e.g.: Multi- Purpose dam Projects. 5. Major power producing areas 6. Importance of power in development. 7. Problems and solutions	- Using familiar examples of energy, guide students to distinguish between renewable and non renewable resources. - Using maps students should be able to identify and locate major sources of energy like H.E.P, petroleum, coal, Natural gas etc. - In small groups guide students to discuss the factors that favour power production and the methods used. - In small groups, guide students to identify importance of power, problems and suggest solutions.

CHAPTER 8. INDUSTRIALISATION.
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITIES
At the end of the topic, students should be able to; - Define and classify industries - Explain factors for location of industries - Identify factors influencing development of industries - Locate major world industrial regions	1. Definition and classification of factories and industries 2. Factors for the location of industries 3. Factors influencing industrial development 4. Major world industrial regions Case studies: a) Developed countries: - Western Europe - Industrial development in Japan - Industrial development in USA - Industrial development in Russia b) Developing countries: - Industrial development in Egypt - Industrial development in South Africa - Industrial development in China - Industrial Development in South Korea	- Using different industrial products, guide students to classify industries and explain factors for their location - Guide students to discuss factors influencing industrial development and name major industrial zones.
- Explain the importance of industrial development - Identify problems affecting industrial Development. - Identify problems resulting from industrial development and suggest solutions	5. Importance of industrial development. 6. Problems affecting industrial development in developing countries. 7. Problems resulting from industrial development and possible solutions.	- In small groups, guide learners to discuss the importance and the problems of industrial development, then suggest solutions. - Through brain storming guide learners to explain problems affecting industrial development.

V. GEOGRAPHY SYLLABUS FOR SENIOR FIVE.

GENERAL OBJECTIVES FOR SENIOR FIVE.

By the end of form five, learner should be able to;

1. Explain the origin of the continents and landform formation processes.
2. Use statistical diagrams and graphs to interpret geographical information.
3. Compare different modes of development in the world
4. Identify the world development problems in the physical, economic and human environment.
5. Suggest possible solutions to world problems and challenges.

PART ONE: GENERAL PHYSICAL GEOGRAPHY - GEOMORPHOLOGY

CHAPTER 1. ORIGIN AND DISTRIBUTION OF CONTINENTS
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Describe the internal structure of the earth - Explain the theories for origin and distribution of continents - Explain continental drift theory - Illustrate evidences of continental drift - Explain the theory of plate tectonism	1. The internal structure of the earth 2. Theories of the origin and distribution of continents 2.1. Theory of continental drift • Evidences of continental drift 2.2.Theory of Plate tectonism	- Demonstrate by use of avocado, cut into two equal halves to explain the internal structure of the earth and its parts. - Using a wall map, guide students to name the Continents which make up the world. - Cut a paper into pieces that has on it a map, distribute the pieces to small groups and guide students to join them again and explain the Theory of continental drift. - Use illustration s and diagrams to explain theories continental drift.

- Describe the effects of plate tectonism on the land scape and drainage	2.3. Effects of plate tectonism	- using ply wood demonstrate on water how plates slide - using illustrations and diagrams, explain the effects of plate tectonism

CHAPTER 2. MATERIALS OF THE EARTH CRUST
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Differentiate rock types - Explain how rocks are formed - Mention the economic importance of Rocks - Differentiate between minerals, mineral ore and rocks - Identify the physical and chemical properties of minerals - Distinguish between mineral types	1. Rocks - Rock types and their characteristics - Rock composition - Economic importance of rocks 2. Minerals - Physical and chemical properties of minerals - Types of minerals	- Guide students to go outside and observe, feel, and distinguish different types of rocks. - Using rock samples and illustrations, help students to distinguish different types of rocks and minerals - In group discussion, help learners to give the importance of rocks and minerals

CHAPTER 3. SOILS
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Explain factors for soil formation - Identify the constituents of soil	1. Introduction/definition of soil 2. Soil formation and evolution 3. Soil constituents 4. Morphological properties of soil	- By direct observation, help students to explain the process of soil formation and evolution of soils

- Identify the morphological properties of soil. - Explain the types, the causes and effects of soil erosion. - Explain the importance of soil.	(structure, texture, colour, porosity, pH, soil profile, soil catena) 5. Types of soil and their classification 6. Soil erosion - types - causes - effects 7. Soil conservation measures 8. World map showing soils 9. Economic importance of soil.	- By observation from the field and use of illustrations, help learners to identify the process, types of soil erosion, causes and effect of soil erosion. - By brain storming, guide students to give the importance of soils and methods of soil conservation.

CHAPTER 4. LANDFORM FORMATION PROCESSES
DURATION: 101 PERIODS

OBJECTIVES	**CONTENT**	**TEACHING/LEARNING ACTIVITY**
At the end of the topic, students should be able to; - Explain the causes of warping - Suggest the effects of warping - Locate major warped areas of the world	**I. Landform associated with internal processes** 1. Warping - features formed by warping - influence of warping on drainage - impact of warping to landscape - Distribution of landform associated with warping	- Using illustrations prepared in advance (sketches, photos, maps), help learners to describe and explain different landform formation processes. (warping, folding, faulting). - In group discussion, help the learners to give the influence and impact of warping on drainage and on man/human activities. - Demonstrate to students using a paper and a ruler to explain how folding and
- Explain the causes of folding and types of folds - Explain the impact of folding on	2. Folding - causes of folding - types of folds - influence of folding on drainage	

drainage and man - Locate major folded areas and features in the world	- Features resulting from folding - Impact of folding to landscape - Distribution of landform associated with folding.	faulting take place. When a paper is compressed it folds, but a ruler breaks. - Using illustrations /diagrams, photos, slides and help students to distinguish different types of folds and faults.
- Explain the causes of faulting and types of Faults - Mention the impact of faulting on the landscape - Discuss the impact of faulting on drainage and man.	3. Faulting - Causes of faulting - Types of faults - influence of faulting on land scape - influence of faulting on drainage - impact of faulting to man - Distribution of landform associated with faulting	- Using the world physical map and giving examples, help students to locate areas affected by warping, faulting , folding etc
- Explain the intrusive and extrusive volcanic features - Mention the impact of Vulcanicity on human activities - Locate major volcanic features and areas of the world	4. Vulcanicity and volcanicity - Definition - Materials of vulcanism (magma, lava, gases) - Intrusive volcanic features - Extrusive volcanic features - Types of volcanoes and their characteristics - Impact of vulcanicity to man - World distribution of volcanoes.	- On a world map identify and locate major areas affected by vulcanism - Using illustrations like photos, guide a student to explain the impact of vulcanism to man. - Using illustrations, films, help the students to distinguish intrusive and extrusive volcanic features
- Explain the causes of earthquake and associated consequences - Locate major areas affected by Earthquake in the world	5. Earthquakes - Definition of concepts (focus, epicenter, shadow, magnitude, intensity, tremors) - Causes and consequences - World distribution of earthquakes - Measurement of earthquakes - Precaution measures	- Use illustrations and photos to explain the causes and consequences of the Earth quake - On a world map, locate major world areas that are prone to Earthquake
	II. Landforms associated with external	

- Describe weathering processes - Identify factors influencing weathering	**processes** **Weathering, erosion, Transportation and deposition.** 1. Types of weathering and their processes 2. Factors influencing weathering - Climate, - Nature of rock, - Mans activities - Vegetation, Relief, Animals - Duration(time)	- Using rock samples and relevant examples illustrate mechanical, chemical and biological weathering and identify different modes of rock decomposition. - By brain storming, guide students to explain factors influencing weathering.
- Explain conditions for formation of Karst Landforms - Describe weathering in hot and humid areas - Explain weathering in desert areas and semi- arid areas. - Identify types of glaciers	3. Weathering erosion, and deposition in limestone regions and associated landforms (karsts landforms) - Conditions for formation of karst land forms - Importance of karst land forms to man 4. Weathering erosion, and deposition in different climatic regions. a) Humid tropical regions and resultant landforms b) Arid (desert and semi desert areas) and resultant landforms. c) Cold regions (glaciated areas) and resultant landforms. - ice formation - Types of glaciers - Types of glacial flow - Factors for the formation of glaciers	- In small groups, guide students to identify agents of weathering in each climatic zone. - Using illustrations and sketches help students to identify landforms in different climatic zones.

- Describe glacial land forms - Mention the impact of glaciation	- Factors that influence the movement of glaciers - Resultant (landforms) features - Impact of glaciation	
- Explain types of mass wasting	5. Movement of debris or transport processes along the slope(mass wasting) - Land slide - Rock fall - Soil creep - Mud flow - Solifluction	- Use diagrams/ illustrations, photos, and observation of the Land scape to explain types of mass wasting
- Distinguish between erosion and deposition features on the coast. - Identify the factors influencing formation of coastal landforms - Distinguish between emerged and submerged coasts.	**III. Coastal landforms** 1. Action of waves - Types of waves - Causes of waves 2. Factors influencing formation of coastal landforms 3. Landforms produced by wave action - Features produced by wave erosion - Features produced by wave deposition 4. Types of the coasts • Submerged coast - Rias, Fjords, estuary, delta • Emerged coast - cliffs - beaches	- With illustrations and demonstrations, explain causes of waves - Using sketches and illustrations help student to identify erosion and deposition features of waves.
- Describe types of coral reefs	5. Coral reefs - Nature of coral coasts	

- Explain the conditions influencing the formation of polyps - Explain the causes of eustatic and isostatic changes - Identify the economic importance of coastal landforms.	- Types of coral reefs - Conditions necessary for growth of coral polyps 6. Isostatic and Eustatic change on the nature of the coasts Causes: - Climatic change - Earth movements 7. Economic importance of coastal Landforms and features.	- Using photos guide students to distinguish types of coral reefs
- Explain landforms associated with human activities.	**IV. Human landscape / man made Land forms and mode of formation** - open cast mining results into artificial terraces, depressions, cliffs, caves, hills etc - River damming results into dam walls, water falls, lakes - Dredging and development of Ports, Roads, railway construction lead to plains - Irrigation causes creation of canals diversion of channels.	- Using photos, diagrams and illustrations help students to identify landforms associated with man's activities.
	V. Landforms made by rivers and surface runoff a) River system	- Using illustrations and sketches help

	- River discharge, Channel, energy and profile. - Functions of a river - River profile and its characteristic • Youthful stage / upper course • Mature stage / middle course • Old stage / lower course - Formation of landforms in the youthful, mature and old stage e.g.: deltas, estuaries, meanders, antecedent drainage, superimposed Drainage. - River rejuvenation causes and resultant landforms e.g. : terraces - River capture and its effects b) Impact of riverine landforms to man	students to describe river profile and associated landforms. - Using sketches help students to explain river capture. - In small groups, guide learners to discuss the importance of riverine landforms to man.

CHAPTER 5. DRAINAGE
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Differentiate between types of rivers - Identify the types of drainage patterns - Explain the importance of rivers to man	1. Rivers - Characteristics of Rivers - The drainage patterns - Importance of rivers to man	- Using illustrations, sketches and maps to explain the characteristics of rivers. - Using sketches help students to distinguish drainage patterns

- Distinguish between types of lakes - Explain the mode of formation and importance of lakes	2. Lakes - Types of lakes - Mode of formation - Importance of lakes	- Use illustrations, diagrams, help students to distinguish types of lakes and their mode of formation. - By braining storming guide students to explain the importance of lakes
- Locate seas and oceans - Describe characteristics of ocean water. - Describe marine relief features - Explain the causes and characteristics of ocean currents - Explain the effects of ocean currents on the climate of adjacent lands. - Explain the causes and economic importance of tides.	3. Seas and oceans a) Distribution of seas and Oceans b). Composition of the oceans - salinity, Temperature, density , - biological and mineral resources c) The relief of ocean floors d) Movements of ocean water o Ocean currents - Definition and examples - Causes of ocean currents - Characteristics of ocean currents - Effects of ocean currents on the climate of adjacent lands. o Tides - Definition - Causes of tides - Importance of tides	- Use the world physical to locate major seas and oceans - In group discussion, guide the students to give the major characteristics of seas and oceans. - Using sketches, guide students to describe marine relief features - In group discussion, guide students to identify causes, characteristics and effects of ocean currents on climate.

PART TWO: PRACTICAL GEOGRAPHY

CHAPTER 6. STATISTICS IN GEOGRAPHY
DURATION: 21 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Explain the importance of statistics in geography. - Interpret statistical data and construct graphs and diagrams	**Introduction to statistics in Geography** - Definition of statistics - Importance of statistical geography a). Statistical graphs - Line and curve graphs - simple - group - compound - divergence - bar graphs - simple - group - compound - divergence - age and sex graphs - dispersion graphs - circular graphs	- In small groups, guide students to discuss the importance of statistics. - Using diagrams and illustrations, help learners to interpret data and draw graphs
- Draw and interpret statistical maps	b). Statistical charts and diagrams - Divided circles (pie charts): simple, proportional - Divided rectangles: simple, compound - Repeated symbols: Proportional circles, proportional	- Use statistical data to illustrate different statistical charts, maps, and diagrams.

	squares, proportional cubes, proportional spheres - Wind rose: simple, compound - Statistical maps: dot maps, isoline, Shading maps (choropleth), Flow maps	

PART THREE: HUMAN AND ECONOMIC GEOGRAPHY

CHAPTER 1. TRANSPORT AND COMMUNICATION

DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Explain the importance of ports. - Identify different types of transport - Explain advantages and disadvantages of each means of transport - Explain problems affecting transport	1. TRANSPORT a). The growth of seaports. - New York - Mombassa - Tokoradi b). Types of transport: headpotrage, road, railway, pipeline, water, underground and air c). Advantages and disadvantages of each type of transport d). Factors influencing the types of transport e). Problems affecting transport f). Case studies - Trans- African Highway - Tanzam railway - Euro tunnel - Trans- Siberian railway - Rotterdam (Euro port) - St. Lawrence sea way - Paris Airport	- Guide students to discuss the importance of port through brain storming - Using the map of the world , identify different modes of transport - In groups help students to discuss the advantages and disadvantages of transport and factors influencing transport - A teacher should guide students in research, discussion and presentation in class especially about the importance and problems faced by these cases studies.

- Explain the importance, problems and solutions affecting communication	2. COMMUNICATION - Types and forms of communication: satellites, television, radio, telephone, Internet, etc - Problems affecting communication and solutions	- Using different communication equipments i.e. telephone, newspapers, Radio, etc, - Guide students to identify different types of communication. - In small groups, guide learners to discuss the problems affecting communication and solutions.

CHAPTER 2. TRADE AND COMMERCE.
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Differentiate between imports and exports. - Identify factors affecting trade - Identify major financial centres of the world - Explain the importance of different types of Economic integration. - Identify problems affecting international trade and solutions.	1. Major export and imports of the developing and developed countries 2. Factors affecting trade 3. The flow of merchandise 4. Major financial centers of the world (I.M.F, world Bank etc.) 5. Importance of Economic integration (customs union and common market): ECOWAS, EEC, C.E.I, COMESA, E.A.C, C.E.E.A.C, etc. 6. Problems affecting international trade and solutions	- Using various manufactured products, guide learners to identify imports and exports. - Through brain storming, guide learners to explain factors affecting trade and name major financial centers. - By question and answer approach, help learners to give and explain the importance of different types of Economic Integrations. - In small groups, guide learners to discuss problems affecting international trade and solutions.

CHAPTER 3. WORLD MULTI PURPOSE RIVER PROJECTS
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to;	1. Definition	- Using the world map, help learners to locate

- Locate principle multi- purpose river dam projects - Identify the importance of multipurpose schemes - Identify problems and solutions associated with these projects.	2. Importance of multi purpose river project 3. Problems affecting multipurpose river projects and solutions 4. Case studies: - The Tennessee Valley Authority - Akosombo dam (Volta) Ghana - Orange River scheme- south Africa) - Aswan high dam Egypt - Hwang-ho river project- China	principle multi- purpose river projects, their importance, problems and suggest solutions.

CHAPTER 4. CONSERVATION OF NATURAL RESOURCES AND TOURISM
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Explain why and how man should conserve the environment. - Identify problems encountered in conserving resources.	1. Conservation of natural resources a). Reasons for conservation of; - Wetlands - Forests - Wildlife - Water b). Methods of conservation c). Problems encountered in conserving natural resources	- By brain storming, drawing examples from various parts of the world, guide learners to explain why and how environment is conserved. - In small groups, guide learners to explain problems why and how environment is conserved.
- Define tourism and eco-tourism	2. Tourism: a). Definition: tourism, eco-tourism b). Tourist attractions and their location	- In small groups, guide learners to discuss the

- Identify and locate tourist - attractions - describe the importance of tourism - explain problems affecting tourism and suggest solutions	c). Importance of tourism d). Problems affecting tourism and solutions e). Case studies: - East Africa - USA: Tourism in Florida, California. - Switzerland	the importance of tourism, the problems affecting tourism and suggest solutions A teacher should guide students in research, discussion and presentation in class especially about different features of tourist attraction and explain the importance of tourism in each country.

CHAPTER 5. MAN AND HIS ENVIRONMENT
DURATION: 18 PERIODS

OBJECTIVES	CONTENT	TEACHING/LEARNING ACTIVITY
At the end of the topic, students should be able to; - Identify components of the environment - Describe factors responsible for environmental degradation and methods for conservation.	1. Environment • definition of environment • Components of environment - Abiotic elements of the environment e.g. weather, climate, rock - biotic elements of the environment e.g. man, flora and fauna • Factors responsible for environmental degradation and desertification • Consequences of Environmental degradation • Methods of environmental conservation	- Using the features around the school, guide learners to identify components of environment.
- Identify and explain the types of	2. Pollution • Definition • types of pollution	- In small group, guide learners to discuss factors responsible for environmental degradation and methods of environmental

pollution - Explain the causes, effects and solutions.	• causes and effects of pollution • Solutions	conservation - By brainstorming, ask students to define pollution, name types of pollution, causes, effects and solutions.
- Identify different natural catastrophes and non natural catastrophes - Explain the causes, effects of natural catastrophes and non natural catastrophes and suggest solutions.	3. Catastrophes a) Natural catastrophes - types: Earthquakes, drought, floods, locusts, diseases (AIDS, tuberculosis, cholera, malaria…). - causes - effects - solutions b) Non natural catastrophes: - types: wars, famine - causes - effects - solutions	- Use photos, illustrations and drawing examples from various parts of the world and help learners to identify different types of catastrophes. - In small groups, help learners to explain the causes, effects and suggest solutions to catastrophes.

VI. GEOGRAPHY SYLLABUS FOR SENIOR SIX

A. GENERAL OBJECTIVES FOR SENIOR SIX

By the end of form six, learners should be able to,

1. Familiarize with the field work procedures in collecting geographical data and satisfy his own curiosity in studying Geography.
2. Use statistical diagrams, photos and maps to interpret geographical information.
3. Acquire an understanding of the major challenges of Rwanda especially HIV/AIDS, overpopulation and environment.
4. Identify different development problems associated with the physical, human and economic environment of Rwanda.
5. Suggest the solutions to the problems associated with the physical, human and economic environment of Rwanda.

PRACTICAL GEOGRAPHY AND GEOGRAPHY OF RWANDA

PART ONE: PRACTICAL GEOGRAPHY

CHAPTER1. FIELD WORK
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Identify the importance of field work - Explain the various methods used to collect data, the advantages and disadvantages of those methods	1. Definition 2. Advantages and disadvantages of field work 3. Field work methods - observation, Questionnaire, - interview, recording, sampling, - measuring etc - Advantages and disadvantages of each method 4. Field work procedure	- Take learners in the field and ask them to suggest advantages and disadvantages of studying Geography from outside the class. - Ask students to suggest advantages and disadvantages of different methods used to collect information from the field.

	- Preparation before field work - Data collection (field tour) - Follow up 5. Fieldwork presentation - Organization and write up / dissemination of information 6. Fieldwork Case studies - School area: e.g. Measure the distance around the school environment showing the direction and locating major features. - An urban area: urban patterns, analyze how land is utilised in urban areas, population characteristics and mobility/circulation. - Settlement in a village or sector :Identify major soil types, settlement characteristics, type of communication and transport, major relief features, identify the relationship between those elements - Land use in a valley/ a hill - school farm - A dairy farm - A plantation - A market - An industry - Fishing at a fishing village: - Land form in an area: - A section of a river valley	- In small groups, guide learners on how to present the fieldwork findings (data)

CHAPTER 2: REPRESENTATION OF THE EARTH
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Explain different ways of representing the Earth	1. Latitudes and Longitudes 2. Ways of representing the Earth a) the globe b) the maps - definition (small scale map, medium scale map, large scale map and a plan) - Types of maps • topographic maps • thematic maps Examples of maps: world map, globe maps, sheet maps, regional maps, marine maps etc.	- Using the globe, guide learners to identify latitudes and longitudes - Using different maps, help students to differentiate them.
- Identify different types of maps and projections - Explain types of projections	3. Cartographic projections - definition - Main types of projections and their characteristics : Azimuthal, conical and cylindrical	- Using different maps, guide learner to distinguish types of projections.

CHAPTER 3 . MAP WORK AND PHOTOGRAGHIC INTERPRETATION
DURATION: 28 PERIODS

OBJECTIVES	CONTENT	LEARNING/ TEACHING ACTIVITY
By the end of this topic students should be able to; - Give elements of a good map.	1. Further understanding of ordinary Survey maps (O.S.M) a. Elements of a good map e.g. key, Title, scale, compass	- Using a map, help learners to identify elements of a good map

- Calculate distance and area on maps - Locate features on maps using grid reference.	b. Measuring Distance and areas on the Maps c. The use of grid references, direction and bearing on maps d. Representation of relief on the map	- Using Ordinary survey maps guide learners to calculate distance and area on the map
- Interpret physical and human aspects on maps. - Draw cross-sections, reduce and enlarge maps - Explain the importance of maps	e. Interpretation of physical aspects from maps e.g. geology, slope, drainage, soils, etc. f. Interpretation of human aspects from maps e.g. agricultural development, mining, industry, settlement etc… g. Drawing cross sections, enlargement and reduction, sketches, Physiographic regions h. Interrelationship on maps: Relief, drainage, settlement… i. Importance of maps	- Using ordinary survey map, help learners to interpret human and physical aspects on maps. - Using topographic maps, guide learners to construct cross- sections, reduce and enlarge maps - In groups, students should discuss the importance of maps
- Identify different types of photographs and the parts of the photograph.	2. Photographic interpretation a) Introduction b) Types of photographs: - Ground photographs : (ground close up, ground oblique) - Aerial photographs : (low oblique, high oblique and vertical aerial photograph) - Parts of a photograph: (foreground, middle ground and background; right ground, middle ground and left ground)	- Using photographs, help students to identify different types of photographs and parts of the photographs

- Explain various aspects on photographs and draw sketch diagrams from photographs. - Interpret physical and human aspects on photographs. - Draw sketches of photographs. - Explain the importance of photographs	c) Physical geography on photographs e.g. geology, soils, drainage, vegetation, slope. d) Human Geography on photographs e.g. settlement, economic activities e) Drawing sketches of photographs (enlargement and reduction) f) Importance of photographs	- Using photographs and illustrations, guide learners to explain geographical aspects on photographs and drawing sketch diagrams. - By the help of photographs, guide learners to draw sketch diagrams - In groups, students should discuss the importance of photographs

PART TWO: GEOGRAPHY OF RWANDA

CHAPTER 1. GENERAL PRESENTATION OF RWANDA

DURATION: 7 PERIODS

OBJECTIVES	CONTENT	LEARNING/ TEACHING ACTIVITIES
By the end of this topic students should be able to; - Locate Rwanda in Africa and in the world. - Identify and explain size of Rwanda, standard of living and administrative divisions. - Compare the population of Rwanda with that of the neighboring countries.	1. Location 2. Size 3. Population (comparison with neighboring countries) 4. Administrative divisions 5. Standards of living.	- Using a map of Africa, guide students to find the location and situation of Rwanda - Using the map Rwanda , guide learners to identify administrative divisions

CHAPTER 2. GENERAL PHYSICAL GEOGRAPHY OF RWANDADURATION: 21 PERIODS

Duration: 21 Periods

- Describe the rocks of Rwanda.	1. Geology - Types of rocks	- Using samples of rocks help learners to identify different types of rocks and their characteristics.
- Describe major relief regions of Rwanda and their mode of formation	2. Relief - Relief regions - Geomorphologic processes (endogenic and exogenic processes)	- Using physical map of Rwanda, guide learners to identify relief, soils, climatic regions and vegetation zones.
- Describe the climatic regions of Rwanda and factors influencing climate of Rwanda - identify major vegetation types and factors influencing their formation - Describe the characteristics of types of soil - Explain the drainage system of Rwanda and the mode of formation of lakes	3. Climate - Climatic regions - Factors influencing climate change 4. Vegetation - Types of vegetation (vegetation zones) - Factors influencing the types of vegetation 5. Soils - Types of soils and where they are found 6. Drainage - Characteristics of drainage system - Major rivers, swamps and lakes - Mode of formation of lakes	- by brainstorming, ask students to explain factors influencing vegetation - Using soil samples help students to identify different types of soil. - Using the physical map of Rwanda, guide learners to identify different drainage systems and their characteristics.

CHAPTER 3. HUMAN GEOGRAPHY OF RWANDA

I. POPULATION
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Describe population distribution of Rwanda - Explain population structure of Rwanda - Explain factors influencing population distribution and population growth - Determine the causes and effects of population growth and suggest solutions.	1. Population distribution and density - Factors influencing population distribution 2. Population structure 3. Population growth - Factors influencing population growth - Consequences of population growth - Solutions for rapid population growth	- Using the population map of Rwanda ask learners to indicate densely and sparsely populated areas and suggest factors for population distribution. - In small groups, ask learners to discuss factors responsible for population growth, associated problems and suggest solutions.
- Identify major types of migration - Explain the causes and consequences	4. Migrations - Types of migration - Causes of migration - Consequences of migration 5. Population and resources (optimum, under, over population)	- Using examples help students to discover the types, causes and consequences of migration.

II. RURAL SETTLEMENTS AND URBANISATION
DURATION: 14 PERIODS

	CONTENT	**TEACHING/LEARNING ACTIVITIES**
By the end of this topic students should be able to; - Identify the types of rural settlements and their characteristics. - Determine factors influencing rural settlement - Explain advantages and disadvantages of rural settlements - Explain problems affecting rural settlement and propose solutions	1. RURAL SETTLEMENTS a) types of rural settlements - Characteristics - factors influencing rural settlements - Advantages and disadvantages b) Government policy towards rural settlement - settlements schemes (imidugudu) c) Problems affecting rural settlements	- Have a field tour to a near by village, help learners to discover types, characteristics, advantages and disadvantages of rural settlements. - In small groups, guide learners to explain government policy towards rural settlement. - Prepare for a field study to any "Mudugudu" and help learners to make comparisons with others forms of settlement in their villages
- Name and determine the characteristics of urban centers - Explain factors for urbanization - Identify the problems associated with urban areas of Rwanda and their solutions	2. Urban settlement (urbanization) a) Characteristics of urban centres a) Factors for Urbanization b) Major urban centres eg : Kigali, Huye, Rubavu, Musanze, etc. (location, population, functions) c) General problems of urban centres and solutions e.g.: - development of slums.	- Have a field study tour to a nearby town, help students to identify characteristics of urban centers, name urban centers and factors for Urbanization. - By brainstorming, ask students to explain problems of urban centers and suggest solutions. - Prepare for a field study to different cities and help learners to make comparisons between those cities.

CHAPTER 4. ECONOMIC GEOGRAPHY OF RWANDA

I. AGRICULTURE AND LIVESTOCK FARMING
DURATION: 28 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Identify the major subsistence and plantation crops in Rwanda - Determine conditions for growth of the crops - Distinguish between improved subsistence agriculture and modern agriculture. - Explain advantages and disadvantages of subsistence farming.	1. Crop cultivation a). Subsistence cultivation : - Examples of crops, - Conditions necessary for crop growth - Advantages and disadvantages of improved subsistence crop cultivation	- Have a field study tour, help students to find out different agricultural activities and explain their characteristics, problems affecting the plantation and their contributions.
- Suggest factors or conditions affecting plantation farming.	b). Plantation farming (major plantations , factors or conditions affecting plantations, characteristics, importance, problems and solutions). • Case study - Tea plantation - Coffee plantation - Sugar cane plantation	- In small groups, guide learners to explain steps taken to modernize agriculture. - Using field trips, help learners to identify the advantages and disadvantages of each plantation. - In small groups, ask students to make research by using Internet, different documents on plantation farming and make a class presentation on advantages and disadvantages of each plantation
- Discuss methods for modernization of agriculture.	c). Agriculture development in Rwanda (Agriculture modernization) d). Problems limiting agriculture production in Rwanda.	- Through brainstorming, ask learners to explain the characteristics of traditional and modern farming systems.

- Explain the characteristics of traditional and modern livestock farming methods. - Suggest reasons and methods for keeping small animals. - Distinguish traditional methods of livestock farming from modern. - Explain the advantages and disadvantages of traditional and modern livestock farming.	2. Livestock farming : A. Traditional livestock farming i) Pastoralism **(**cattle) - Characteristics - types of local breeds ii). Keeping of other livestock: goat, sheep, pig, poultry, rabbits, apiculture, etc. B. Modern livestock farming i). Dairy farming (cattle) - characteristics - types of modern breeds - Areas of dairy farming - Factors hindering the development of dairy farming ii). The keeping of other livestock: goats, pigs, sheep, poultry, rabbits, apiculture, etc. - Factors affecting the keeping of smaller animals. - Methods of improving small animal keeping - Importance of keeping these animals. C. Comparison on traditional livestock farming and modern livestock farming in Rwanda.	- Have a tour to a farm, guide learners to identify different cattle breeds, and name the diary farming areas. - In small groups, guide learners to identify small animals, explain factors for keeping small animals and methods of improving small animals. - In small groups, guide students to make research by using Internet, different documents on livestock farming and make a class presentation on the advantages and disadvantages of traditional and modern livestock farming.
- Suggest contributions of livestock farming in Rwanda - Identify problems of livestock farming in Rwanda and suggest solutions.	D. Contributions of livestock farming in Rwanda. E. Problems affecting livestock in Rwanda and solutions.	- Through brain storming, ask students to explain contributions of livestock.

II. FORESTRY

DURATION: 7 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Locate and describe major forest areas of Rwanda - Identify the factors leading to forest exploitation - Explain importance of lumbering - Identify problems affecting lumbering. - Identify the causes and effects of deforestation. - Suggest solutions of deforestation	1. Forested areas of Rwanda 2. Factors leading to forest exploitation 3. Importance of forestry 4. Problems affecting lumbering 5. Causes and effects of deforestation 6. Solutions to deforestation and forest Conservation 7. Case study: Gishwati, Nyungwe, Mukura	- Using a map of Rwanda, guide the learners to locate and name the major natural forests and suggest factors leading to forest exploitation. - In small groups ask learners to explain the importance of forests and problems affecting lumbering - Prepare a field trip to any forest and ask the learners to observe the changes caused as a result of forest exploitation. - Help the learners to compare the positive and negative effects of utilizing forests. - In small groups, ask learners to discuss the causes and effects of deforestation for the mentioned forests and suggest solutions.

III. FISHING

DURATION: 7 PERIODS

OBJECTIVES	CONTENT	LEARNING / TEACHING ACTIVITY
By the end of this topic students should be able to; - Locate major fishing grounds - Identify types of fish - Explain methods of fishing, preservation and conservation - Explain the importance of fishing. - Identify problems affecting	1. Major fishing grounds of Rwanda 2. Types of fish 3. Methods of fishing 4. Methods of preservation and conservation 5. Marketing of fish 6. Importance of fishing (contributions) 7. Problems affecting fishing and their solutions	- Using maps showing water bodies, guide students to identify fishing grounds and suggest types and methods used to catch fish, preserve and conserve fish - Use photographs and diagrams guide the learners to identify the fishing grounds and methods of fishing.

fishing and suggest solutions - Analyze the role of fish farming to the people of Rwanda.	8. Fish farming: i). Factors favoring fish farming ii). Problems affecting fish farming 9. Case study: fishing ponds: e.g. Rwasave	- In small groups, guide learners to discuss problems affecting fishing and suggest solutions. - Through brainstorming, guide learners to locate fish ponds and explain reasons why its necessary to have fish ponds in Rwanda.

IV. MINING
DURATION: 14 PERIODS

OBJECTIVES	**CONTENT**	**LEARNING/TEACHING ACTIVITY**
By the end of this topic students should be able to; - Locate major minerals of Rwanda - Explain methods used in mining in Rwanda - Identify factors affecting exploitation of minerals, importance, problems associated with mining and solutions.	1. Distribution of major minerals (tin, gold, wolfram, natural gas, peat coal) and mining areas. 2. Methods of mining 3. Factors affecting exploitation of minerals 4. Importance of mining to the economy of the country 5. Problems affecting mining and solutions	- Using maps students should locate major minerals, mining and quarrying areas. - In small groups guide learners to explain the methods used in mining , factors affecting exploitation and importance of mining to the economy of Rwanda

V. POWER AND ENERGY
DURATION: 7 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to;		
- Identify sources of power used in the country	1. Major sources of energy used in Rwanda (wood, H.E.P, Peat coal, Natural gas, Solar, Biogas, Geothermal, imported fuel etc.	- Using the map of Rwanda, guide learners to identify sources of power used in the country and problems of power production in Rwanda
- Locate major sources of hydro-electric power on the map of Rwanda	2. Hydro-Electric Power distribution Rusizi I and II, Mukungwa I, Ntaruka, Gihira (Rubavu district) Kilinda (karongi district) Runyombyi (Nyaruguru district murunda (Rutsiro district)	- In small groups, guide learners to explain the importance of power, problems limiting power supply and future prospects.
- Identify potential for power production in Rwanda	3. Hydro-Electric Power potentials (not exploited) Rusumo (Kirehe district), Nyabarongo (Mwaka) Rukarara I, II and III, Mukugwa II, Rusumo-Rugezi (Burera district), Satinsyi, Akanyaru II, etc.	
- Explain factors influencing power production in Rwanda	4. Factors affecting Power and energy production	- By conducting a field study to any power production area, guide learners to understand the significance of power generation and its importance.
- Describe the importance of power	5. Importance of power	
- Explain the problems prospects and prospects for power production	6. Problems limiting power production and supply 7. Prospects for power production 8. Case study: Any power production area	- In groups, help students to make research by using Internet, different documents on source of energy in Rwanda and make a class presentation on the significance of power generation and its importance.

VI. INDUSTRIALISATION
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Locate major industries in Rwanda - Explain factors for location of industries - Suggest problems to development of industries - Explain efforts made towards industrial development	A. Medium scale industries 1. Type of industries • Agro-based industries • Chemical industries • Construction • Textile Industries 2. Factors affecting the location of industries 3. Factors influencing industrial development 4. Importance of industrial development 5. Problems affecting industrial development and problems resulting from industrial development 6. Steps taken to encourage industrial Development 7. Case study: Tea factory, Coffee factory, Dairy industry, Bugarama cement factory, BRALIRWA, UTEXIRWA	- Using the economic map of Rwanda, guide students to identify and describe industries and industrial areas of Rwanda. - By brain storming guide students to explain factors for location of industries, factors influencing industrial development and problems associated with industrial development in Rwanda. - In small groups , guide students to explain the importance and steps taken to encourage industrial development - Using a field study to any of the mentioned industries, help learners to assess the conditions, activities and factors responsible for the industrial growth. - In small groups, help students to make research by using Internet or different documents on industries in Rwanda and make a class presentation on the conditions, activities and factors responsible for the industrial growth.
- Differentiate between traditional and modern sectors - Identify factors which favor	B. Small scale industries. 1. Traditional industries : broidery, pottery, blacksmith, brewing 2. Modern sector : brick laying, carpentry and	- Using a discussion groups, guide students to differentiate between traditional and modern small scale industries - In small groups help learners to discuss factors

small scale industries - Explain the importance of small scale industries and problems limiting development of these industries	curving, bakery 3. Factors affecting small scale industries 4. Importance of small scale industries 5. Problems affecting small scale industries	which favor small industries, importance, problems affecting small scale industries and suggest solutions.

VII. TRANSPORT, COMMUNICATION AND TRADE
DURATION: 14 PERIODS

OBJECTIVES	CONTENT	LEARNING/TEACHING ACTIVITY
By the end of this topic students should be able to; - Describe the major means of transport used in Rwanda - Identify factors for development of each type of transport - Explain the advantages and disadvantages associated with each type - Identify the problems of land lockedness and the solutions	A. TRANSPORT 1. Major types of transport and their distribution 2. Factors influencing the development of transport. 3. Advantages and disadvantages associated with each type 4. Problems of land lockedness and possible solutions 5. Future prospects	- Using the map of Rwanda, guide learners to identify different types of transport. - By brain storming, help learners to discuss factors influencing development of transport, advantages and disadvantages associated with each type - Using discussion groups, help learners to suggest, identify problems of land lockedness and suggest solutions.
- Identify different types of communication - Explain the importance of communication - Describe problems affecting communication and suggest solutions	B. COMMUNICATIONS • Different means communication • Factors influencing the development of communication • Importance of communication • Problems and solutions	- Using discussion groups, help learners to identify different means of communication.

- Describe the structure of trade in Rwanda. - Explain factors affecting trade - Explain the importance of trade - Identify the problems associated with trade and some solutions. - Explain the future prospects of trade in Rwanda	C. TRADE • Internal and external trade • Factors affecting trade • Importance of trade • Financial centers of the country • Importation and exportation of the products (balance of trade and balance of payment) • Problems affecting trade and solutions • Future prospects	- Use different commodities, guide learners to identify exports and imports and suggest factors affecting trade and its importance. - In small groups, guide learners to discuss problems affecting trade, solutions and suggest future prospects.

VIII. ENVIRONMENTAL CONSERVATION AND TOURISM
DURATION: 14 PERIODS

OBJECTIVES	**CONTENT**	**LEARNING/TEACHING ACTIVITY**
By the end of this topic students should be able to; - Explain why and how environment is conserved - Identify problems encountered in conservation of environment and suggest solutions	A. CONSERVATION 1. Reasons for conservation of wetlands, forest, wild life, soils, etc. 2. Ways of conservation 3. Problems encountered in conserving the Environment and solutions 4. Case study: Rwanda Environment Management Agency (REMA)	- Have a field study tour, guide learners to explain why and how environment is conserved and identify problems encountered in conservation - Organize a field trip to any wetland, forest, mountain / hills, urban area in Rwanda and explain the achievements, failures and challenges of REMA as far as environment conservation is concerned

- Identify tourist attraction of Rwanda - Explain factors for development of tourism - Give the importance of tourism - Mention problems affecting tourism and suggest solutions.	B. TOURISM 1. Tourist attractions and Eco- tourism 2. Factors affecting development of tourism 3. Importance of tourism 4. Problems affecting tourism and solutions 5. Prospects of tourism 6. Case study: Rwanda office of Tourism and National Parks (ORTPN)	- By brainstorming guide learners to identify the tourist attraction of Rwanda, factors for development, importance of tourism and problems affecting tourism - By carrying out a field trip to any tourism center in Rwanda, explain the achievements and failures of ORTPN in the promotion of tourism Industry. - In small groups, help students to make research by using Internet or different documents on tourism in Rwanda and make a class presentation on the achievements and failures of ORTPN in the promotion of tourism Industry.

CHAPTER V. PROBLEMS AND PROSPECTS OF DEVEVELOPMENT IN RWANDA
DURATION: 7 PERIODS

OBJECTIVES	**CONTENT**	**LEARNING/TEACHING ACTIVITY**
By the end of this topic students should be able to; - Discuss the problems affecting the socio- economic development of Rwanda	A. SOCIAL AND ECONOMIC PROBLEMS 1. Land lockedness 2. Population problems 3. Limited natural resources 4. Limited capital 5. Limited skilled labour 6. Political history 7. Shortage of power 8. Poor technology 9. Shortage of market 10. Low levels of education	- By brain storming, guide students to explain the problems of Rwanda and suggest solutions.

- Describe factors favoring development in Rwanda. - Explain the future developments prospects of Rwanda. - Propose solutions for problems affecting the socio-economic development of Rwanda	B. PROSPECTS OF SUSTAINABLE DEVELOPMENT IN RWANDA 1. Factors favoring the development of Rwanda - Natural conditions (climate, soil, relief) - Cultural factors (common language, hospitality, dance and drama) 2. Prospects for sustainable development of Rwanda - Government strategic policies e.g. Privatization policy, good governance, etc. - Science and technology (schools and - Institutes) - Regional integration: CEPGL, COMESA, EAC, AU. - International cooperation (UNO, IMF, World Bank, ACP) • Hindrances of Sustainable development in Rwanda • Steps taken to solve the problems of development.	- In small groups, help students to discuss factors favoring development of Rwanda and future prospects.

VII. METHODOLOGY:

This programme presupposes that the student of Geography has gone through the ordinary level of secondary Education.
He/she is therefore acquitted with some basic geographical fundamentals in practical, physical, human and economic geography.

At an advanced level therefore, the teacher's approach in teaching geography should go deeper in the subject matter than before.

Great emphasis should be put on practical and comparative studies. Students should be fully involved in the collecting geographical information, reading and interpreting maps, photographs as well as statistics in Geography. The teacher must act as a guide and not as a source of all information.

In field work, the area around the school should be taken as an ideal environment for field work demonstrations. Students should be shown that geography is not only found in books, but also in the field where the interaction between man and his environment exists. Therefore, through direct involvement in the fieldwork observations, recording and interpretations, the student can develop relevant skills, knowledge and a more positive attitude towards his environment.

Geographical maps and photographs are inseparable. In teaching geography, maps and photographs should accompany every scheme. Maps give real information compared to text books which give second hand information. Ordinary survey maps and photographs on the same area and more especially the school area should be given first consideration. This is advantageous to student especially when he/she can compare what is on the map with what he/she can see on the actual ground.

Simple statistics should also be given adequate coverage in teaching Geography. The students must be involved in reading; presentation and interpretation of statistical geography to enable him/her acquire quantitative skills.

VIII. EVALUATION AND ASSESSMENT

Evaluation at advanced level should cover all aspects of geography and should be carried out more regularly especially in the practical geography. Regular drills in practical geography assist the students to gain a more independent application of skills acquired. They will also help the teacher to monitor the student's progress.

Continuous assessment tests should be carried out after every topic covered. Other than practical geography, the student is expected to answer in essay style.

At the end of every term, students should be tested on the work covered. These tests should reflect the major objectives.
Coursework assignments especially in fieldwork should be given to students to be done during holidays.
In such case, the topics given should centre on their home areas.

At the end of the course, students are expected to seat for a national examination covering all aspects of geography studied throughout the whole course of advanced secondary level of education.

For the advanced level Geography program to be effectively and efficiently evaluated or assessed in the National examinations, three assessment papers should be structured as recommended in the tables below.

PAPER ONE: GENERAL PHYSICAL GEOGRAPHY, MAP READING AND PHOROGRAPH INTERPRETATION

SECTION	AREAS TO BE COVERED AND NATURE OF THE QUESTIONS	QUESTIONS TO BE ATTEMPTED
A	General physical geography **Essay type of Questions**	compulsory questions
B	General physical geography **Essay type of Questions**	optional questions
C	Map reading and Photograph Interpretation **Essay type of Questions**	compulsory questions

PAPER TWO: HUMAN AND ECONOMIC GEOGRAPHY AND STATISTICS IN GEOGRAPHY

SECTION	AREAS TO BE COVERED AND NATURE OF THE QUESTIONS	QUESTIONS TO BE ATTEMPTED
A	Human and Economic Geography of Africa **Essay type of Questions**	optional questions
B	Human and Economic Geography of America and Europe **Essay type of Questions**	
C	Human/Economic Geography of Asia and Oceania **Essay type of Questions**	
D	Statistics in Geography **Essay type of Questions**	compulsory questions

PAPER THREE: GEOGRAPHY OF RWANDA AND FIELD WORK

SECTION	AREAS TO BE COVERED AND NATURE OF THE QUESTIONS	QUESTIONS TO BE ATTEMPTED
A	Physical Geography of Rwanda **Essay type of Questions**	optional questions
B	Human and economic Geography of Rwanda **Essay type of Questions**	
C	Field work **Essay type of Questions**	compulsory questions

IX. KEY POINTS TO NOTE

The three sections are coherently interrelated, necessary and students must study them all. The economic and human geography are all built upon the physical geography. For example, geology, minerals, weather, climate combine to explain the human and economic activities like, settlement, agriculture, transport and so on.
The practical skills taught in the human and economic geography provide additional knowledge and support to all students.

X. RECOMMANDATIONS

1. There should be refresher courses for the teachers to be able to implement the programme.
2. Writer's workshop should be organized to encourage the writing of text books.
3. The school head teachers should facilitate geography departments in organizing and executing field trips so as to facilitate learning.
4. Follow up inspection in the schools to be strengthened in order to monitor the implementation of the programme.
5. The ministry of Education must be given special attention in funding; so that the teachers can be given better conditions of service at the same time attract more.

XI. TEACHING AIDS

1. Ordinary survey maps (OSM) original in colour with contour and grid lines etc. For map work
   E.g. 1: 50,000
   1: 100,000
   1: 10,000 etc…..

2. Photographs depicting physical and human aspects taken from Rwanda
3. Wall maps of all parts – continents of the world and Rwanda, depicting relief climate, vegetation, drainage, soils etc
4. Variety of atlas e.g. The atlas of Rwanda, Africa, World regional atlas etc.
5. Text books and other print materials like pamphlets, guide books for both teachers and students.

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