



Republic of Zambia

Ministry of Education, Science, Vocational Training and Early Childhood Education

GRADE 10 -12 Geography Syllabus



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VISION

Quality, life-long education for all which is accessible, inclusive and relevant to individual, national and global needs and value systems.

PREFACE

The syllabus was produced as a result of the Curriculum review process carried out by the Ministry of Education, Science, Vocational Training and Early Education under the auspices of the Curriculum Development Centre (CDC). The curriculum reform process started way back in 1999 when the Ministry of Education commissioned five(5) curriculum studies which were conducted by the University of Zambia. These studies were followed by a review of the lower and middle basic and primary teacher education curriculum. In 2005 the upper basic education National survey was conducted and information from learners, parents, teachers, school managers, educational administrators, tertiary institutions traditional leaders civic leaders and various stakeholders in education was collected to help design a relevant curriculum ,.

The recommendations provided by various stakeholders during the Upper Basic Education National survey of 2005 and National symposium on curriculum held in June 2009 guided the review process.

The review was necessitated by the need to provide an education system that would not only incorporate latest social, economic, technological and political developments but also equip learners with vital knowledge, skills and values that are necessary to contribute to the attainment of Vision 2030.

The syllabus has been reviewed in line with the Outcome Based Education principles which seek to link education to real life experiences that give learners skills to access, criticize analyze and practically apply knowledge that help them gain life skills. Its competences and general outcomes are the expected outcomes to be attained by the learners through the acquisition of knowledge, skills, techniques and values which are very important for the total development of the individual and the nation as a whole.

Effective implementation of Outcome Based Education requires that the following principles be observed: clarity of focus, Reflective designing, setting high expectations for all learners and appropriate opportunities.

It is my sincere hope that this Outcome Based syllabus will greatly improve the quality of education provided at Senior Secondary School as defined and recommended in various policy documents including Educating Our Future`1996 and the `Zambia Education Curriculum Framework `2013.

Chishimba Nkosha

Permanent Secretary

MINISTRY OF EDUCATION, SCIENCE, VOCATIONAL TRAINING AND EARLY EDUCATION.

Acknowledgements

The syllabus presented here is a result of broad-based consultation involving several stakeholders within and outside the education system.

Many individuals, institutions and organizations were consulted to gather their views on the existing syllabus and to accord them an opportunity to make suggestions for the new syllabus. The Ministry of Education wishes to express heartfelt gratitude to all those who participated for their valuable contributions, which resulted in the development of this syllabus.

The Curriculum Development Centre worked closely with other sister departments and institutions to create this document. We sincerely thank the Directorate of Teacher Education and Specialized Services, the Directorate of Planning and Information, the Directorate of Human Resource and Administration, the Directorate of Open and Distance Education ,the Examinations Council of Zambia, the University of Zambia, schools and other institutions too numerous to mention, for their steadfast support.

We pay special tribute to co-operating partners especially JICA and UNICEF for rendering financial technical support in the production of the syllabus.

C.N.M Sakala (Mrs)

Director-Standard and Curriculum

MINISTRY OF EDUCATION, SCIENCE, VOCATIONAL TRAINING AND EARLY EDUCATION

Table of Contents

COPYRIGHT	2
VISION	3
PREFACE	4
Acknowledgements	5
INTRODUCTION.....	8
SUGGESTED METHODOLOGIES.....	8
TIME ALLOCATION FOR GEOGRAPHY	9
ASSESSMENT	9
RATIONALE	10
GENERAL OUTCOMES	10
GENERAL OUTCOMES AND KEY COMPETENCES FOR GRADE 10	11
GRADE 10	12
SECTION A: MAP WORK	12
TOPIC	12
10.1 Map Work: Basic Techniques and skills	12
SECTION B: ELEMENTS OF PHYSICAL GEOGRAPHY	13
Topic.....	13
10.2. The Solar System.....	13
10.3. Earth Movements.....	14
10.4 Weathering and Mass Wasting	14
10.5. River Processes.....	15
10.6 Weather and Climate	16
10.7 Vegetation.....	16

10.8	Natural Environmental Hazards	16
	GENERAL OUTCOMES AND KEY COMPETENCES FOR GRADE 11	17
	GRADE 11	18
	SECTION C: ELEMENTS OF HUMAN GEOGRAPHY	18
	TOPIC	18
11.1	Farming	18
11.2	Fuel and Energy.....	18
11.3	World population.....	18
	GENERAL OUTCOMES AND KEY COMPETENCES FOR GRADE 12	20
	GRADE 12	21
	SECTION D: ZAMBIA	21
	TOPIC	21
12.1	Agriculture.....	21
12.2	Forestry.....	21
12.4	Wildlife and Tourism	22
12.5	Mining in Zambia	22
12.6	Mining in the sub- region (Zimbabwe, Angola and South Africa).....	23
12.7	Power and Energy in Zambia	23
12.8	Power and Energy in the Sub-Region.....	23
12.9	Transport and Communication in Zambia.....	24
12.10	Transport and Communication in the Sub-Region	24
12.11	Processing and Manufacturing Industries in Zambia	24
12.12	Processing and Manufacturing Industries in the Sub-Region(Zimbabwe and South Africa).....	25
	SCOPE AND SEQUENCE CHART.....	26

INTRODUCTION

The Zambia Senior Secondary School syllabi (Grades 10 to 12) are a result of extensive consultation undertaken to reform the existing one.

The new curriculum is outcomes based and focuses on results rather than on goals, aims and objectives. It places emphasis on observable and measurable knowledge, skills and values to be acquired by learners at specific levels of their schooling. The new curriculum emphasises learner centredness and provides for increased learner-teacher contact time.

Continuous assessment is another prominent feature of the new curriculum. This allows for regular monitoring of individual learning process, diagnosis of learning difficulties and provision of remedial teaching.

In addition, the curriculum integrates cross-cutting issues and themes such as HIV and AIDS, Life Skills, Gender, Human Rights, Reproductive Health, Good Governance, Environmental Education and Water and Sanitation across the curriculum to ensure holistic development of the learner. Throughout the learning process, the curriculum will lead to the development of entrepreneurship skills.

In view of the magnitude of what is to be accomplished, there will be need for firm commitment by learners, teachers, educational administrators, parents and other stakeholders to the achievement of the changes designed to make the education system responsive to individual, community and national needs.

SUGGESTED METHODOLOGIES

These shall include, but not limited to:

- Teacher exposition;
- Group discussions;
- Education tours to relevant Geographical sites;
- Learning and teaching aids;
- Questions and answers.

TIME ALLOCATION FOR GEOGRAPHY

High School History will be offered over a period of three (3) years, i.e., from Grade 10 to 12. Each class taking History will have four (4) periods of allocated per week, each period lasting forty (40) minutes. All the four periods will be single.

ASSESSMENT

In order to ensure that learning is taking place there will be need to have the learners assessed regularly. This assessment will take the form of continuous assessment to be done at specified periods determined by school administrators, termly tests as well as the final examination which will be set by the Examination Council of Zambia at the end of Grade 12.

RATIONALE

The Geography syllabus has been prepared and produced against the background and needs of the Education Sector, Millennium Development Goals and Vision 2030 which emphasise on Zambia being a middle income country. It is also in line with the structure of the Reviewed Curriculum Framework. It underscores the importance of understanding the economic, social, and cultural development and their impact on spatial patterns. Once this understanding is developed, the learner would be able to appreciate the spatial challenges affecting the environment and offer possible solutions to these challenges.

GENERAL OUTCOMES

- Applying Geographical knowledge, concepts, skills and values to the understanding of man's interaction with the environment and its effects on spatial patterns;
- Empowering learners with skills to offer solutions to some of the challenges affecting man's interaction with the environment;

GENERAL OUTCOMES AND KEY COMPETENCES FOR GRADE 10

GENERAL OUTCOMES

- Develop map reading and interpretation skills
- Develop an understanding of the major elements of Physical geography

KEY COMPETENCES

- Match conventional signs on a map with ground features
- Measure map distances and translate into actual distances on the ground
- Calculate the gradient (slope) between two features on the map
- Identify relief features and drainage patterns using contour lines on a map
- Relate human settlements and activities to relief and drainage patterns on a map
- Identify vegetation and land-use types
- Draw a cross-section between two points on a map
- Locate places on the Earth's surface using latitudes and longitudes
- Calculate distances using latitudes
- Calculate longitude from local time
- Calculate local time and date using longitudes east or west of the Prime Meridian
- Calculate the position of the midday sun (angle of elevation) at a given latitude at different times of the year
- Calculate the latitude of a place using the position of the midday sun (angle of elevation)
- Demonstrate how conditions in the atmosphere have influenced the physical landscape and the activities of man
- Demonstrate how man has influenced atmospheric conditions as well as the physical landscape

GRADE 10

SECTION A: MAP WORK

TOPIC	SUB-TOPIC	SPECIFIC OUTCOMES	CONTENT		
			KNOWLEDGE	SKILLS	VALUES
10.1 Map Work: Basic Techniques and skills	10.1.1 Map Reading and Interpretation	10.1.1.1 Match conventional signs with ground features 10.1.1.2 Measure real distances between object in the field 10.1.1.3 Translate map distances into real distances 10.1.1.4 Compute the gradient (slope) between two features on the map 10.1.1.5 Identify relief features and drainage patterns using contour lines on a map 10.1.1.6 Identify factors which influence human settlements and activities on a map 10.1.1.7 Identify vegetation and land-use types 10.1.1.8 Account for observed vegetation and land use patterns	<ul style="list-style-type: none"> • Conventional signs • Scale • Measurement of distances and areas • Gradient • Relief features: mountains, plateaux, valleys, gorges, plains • Relief, drainage, minerals, vegetation, transport and communication, • Land-use and vegetation, • Land-use and settlement patterns, transport and communication, vegetation, • Topographical maps • Cross-section 	<ul style="list-style-type: none"> • Interpretation of conventional signs, scale, relief, land use features, settlement features, • Drawing sketch maps and a cross-section • Calculation of distance between points, gradient • Measurement of distance along a straight line and along a winding course 	<ul style="list-style-type: none"> • Accuracy in interpretation of conventional signs and various features, measurement and calculations of distance
	10.1.2 Sketch maps and diagrams	10.1.1.9 Identify and present variables on a graphical axis 10.1.2.1 Draw a sketch map from topographic maps 10.1.2.2 Draw a cross-section between two points on a map			

SECTION B: ELEMENTS OF PHYSICAL GEOGRAPHY

Topic	Sub-topic	Specific Outcomes	Content		
			Knowledge	Skills	Values
10.2. The Solar System	10.2.1 The solar system	10.2.1.1 Describe the solar system	<ul style="list-style-type: none"> • The Sun and its planets • Shape of the Earth • Latitude and longitude 	<ul style="list-style-type: none"> • Identification of planets, lines of latitude and longitude, forces altering the surface of the earth and resulting landforms, types of volcanoes, volcanic landforms • Description of the shape of the earth • Explanation of the effects of the earth's rotation and revolution • Observation • Calculation of distance using latitude, local time using longitudes, angle of elevation 	Appreciation Accuracy in calculating distance, local time and angle of elevation Care Responsibility Awareness of the existence of other planets apart from the earth
	10.2.2 The Earth as a planet	10.2.2.1 Describe the shape of the Earth			
	10.2.3 Latitude and longitude	10.2.3.1 Explain latitude and longitude 10.2.3.2 Locate places on the Earth's surface using latitudes and longitudes 10.2.3.3 Calculate distances using latitudes			
	10.2.4 Local and standard time	10.2.4.1 Calculate local time using longitudes 10.2.4.2 Calculate longitude from local time	<ul style="list-style-type: none"> • Local time, standard time, Greenwich mean time(GMT) • International Date Line 		
	10.2.5 International Date Line	10.2.5.1 Explain the International Date Line 10.2.5.2 Calculate time and date east or west of the International Date Line			
	10.2.6 Apparent movement of the Sun (angle of elevation)	10.2.7.1 Calculate the position of the midday sun (angle of elevation) at a given latitude at different times of the year 10.2.7.2 Calculate the latitude of a place using the position of the midday sun (angle of elevation)	<ul style="list-style-type: none"> • Angle of elevation 		
	10.2.7 Rotation and revolution of the Earth	10.2.7.1 Explain the effects of rotation of the earth 10.2.7.2 Explain the effects of the earth's revolution	<ul style="list-style-type: none"> • Effects of rotation (e.g., day and night, dawn and dusk) • Effects of revolution (e.g. change of seasons) 		

<p>10.3. Earth Movements</p>	<p>10.3.1 Faulting and folding</p> <p>10.3.2 Earthquakes and Volcanic activities</p>	<p>10.3.1.1 Distinguish forces leading to faulting and folding</p> <p>10.3.1.2 Explain the landforms resulting from faulting and folding</p> <p>10.3.1.3 Describe the distribution of landforms resulting from faulting and folding</p> <p>10.3.2.1 Explain the origins of earthquakes and volcanoes</p> <p>10.3.2.2 Describe the types of volcanoes</p> <p>10.3.2.3 Discuss the various landforms resulting from volcanic activities</p> <p>10.3.2.4 Explain effects of earthquakes and volcanic activities on the environment and people</p> <p>10.3.2.5 Describe the distribution of earthquakes and volcanoes</p>	<ul style="list-style-type: none"> • Compression and Tension • Compression: fold mountains • Tension: rift valleys, block mountains, fault scarps • World map • Magmatic activities in the earth's crust • Active, dormant and extinct • Extrusive and intrusive features, geysers and hot springs • Destruction of life and infrastructure, displacement of people, pollution, climatic barriers, fertile soils, minerals, hot springs, geo-thermal power, gas poisoning • 'Pacific Ring of Fire' 	<p>of mid-day sun</p> <ul style="list-style-type: none"> • Drawing of lines of latitude and longitude 	
<p>10.4 Weathering and Mass Wasting</p>	<p>10.4.1 Weathering in the Tropics and Temperate Regions</p> <p>10.4.2 Mass movement</p> <p>10.5.1 River systems and drainage patterns</p> <p>10.5.2 River erosion, transportation and deposition</p>	<p>10.4.1.1 Explain the processes of weathering</p> <p>10.4.2.1 Describe the agents of weathering</p> <p>10.4.2.2 Discuss the processes of mass movement or mass wasting</p> <p>10.5.1.1 Describe river systems</p> <p>10.8.1.1 Identify river drainage patterns</p>	<ul style="list-style-type: none"> • Mechanical weathering: temperature variations, frost action, alternate wetting and drying • Chemical weathering: solution, carbonation, hydrolysis, oxidation, hydration • Biotic weathering: biotic factors i.e., animal and plant activities • Wind, frost action, rainfall • Soil creep, landslides, mudflows, rock fall, avalanches • Hydrological cycle • Consequent and subsequent streams, river capture and rejuvenation • Dendritic, radial and trellis patterns 	<ul style="list-style-type: none"> • Identification of the agents of weathering and how they affect the landscape 	

10.5. River Processes		10.8.1.2 Explain the stages in the formation of a river	<ul style="list-style-type: none"> • Youth or mountain stage, middle or mature stage, lower or old stage • Youth: interlocking spurs, rapids, potholes, waterfalls, plunge pools • Middle: flood plains, swamps, ox-bow lakes • Old: delta, flood plains, levees • Erosion: vertical and lateral erosion • Transportation: solution, suspension, floatation and traction • Deposition: silt, debris • Erosional features: potholes, valleys, plunge pools • Depositional features: deltas, levees, braided streams, ox-bow lakes • Transportation, fishing, irrigation, domestic and industrial water supply, power generation 			
		10.8.1.3 Describe the features associated with each stage of a river				
		10.8.1.4 Describe processes of river erosion, transportation and deposition				
		10.8.1.5 Explain erosional and depositional features				
		10.8.1.6 Discuss the importance of rivers				
	10.6.1 Tropical and Temperate storms	10.6.1.1 Describe formation, structure and effects of Tropical and Temperate storms		<ul style="list-style-type: none"> • Formation: differences in pressure systems • Structure: cyclones in tropical regions and anti-cyclones in temperate regions • Effects: destruction of life and property and displacement of people • World map showing climatic types • Equatorial, Savannah, hot deserts, Mediterranean • Equatorial: heavy rainfall, high humidity, high temperature, one season • Savannah: summer rainfall, 		
	10.6.2 Climatic types	10.6.2.1 Locate on a world map major climatic types				
	10.6.3 Climatic characteristics	10.6.3.1 Describe the characteristics of climatic types				

<p>10.6 Weather and Climate</p>			<p>distinct seasons, cool dry winters</p> <ul style="list-style-type: none"> • Hot deserts: high day-time and low night temperatures, little or no rain, large diurnal temperature range • Mediterranean: winter rains and dry summers, mild temperatures 		
<p>10.7 Vegetation</p>	<p>10.7.1 Natural Vegetation</p>	<p>10.7.1.1 Explain the characteristics of natural vegetation (adaptation)</p>	<ul style="list-style-type: none"> • Equatorial: layered, poor undergrowth, evergreen, closed canopy, multiple species • Savannah: tall grass with short scattered trees, umbrella-shaped trees, deep roots • Hot deserts: drought resistant, scanty vegetation, deep roots • Mediterranean: evergreen coniferous forests, poor grass growth 		
<p>10.8 Natural Environmental Hazards</p>	<p>10.8.1 Natural hazards</p>	<p>10.8.1.1 Describe the natural environmental hazards</p> <p>10.8.1.2 Explain the impact of human activities on the physical environment</p> <p>10.8.1.3 Describe effects of hazards on people and the environment</p> <p>10.8.1.4 Suggest possible solutions to natural environmental hazards</p> <p>10.8.1.5 Assess the impact of climate change on the environment</p>	<ul style="list-style-type: none"> • Earthquakes, volcanoes, avalanches, rock falls, landslides, cyclones, tsunamis • Deforestation, pollution, soil erosion, overgrazing • Effects: destruction of life and property and displacement of people • Reafforestation, afforestation, population control, controlled grazing • Global warming, droughts, floods, desertification 	<ul style="list-style-type: none"> • Identification of natural hazards and their impact on human activities and how they can be mitigated 	<ul style="list-style-type: none"> • Awareness of natural hazards and how they can be mitigated

GENERAL OUTCOMES AND KEY COMPETENCES FOR GRADE 11

GENERAL OUTCOME

- | |
|---|
| <ul style="list-style-type: none">• Create an understanding of the interaction between man's activities and the environment |
|---|

KEY COMPETENCE

- | |
|---|
| <ul style="list-style-type: none">• Demonstrate how man has manipulated the physical environment to secure a livelihood on a global scale |
|---|

GRADE 11

SECTION C: ELEMENTS OF HUMAN GEOGRAPHY

TOPIC	SUB-TOPIC	SPECIFIC OUTCOMES	CONTENT		
			KNOWLEDGE	SKILLS	VALUES
11.1 Farming	11.1.1 Types of farming	11.1.1.1 Locate major farming types on the map of the world	<ul style="list-style-type: none"> • World map • Physical: soils, relief, climate • Economic: labour, market, transport, capital • Social/cultural: ethnicity, religion, • Political: government policy • Shifting cultivation, semi-permanent cultivation • Mixed farming • Intensive and extensive farming • Livestock farming • Plantation agriculture • Coal, oil, natural gas, hydro-electric power, solar energy, uranium, biogas, wind power • Water: ship, marine cables • Land: road, rail, pipeline, overhead cables • Domestic and industrial fuels • Synthetic products • High density: Asia, North-western Europe, North-eastern USA, Nile Valley and Delta • Medium density: coastal lands of continents and interior of USA and Eurasia • Low density: Cold/hot 		
		11.1.1.2 Describe factors that influence farming			
11.1.1.3 Describe major farming types					
11.2 Fuel and Energy	11.2.1 Sources of fuel and energy	11.2.1.1 Explain different sources of fuel and energy			
		11.2.1.2 Distinguish methods of transportation of fuel and energy			
		11.2.1.3 Describe uses of different forms of fuel and energy			
11.3 World population	11.3.1 World population distribution	11.3.1.1 Locate on a world map areas of high, medium and low population densities			

	<p>11.3.2 Population Change</p>	<p>11.3.1.2 Describe major factors influencing world population distribution and density</p> <p>11.3.2.1 Explain factors influencing population change and structure</p> <p>11.3.2.2 Explain factors which have contributed to rapid population growth</p> <p>11.3.2.3 Describe the consequences of increased world population</p> <p>11.3.2.4 Describe possible solutions to over-population</p> <p>11.3.2.5 Explain reasons and implications for migrations</p> <p>11.3.2.6 Describe human survival strategies in relation to resource availability and utilization</p>	<p>deserts, mountainous areas</p> <ul style="list-style-type: none"> • Relief, climate, biotic, economic, historical and political factors • Factors: births, deaths, migration • Increased food production, improved medical and health facilities, early marriages, lack of family planning, high illiteracy rates, industrialization • Food scarcity, unemployment, overcrowding, traffic congestion, outbreaks of epidemics, shortage of social services, high crime rate, creation of shanties, shortage of accommodation • Improved social services, economic development, birth control, improved literacy • Economic factors: political conflicts, famine, drought, religious and personal reasons • Implications: increase in population in receiving areas and decrease in population where people move from • Carrying capacity, sustainability, availability of resources, resource conservation 	<ul style="list-style-type: none"> • Identification of the factors influencing population distribution and growth 	<ul style="list-style-type: none"> • Awareness of the factors influencing population distribution and population growth and its effects • Appreciation of how the effects of population growth can be mitigated
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GENERAL OUTCOMES AND KEY COMPETENCES FOR GRADE 12

GENERAL OUTCOME

- | |
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| <ul style="list-style-type: none">• Develop an understanding of the impact of man on the environment |
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KEY COMPETENCE

- | |
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| <ul style="list-style-type: none">• Apply the key concepts of man's interaction with the physical environment learnt at global level to the local scenario |
|--|

GRADE 12

SECTION D: ZAMBIA

TOPIC	SUB-TOPIC	SPECIFIC OUTCOMES	CONTENT		
			KNOWLEDGE	SKILLS	VALUES
12.1 Agriculture	12.1.1 Land tenure systems	12.1.1.1 Describe land tenure 12.1.1.2 State types of land tenure in Zambia	<ul style="list-style-type: none"> • Legal right to use of land • Traditional/customary land, state land, leasehold and freehold • Topography, availability of water supply, soil fertility, markets, transport, labour, capital availability • Salinization, Water-logging, water borne diseases, pollution • Bad practices: overstocking, lack of fallowing, mono-cropping, poor land tillage methods • Effects: destruction and displacement of wildlife, deforestation, pollution, desertification, soil degradation • Crop rotation, contour ploughing, mulching, terracing, fallowing, strip cultivation, organic farming, agro-forestry • Abundant arable land, adequate rainfall, good soils, large market, human labour, power, enough water for irrigation, favourable government policy • Difficult to access, low demand, lack of capital, poor quality of timber, trees do not grow in pure stands, weak laws in forest management • Droughts, fires, human activities • Inhibit navigation, reduce oxygen needed by aquatic animals, displace indigenous tree species, produce toxins which endanger animals, disturb HEP production • Source of employment, source of foreign exchange, recreation facilities, 	<ul style="list-style-type: none"> • Identification of the factors favouring irrigation farming • Analysis of bad agricultural practices and their effects 	<ul style="list-style-type: none"> • Responsibility • Awareness • Patriotism • Respect • Care • Appreciation • Integrity • Honesty
	12.1.2 Irrigation farming	12.1.2.1 State factors that favour irrigation farming			
	12.1.3 Bad agricultural practices	12.1.3.1 Describe effects of irrigation farming on the environment 12.1.3.2 Explain bad agricultural practices and their effects			
	12.1.4 Soil conservation	12.1.4.1 Discuss soil conservation measures and sustainable agriculture 12.1.4.2 Explain Zambia’s agricultural potential in the SADC region			
12.2 Forestry	12.2.1 Exploitation of timber	12.2.1.1 Describe factors limiting the commercial exploitation of indigenous trees 12.2.1.2 Describe the problems affecting forests	<ul style="list-style-type: none"> • Difficult to access, low demand, lack of capital, poor quality of timber, trees do not grow in pure stands, weak laws in forest management • Droughts, fires, human activities • Inhibit navigation, reduce oxygen needed by aquatic animals, displace indigenous tree species, produce toxins which endanger animals, disturb HEP production • Source of employment, source of foreign exchange, recreation facilities, 	<ul style="list-style-type: none"> • Application of soil conservation methods • Analysis of the factors limiting commercial exploitation of indigenous tree species 	<ul style="list-style-type: none"> • Responsibility • Awareness • Patriotism • Respect • Care • Appreciation • Integrity • Honesty
	12.2.2 Invasive Plant Species	12.2.1.3 Explain effects of invasive plant species (Lantana camara, Kafue weed)			

12.4 Wildlife and Tourism	12.4.1 Wildlife 12.4.2 Tourism	12.4.1.1 Explain the importance of wildlife 12.4.1.2 Identify factors that hinder the growth of the wildlife and tourism industry 12.4.2.1 Identify government measures put in place to promote wildlife conservation and the tourism industry	food, medicines <ul style="list-style-type: none"> • Corruption, some traditional practices, climatic conditions, weak enforcement of laws,, poaching • Community participation, game ranching, establishment of ZAWA and forestry department, Infrastructure development, enhancing security, sensitisation, community participation, favourable immigration laws,, formation of wildlife conservation clubs, publicity abroad 		
12.5 Mining in Zambia	12.5.1 Mineral exploitation 12.5.2 Mineral production 12.5.3 Uses of major minerals and marketing 12.5.4 Mineral processing	12.5.1.1 States factors influencing exploitation of minerals 12.4.2.2 Interpret simple tables of data showing production and marketing figures of mining companies 12.5.3.1 State some of the uses of major minerals 12.5.4.1 Describe stages of mineral processing 12.5.4.2 Locate on a world map markets for major minerals produced in Zambia 12.5.4.3 State major export routes of Zambia's major minerals	<ul style="list-style-type: none"> • Geological occurrence, quality of ores, accessibility, operational costs, transport, national and international demand, labour and power, government policy • Charts and tables • Copper: alloys, electrical wires, coins, ornaments, roofing • Lead: piping, battery plates, cables, tanks, reinforced cylinders for transporting nuclear waste • Zinc: roofing, tubes and castings • Coal: thermal electricity, smelting, raw material, heating • Blasting, crushing floatation, smelting, refining • Germany, U.K, China, India, Japan, Italy, U.S.A, • By rail and road to Dar-es-salaam (Tanzania), Port Elizabeth, East London (R.S.A), Maputo (Mozambique) • By sea to Europe, Asia and North America 		

12.6 Mining in the sub- region (Zimbabwe, Angola and South Africa)	12.6.1 Mineral Distribution 12.6.2 Mineral processing 12.6.3 Importance of mining and its effects	12.6.1.1 Locate on a map of Zimbabwe, Angola and South Africa mining areas for gold, diamonds coal, petroleum and natural gas and iron ore 12.6.2.1 Describe factors influencing location of mineral processing plants 12.6.3.1 State the importance of mining on the economies of countries in the sub-region 12.6.3.2 Describe constraints associated with production and sale of minerals 12.6.3.3 Explain measures adopted to overcome some of the problems related to mining 12.6.3.4 Evaluate impact of mining on the environment	13 Maps showing gold and diamonds in South Africa, petroleum and natural gas in Angola and coal and Iron ore in Zimbabwe and South Africa 14 Geological occurrence, accessibility, transport, power, labour, markets, government policies, local and world demand 15 Exports to earn foreign exchange, employment, raw materials 16 High production cost, specialized labour, corruption, transport routes to exports ports, fluctuating prices and demand on world markets, theft, money laundering <ul style="list-style-type: none"> Regional policies (harmonization of standards), privatization, liberalization, opening new mines, enabling environment for investment, crime prevention 17 Air, soil, and water pollution, land degradation, depletion of natural resources, destruction of vegetation		
12.7 Power and Energy in Zambia	12.7.1 Location of hydro-electric power stations 12.7.2 Uses of hydro-electric power and its effects in Zambia	12.7.1.1 Explain factors affecting location and development of hydro power stations 12.7.2.1 Explain the various uses of energy in Zambia 12.7.2.2 Evaluate the negative impact of hydro-electric power development on the environment	<ul style="list-style-type: none"> Large volume of water, market, capital, steep gradient, firm bedrock Industrial, domestic, lighting, security Flooding, displacement of settlements and wildlife, deforestation 		
12.8 Power and Energy in the Sub-Region	12.8.1 Major hydro-electric power stations 12.8.2 Power demand in the sub-region	12.8.1.1 Locate on a map of Africa, major power station in the sub-region 12.8.2.1 Describe energy and power needs in the sub-region	13 Kariba, Caborabasa, Vaal, Inga (two schemes) 14 Distribution, national grids, inter-connectors, inter-connection standards, consumption		

12.9 Transport and Communication in Zambia	12.9.1 Types and importance of transport and communication 12.9.2 Problems and possible solutions	12.9.1.1 State major means of transport and communication 12.9.1.2 Explain the importance of transport and communication 12.9.2.1 Describe problems associated with poor transport and communication 12.9.2.2 Suggest possible solutions to poor transport and communication	<ul style="list-style-type: none"> • Transport: rail, road, water, air • Communication: phone, telecommunication, radio, television, internet, print media • Movement of goods, services and people, exchange of information • Access to transport and communication infrastructure, movement of goods and services, inadequate safety standards • Infrastructure development, compliance with standards 		
12.10 Transport and Communication in the Sub-Region	12.10.1 Transport and communication in landlocked countries	.10.1.1 State prospects for landlocked countries	<ul style="list-style-type: none"> • Construction of new railways and roads, regional integration 		
12.11 Processing and Manufacturing Industries in Zambia	12.11.1 Importance of manufacturing and processing	12.11.1.1 State the importance of manufacturing and processing industries	<ul style="list-style-type: none"> • Development of infrastructure, employment, import substitution, utilization of social amenities, promotion of local, regional and international trade 		

<p>12.12 Processing and Manufacturing Industries in the Sub-Region(Zimbabwe and South Africa)</p>	<p>12.12.1 Types and location of major manufacturing and processing industries in Zimbabwe and South Africa</p> <p>12.12.2 Intra-regional trade in manufactured goods</p>	<p>12.12.1.1 Name and locate on a map of Zimbabwe, and South Africa, major processing and manufacturing industries</p> <p>12.12.1.2 Analyze constraints associated with the development of processing and manufacturing industries in the sub-region</p> <p>12.12.1.3 Describe one processing or manufacturing industry in any two countries in the sub-region</p> <p>.10.1.1 Describe trade in manufactured goods in the sub-region</p>	<ul style="list-style-type: none"> • Map of Zimbabwe and South Africa showing: Iron and steel works in South Africa or Zimbabwe, Motor vehicle assembly in South Africa • Specialized manpower, machinery, foreign exchange, dependency on imported raw materials, inadequate and high cost of power, dependency on foreign capital, competition from developed countries, government policies • Iron and steel in South Africa or Zimbabwe, motor vehicle assembly in Kenya or South Africa, tea or tobacco processing in Malawi, oil refining Angola • Direction and volume, value of trade 		
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SCOPE AND SEQUENCE CHART

Theme	Grade	10	11	12
Map Reading and Interpretation		<ul style="list-style-type: none"> • Conventional signs • Scale • Measurement of distance and area • Gradient • Relief features: mountains, plateaux, valleys, gorges, plains • Factors influencing human settlement: relief, drainage, minerals, vegetation, transport and communication, • Land-use and vegetation • Topographical maps • Cross-section 		
The Earth in the Solar System		<ul style="list-style-type: none"> • The Sun and its planets • Shape of the Earth • Latitude and longitude • Local time, standard time, Greenwich mean time(GMT) • International Date Line • Angle of elevation • Effects of rotation (e.g., day and night, dawn and dusk) • Effects of revolution (e.g. change of seasons) 		
Earth Movements		<ul style="list-style-type: none"> • Faulting and folding • Earthquakes and Volcanic activities 		
Weathering and Mass Wasting		Weathering in the Tropics and Temperate Regions Mass movement		
River Processes		<ul style="list-style-type: none"> • River systems and drainage patterns • River erosion, transportation and deposition 		
Weather and Climate		Tropical and Temperate storms Climatic types Climatic characteristics Natural Vegetation		

Natural Hazards	Environmental	<ul style="list-style-type: none"> • Earthquakes, volcanoes, avalanches, rock falls, landslides, cyclones, tsunamis • Deforestation, pollution, soil erosion, overgrazing • Global warming, droughts, floods, desertification 		
Farming			<ul style="list-style-type: none"> • Types of farming • Factors influencing types of farming 	
Fuel and Energy			<ul style="list-style-type: none"> • Sources of fuel and energy • Transportation of various forms of energy • Uses of various sources of energy 	
World Population			<ul style="list-style-type: none"> • Distribution of world population • Factors influencing population world distribution • Population change and its consequences 	
Agriculture in Zambia				<ul style="list-style-type: none"> • Land tenure systems • Irrigation farming • Bad agricultural practices • Soil conservation
Forestry in Zambia				<ul style="list-style-type: none"> • Exploitation of timber • Invasive Plant Species
Wildlife in Zambia				<ul style="list-style-type: none"> • Wildlife • Tourism
Mining in Zambia				<ul style="list-style-type: none"> • Mineral exploitation • Mineral production • Uses of major minerals and marketing • Mineral processing
Mining in the Sub-Region				<ul style="list-style-type: none"> • Mineral Distribution • Mineral processing • Importance of mining and its effects
Power and Energy in Zambia				<ul style="list-style-type: none"> • Location of hydro-electric power stations • Uses of hydro-electric power and its effects in Zambia
Power and Energy in the Sub-Region				<ul style="list-style-type: none"> • Major hydro-electric power stations • Power demand in the sub-region
Transport and Communication in Zambia				<ul style="list-style-type: none"> • Types and importance of transport and communication

			<ul style="list-style-type: none"> • Problems and possible solutions
Transport and Communication in the Sub - Region			<ul style="list-style-type: none"> • Transport and communication in landlocked countries
Processing and Manufacturing Industries in Zambia			<ul style="list-style-type: none"> ▪ Importance of manufacturing and processing
Processing and Manufacturing Industries in the Sub-Region(Zimbabwe and South Africa)			<ul style="list-style-type: none"> • Types and location of major manufacturing and processing industries in Zimbabwe and South Africa • Intra-regional trade in manufactured goods