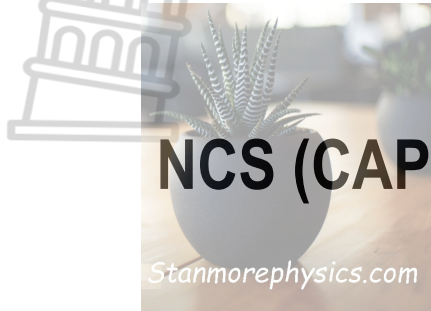




KWAZULU-NATAL PROVINCE

EDUCATION
REPUBLIC OF SOUTH AFRICA

CURRICULUM GRADE 10 -12 DIRECTORATE



NCS (CAPS) SUPPORT

JUST IN TIME TEACHER DOCUMENT

GEOGRAPHY

GRADE 11

2025



1.1	The earth's axis		
1.1.1	Incoming solar radiation received by the earth from the sun	(1 x 2)	(2)
1.1.2	37°C	(1 x 1)	(1)
1.2.3	Latitude: the further you move from the equator the cooler it gets Altitude : the higher you go the cooler it becomes	(2 x 2)	(4)
1.1.4	<ul style="list-style-type: none"> ➤ The equator receives direct rays and the poles receive indirect rays from the sun resulting in higher temperature over the equator ➤ The equator has a thin layer of the atmosphere and the poles have a thick layer of the atmosphere resulting in higher temperatures over the equator ➤ In the equator a small surface area is heated, while the poles large surface area is heated ➤ The equator has more dark surfaces which absorb heat whereas the poles have white ice due to snow which reflect a lot of heat from the sun 	(4 x 2)	(8)
1.2	Air pressure and wind		
1.2.1	Hectopascals		
1.2.2	Isobars		
1.2.3	Pressure gradient		
1.2.4	High pressure to low pressure		
1.2.5	Four mb		
1.2.6	Divergence	(6 x 1)	(6)
1.3	Geostrophic wind		
1.3.1	Coriolis force	(1 x 1)	(1)
1.3.2	Move from high pressure to the low pressure	(1 x 1)	(1)
1.3.3	North East	(1 x 1)	(1)
1.3.4	Northern hemisphere because the wind deflection is to the right	(1 + 2)	(3)
1.3.5	The pressure gradient and the Coriolis force are in balance flow along the isobars	(1 x 2)	(2)
1.3.6	<ul style="list-style-type: none"> ➤ Air moves from the high pressure to low pressure because of the pressure gradient force. ➤ As soon it moves the air starts to deflect because of Coriolis force that develops due to the rotation of the earth. ➤ As wind moves from high to low pressure the speed increases. ➤ The speed and Coriolis force increase until the pressure gradient force and Coriolis force are of equal strength ➤ The air is no longer moving from high to low pressure but flows parallel to the isobars 	(4 x 2)	(8)

1.4	Fohn winds		
1.4.1	Leeward side		
1.4.2	Dry adiabatic lapse rate		
1.4.3	0.5°C/100m		
1.4.4	500m		
1.4.5	16°C		
1.4.6	Europe		
1.4.7	Berg winds		
		(7 x 1)	(7)
1.5	Monsoon winds		
1.5.1	Inter tropical convergence zone	(1 x 1)	(1)
1.5.2	Because of the migration of ITCZ to the North and South of the equator, the pressure belts also move with it and results in the high pressure and low pressure to move from the ocean to the continent and back	(2 x 2)	(4)
1.5.3	The pressure is low over the plateau than over the sea. Wind flows from the high pressure to the low pressure	(2 x 2)	(4)
1.5.4	Blessings <ul style="list-style-type: none"> ➤ It bring water to the area for domestic purposes ➤ Enough water for irrigation of crops ➤ Fills up dams and reservoirs 		
	Curses <ul style="list-style-type: none"> ➤ Heavy rain can lead to flooding houses ➤ Erode crops and fertile soil ➤ Damage infrastructure ➤ Kill livestock and people 		



2.1	Horizontally layered rocks		
2.1.1	The original height remains the same (1)		
2.1.2	Resistant cap rock (1)		
2.1.3	Unequally (1)		
2.1.4	Steep-sided valley with rocks vary in resistance to erosion (2) Rivers incise into joints in rocks (2) Back-wasting widens the joints (2) Resistant layers form from vertical cliffs and softer rock form gentle slopes. (2) ANY TWO	(2 x 2)	(4)
2.1.5	The impressive scenery associated with canyons can be used as a tourist attraction (2) Canyons can be utilised for recreational activity (accept examples) (2) The Pedi plain below canyons, mesas and buttes can be used for livestock farming	(2 x 2)	(4)
2.2	Canyon landscape		
2.2.1	Steep and less steep slopes are alternating The slopes are terraced	(1 x 1)	(1)
2.2.2	Dry / Low rainfall / High temperatures	(1 x 2)	(2)
2.2.3	Attract tourists (accept examples)	(1 x 1)	(1)
2.2.4	The river established its course on the surface sediments (2) River eroded vertically through cracks and joints	(2 x 2)	(2)
2.2.5	The canyon landscape has resistant top layers that form a protective cap with steep cliffs The layers below the cap are more easily erodible (2) Back wasting / scarp retreat causes the cap rock to get narrower and the valley floor wider (2) The canyon landscape now becomes characterised by flat-topped hills separated by wide, flat plains (2) Mesas are flat topped hills that are capped by resistant sills and steep cliffs (2) If the resistant cap is less than half the size of the base, it becomes known as a butte (2) Pointed buttes develop, with a very small cap rock, with steep slopes (2) Once the resistant cap is eroded away, the erosion of a mesa or butte results in the formation of a conical hill (2) [ANY FOUR] (4 x 2) (8)	(4 x 2)	8)
2.3	Horizontally layered		
2.3.1	Dolerite sill (2)	(1 x 1)	(1)
2.3.2	1m per million years (1)	(1 x 1)	(1)
2.3.3	Surface area of the landscape has been reduced (1) Natural deposits have been exposed (1)	(2 x 1)	(2)
2.3.4	Advantage: reduces the vertical distance to access minerals and resources such as water underground (2) - Disadvantage: disturbs habitats and ecosystems in the area Maritime climate would increase the rate of scarp retreat as there will be more rainfall serving as an agent of erosion(2)	(2 x 2)	(4)
2.3.5	The slope moves backwards as a result of weathering and erosion When a scarp/ cliff wears back parallel to its original position.	(2 x 2)	(4)

2.4	Inclined rocks		
2.4.1	horizontally(1)	(1 x 1)	(1)
2.4.2	exfoliation(1)	(1 x 1)	(1)
2.4.3	dome(1)	(1 x 1)	(1)
2.4.4	cuesta(1)	(1 x 1)	(1)
2.4.4	scarp(1)	(1 x 1)	(1)
2.4.5	horizontally layered. (1)	(1 x 1)	(1)
2.4.6	Africa(1)	(1 x 1)	(1)
2.4.7	tilted(1)	(1 x 1)	(1)
2.4.8	horizontally(1)	(1 x 1)	(1)
			[8]
2.5	Igneous intrusions		
2.5.1	batholith (1)	(1 x 1)	(1)
2.5.2	dike (1)	(1 x 1)	(1)
2.5.3	lava flow (1)	(1 x 1)	(1)
2.5.4	laccolith (1)	(1 x 1)	(1)
2.5.5	sill (1)	(1 x 1)	(1)
2.5.6	lopolith (1)	(1 x 1)	(1)
2.5.7	volcanic cone (1)	(1 x 1)	(1)
			[7]
2.6	Tors		
2.6.1	A: tors (1) B: granite dome (1)		
2.6.2	Rocks have no strata/ bedding planes (1)		
2.6.3	A: Batholith(1) B: Laccolith (1)		
2.6.4	Erosion of sedimentary layers on the surface (2)		
2.6.5	Water seeps into joints of igneous rocks underneath the earth's surface (2) This causes chemical weathering to take place (2) Chemical weathering causes the rock to break into rectangular blocks (2) Granite dome Granite domes usually arise from batholiths (2) or laccoliths, which intrude into and penetrate sedimentary layers (2). Erosion and weathering then occurs (2) until a large granite mass appears on the land surface (2)		

2.7	Slope elements		
2.7.1	There is a bare rock It is vertical / steep		
2.7.2	Scarp retreat / Back wasting		
2.7.3	Y		
2.7.4	It is found in the crest It is where the weathered material falls over the cliff The loose weathered material moves slowly downhill.		
2.7.5	Z – is a Pedi-plain The slope shape is concave It is ideal for farming because of the gentle slope The area is flat so water does not run off easily and Accumulation of fertile soil.		
2.8	Mass movements		
2.8.1	Gradual or sudden movement of loose weathered material down slope as a result of gravity.		
2.8.2	Rockfall		
2.8.3	Heavy rainfall.		
2.8.4	2008 Stanmorephysics.com		
2.8.5	Inaccessibility of the road /Potential loss of life /Can be lethal to road users.		
2.8.6	<ul style="list-style-type: none"> • Drilling bolts into the sides of the hill • Cover steep slopes with concrete spray to prevent rockfalls. • Using wire mesh to hold the rocks in place • Building retaining walls in order to stabilise the slope • Building gabions or small stone walls of rock at the base for reinforcement of slope. • Avoiding unstable slopes when developing infrastructure (e. g. roads, railway lines and buildings)/Avoid new housing developments on hilly slopes. • Early warning systems to detect land movements and instability in slopes. • Closing roads to ensure safety of people when slopes become unstable. 		
2.9	Mass movements		
2.9.1	B (Soil creep)		
2.9.2	C (Mudflow)		
2.9.3	A (Landslide)		
2.9.4	D (Slump)		
2.9.5	A (Landslide)		

3.3 DEVELOPMENT

COLUMN A	COLUMN B	
3.1.1	E	
3.1.2	G	
3.1.3	A	
3.1.4	F	
3.1.5	C	
3.1.6	B	
3.1.7	H	
3.1.8	D	
3.2	Framework for development	
3.2.1	-Refers to cutting down of trees/clearing of vegetation	(2)
3.2.2	-tress	(1)
3.2.3	-It reduces the level of oxygen/increases level of carbon dioxide	(2)
3.2.4	Development cause deforestation/ cutting down of trees Natural surfaces are replaced with artificial surfaces	(2)
3.2.5	-Create buffer zones -Promote nature reserve -Create awareness campaigns of nature reserve -Educate people on the importance of tress -Environmental impact assessment -Promote planting of tress	(6)
3.3	Development	
3.3.1	-Refers to the stage that a country has reached on economic, social and technological level	(2)
3.3.2	-Panel 1- Rural development -Panel 2-urban development	(2)
3.3.3	-Panel 1- less economically developed countries -Panel 2- more economically developed countries	(2)
3.3.4	-Panel 1- lack of access to food -Panel 2- more access to food	(4)
3.3.5	-Drought -Floods -Desertification -Land degradation -Soil erosion	(4)
3.4	Balance of trade	
3.4.1	It is the difference in value between a country's imports and export	(2)
3.4.2	(a) Export are 166.5 billion compared to imports which where 108.8 billion Export were 51% compared to import which were 19.3% (b) -Precious metals and stones (7%) -Base metals (9%) -Chemicals (23%) -Vegetable products(10%)	(1)
3.4.3	-Mineral products -Vehicles and transport -equipment	(1) (2)

3.4.4	-Goods move freely between countries -Trade will occur without restrictions -Prices will be determined by government	(4)
3.4.5	-Foreign capital flows into a country -Economic growth is stimulated -Jobs are created -Standard of living improves	(6)
3.5	International trade	
3.5.1	Exchange of goods and services between countries of the world	(2)
3.5.2	Poultry/chicken	(1)
3.5.3	Trade tariffs, trade quotas/ import duties/sanctions	(4)
3.5.4	-Negative balance of trade -Profit decline for local producers -Local producers forced to shut down -High unemployment	(4)
3.5.5	1.1.1. Export promotion: to increase quantity and variety of goods that are exported government offers subsidies and tax rebates. Import substitution: replacement of imported goods by locally produced goods. Protectionism: restrictions are placed on trade between countries by using import tariffs, quotas and regulations.	(4)
3.6	Development Aid	
3.6.1	Refers to financial, technical and humanitarian support provided by developed countries to poor countries	(2)
3.6.2	Humanitarian aid	(1)
3.6.3	Bilateral- support given by a developed country in to a poor country with conditions attached Humanitarian aid- support designed to save lives, alleviate poverty and protect human dignity	(4)
3.6.4	Positive- poverty reduction Improvement in technology Improvement in healthcare facilities Education and skill development Infrastructural development Improvement in employment opportunities Negative- dependency Corruption and mismanagement of the funds Debt accumulation Create unequal relationship	(8)

3.7	Development Aid	
3.7.1	Aid designed to save lives Aid aimed at protecting human dignity Aid that is given to relieve people during emergency	(2)
3.7.2	Mozambique Malawi Madagascar	(2)
3.7.3	Food Clean water Protection Shelter Health/medical services	(1)
3.7.4	Flooding and strong winds affects people Cholera pandemic Lack of clean water People lost houses and needed shelter	(2)
3.7.5	LEDCs have fewer financial resources to assist Low economic growth and high debts. Inadequate infrastructure Lack of skills to assist Limited resources Political instability and corruption	(4)
3.7.6	Culture of dependency is created High risk of corruption High debts. on recipient countries Hidden agenda from donor which may not be beneficial	(4)

3.8 RESOURCES AND SUSTAINABILITY

3.8.1	C		
3.8.2	F		
3.8.3.	G		
3.8.4.	B		
3.8.5.	A		
3.8.6.	D		
3.8.7.	H		
3.8.8.	E	(8 x 1)	(8)

3.9	Soil Erosion			
3.9.1	<ul style="list-style-type: none"> • The loss of soil from the ground's surface (by wind and water) • The removal of fertile topsoil at a greater rate than it can be formed 	(1 x 2)		(2)
3.9.2	Donga	(1 x 1)		(1)
3.9.3	<ul style="list-style-type: none"> • Vegetation is removed / stripped away • Reduced ground cover which protects the soil • Bare soil is more susceptible to being displaced by wind / water • Without sufficient ground cover, raindrops hit the soil directly, dislodging soil particles • Soil compaction reduces ability to absorb water, increases surface runoff 	(2 x 2)		(4)
3.9.4	<ul style="list-style-type: none"> • Expensive to pay for restoration measures • Soil conservation practices are costly • Soil remediation increases costs • Reduced agricultural productivity • Job losses on farms increases poverty • Lower crop yields • Increased food price • Farm lands are abandoned • Loss of arable land • Higher infrastructure maintenance costs • Cost of water treatment because of sedimentation • Higher costs for water purification • Higher flood risk has damage costs • Loss of property value • Increased insurance premiums • Investment in agriculture and rural development deterred 	(2 x 2)		(4)



3.9.5	<ul style="list-style-type: none"> • Plantation of vegetation protects soil from heavy rain <ul style="list-style-type: none"> ○ Buffer / less exposed soil ○ Reduces wind speed / acts as a wind break ○ More vegetation slows down water movement / reduces erosive capacity of water ○ Less run-off and more infiltration with vegetation cover ○ Soil is stabilised (more roots to bind soil) ○ Soil is more anchored and reinforced by root system ○ More vegetation increases the soil's water holding capacity, decreasing runoff ○ Increased interception of rain by vegetation, reduces surface runoff ○ Decrease in soil compaction / soil is well-aerated 	(2 x 2)		
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(4)
[15]

3.10 Soil Erosion

3.10.1	Thin layer of loose organic and weathered material found on the Earth's surface. (1)	(1 x 2)
3.10.2	Overgrazing	(1 x 1)
3.10.3	Rotational grazing, help to reduce overgrazing, improve soil quality, and reduce soil erosion.	(1 x 2)
3.10.4	<ul style="list-style-type: none"> • The land becomes less productive for agriculture. • Soil and fertilizers eroded into rivers can damage freshwater and kill marine habitats which serve as food to the local communities. • Flooding becomes more common. • Famine since little vegetation is able to grow on land. • Rural-urban migration due to food shortages and food insecurity. 	(2 x 2)
3.10.5	<ul style="list-style-type: none"> • Promote more sustainable agriculture. • Reduce deforestation. • Prevent desert expansion. 	(2 x 2)

	<ul style="list-style-type: none"> • Proper soil management reduces the risk of severe soil erosion. • Afforestation programmes. • Encouraging crop rotation to increase soil stability. • Educating farmers on proper farming techniques. • Practicing rotational grazing. 		
3.11 Energy sources			
3.11.1	<ul style="list-style-type: none"> • Renewable: Can be replaced over a relatively short time such as trees. • Non-renewable: Take a longer time to replace themselves such as oil. 	(2 x 2)	
3.11.2	<ul style="list-style-type: none"> • Solar • Wind • Hydro electricity <p>[ANY TWO]</p>	(1 x 1)	
3.11.3	<ul style="list-style-type: none"> • The nuclear disaster at Fukushima in Japan in 2011. • Solar, wind and hydro power station are beginning to play a larger role. • Referendum results suggest voters are in favour of environmentally friendly energy. <p>[ANY TWO]</p>	(2 x 1)	
3.11.4	<ul style="list-style-type: none"> • High cost of building nuclear power stations. • Previous accidents such as Chernobyl and nuclear power plant in Fukushima. • Fossil fuels, nuclear fuels are non-renewable energy resources. • If there is an accident, large amounts of radioactive material could be released into the environment. • Nuclear waste remains radioactive and is hazardous to health for thousands of years. <p>[ANY TWO]</p>	(2 x 2)	
3.11.5	<ul style="list-style-type: none"> • Increase in electricity cost, will disadvantage the poor. • Production costs will increase, with a hike in product price. • Industrial production will decline, with the export market being influenced negatively. <p>[ANY TWO]</p>	(2 x 2)	
3.12 Energy sources			
3.12.1	Thermal		
3.12.2	Extraction		
3.12.3	Convictional		
3.12.4	Non- convectional		
3.12.5	Biogas		
3.12.6	Biomass energy		
3.12.7	Fracking	(7 x 1)	

3.13 non-convective energy sources		
3.13.1	Nuclear	
3.13.2	Geo-thermal	
3.13.3	Biomass	
3.13.4	Solar	
3.13.5	Thermal	
3.13.6	Nuclear	
3.13.7	Hydro	
3.13.8	Thermal	(8 x 1)

