

TEACHERS WITHOUT BORDERS PROGRAMME

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basic education
Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

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In Bill Gates words, at the Mandela Day 'Living Together' address: "Maintaining the quality of this country's higher education system while expanding access to more students will not be easy. But it's critical to South Africa's future" – working together, we can help achieve this."

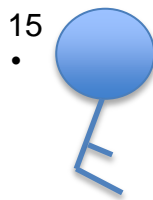
Contributing schools to date:

Clifton School	Milnerton High	Rustenburg Girls' High	St Peter's
Durban Girls'	Northwood High	St Anne's DC	St Stithians
Fairmont High	Roedean	St John's DSG	Wynberg Boys' High
Herzlia High	Rondebosch Boys'	St Mary's DSG Kloof	Wynberg Secondary

G11 June Exam Memo

1.1 Local weather patterns

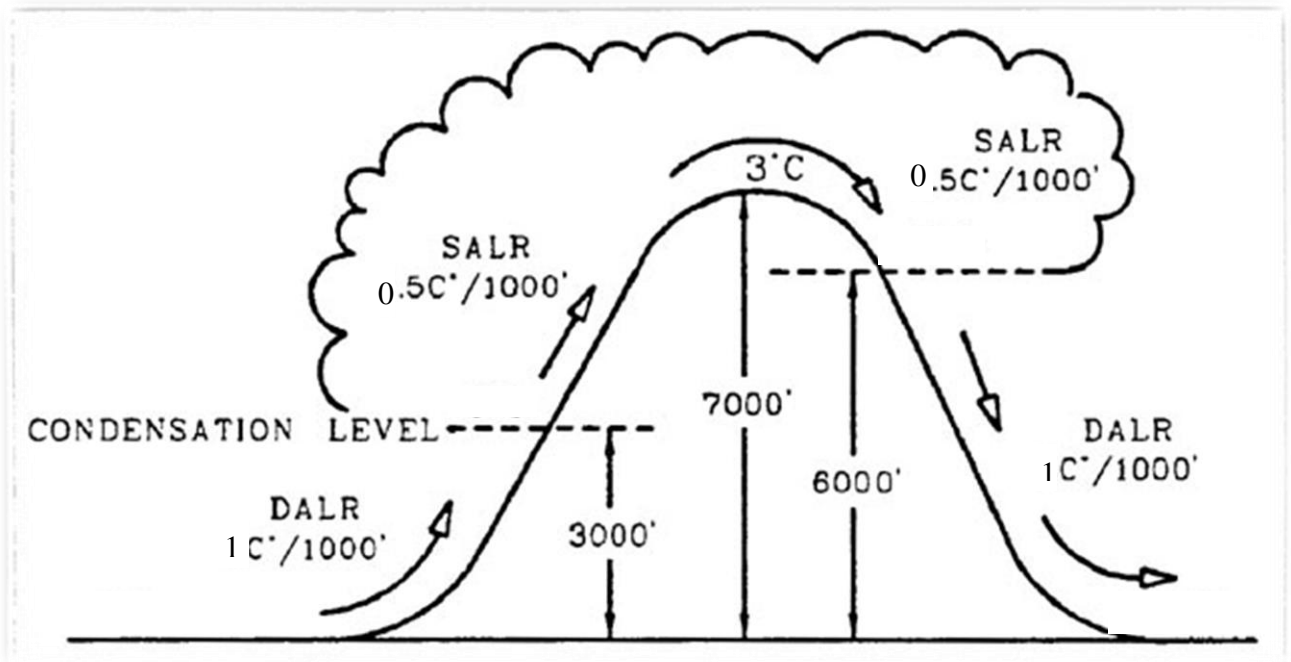
- 1.1.1. winter (1)
- 1.1.2 Rest of SA: summer rain (2)
- 1.1.3
 - a) T: 17-18°C; P: 1015 – 1018 hPa (2)
 - b) 2am on 14 Nov (2)
- 1.1.4 (5)
 - Temp 14/15°C
 - Overcast, rain
 - S wind, 15 knots



- 1.1.5 (1)
 - 4pm, end of day TR occurs, general cooling down??
 - Passing of CF/MLC
 - Overcast = less insolation [anything logical]

[12]

- 1.2.1 HP Weak due to stability of descending air. LP Strong due to unstable convection currents (2)
- 1.2.2 a) (1)
 - 1018hPa
- b) (2)
 - HP – higher than 1013 adjacent isobars increasing in value
- 1.2.3 (6)



- 1.2.4 a) Mid-Latitude/Sub tropical HP (1)
- b) Hadley and Ferrel Cells (2)

1.2.5

- a) 20 knots (1)
- b) Blowing parallel to isobars (2)
- c) Air blows under PGF from H-L. Cf acts at perpendicular to wind (greater wind speed = greater effect of CF) at high wind speed Cf is balanced by PGF & geostrophic balance is achieved (4)
upper atmos – little friction

1.3.1

(4)

	Water content	Velocities
mudflows	a) high	c) 1cm – 10m per sec (fast)
rock falls	b) low	d) 1m - 100m per sec (even faster)

1.3.2

(4)

Loose material slips downslope in curved path. Base of material slipd more rapidly than surface (from underneath) Scar makes curve on hill
Where soft rocks lie on resistant rocks. (Or medium water & speed??)

1.3.3

Expantion & contraction of soil particles by heating/cooling hydration/dehydration causes particles to move downslope under gravity. due to extremely small movements of soil, movement is slow. (4)

1.3.4

(4)

. Discuss 2 - Gabions, cement screeding, netting

1.3.5

. Negative impact: rocks falling on cars, closing of pass, delay in travel time (2)

2.1.1.

A the equatorial low (1)

2.1.2

C polar easterlies (1)

2.1.3

B Ferrel cell (1)

2.1.4

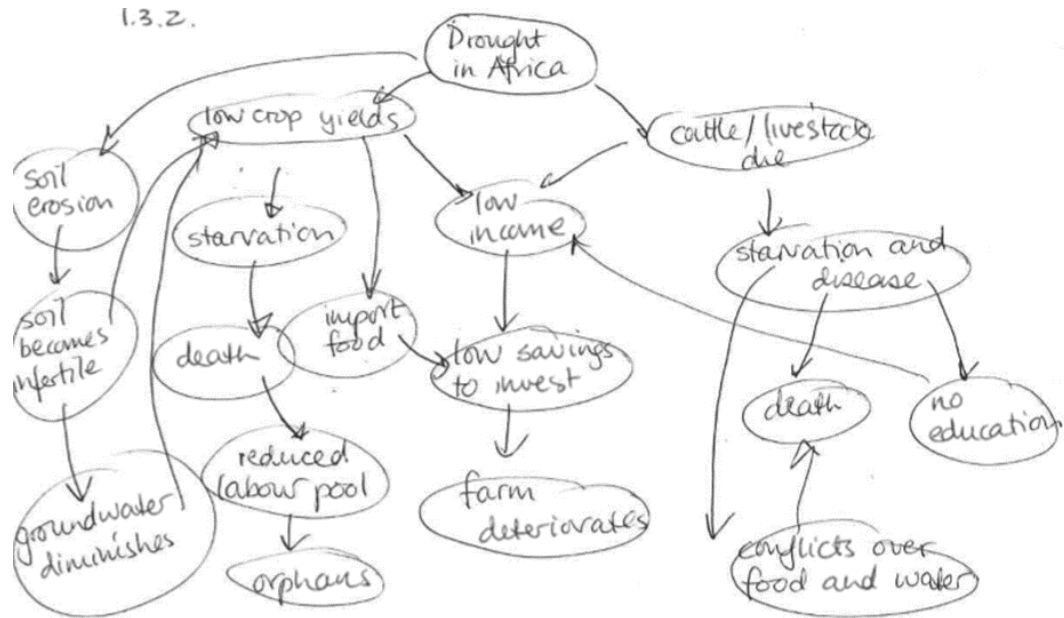
D high pressure (1)

2.1.5

C the polar front (1)

2.2.1

- a) Prolonged period of much drier weather than normal (e.g. season) (1)
- b) rain follows movement of ITCZ (2)
- c) (6)



MUST show clear LINKS of CAUSE → EFFECT
 Must cover economic, environmental + social impacts.

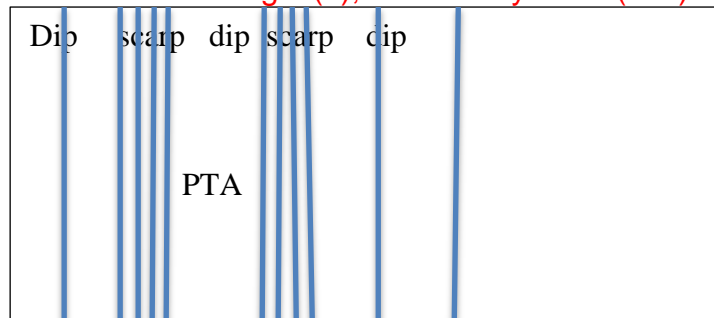
2.3.1

- a) (2)
magma pushes into crust and crystallises below the surface
- b) (1)
batholith/laccolith

2.3.2

- a) (1)
Magaliesberg
- b) (2)
inclined = tilted/at an angle (1); strata = layers of (sed) rock (1)

c)



2.4.1

- canyon (1)

2.4.2

- Water hard to access; good for tourism; difficult to build infrastructure (4)

3.1

- a (1)

3.2

- 27°51'43"S 25°38'27"E (2)

3.3

- a) 33° NE (2)
- b) 43°30' (1)
- c) 43°36' (2)

3.4

- 2527BD (2)

3.5 $(16.5 * 50\ 000)/100\ 000 = 8.15\text{km}$

(2)

3.6 $8.15\text{km}/4\ \text{min} = 2\text{hrs}\ 4\text{min}$

(3)

3.7 1180m

(1)

3.8 NNW

(1)