

CURRICULUM GRADE 10 TO 12

STEP AHEAD LESSON PLANS

2021

GRADE 11

GEOGRAPHY

ASSESSMENT ACTIVITY ONE

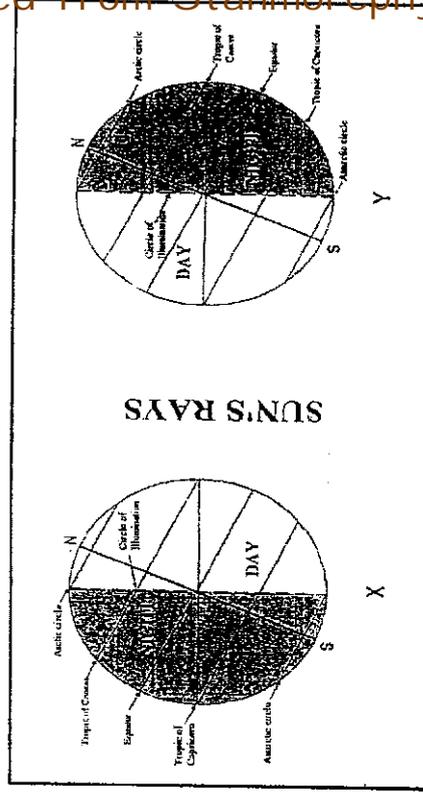
TOPIC: THE ATMOSPHERE

TIME : 30 minutes

MARKS: 20

QUESTION ONE

Refer to Figure 1.1. Below which shows two seasonal positions of the Earth and answer the set questions.



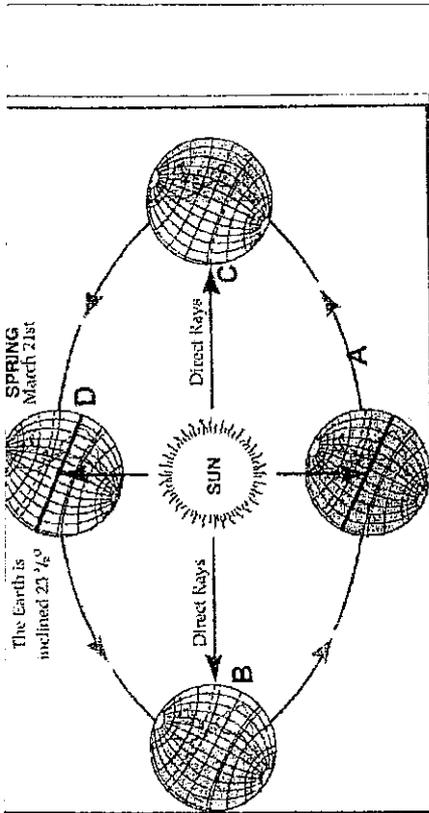
1.1. Define the term equinox. (1X1)(1)

1.2.1 Does X represent an Equinox or Solstice (1X1)(1)

1.2.2 Give a reason for your answer. (1X2)(2)

1.3 Refer to position Y and give the season South Africa is experiencing. (1X1)(1)

1.4 Explain how ocean currents play a role in restoring the energy balance between the Poles and Equator. (2X2)(4)



1.5 Refer to Figure 1.2 above showing Earth movements and answer the following questions.

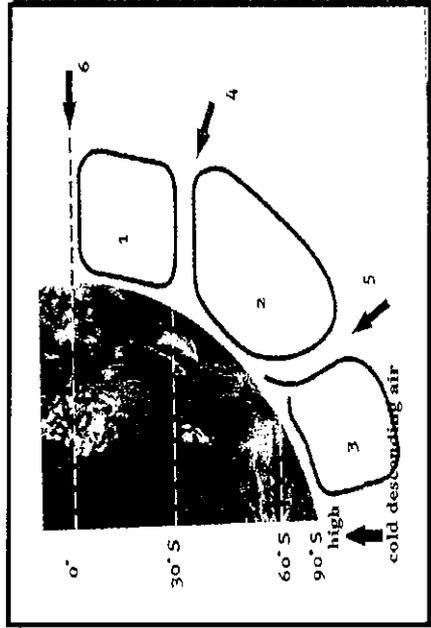
- 1.5.1 Identify the earth movement shown in the diagram. (1X1)(1)
- 1.5.2 Name the seasonal phenomenon experienced in the Northern Hemisphere on 21 March as indicated on the diagram. (1X1)(1)
- 1.5.3 In which position of the earth does the Southern Hemisphere experience summer? (1x1)
- 1.5.4 Provide TWO reasons to support your answer. (2x2)(4)
- 1.5.5 Describe the position of the sun when an equinox is experienced (2x1)(2)
- 1.5.6 On which two dates do equal day and night? (1x2)(2)

MARKING GUIDELINES

- 1.1 When the day and night are of equal length throughout the world (1x1)(1)
 - 1.2 Solstice (1) when the sun is overhead the tropics. (1x2)(2)
 - 1.3 Summer – (1x1)(1)
 - 1.4.1 Warm currents move warm water from the equator toward the poles thus increases the temperature. (1x2)(2)
 - 1.4.2 Cold currents take cold water from the poles towards the equator thus decreases the temperature. (2x1)(2)
 - 1.2.1 Revolution (1x1)(1)
 - 1.2.2 Spring Equinox (1x1)(1)
 - 1.2.3 C (1x1)(1)
- Reasons- Sun rays are directly over the Tropic of Capricorn/ the SH hemisphere is tilted towards the sun/ SH experiences long days and short nights. (2x2)(4)
- 1.2.4. The sun is directly overhead the equator. (2x1)(2)
 - 1.2.5. 21 March and 22 September (2x1)(2)

ASSESSMENT TOPIC : GLOBAL AIR CIRCULATION
TOTAL MARKS : 20
DURATION : 30 MINUTES
ACTIVITY 1

Study the diagram below in FIGURE 1.1 and answer the questions that follow



- 1.1.1 Identify the pressure belts at 0°S, 30°S, 60°S and 90°S as well as the air circulation cells at 2 and 3 (6 x 1)(6)
(2 x 1)(2)
(1 x 1)(1)
- 1.1.2 Explain how the air circulation cell at number 1 is formed. (1 x 1)(1)
- 1.1.3 Where on the diagram will the ITCZ be situated? (1 x 1)(1)
- 1.1.4 Name the global winds that blow between 30°S and 60°S on the diagram. (1 x 1)(1)
- 1.1.5 Which forces are responsible for the wind speed and wind direction of the winds mentioned in QUESTION 1.1.4? (2 x 1)(2)
- 1.1.6 Write a paragraph of 8 lines to discuss the influence of the winds mentioned in QUESTION 1.1.5 on the weather conditions in the Western Cape. (4 x 2)(8) [20]

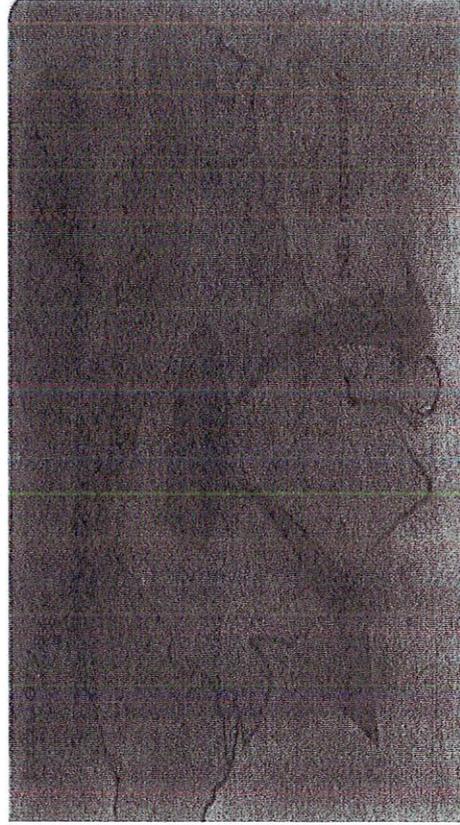
SOLUTIONS

- 1.1.1
0° – Equatorial LP
30° S – Subtropical HP
60° S – Sub polar LP
90° S – Polar HP
2 – Ferrel cell
3 – Polar cell
1.1.2 Warm air rises near the equator and flows back to the poles Descends near 30° N and S and flows back to the equator close to the earth's surface (2 x 1) (2)
- 1.1.3 The equator/no.6 (1 x 1) (1)
- 1.1.4 Westerlies (1 x 1) (1)
- 1.1.5 Windspeed = pressure gradient force Wind direction – Coriolis force (2 x 1) (2)
- 1.1.6 The westerlies blow between the Subtropical HP and the Sub polar LP
NW – winds in the SH. Greater Coriolis force results in a change of direction to SW-winds. Blow at gale force speed. Blow from warm to colder region and increase the temperature of the coastal areas. With the migration of winds during winter, the Western Cape is under the influence of the Sub polar LP and the SW-winds bring rain to the area (6 x 1) (6)

(Any 4 x 2) (8) [20]

ACTIVITY

- 1.1 Study FIGURE: 1 and thereafter answer the questions that follows.



- 1.1.1. Explain the concept monsoon wind. 1 x 1 (1)
- 1.1.2. Does the diagram show a summer or winter monsoon? 1 x 1 (1)
- 1.1.3. Suggest TWO reasons, evident on the diagram, to support your answer. 2 x 2 (4)

- 1.1.4. The figure above is a north easterly monsoon. Give ONE reason to support your answer. 1 x 2 (2)
- 1.1.5 Explain the impact of the above monsoon on the environment of India. 2 x 2 (4)
- 1.1.6. "The monsoons can be regarded as a blessing as well as a curse for the people of India". In a paragraph of approximately EIGHT lines, explain this statement. 4 x 2 (8)

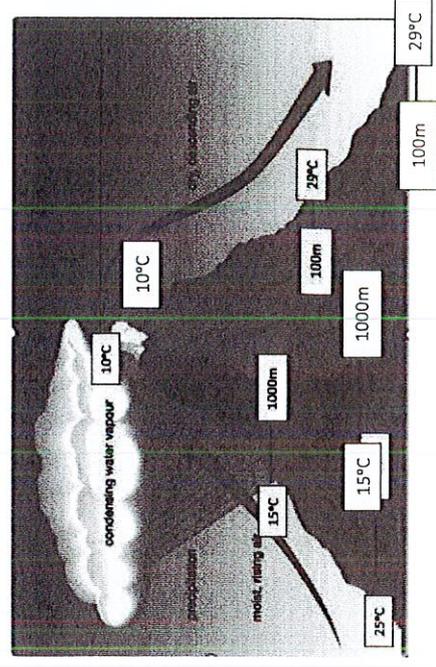
1.2 Climate data for Lagos, Nigeria

Month	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sept	Oct	Nov	Dec
Rainfall	25	43	97	140	251	386	248	74	161	177	70	21
Temp	27,5	28,2	28,6	28,2	27,5	26,4	25,7	25,2	25,7	26,3	27,4	27,3

1.2.1 Calculate the following for Lagos:

- 1.2.1.1 Total annual rainfall in mm. 1 x 1 (1)
- 1.2.1.2 The range in temperature 1 x 1 (1)
- 1.2.1.3 The range in rainfall 1 x 1 (1)
- 1.2.2 Using the data given state and explain the type of the climatic region in which Lagos is found. 2x2 (4)
- 1.2.3 Draw a bar graph and a line graph indicating climatic factors depicted in the table above for Lagos. 8x1 (8)

- 1.3 Study the figure below about Föhn wind in Asia and answer the questions that follow. (15)



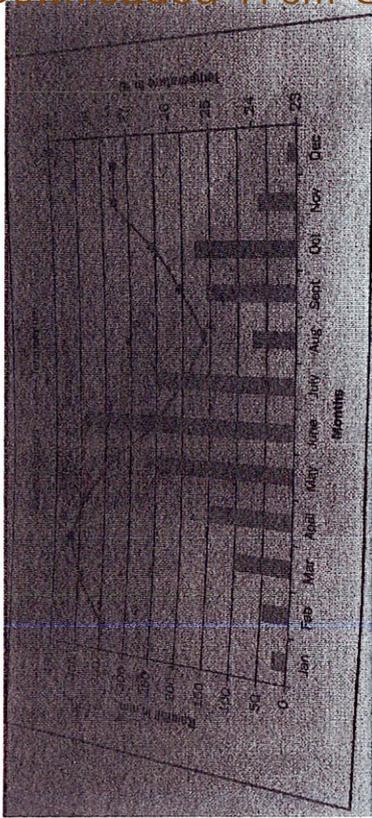
- 1.3.1 Define the term Fohn wind 1x1 (1)
- 1.3.2 What is the rate of cooling of air as it is evident along the windward side 1x2 (2)
- 1.3.3 Calculate the difference in temperature of the wind at the base of the mountain on the windward side and leeward side. 1x2 (2)
- 1.3.4 Give reasons for the warm air prevailing on the leeward side of the mountain 2x2 (4)
- 1.3.5 Account for the precipitation that is experienced on the windward side 3x2 (6)

SOLUTIONS

- 1.1 Monsoon Winds**
- 1.1.1. They are seasonal winds that change direction in summer and winter (1x1) (1)
- 1.1.2. Winter (1x1) (1)
- 1.1.3. Winds blow from land to sea (1x2) (2)
- 1.1.4. The wind that is blowing from the land to the sea is a north-easterly wind and the winds are named by the direction in they are coming from. (1x2)(2)
- 1.1.5. Positive impact**
- Its brings good rainfall for agriculture in India
 - Availability of water for human consumption
- Negative impact**
- Flooding
 - Drowning of people (any reasonable response) (3x2) (6)
- 1.1.6 **Curse**
- Destroys homes
 - Destroys crops and agricultural land
 - People are wounded and killed

- SOLUTIONS**
- 1.2 AFRICA'S CLIMATE: Lagos**
- 1.2.1 (a) Total annual rainfall 1693 mm (1x1)(1)
- (b) The range in temperature 28.6 °C - 25.2°C= 3.4° C (1x1) (1)
- (c) The range in rainfall 386 - 21= 365 mm (1x1) (1)
- 1.2.2 Mediterranean climate - Lagos receives rainfall in Winter
- Between April and July (2x2) (2)

1.2.3.



(8x1)

ACTIVITIES

1.1 Read the article A and B below based on El Nino and answer the questions that follow:

- 1.1.1 Define the term El Nino 1x1 (1)
- 1.1.2 During which months does this phenomenon occur? 1x1(1)
- 1.1.3 How does this event impact on globally and in Africa? 2x2(4)
- 1.1.4 Explain the relationship between climate change, El Nino and Global Warming 3x2 (6)
- 1.1.5 Suggest why the WMO Chief Jarraud specifically refers to human induced Climate change 2x2 (4)

(16)

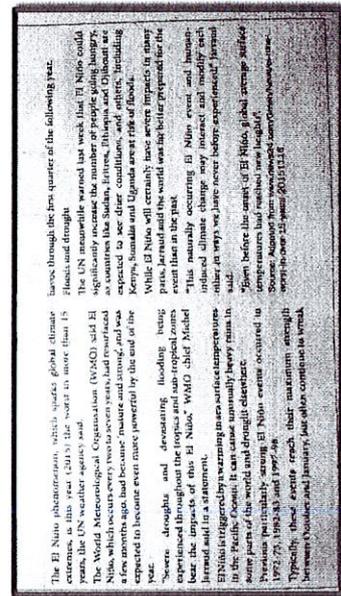
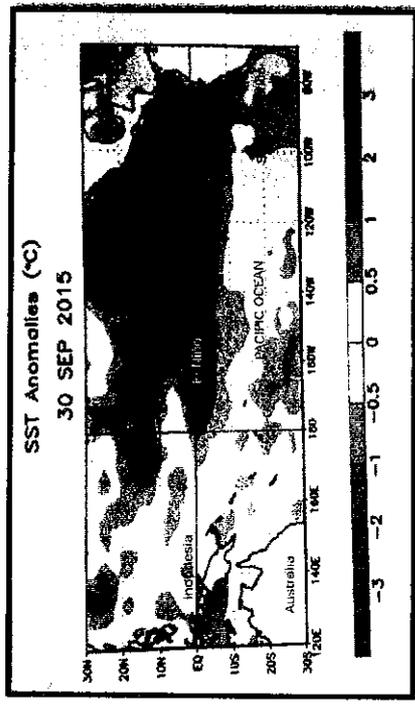


FIGURE B



SOLUTIONS

1.1 Monsoon Winds

- 1.1.4. They are seasonal winds that change direction in summer and winter: (1x1) (1)
- 1.1.5. Winter (1x1) (1)
- 1.1.6. Winds blow from land to sea (1x2) (2)
- 1.1.4. Presence of high pressure cell over the land (1x2) (2)
- 1.1.4. The wind that is blowing from the land to the sea is a north-easterly wind and the winds are named by the direction in they are coming from. (1x2)(2)
- 1.1.5. **Positive impact**

- Its brings good rainfall for agriculture in India
- Availability of water for human consumption

Negative impact

- Flooding (3x2) (6)
- Drowning of people (any reasonable response)
- 1.1.6. **Curse**

- Destroys homes
- Destroys crops and agricultural land
- People are wounded and killed

Blessing

- Water is available for cultivation (2x2) (4)
- Water is available for domestic use. (2x2) (4)

ACTIVITIES

DEFINE THE FOLLOWING TERMS

- a) La Nina
- b) Floods
- 1. Refer to figure 1 and the extract 1 then answer the following questions
- Compare El Nino and La Nina in Transparency 1
- Identify the equatorial easterlies in Transparency 1
- What happened to the Equatorial easterlies in transparency 1 (La Nina conditions)
- Why is La Nina associated with Floods in Africa (refer to the global air circulation)

Extract 1

Q&A: How La Niña causes floods
By Clive Cookson

Published: January 13 2011 18:35 |Last updated: January 13 2011 18:35

Is there any link between the terrible floods in Australia and Brazil?

Yes – La Niña. Weather throughout the southern hemisphere is affected by the periodic oscillation between warming (El Niño) and cooling (La Niña) of surface waters in the central and eastern Pacific Ocean. The past few months have seen one of the most intense La Niña events on record.

How does La Niña cause floods?

The changing atmospheric circulation redistributes the rainfall. High pressure reduces the normally heavy precipitation over the tropical and subtropical Pacific. Instead of falling on the sea, the rain lands on continental landmasses on the ocean margins. Although eastern Australia is particularly vulnerable, "La Niña tends to intensify all the monsoon systems in the southern hemisphere," says Nicholas Klingaman, tropical climate specialist at Reading University in the UK. Besides Brazil, there has also been serious flooding this month in the Philippines, Sri Lanka and South Africa.

We have had a La Niña every few years since climate records began. Is this one unusual?

It is the most intense La Niña at least since the 1973-74 event, which caused the last devastating Brisbane floods.

Is climate change responsible?

That is, of course, a controversial question. Some climatologists say the event falls within the expected range of natural variability. Others say that, while La Niña would have appeared anyway, global warming has exacerbated its impact. Evidence supporting that claim comes from the fact that the water temperatures off the north - east coast of Australia have never been higher since records began. Warmer seas mean more moisture evaporating into the atmosphere and therefore heavier rainfall.

To what extent can we blame human activity for the death and destruction?

Even if man - made climate change is not a factor, population density and shoddy building practices are – and not just in the shanty towns that are all too often hit by floods in the developing world. Once Queensland has begun to recover from the impact of its floods, there will be soul-searching over the way housing has been built on natural flood plains. Australia has been too preoccupied in recent years with drought, failing to recognize that flooding too has historically been a peril.

What is the outlook? More flooding or is the worst over?

The medium-term prospects are not good. Experts say a strong La Niña is likely to last at least until March, so places that have suffered flooding during this southern hemisphere summer can expect more rain on saturated ground. They will be unlucky if the consequences are as serious as they have been so far this month, but a prolonged drying period is unlikely.

Looking further ahead, if you trust the majority of climatologists who believe in man - made climate change, the only thing that can be predicted with reasonable confidence is that meteorological extremes will occur more frequently. Copyright The Financial Times Limited 2011.

Figure 1

(EL NINO AND LA NINA CIRCULATION)

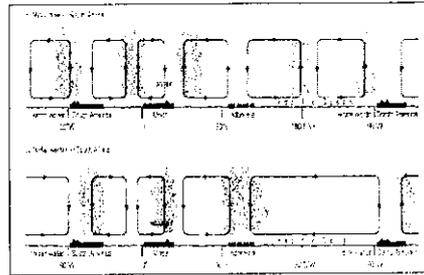


Fig 1

QUESTIONS AND SOLUTIONS

2. DEFINE THE FOLLOWING TERMS

- a) La Niña (1 x 1) (1)
 Is a short - term climate change where there are unusually cool sea surface temperatures in the western pacific?
 b) Floods: it is when the water is above the required level/ overflow of water
 c) Refer to Figure 1 and the extract¹ and answer the following questions
 d) Compare El Niño and La Niña in Figure 1

El Niño: sinking air over the continents
 Rainfall over the sea
 Equatorial easterlies changed direction from east to west (surface wind direction)

La Niña: rising air over the continents
 Rainfall over the continent
 Equatorial easterlies are from east to west (surface wind direction)

- e) Identify the equatorial easterlies in Transparency 2?
 f) What happened to the Equatorial easterlies in figure 2 (El Niño conditions)?

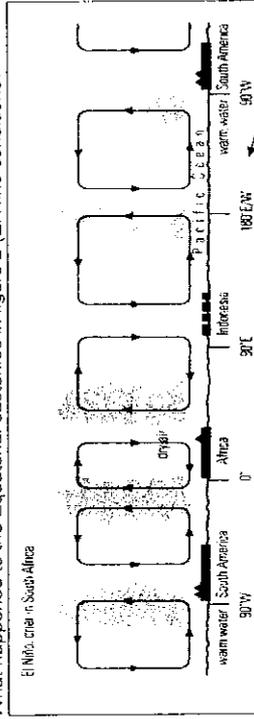


Fig 2

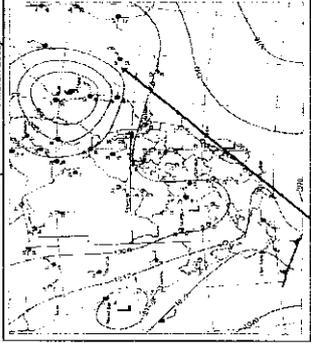
- g) Why is La Niña associated with Floods in Africa (refer to the global air circulation)?
 The changing atmospheric circulation redistributes the rainfall. High pressure reduces the normally heavy precipitation over the tropical and subtropical Pacific. Instead of falling on the sea the rain lands on continental landmasses on the ocean margins. Although eastern Australia is particularly vulnerable, "La Niña tends to intensify all the monsoon systems in the southern hemisphere," says Nicholas Klingaman, tropical climate specialist at Reading University in the UK. Besides Brazil, there has also been serious flooding this month in the Philippines, Sri Lanka and South Africa.

Worksheet on Synoptic Weather Chart

- Weather models/Weather stations
- Low pressure cells
- High Pressure cells
- Isobars

Where does the South African Weather Service obtain its information?

Identify the season of the synoptic map



1 March 2009

What is the date?

Where is the South Atlantic high pressure?

Where is the South Indian high pressure?

Is a mid-latitude cyclone close to or crossing the land?

Is a tropical cyclone evident?

Is there rain in the Western Cape?

Temperatures over the interior?

Cloud cover over the interior?

Presence of a high jet?

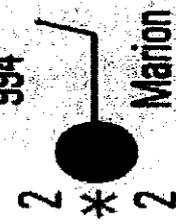
Presence of a coastal low?

Weather station:
Temperature: _____
Dew point temperature: _____
Wind direction: _____
Wind speed: _____
Cloud cover: _____
Precipitation: _____

- Radiosonde carries thermometer, barometer and hygrometer is sent to the higher atmosphere.

Weather Model

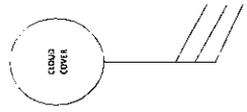
Example:



994

2 * 2

Marion



32 (AIR TEMP)

15 (LOW PUNT / TEMP)

CLOUD COVER

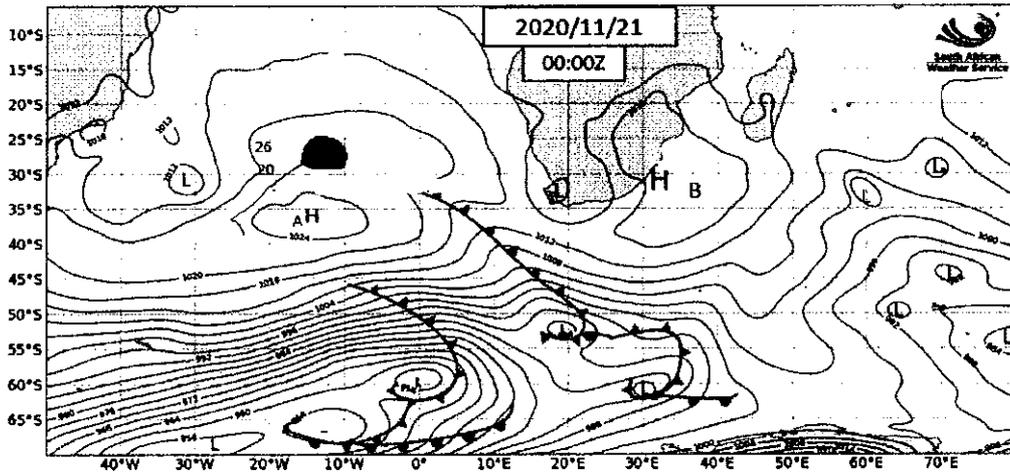


Fig 3.

SOURCE : GOOGLE

Refer to today's synoptic weather map

- 1.1 Name the pressure A and B respectively (1 x 2) (2)
- 1.2 Besides using the date, give two pieces of evidence to show that this is a summer map (2 x 1) (2)
- 1.3 Identify the name of the wind on the station model provided above (1 x 1) (1)
- 1.4 Give a reason for your answer (1 x 2) (2)
- 1.5 Interpret this weather station (1 x 5) (5)

SOLUTIONS

- 1.1 A SAH (1 x 2) (2)
 B SH
- 1.2 Midlatitude cyclone is further South (2 x 1) (2)
 Skies are overcast
 Temperatures are high
- 1.3 Geostrophic wind (1 x 1) (1)
- 1.4 Wind moves parallel to the isobars (1 x 2) (2)
- 1.5 Temperature = 26°
 Dew Point Temperature = 20°
 Wind direction = SW
 Wind speed = 10 knots (1 x 5) (5)

WORK GUIDE

3. DEFINE THE FOLLOWING TERMS
- c) Drought
- d) Desertification
- 4 Refer to transparency 1 and the extract and answer the following questions
- What are the causes of drought?
 - What is the impact of Drought on people, environment and economy
 - Identify the drought stricken countries Transparency 1

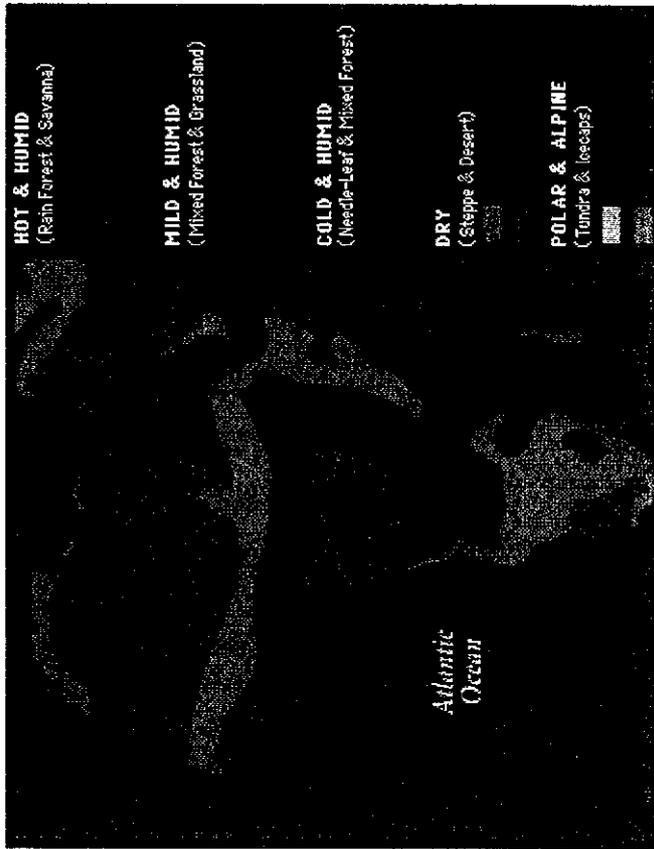
Extract

Drought, condition of abnormally dry weather within a geographic region where some rain might usually be expected. A drought is thus quite different from a dry climate, which designates a region that is normally, or at least seasonally, dry.

The term drought is applied to a period in which an unusual scarcity of rain causes a serious hydrological imbalance: water-supply reservoirs empty, wells dry up, and crop damage ensues. The severity of the drought is gauged by the degree of moisture deficiency, its duration, and the size of the area affected. If the drought is brief, it can be written off as a dry spell, or partial drought. A dry spell is usually defined as more than 14 days without appreciable precipitation, whereas a drought may last for years.

Droughts tend to be more severe in some areas than in others. Catastrophic droughts generally occur at latitudes of about 15°-20° in areas bordering the permanently arid desert regions of the world. Permanent aridity is a characteristic of those areas where warm, tropical air masses, in descending to Earth, become hotter and drier. When a pole ward shift in the prevailing westerly winds occurs, the high-pressure, anticyclonic conditions of the permanently arid regions impinge on areas that are normally subject to seasonally wet low-pressure weather and a drought ensues. A southward shift in the westerlies caused the most severe drought of the 20th century, the one that afflicted the African Sahel region for a dozen years, beginning in 1968.

TRANSPARENCY 1



a) Drought

It is when there is lack of rainfall for a long period of time

5. Refer to transparency 1 and the extract and answer the following questions
- b) What are the causes of drought?

- Climate change: global warming
- Short term climate change: El Nino
- High pressure systems

- c) What is the impact of Drought on people, environment and economy

- Decrease in agricultural production
- Forced migration
- Famine
- Increase in food prices
- Decrease in GDP
- Job Losses
- Destruction of Natural Vegetation
- Decrease in ground water
- More veldfires

- d) Identify the drought stricken countries Transparency 1?
Use an atlas to identify countries in the Sahara and Kalahari deserts

ASSESSMENT ACTIVITY ONE

TOPIC: Drought and Desertification

TIME : 30 minutes

MARKS: 18

QUESTION ONE

Read the following case study on the Sahel Desert and answer the questions that follow.

The Sahel Desert.

In the Sahel Desert, desertification is becoming a huge problem. Around the 1950s, people settled in the Sahel region, in areas where there was water. This resulted in overgrazing, which is one of the greatest cause of desertification. Eventually, the perennial shrubs were destroyed because of grazing, and they replaced by annuals. Then, the annuals were grazed out which left bare soil. A lot of the top soil was washed away and all that was left were rocks. Silt turned hard when it was hit by rain. Therefore plants were not able to grow because their roots could not penetrate this hard layer. Now this region has turned into desert and it continues to expand. (desertification, The Sahel, 2004) Records show that rainfall in the Sahel has decreased and sands have shifted about 60 miles south into the area. Sahel is expanding due to lack of vegetation in the area. Another reason desertification is happening in the Sahel region is because people are using the slashing and burning method to clear land. This degrades the quality of soil just like overgrazing.

(source: No author (No publisher, 2000)

Answer the following questions based on the case study.

- 1.1.1 Why did people settle in the Sahel region? (1)
- 1.1.2 State the main cause of desertification in this region. (1)
- 1.1.3 Explain how the quality of soil was affected. (2)
- 1.1.4 Briefly describe how this region became a desert. (6)
- 1.1.5 In a paragraph of approximately EIGHT lines, outline the possible sustainable measures to reduce the effects of desertification. (8)

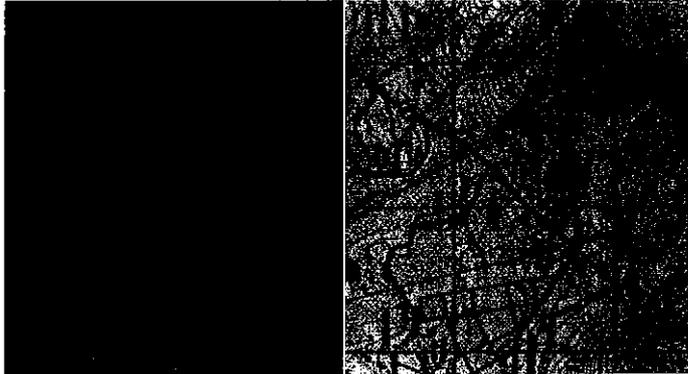
Possible answers

- 1.1.1 People settled there because there was water available (1)
- 1.1.2 Overgrazing (1)
- 1.1.3 – Topsoil was washed away (2)
- Silt turned hard and plant roots could not penetrate
- 1.1.4 - Land was grade out (2)
- Rain decreased
 - People used slashing and burning method to clear the land
 - Top soil washed away
 - Plant roots could not penetrate the soil
 - Perennial shrubs were destroyed
- (Any three) (6)
- 1.1.5 - Harvesting water during heavy rainfall
- Transfer of water from regions of high rainfall to where there is shortages
 - Desalination of sea water
 - Recycle and reuse of water
 - Dam construction
 - Education programmes to ensure sustainable use of water
 - Replace alien plants with indigenous plants
- (Any four) (8)

Work guide

The scale 1: 10 000

1: 50 000

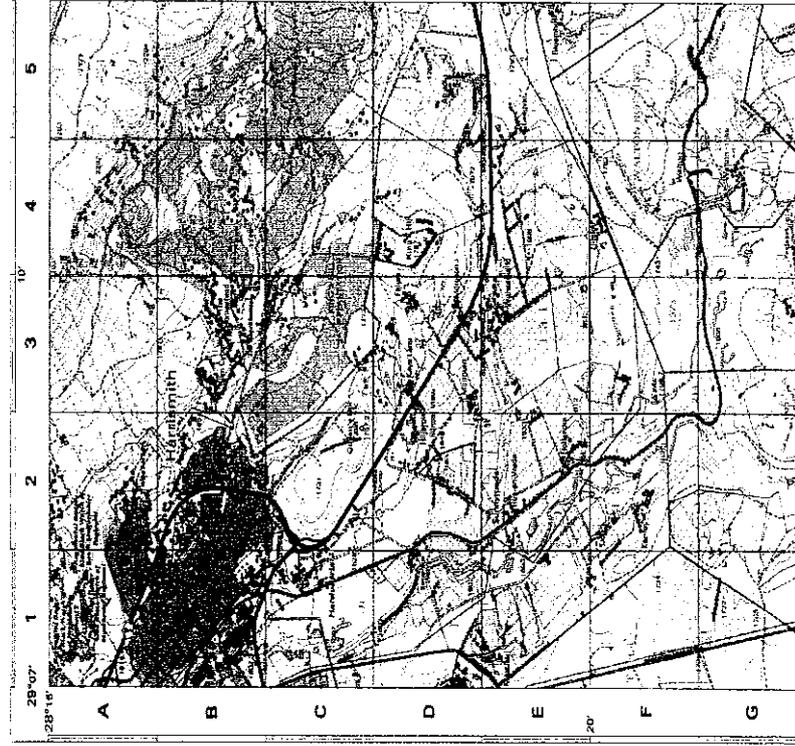


- 1.1 At what time of the day was this orthophoto taken? (1 x 1) (1)
- 1.2 Give reason for your answer (1 x 1) (1)
- 1.3 Comparing to the topographic map scale, which is 1:50 000 to that of an orthophoto map. Which scale is larger? (1 x 1) (1)
- 1.4 Provide a reason for your answer (1 x 2) (2)
- 1.5 Distinguish between the tone at B and H (1 x 2) (2)
- 1.6 Discuss two advantages of an aerial photograph (2 x 2) (4)

SOLUTIONS

- 1.1 Between 10 am and 12 am (1 x 1) (1)
- 1.2 The picture is clear There are no shadows (1 x 1) (1)
- 1.3 The orthophoto map has a larger scale (1 x 1) (1)
- 1.4 It gives more details and it is more clear (1 x 2) (2)
- 1.5 B – Lighter tone (1 x 2) (2)
H – Darker tone
- 1.6 It covers a larger area

ACTIVITY1



1.1. Refer to the topographical map of Harrismith above and answer the questions below;

1.1.1 Is this topographical map a vector or a raster (1 x 1) (1)

1.1.2 Give reason for your answer (1 x 1) (2)

1.1.3 Identify the following spatial objects in block B1 (1 x 3) (3)

A Lines

B

Points

C

Polygons

1.1.4 How can GIS assist the farmers about climate of Harrismith?

(2x1) (2)

Solutions

- 1.1.1 Vector
- 1.1.2 Information found in lines, point and polygons
- 1.1.3 A Roads
B Railways station, place of worship,
C Dam, recreational area, build up area
- 1.1.4 The farmers will know the rainfall patterns

The farmers will know which crops to plant

ASSESSMENT ACTIVITY ONE

TOPIC: Horizontal rock strata

TIME : 30 minutes

MARKS: 18

QUESTION ONE

1.1 HORIZONTAL LANDFORMS:

Refer to FIGURE 1.1 below showing landforms associated with horizontal strata and answer the following questions.



- 1.1.1 Identify landforms K and L respectively. (1x2)(2)
 1.1.2 Provide labels for P, Q and R. (3x1)(3)
 1.1.3 What type of rocks are associated with basaltic mountains? (1X1)(1)
 1.1.4 How do basaltic plateaus originate? (2 x 2) (4)
 1.1.5 Evaluate the economic importance of horizontal landscapes like the basaltic plateaus (2 x 2) (4)

Possible answers

- 1.1.1 K – butte
 L – mesa
 1.1.2 P – crest
 Q – cliff/ free face
 R – talus
 1.1.3 Horizontally inclined or massive
 1.1.4 Layers of rock that are parallel to the earth's surface
 Layers are separated by bedding planes
 Rock that have many joints
 1.1.5 Tourist attraction
 a source of income

ACTIVITY 1.1

1.1 INCLINED STRATA AND SLOPES

Refer to FIGURE 1.1 based on inclined strata. The landform A below is a cuesta.

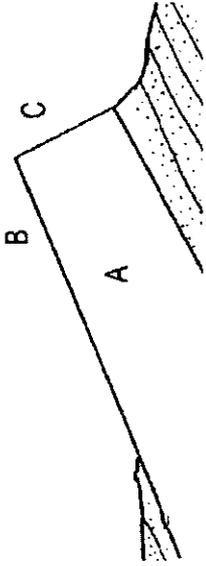


FIGURE 1.1

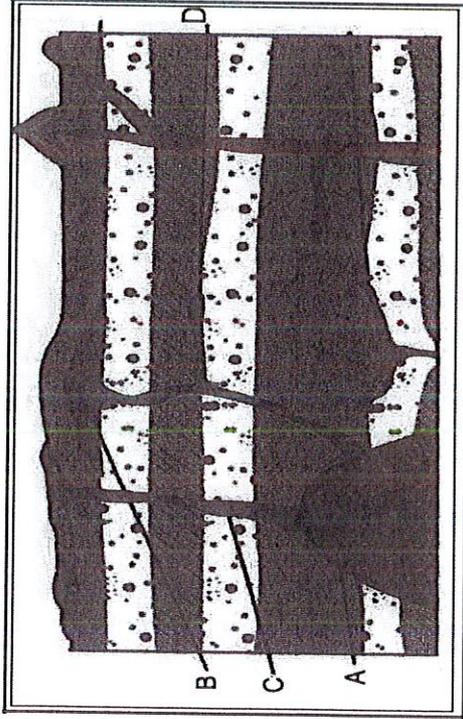
- 1.1.1 Define the term incline. (1x1)(1)
 1.1.2 Identify slopes B and C respectively (2x1)(2)
 1.1.3 Mesas will not develop in this landscape. Give a reason why this is so (1x2)(2)
 1.1.4 Suggest ONE way in which ridges, such as cuestas, are significant to humans. (1x2)(2)
 1.1.6 Write a paragraph in which you compare the difference between Cuestas, Homoclinal Ridges and Hogbacks. (4x2)(8)

Possible answers

- 1.1.1 It refers to the tilting of a horizontally layered strata
 1.1.2 B – dip slope
 C – scarp slope
 1.1.3 This landform does not have a flat surface it has tilted slopes
 1.1.4 Forestry is undertaken on the dip slope
 Dip slopes are gentle and good for settlement
 Basin cuestas have artesian wells that form oil traps
 1.1.5 Cuesta – it is an asymmetrical ridge with a gentle dip slope between 10 - 25°
 They can form cuesta domes or cuesta basins
 Homoclinal ridge – asymmetrical ridge with a dip slope at an angle of 25 - 45°
 Hogback ridge – asymmetrical ridge with a steep dip slope of more than 45°

Work guide

Figure 1.1 Intrusive Landforms

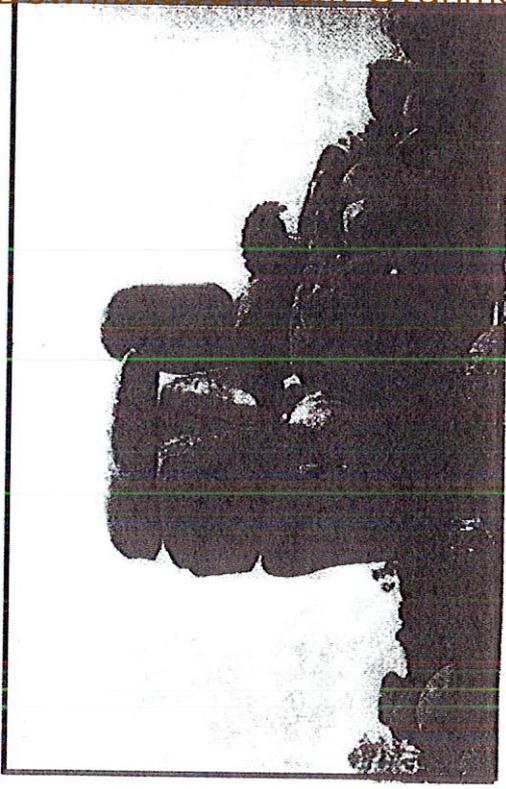


- 1.1.1 State the largest intrusive feature at A (1 x 1) (1)
 1.1.2 Label the landforms A, B, C, D respectively (1 x 4) (4)
 1.1.3 The mushroom shaped feature at B (1 x 1) (1)
 1.1.4 In a paragraph of approximately 8 lines account on the landforms that will develop when the intrusive features A, B, C and D are exposed above the surface (4 x 4) (8)

Solutions

- 1.1.1 Batholith (1 x 1) (1)
 1.1.2 A Batholith
 B Laccolith
 C Dyke
 D Sill (1 x 4) (4)
 1.1.3 Laccolith
 1.1.4 A mesa was previously a sill. A hogsback was previously a dyke. A cuesta dome was previously a laccolith. A granite dome was previously a batholith. A cuesta basin which was previously a lopolith (4 x 2) (8)

Figure 1.2 Tors



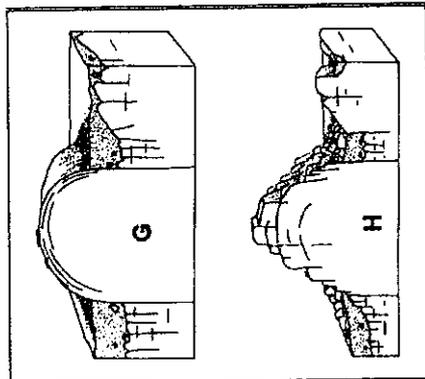
- 1.2.1 Define tors (1 x 1) (1)
 1.2.2 State the name of the largest rock A (1 x 1) (1)
 1.2.3 Account for the rock type that form the tors (1 x 2) (2)
 1.2.4 Classify the type of weathering accompanying the formation of tors (1 x 2) (2)
 1.2.5 In approximately 8 lines discuss the formation of the tors (4 x 2) (8)

Solutions

- 1.2.1 Pile of rounded core stones balancing on top of one another (1) **Concept** (1 x 1) (1)
 1.2.2 Granite dome (1 x 1) (1)
 1.2.3 Massive igneous rock (1 x 2) (2)
 1.2.4 Chemical weathering (1 x 2) (2)
 1.2.5 **Tors** - when vertical and horizontal joints/cracks formed because of water seeping through the rock chemical weathering to occur. Joints will widen - the rocks break down and become more rounded. The core stones appear as a loose pile after the eroded material has been removed - looks like rocks have been deliberately stacked (4 x 2) (8)

Figure 1.3

Tors



1.3. TORS

Refer to FIGURE 1.3 illustrating a granite dome and a tor and answer the following questions.

- 1.3.1 Name the landform H. (1x2)(2)
- 1.3.2 Describe ONE characteristic of the rock from which the above two landforms developed. (1x2)(2)
- 1.3.3 The weathering process of EXFOLIATION results in the rounded shape of the dome at G. Briefly explain this process. (1x2)(2)
- 1.3.4 In a short paragraph, discuss the differences in the formation of the Granite dome and the Tor. (4x2)(8)

Solutions

1.3 TORS

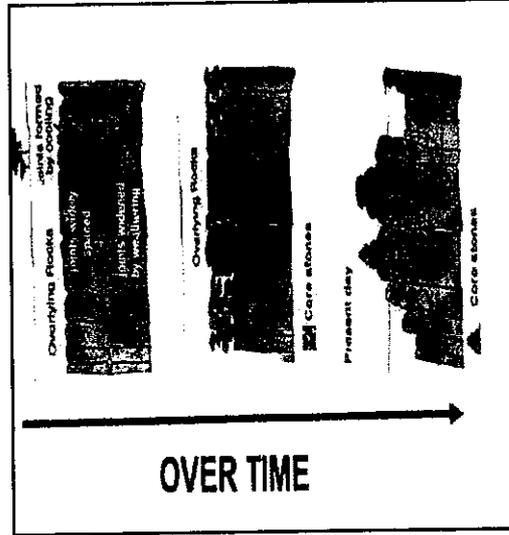
- 1.3.1 Tor or Tors (1x2) (2)
- 1.3.2 Massive igneous rock
Granite Hard rock
Resistant to erosion
Any ONE (1x2) (2)
- 1.3.3 Rocks heat and expand, Rocks cool and contract. The rock pieces flake off becoming rounder (1x2) (2)

1.3.4 Paragraph - discussing the differences in the formation of a granite dome and a tor.

Granite dome is formed when magma forced its way into the crust forming an igneous intrusion called a Batholith (or Laccolith) when the Batholith became exposed through erosion a granite dome resulted. Tors - when vertical and horizontal joints/cracks formed because of water seeping through the rock causing chemical weathering to occur. Joints will widen - the rocks break down and become more rounded. The core stones appear as a loose pile after the eroded material has been removed - looks like rocks have been deliberately stacked (4x2) (8)

ACCEPT OTHER CORRECT ANSWERS.

FIGURE 1.4: TORS



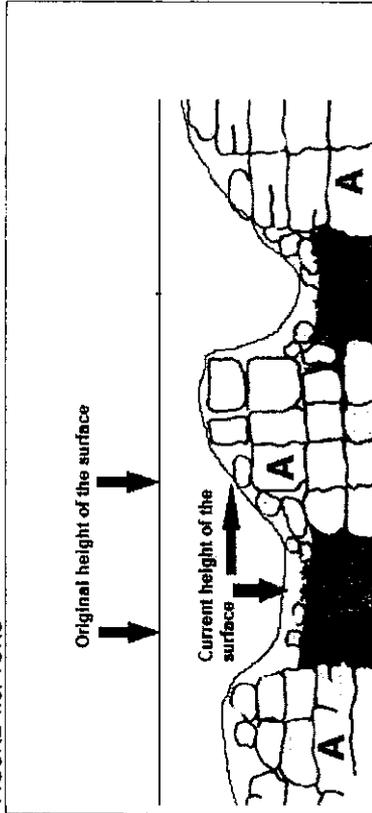
1.4 FIGURE 1.4 is based on the development of tors over time.

- 1.4.1 What are tors? (1 x 1) (1)
- 1.4.2 Name the massive igneous rock from which tors develop. (1 x 1) (1)
- 1.4.3 Describe the appearance of the present-day core stones of the tors. (1 x 2) (2)
- 1.4.4 Why is it possible for the core stones to remain in place although they seem very loose? (2 x 2) (4)
- 1.4.5 Outline the development of tors in a paragraph of approximately EIGHT lines. (4 x 2) (8)

FIGURE 1.4: TORS

- 1.4.1 Pile of rounded core stones balancing on top of one another (1) Concept) (1 x 1)
- 1.4.2 Batholith (1)
Laccolith (1) (Any ONE) (1 x 1)
- 1.4.3 The core stones are well rounded (2) (1 x 2)
- 1.4.4 The base of the tor is still joined to the original granite rock (2) Tors develop from igneous rocks, which are not easy to erode (2) During the development of tors, the core stones were joined when rain water seeped into the cracks and joints (2) (Any TWO) (2 x 2)
- 1.4.5 Igneous rocks cool down below the surface (2)
Cooling magma results in cracks and joints in the rock (2)
Chemical weathering occurs as ground water seeps into the cracks and joints (2)
Joints and cracks are widened through erosion (2)
The eventual removal of overlying rock layers, exposes the core stones (2)
The joints and cracks are further widened through mechanical weathering and erosion (2) (Any FOUR) (4 x 2)

FIGURE 1.5: TORS



1.5 Study FIGURE 1.5, which illustrate tors and answer the questions that follows:

- 1.5.1 Name ONE igneous intrusion that tors can originate from. (1 x 1) (1)
- 1.5.2 What is the rocks at A known as during the process of formation? (1 x 1) (1)
- 1.5.3 Name the type of igneous rock that A consists of. (1 x 1) (1)
- 1.5.4 Comment on the reasons as to why there is a difference in the current height of the surface although the original height was the same. (2 x 2) (4)
- 1.5.5 In a paragraph of approximately EIGHT lines, explain how tors develop (4 x 2) (8)

FIGURE 1.5: TORS

- 1.5.1 Batholith (1)
Laccolith (1) (Any ONE) (1 x 1) (1)
- 1.5.2 Core stones (1)
- 1.5.3 Granite (1)
- 1.5.4 The area consists of hard resistant rock and less resistant (1)
- 1.5.5 At the higher region, the rocks are more resistant to erosion, therefore difficult to erode. The higher region takes longer to be broken down by agents of weathering and erosion. At the lower regions, the area consists of less resistant rock, and therefore easier to erode. (Any TWO) (2 x 2)

Workguide

Learner Activity
Carefully study the following diagram showing a hillslope.



Copy and complete the table below in your answer book.

A			
B			N/A
C			N/A
D			

(10x1)(10)

Memo

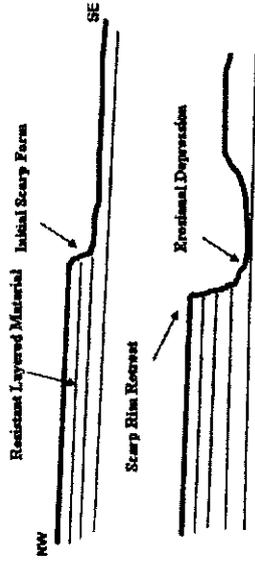
A	Crest ✓	Soil creep ✓	Sight seeing, tourism, photography, bungee jumping, abseiling ✓
B	Free face, scarp face ✓	Rock fall ✓	N/A
C	Talus, scree slope ✓	Mudflow, rockslide ✓	N/A
D	Pediment ✓	Sheet flow ✓	Farming, grazing, road-rail construction, property development ✓

(10x1)

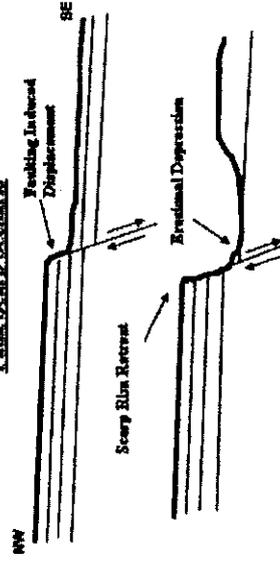
Learner Activity

Refer to the diagrams below

Resistant Cap Rock Scenario



Fault Scarp Scenario



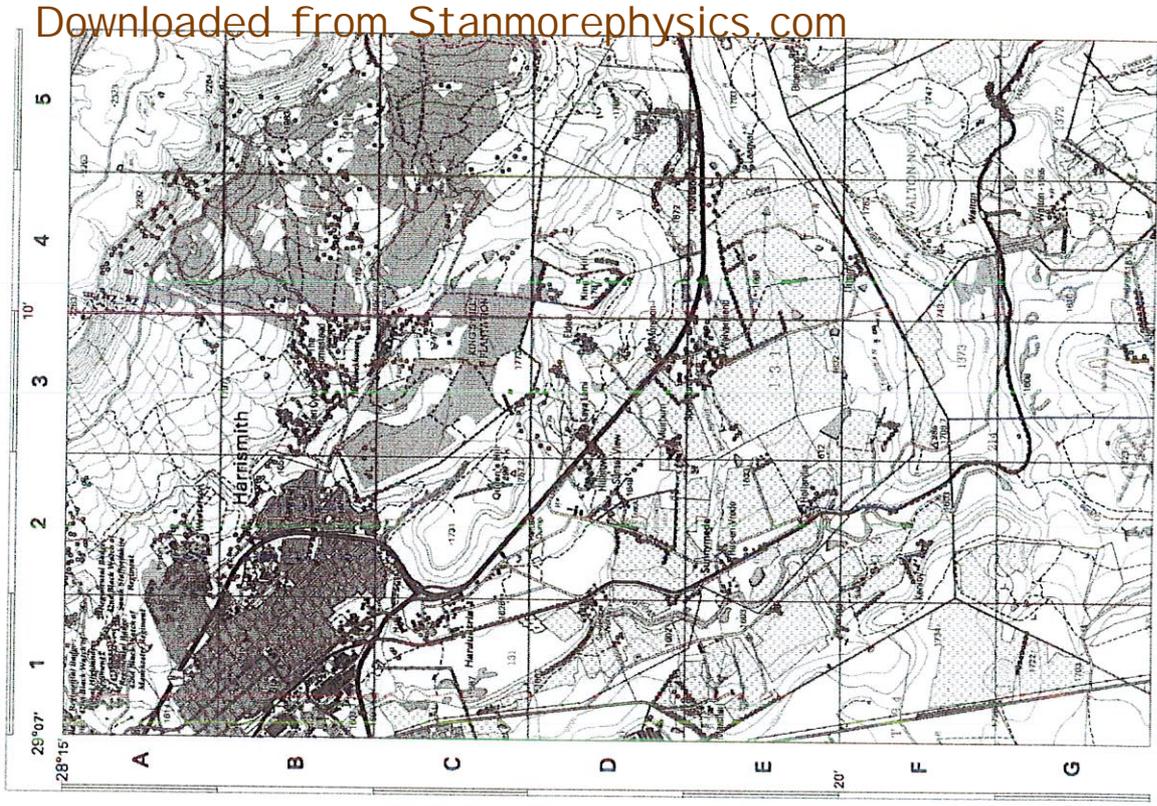
Source: sciencedirect.com

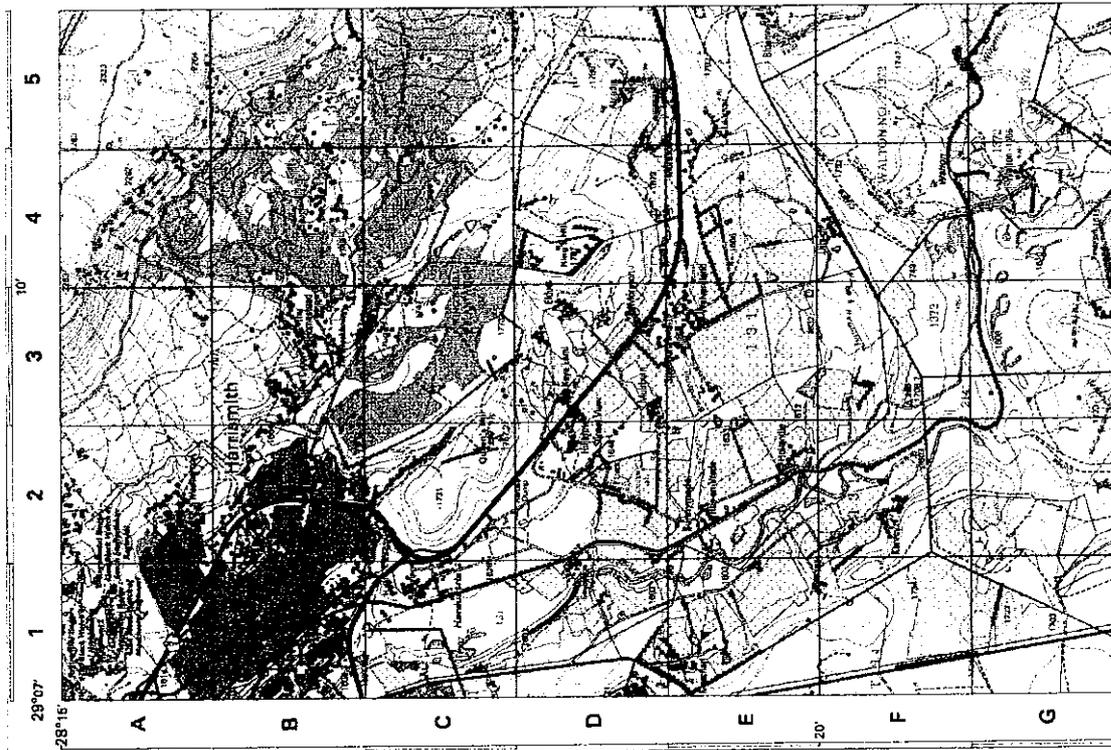
- 1 The diagrams above depict the process of scarp retreat. Explain in your own words what happens during the process of scarp retreat.

Memo

- slope angle and lengths remain uniform as the slope retreats parallel to itself
- Hillslopes are essentially free of sediment
- Parallel retreat occurs where underlying strata are protected by a resistant cap rock, such as a layer of sandstone, limestone, or lava.
- Failure of the caprock occurs only when erosion has removed the weaker rock supporting it. Parallel retreat is responsible for the classic stepped topography of the Colorado Plateau, and the formation of flat-topped
- upper slope weathers and erodes at a faster rate so there is progressive decline of slope angle occurs.

steep slope is progressively replaced by shallower lower slope deposits. The upper slope retreats parallel to itself while replacement of the lower slope forms a pediment.





1.1 Refer to the topographical map of Harrismith above and answer the questions below;

1.1.1 Differentiate between isobars and contour lines

Isobars: _____

Contourlines: _____ (2 x 1) (2)

1.1.2 Identify the pattern of contour lines in block D1 and the block B5

(2x1) (2)
1.1.3 Calculate the vertical exaggeration where VS is 1 cm = 20 meters and HS= 1:10000

(3 x 2) (6)

SOLUTIONS

1.1.1 Isobars are the lines on the synoptic map joining places with the same pressure. Contour-lines are the lines on the topographic map joining places with the same height.

1.1.2 D1 the contours are far apart from each other and the gradient is gentle while in Block B5 the contours are close to each other and the gradient is gentle

1.1.3 $VE = \frac{VS}{HS}$
 $20m \times 100 = 2000m$
 $1: 2.000$
 $1: 10.000$
 $\frac{1}{2000} - \frac{1}{10000}$
 $1 \times \frac{10.000}{2000}$
 5
 5 times

ACTIVITY

$$HE = 1,7 \text{ cm} \times 500 = 850 \text{ m}$$

$$G = \frac{26,2}{850}$$

$$850$$

$$G = 1$$

$$32,442$$

$$G = 1 : 32,442$$

ACTIVITY 1

1.1 Refer to the cartoon in FIGURE 1.1 showing trade and answer the questions that follow



FIGURE 1.1: TRADE

Source: NSC Geography examination paper grade 11 exemplar, 2013

- 1.1.1 Define the term Free trade. (1 x 1) (1)
- 1.1.2 Is the man with the cigar promoting free trade? (1 x 1) (1)
- 1.1.3 Give ONE reason for your answer to QUESTION 1.1.2. (1 x 2) (2)
- 1.1.4 Who in the cartoon represents the less economically developed countries? (1 x 1) (1)
- 1.1.5 Give TWO regulations used to prevent free trade. (2 x 2) (4)
- 1.1.6 Explain why free trade is to the advantage of less economically developed countries. (3 x 2) (6)

[15]

SOLUTIONS

- 1.1.1 Refers to the buying and selling goods and services. ✓
- 1.1.2 No ✓
- 1.1.3 A condition is attached to his assistance ✓
- 1.1.4 LEDC – Thin man/poorly dressed man/man with dog ✓
- 1.1.5 Tariffs ✓ ✓
Import licenses ✓ ✓
Export licenses ✓ ✓

- Import quotas ✓ ✓
- Subsidies ✓ ✓
- Local content requirements ✓ ✓
- Embargoes ✓ ✓
- Trade restrictions ✓ ✓

[Any TWO. Accept other]

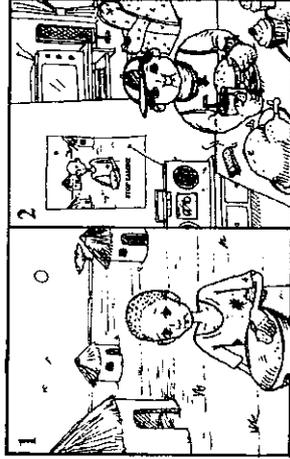
- 1.1.6 Trade of goods without taxes (including tariffs) or other trade barriers (e.g. quotas on imports or subsidies for producers) ✓ ✓
Trade in services without taxes or other trade barriers ✓ ✓
The absence of trade-distorting policies (such as taxes, subsidies, regulations, or laws) that give some firms an advantage over others ✓ ✓
Free access to markets ✓ ✓
Free access to market information ✓ ✓
Inability of firms to distort markets through government-imposed monopoly power ✓ ✓

[Any THREE. Accept other]

ACTIVITY 1

1.1 Study the cartoon below to answer the following questions.

FIGURE 1.1



Source: LearnExtra

- 1.1.1 Define the term development. (1 x 1) (1)
- 1.1.2 What does the cartoon say about development across the world? (1 x 2) (2)
- 1.1.3 Which panel represents a more economically developed country, and which one represents a less economically developed country? (2 x 1) (2)
- 1.1.4 Support your answer to QUESTION 1.2.5 by using geographically sound theory. (2 x 2) (4)
- 1.1.5 How does the development indicator 'access to food' differ in panel 1 and 2? (2 x 2) (4)
- 1.1.6 With reference to Rostow's development model, indicate the phase represented by panel 1 and 2 of the cartoon, respectively. (2 x 1) (2)

SOLUTIONS

- 1.1.1 Refers to the growth of a country in terms of its wealth, social conditions, and standard of living ✓
- 1.1.2 Development across the world is uneven. ✓✓
- 1.1.3 Panel 1: economically less developed ✓
Panel 2: economically more developed ✓
- 1.1.4 Economically more developed countries have economic wealth and strong economies--The social well-being is good, and people have access to housing, services, education, food, health care and employment opportunities ✓✓
Economically less developed countries are poor and do not have strong economies --- Access to housing, education, food, health care, etc. are limited ✓✓
Panel 1: limited access to food ✓✓
Panel 2: access to food ✓✓
- 1.1.6 Panel 1: the traditional society ✓
Panel 2: mass production ✓

ACTIVITY 1



Figure 1.1

- 1.1 Define the term globalisation. (1 x 1) (1)
- 1.2 Explain why the worker does not seem very happy to be 'helped' by the USA. (1 x 1) (1)
- 1.3 Why do you think China is portrayed (showed) as the smallest in the cartoon? (1 x 2) (2)
- 1.4 Refer to the characters representing multinationals and local governments.
 - a) What are multinationals? (1 x 1) (1)
 - b) Explain why multinationals and local governments seem to be very good 'friends'. (1 x 2) (2)
- 1.5 In a paragraph of approximately EIGHT lines, comment on the social impact of globalisation on developing countries. (4 x 2) (8)

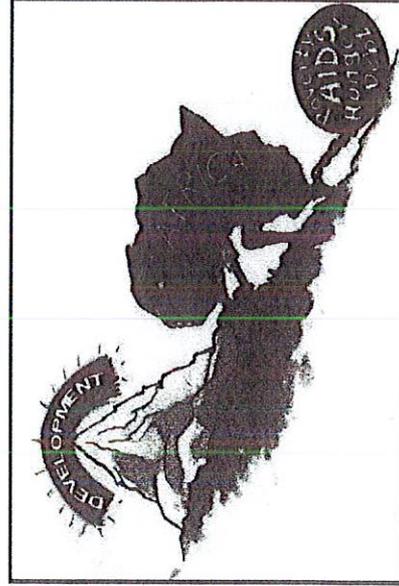
SOLUTIONS:

- 1.1 A system(s) linking all countries of the world together. ✓
- 1.2 The USA is one of the biggest exploiters of developing countries ✓
The USA will help the other big countries to further exploit Africa ✓
- 1.3 China is an emerging economy and not part of the bigger trading blocs ✓✓
- 1.4
 - a) Multinationals are businesses which operate in many different countries at the same time. In other words, it's a company that has business activities in more than one country ✓
 - b) MNC's pay local government officials to exploit resources of their country ✓ ✓
Local government officials may implement policies that will benefit multinational corporations ✓✓
- 1.5 **Positive impact**
 - Migration processes become easier and quicker International networks make it easier to communicate. ✓✓
 - People learn about the traditions and cultures of other nations. International intervention during human or natural disasters can be implemented much easier and effectively. ✓✓
 - Through globalisation, a lot of MNCs have brought job opportunities to poorer nations. ✓✓
- Negative impact**
 - Globalisation has brought a breakdown in traditions and cultures. ✓✓
 - Leads to cultural uniformity. Loss of family ties. ✓✓
 - Spread of diseases, viruses, etc. has become easier. ✓✓

ACTIVITY 1

1.1 FIGURE 1.1 is a cartoon depicting development and challenges in Africa

Figure 1.1



- 1.1 List any TWO challenges depicted in the cartoon affecting Africa (2 x 1) (2)
- 1.2 Interpret how the cartoonist illustrates these challenges affecting Africa (1 x 2) (2)
- 1.3 Explain why Africa continues to have these challenges despite being a recipient of development aid (3 x 2) (6)
- 1.4 The Ebola outbreak in West Africa claimed the lives of more than 5 000 people in 2014. Write a paragraph (approximately 8 lines) in which you analyse how humanitarian aid could prevent the spread of the disease (2 x 4) (8)

SOLUTIONS

- 1.1 Poverty ✓ Aids ✓ Hunger ✓ Debt ✓
- 1.2 The cartoonist depicts the challenges as obstacles/difficulties preventing Africa from attaining development ✓ ✓
- 1.3 Encourages corruption ✓ ✓
Aid does not reach poor or marginalised people ✓ ✓
Financial loans have high interest rates which took African countries into high repayments for many years ✓ ✓
Human and physical resources are exploited ✓ ✓
Does not encourage self-reliance ✓ ✓
Local markets are distorted ✓ ✓
- (Accept any relevant answer)**
- 1.4 Specialised medical personnel can be sent in developed countries would respond to the emergency and provide crisis aid ✓ ✓
Primary health care, example immunisation programs and training of nurses would be provided ✓ ✓
Help with education of the virus ✓ ✓
Provide technical support to governments ✓ ✓
Can help to protect human rights ✓ ✓
Can provide water, food, medical supplies, clothing, shelter, etc. ✓ ✓
Examples of international organisations like International Red Cross, Doctors without borders, United Nations Organisation, Gift of the Givers, World food program and others would help ✓ ✓
Aid would be people focused and not country-focused ✓ ✓
Countries can send in soldiers/army to man quarantine stations ✓ ✓

ACTIVITIES

ACTIVITY 1

FIGURE 1.1: DROUGHT IN AFRICA

EAST AFRICA'S DROUGHT: THE AVOIDABLE DISASTER

The deaths of tens of thousands of people during the drought in East Africa could have been avoided if the international community, donor governments and humanitarian agencies had responded earlier and more swiftly to clear warning signs that a disaster was in the making, according to a new report.

Figures compiled by the Department for International Development suggest that between 50 000 and 100 000 people, more than half of them children under five, died in the 2011 Horn of Africa crisis that affected Somalia, Ethiopia and Kenya. Hundreds of thousands remain at continuing risk of malnutrition.

The authors of the report, published by Save the Children and Oxfam, suggest current emergency response systems, which they believe to be seriously flawed, will soon be tested again as new humanitarian crises loom in West Africa and the Sahel, where growing food shortages are reported.

[Adapted from *The Guardian*, Wednesday 18 January 2012]

Read the extract from an article in FIGURE 1.1 above and answer the questions that follow.

- 1.1.1 What does the term *development aid* refer to? (1 x 1) (1)
- 1.1.2 What is the difference between *bilateral aid* and *humanitarian aid*? (2 x 1) (2)
- 1.1.3 Name ONE humanitarian aid organisation that plays an important role in providing food to countries affected by famine. (1 x 1) (1)
- 1.1.4 Except food, name ONE other form of humanitarian aid. (1 x 1) (1)
- 1.1.5 Do you agree that humanitarian aid should be granted to avoid a humanitarian crisis in West Africa and the Sahel? Motivate your answer by discussing the advantages and/or the disadvantages of providing humanitarian aid.

ACTIVITY 1.2

- 1.2.1 Multilateral (1)
- 1.2.2 More than one organisation (different people are providing aid) (1)
- 1.2.3 The aid only provides temporary solution to the problem, but does not have a long-term benefit to the community (2)
- 1.2.4 (a) Humanitarian aid (1)
- (b) The picture depicts a very dry environment, therefore aid during drought-stricken times (2)
- 1.2.5 It can increase the rate of economic growth (2)
- Helps with the development of resources and provision of energy (2)

- Encourages and helps to implement appropriate technical systems (2)
- Provides employment in new industries (2)
- Reduces the need for certain imported goods (2) (4X2)

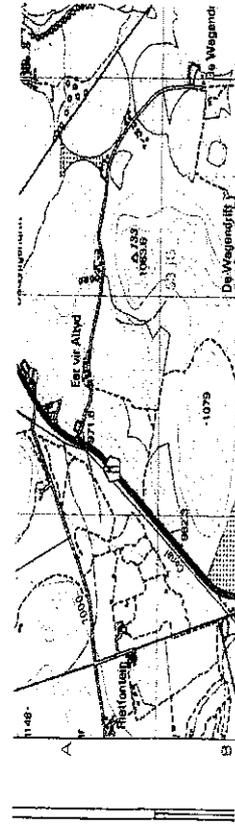
WORKING GUIDE

DISTANCE

Usually asked to work out distances in reality from information on maps
E.g. Calculate the straight-line distance from point A to point B. Give your answer in metres.

OR

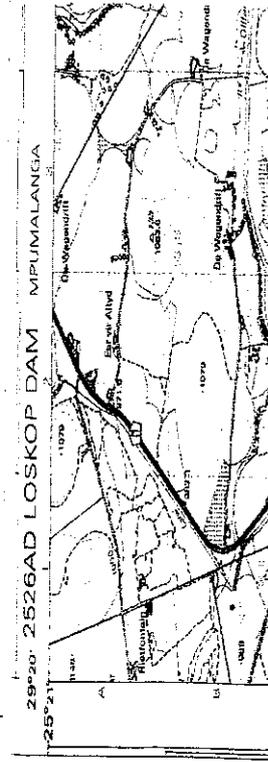
E.g. if you were to travel from point A to point B. How far would you drive in kilometres along the N11?



AREA

Regular areas (straight edged or square or rectangle) are easily calculated
Use the formula: Area = Length x Breadth

NB: make sure the units of measurements are only multiplied once the numbers are in the answer's required unit of measurement



A = (l) x (b) Give answer in kilometres

$A = (4\text{cm} \times 0.5) \times (2\text{cm} \times 0.5)$ ✓

$2\text{km} \times 1\text{km}$ ✓

Area = 2km^2 ✓✓

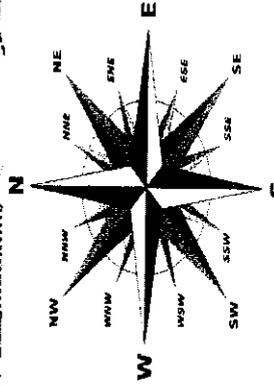
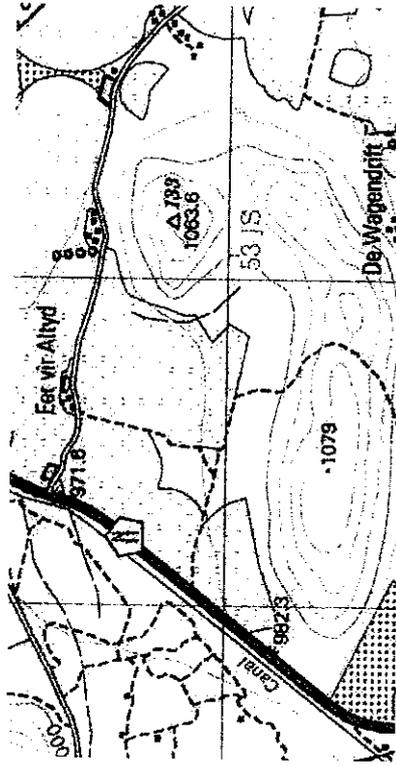
DIRECTION

N/E/S/W are the four main compass points, there are 16 in total

Most important point first NE, SE, SW, NW

In between points NNE, ENE, SSE, SSW, WSW, WNW, NNW

Calculate the direction "From" and "to" points



TRUE BEARING

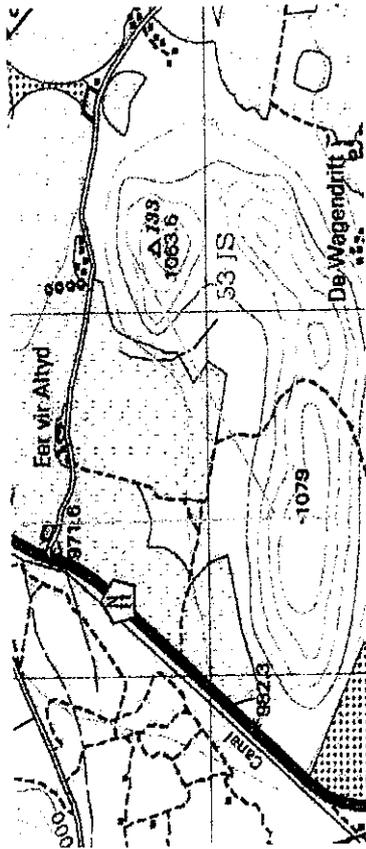
Assume that the top of the map is True North (0°)

Calculate the true bearing "from" and "to" points

Use a protractor (D)

If "to" point is on right of "from" point then answer will be less than 180°

If "to" point is on left of "from" point then answer will be more than 180°



MAGNETIC DECLINATION

To calculate how much the angle between True North and Magnetic North has changed over the years.

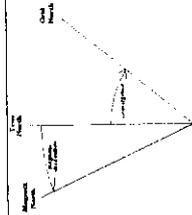
This information can be found at the bottom of the map or the side of the map

If the change is Eastwards (-)

If the change is Westwards (+)

If the minutes (') go over 60' then it needs to be converted into degrees (°) and minutes (')

Borrow a degree = 60'



Mean Magnetic Declination 19° 45' West of True North (2005). Mean Annual Change 6' Eastwards (2003 – 2007).

E.g.

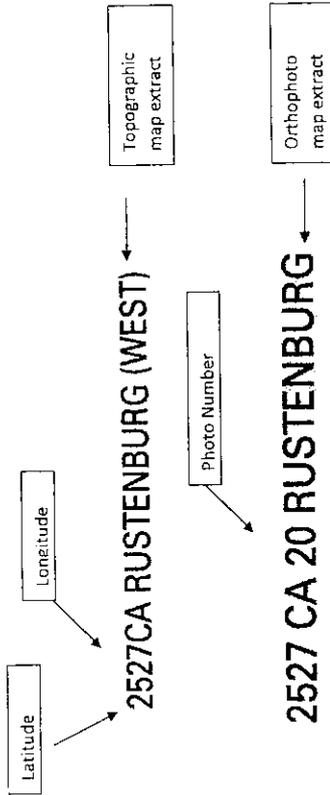
2014 – 2008 = 6 years

6 years x 5' = 30' = 0° 30'

20° 06' + 0° 30' = 20° 36'

MAP INDEX

Look at the top of the map. A map code always appears next to the title, e.g. 2527 CA Rustenburg West. In this case Rustenburg West is the title and 2527 CA is the code. The map code shows that the map is in the vicinity of the coordinates 25°S, 27°E. CA is used to distinguish all maps within the area of 1° latitude X 1° longitude. Each small square represents a map sheet. Therefore, an area of 1° latitude X 1° longitude is covered by 16 map sheets. SA as a whole is covered by 1 916 map sheets



COORDINATES (GRID REFERENCE)

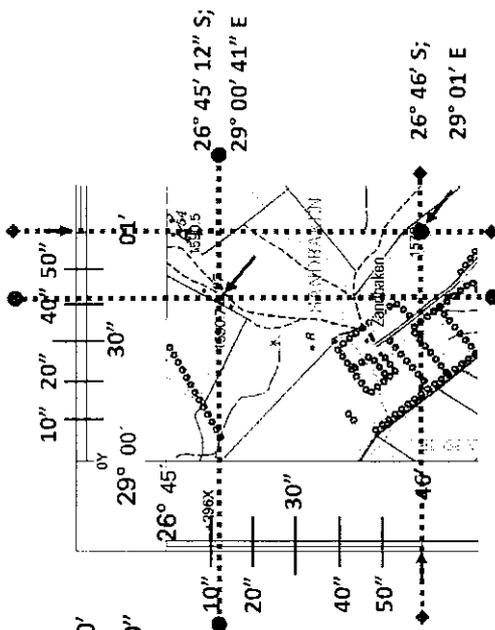
Look at the latitudes and longitudes. Their intersections give the position (Grid Reference) of a place on the map in degrees (°), minutes (') and seconds ("). 1° = 60'. Pronouncing these measurements, we start off with latitude and then longitude, e.g. in 2527 CA Rustenburg West, 25 is lat and 27 long.

The coordinates (where two lines intersect) usually give the position of a place. The coordinates we use are lines of latitude and longitude. Lines of latitude measure the distance north and south of the equator (0°). In SA, lines of latitude tell us in degrees how far south of the equator a place is. For example, 30°S means thirty degrees south of the equator. Lines of longitude measure the distance west or east of the Greenwich Meridian (0°). All places in SA will be east, for example, 30°E means thirty degrees east of Greenwich. A degree of latitude or longitude is subdivided into 60 minutes. A minute is indicated by this symbol ('). Therefore, half of a degree is 30' and quarter of a degree is 15'. Each minute is subdivided into 60 seconds and indicated with this symbol ("). Therefore, half a minute is 30" and quarter of a minute is 15".

The degrees of latitude and longitude are indicated on the top and bottom corners along the east and west edges of a full map.

CO-ORDINATES: FROM " TO " TO "

- 1° = 60'
- 1' = 60"



ACTIVITY 1

Resource material:

An extract from Topographic map 2731BC PONGOLA and Orthophoto map 2731 BC 13

1. Refer to the Orthophoto map.

1.1 Calculate in m², the average area of the Pongola demarcated by 9 on the orthophoto map (5x1) (5)

1.2 Why does the size of the Pongola aerodrome appear different on the Topographic map in comparison to the orthophoto map. (1x1) (1)

2. Refer to the information on the topographic map.

2.1 Calculate the magnetic declination for the present year using the information on the topographic map. (5x1) (5)

2.2 Determine the magnetic bearing for the present year from trig. station B9 in block C7 to trig. station B8 in block B9. (2x1) (2)

2.3 Why is it necessary to calculate magnetic declination? (1x2) (2)

SOLUTIONS

1.1 Area = L x B

$$= (10.8 \text{ cm} \times 100) \times (0.7 \text{ cm} \times 100)$$

$$= 1080 \text{ m} \times 70 \text{ m}$$

$$= 75600 \text{ m}^2$$

$$\text{Range } [53000 - 87200] \text{ m}^2$$

2.1 Orthophoto map scale is 5 times larger than the scale of a topographic map.

The aerodrome is 5 times larger on the orthophoto map.

2.1 Difference in years: 18

Mean Annual change: 12'W

Total change: 18 x 12'W

$$= 216'W (3^{\circ}36')$$

Total magnetic declination: 20° 06' + 3° 36'W

$$23^{\circ} 42' W$$

2.2 MB = TB + MD

$$56^{\circ} + 23^{\circ} 42'W$$

$$79^{\circ} 42' W$$

2.3 To orientate the true north

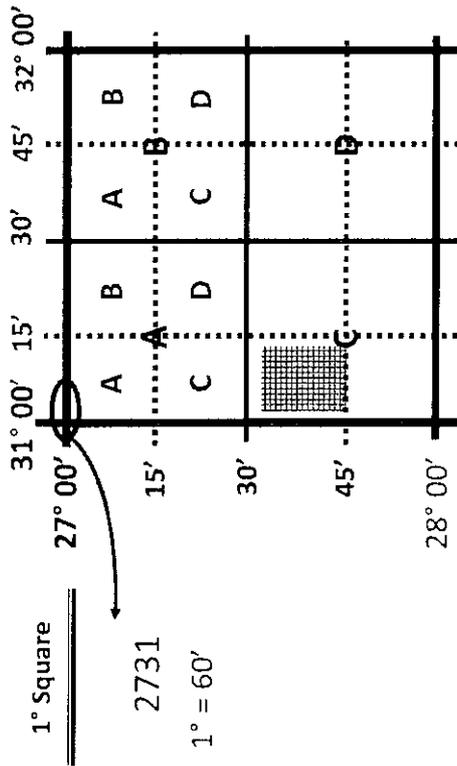
To give a precise direction

The fact that it changes yearly is the reason why it is calculated.

ACTIVITY 2

1. Refer to the topographical map of Rustenburg West and answer the questions that follow

Reference numbering – 1:50 000



1.1 Determine the map index of the town that can be found to the South East of Rustenburg West. (1x1) (1)

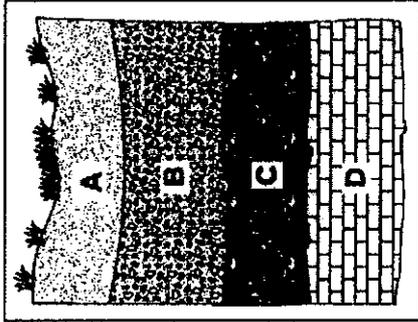
1.2 Determine the map index of the town that can be found to the North West of Rustenburg West. (1x1) (1)

SOLUTIONS

1.1. 2527CDV

1.2. 2427BDV

Activity 1 Refer to the diagram below depicting soil profile



[Source: Google Search]

1.1 What is a soil profile?

1.2 Name the horizon that has the following characteristics:

- 1.2.1 un-weathered parent rock material called the bedrock is rich in humus (1 x 1) (1)
- 1.2.2 Give TWO factors that lead to soil formation. (2 x 1) (2)

(1 x 1) (1)

1.3 Explain how excessive soil erosion can negatively impact a country's economy and its people (2 x 2) (4)

1.4 Discuss THREE strategies that can be implemented to prevent and control soil erosion. (3 x 2) (6)

Solutions

1.1 Cross-section through soil showing the different layers (1)

1.2

1.2.1 D (1)

1.2.2 A (1)

1.3 Parent material (1)

Time (1)

Climate (1)

Topography (1)

Biological factors (1)

Human activities (1)

[ANY 2]

1.4 Results in loss of soil fertility (2)

Can cause desertification (2)

Drop in crop production (2)

Loss of jobs (2)

Decrease in exports (2)

Food prices increase (2)

[ANY 2]

1.5 Use of contour ploughing and windbreakers (2)

Avoid overgrazing and monoculture (2)

Conserve wetlands (2)

Allow indigenous plants to grow on riverbanks (2)

Use crop rotation systems
Plant trees (afforestation)
[ANY 3]

(2)
(2)

Activity

- 1.1 Coal is not a sustainable source of energy. Explain this statement. (2 x 2) (4)
- 1.2 State TWO environmental impacts of coal mining and thermal power stations. (2 x 2) (4)
- 1.3 Discuss THREE management strategies that can be put in place to reduce South Africa's carbon emissions from coal-fired power stations. (3 x 2) (6)

SOLUTIONS

- 1.1 Coal is non-renewable ✓✓
Once used it cannot be replaced and no electricity can be generated ✓✓
- 1.2 Environmental despoliation ✓✓
Produce solid wastes ✓✓
Produce greenhouse gases when it's burnt Gases emitted pollute the atmosphere Gases emitted cause acid rain ✓✓
- 1.3 Coal cleaning prior to combustion ✓✓
The use of high efficiency coal combustion technologies ✓✓
Filters/electrostatic precipitators in chimneys ✓✓
Laws limiting emissions ✓✓
Heavy fines if law is broken ✓✓
Use clean energy sources such as water, sun and wind ✓✓
Revegetation ✓✓
Public awareness ✓✓

Activity

- 1.1 Read the Article above and answer the following questions
- 1.1.1 What is greenpeace? (1 x 1) (1)
- 1.1.2 State 2 objectives of Greenpeace. (2 x 1) (4)
- 1.1.3 Give one reason why Mpumalanga is the location of the Kusile coal-fired power plant (1 x 1) (1)
- 1.1.4 List a reason why the activists refer to Kusile as a "Climate killer" (1 x 2) (2)
- 1.1.5 "Coal has failed to deliver electricity to over 10 million South Africans". Suggest which section of the population the statement is referring to (1 x 2) (2)
- 1.1.6 Outline two problems associated with the use of coal as an energy source (2 x 2) (4)

Solutions

- 1.1.1 Greenpeace is an international non-governmental organization (NGO) that is actively involved in raising public awareness on environmental issues. ✓
- 1.1.2 aims/objectives of Greenpeace are ✓
ensuring that the earth sustains life for all humans and living ✓✓
organisms ✓✓
concerns itself with international issues such as global warming, deforestation, commercial whaling and anti-nuclear matters ✓
research, direct action and lobbying on international environmental issues ✓✓
- 1.1.3 Province with the largest number of coal reserves and mines in the country ✓✓
1.1.4
- Coal-fired power stations release greenhouse gases that are responsible for climate change ✓✓
• Release carbon dioxide which contribute to global warming ✓✓
- 1.1.5 Reference is made to the poor people who live, predominately, in the rural areas and informal settlements.
- 1.1.6
- Climate change and global warming ✓
 - Radiation ✓, acid rain ✓, altering of the landscape ✓
 - Pollution – air, noise and land ✓

ACTIVITY

Read through the Two Case studies below and divide your learners into groups of 4 to 6 depending on your class size. Each group must choose a Case study, discuss and report back to the class on the following points.

1. Identify the problem (1x1) (1)
2. Explain the meaning of the title. (1x2) (2)
3. Aim of the organization and involvement of government. (1x2) (2)
4. Social and economic effects (2x2) (4)
5. Solutions to the problem. (3x2) (6)

ACTIVITY 1: CONCEPT OF DEVELOPMENT

Read the statements below and determine if the statement refers to:

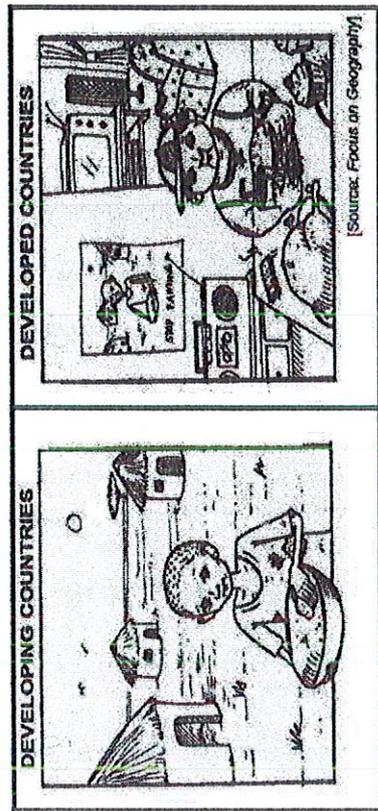
- MDC Most developed countries
- LDC Least developed countries
- NIC Newly industrialised countries

Write the numbers 1 - 16 and write either MDC, LDC or NIC next to the question number. For example, 9. MDC

1. Fast growing economies
2. High levels of poverty, weak economies
3. Growing economies, large informal sector
4. Access to services is excellent
5. These countries, according to the Brandt report, are mostly in the north
6. Colonialism had a major negative impact on these countries
7. Strong economies, high levels of employment
8. These countries favour export-led development
9. Very few individuals die before the age of 5 years.
10. Death rate is high due to poor health care and widespread disease.
11. The majority of people have access to a doctor.
12. Housing is often inadequate with limited access to clean running water and electricity.
13. Literacy rates are high because most children have access to free education.
14. Life expectancy is high due to medical care and quality of life.
15. 20–45 people per 1 000 people are born per year.
16. 200–500 babies per 1 000 people are born per year. (16 x 1) (16)

ACTIVITY 2: CONCEPT OF DEVELOPMENT

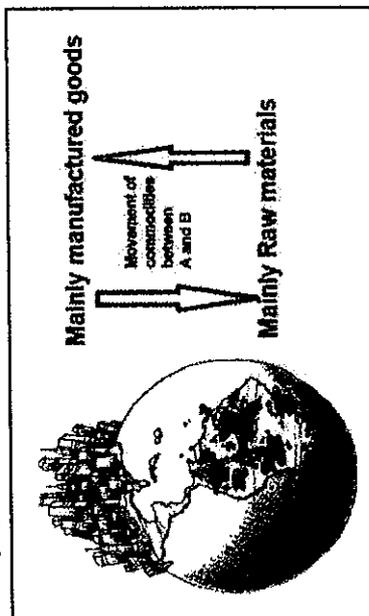
Refer to the figure, illustrating the inequalities in development between developing and developed countries.



1. Define the term development. (1 x 2) (2)
2. How do the illustrations depict inequality in development? (1 x 1) (1)
3. Name TWO living conditions illustrated by the cartoonist regarding people in developing countries. (2 x 1) (2)
4. By using the information on the sketches, differentiate between the countries by referring to the following points: (7 x 2) (14)
 - 4.1 Availability of food
 - 4.2 Development of technology
 - 4.3 Availability of clean drink water
 - 4.4 Availability of health care
 - 4.5 Availability of education
 - 4.6 Life expectancy
 - 4.7 Level of development

ACTIVITY 3 – CONCEPT OF DEVELOPMENT:

The following figure illustrates the Brandt line.



1. Explain what the Brandt line is. (1 x 2) (2)
2. Name the continents **A** and **B** illustrated in the cartoon. (2 x 1) (2)
3. Name ONE historical factor that may have caused the illustrated relationship between the continents. (1 x 1) (1)
4. Refer to the movement of commodities (raw materials and manufactured goods) between continents **A** and **B**.
 - (a) Which of the continents (**A** or **B**) in the cartoon is more developed? (1 x 1) (1)
 - (b) Explain TWO reasons for your answer to QUESTION 3.3 (a). (2 x 2) (4)
 - (c) Discuss how the illustrated movement of commodities will negatively influence continent **A**. (3 x 2) (6)

ACTIVITY 4 – CONCEPT OF DEVELOPMENT

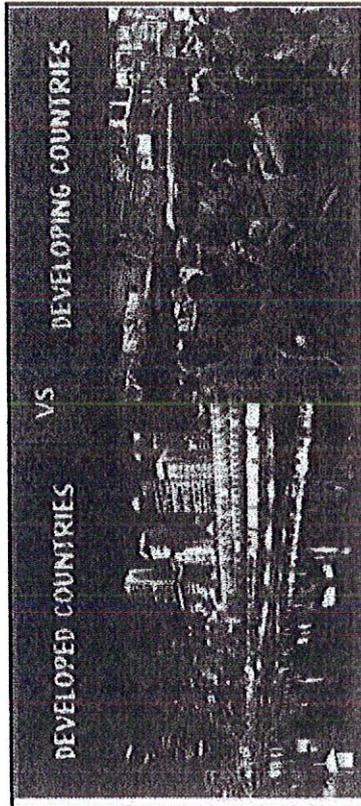
Refer to the figure, showing the levels of development of the BRICS countries.

Indicator	India	China	Brazil	Russia	S. Africa
Population	5th	9th	2nd	1st	25th
GDP growth rate	15th	88th	4th	5th	117th
GDP/capita	53th	56th	138th	84th	71st
Number of mobile phone users	6th	4th	2nd	1st	25th
Rail network	10th	2nd	4th	3rd	12th
Exports	18th	11th	16th	1st	36th
Electricity consumption	9th	4th	5th	1st	14th
Human Development Index	73rd	65th	119th	89th	110th

1. Name the five BRICS countries. (5 x 1) (5)
2. What is the aim of the BRICS group? (1 x 2) (2)
3. Why are the BRICS countries classified as less economically developed countries? (1 x 1) (1)
4. Explain what you understand by GDP (Gross Domestic Product) per capita. (1 x 1) (1)
5. Interpret why GDP growth rate rankings for India and China are so high. (1 x 2) (2)
6. Suggest possible reasons why Russia would have the highest level of education among the BRICS countries. (1 x 2) (2)
7. Name any TWO factors that affects economic development. (2 x 1) (2)
8. Explain how exports can help a country with economic development. (1 x 2) (2)

ACTIVITY 5 – CONCEPT OF DEVELOPMENT

Study the following figure, illustrating indicators of development.



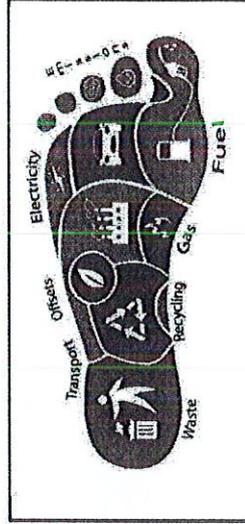
COUNTRY	HDI	GINI - coefficient
X	0,35	0,72
Y	0,96	0,25

1. What does the abbreviation *HDI* stand for? (1 x 1) (1)
2. Name ONE of the HDI indicators of development. (1 x 1) (1)
3. Refer to the photo indicating Developed vs. Developing countries and the HDI and GINI-coefficient data.
 - (a) Match X and Y to either developed or developing countries respectively. (2 x 2) (4)
 - (b) Clearly distinguish between *HDI* and *GINI-coefficient* data. (2 x 2) (4)
4. Explain how the population growth of developing countries will have a negative influence on development. (2 x 2) (4)

ACTIVITY 6 – CONCEPT OF DEVELOPMENT:

1. South Africa has rich coal deposits in the north-east of the country, and as such most South Africa's coal-fired plants are located in Mpumalanga. Historically, this has given South Africa access to cheap electricity, but it is also one of the leading causes why the country is on the top 20 list of carbon dioxide emitting countries.
 - 1.1 Coal is not a sustainable source of energy. Explain this statement. (2 x 2) (4)
 - 1.2 State TWO environmental impacts of coal mining and thermal power stations. (2 x 2) (4)
 - 1.3 Discuss THREE management strategies that can be put in place to reduce South Africa's carbon emissions from coal-fired power stations. (3 x 2) (6)

2. Study the following figure, which illustrates ways in which the carbon footprint can be reduced.



- 2.1 What is a *carbon footprint*? (1 x 1) (1)
- 2.2 Name TWO sources of CO₂ emissions from the sketch. (2 x 1) (2)
- 2.3 Explain TWO ways in which households can reduce their electricity use and thus reduce their carbon footprint. (2 x 2) (4)

ACTIVITY 7 – CONCEPT OF DEVELOPMENT

Refer to the figure, an extract on the initiative of the Umsizi organisation in community development.

Umsizi has established, together with Northpoint City Church, a Non-Profit Organisation called Impophomo, which focuses on the socio-economic development of impoverished communities.

Community development is at the heart of Umsizi, and as a result, we have long standing partnerships with the leading experts in the field of rural development. Within community development projects the aim is to significantly improve the well-being of households within rural communities. Projects are designed to be community specific so that upon implementation the positive impacts on the ground can be sustainable and widespread.

Agricultural crop production training is key to community development, and has been presented to many households in villages throughout Southern Africa, with an open invitation for any and all interested community members to attend. The training covers several modules on homestead agriculture and food security, including nutrition, soil fertility, crop rotation, rainwater harvesting and produce, marketing, etc.

[Source: <http://umsizi.co.za/community-development/>]

1. What is *community development*? (1 x 1) (1)
2. Name ONE focus area and ONE aim from the extract of the community development projects organised by Umsizi. (2 x 1) (2)
3. Mention why crop production training is sustainable and widespread within the Umsizi framework. (1 x 2) (2)
4. Explain why monitoring of community-based projects is important to its success for sustainable development. (2 x 2) (4)
5. Provide reasons why community development is important to a country's broader development aims. (3 x 2) (6)

ACTIVITY 8 – FRAMEWORK FOR DEVELOPMENT

Energy is one of the factors affecting development. Refer to the following figure, a cartoonist's impression of the use of a conventional energy source.

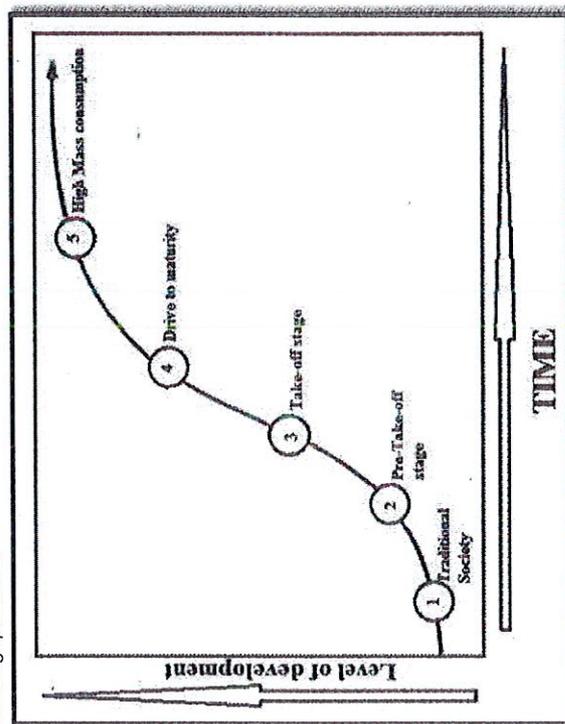


[Source: <http://www.foxphoto.com/foxphoto/>]

1. Name the type of energy that the industries in the cartoon make use of. (1 x 1) (1)
2. The question being asked in the cartoon is contrary (opposite) to what is depicted in the industries. Substantiate this statement. (1 x 2) (2)
3. Refer to the gasses at **A**, being emitted by the industries.
 - (a) Name ONE type of gas being emitted by the industries. (1 x 1) (1)
 - (b) Account for TWO types of atmospheric consequences that these gasses are responsible for. (2 x 1) (2)
4. Explain why the answer of 'DENIAL' is appropriate. (2 x 2) (4)
5. Despite the situation depicted in the illustration, the resource being used to generate energy is still important and vital to South Africa's economy. Explain TWO reasons why. (2 x 2) (4)

ACTIVITY 9 – FRAMEWORK FOR DEVELOPMENT

Study the following diagram, which depicts a model of development to answer the following questions.



1. Name the model of development depicted in the figure. (1 x 2) (2)
2. Identify the stage on the graph which would typify an advanced highly developed industrial economy. (1 x 2) (2)
3. List TWO characteristics of Stage 4 (Drive to maturity). (2 x 2) (4)
4. This model of development has been strongly criticised and replaced by several different theories and models. Discuss in a paragraph of approximately 8 lines the criticism levelled against this model of development. (4 x 2) (8)

ACTIVITY 10 – FRAMEWORK FOR DEVELOPMENT
SOLAR POWER AS A SUSTAINABLE WAY OF SUPPLY ENERGY

Read through the newspaper article *Solar power changes villagers lives* and answer the following questions.

SOLAR POWER CHANGES VILLAGES

The days of cutting firewood for cooking and heating water are over for about 80 Xhoboheni villagers in Mbizana who received solar panels and geysers from the Eastern Cape rural development and agrarian reform department.

The project was started earlier this year by former MEC Zoleka Capa as a means providing alternative energy to villagers after it was become known that power utility Eskom had no immediate plans to electrify the village.

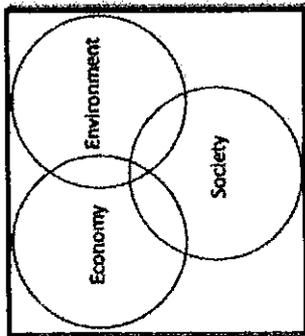
The one-kilowatt solar panels provide the 80 households with enough energy for lights and to connect other household appliances and the 100-litre solar geyser ensure warm bath water daily.

(Source: Daily Dispatch, (28/07/2014) - Lulamile Feni)

1. State what you understand by *alternative energy*. (1 x 1) (1)
2. Suggest a possible reason why 'Eskom had no immediate plans to electrify the village'. (1 x 2) (2)
3. Identify the device that will be used for converting solar power into energy in the village. (1 x 1) (1)
4. Explain how electricity will help eradicate poverty for the villagers. (2 x 2) (4)
5. In a paragraph of approximately 8 lines explain the benefits that solar energy has for the world. (4 x 2) (8)

ACTIVITY 11 – FRAMEWORK FOR DEVELOPMENT

1. Study the figure that illustrate the sustainable development model and answer the questions that follow:



- 1.1 Define the term sustainable development. (1 x 1) (1)
- 1.2 Name the three components of sustainable development. (3 x 1) (3)

2. Refer to the following depicting how coal mining harms the environment. Coal mining can be considered as an environment injustice and hinders/affect sustainable development.

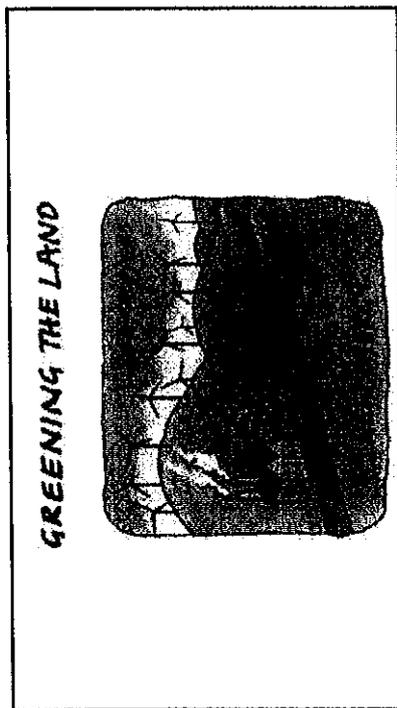


- 2.1 Identify the type of mining method used in the first diagram. (1 x 2) (2)

- 2.2 Is coal a renewable or non-renewable energy source? Give a reason for your answer. (2 x 1) (2)
- 2.3 Refer to the diagram and name the process whereby:
 - (a) Rainwater enters the groundwater sources (1 x 2) (2)
 - (b) Rainwater land in rivers and lakes (1 x 2) (2)
- 2.4 List TWO negative results that coal mining has on the environment. (2 x 2) (4)
- 2.5 Suggest measures mining companies can implement to rehabilitate the environment after extracting the coal ore. (2 x 2) (4)
- 2.6 "Environmentalists are of the opinion that the environment cannot be fully rehabilitated after the extraction of the ore ..." Justify the statement. (2 x 2) (4)

ACTIVITY 12 – FRAMEWORK FOR DEVELOPMENT

Refer to the figure, showing the use of a non-conventional energy method which contributes to sustainable development.



(Source: <http://www.globe.gov/multimedia>)

1. Which non-conventional energy is being depicted by the cartoonist? (1 x 1) (1)
2. Name TWO disadvantages, illustrated in the diagram, of this type of energy being generated. (2 x 1) (2)
3. Describe TWO advantages of this type of energy being generated. (2 x 2) (4)
4. Refer to the heading 'Greening the Land'.
 (a) What is meant by the heading 'Greening the Land'? (1 x 2) (2)
 (b) Explain how greening of the land will benefit the economy of South Africa. (3 x 2) (6)

ACTIVITY 13 – FRAMEWORK FOR DEVELOPMENT

Development models, although heavily criticised, give us an idea of the development of places within a time frame. Choose the development model that the descriptions below refer to. Write ONLY one model next to the question number (1 - 7).

MODELS
Rostow's model
Core-periphery model
Sustainable development model

1. This model has been developed from the dependency theory.
2. This model has a 'bottom-to-top' rather than a 'top-to-bottom' approach to development.
3. This model was developed in the 1950's and consists of linear development stages.
4. This model is based on the idea that if there is worldwide growth in wealth, only the richer countries benefit from this wealth.
5. This model was based on the European experience and does not accommodate developing countries' development.
6. This model is based on the fact that development cannot take place if there is no balance between economic, social and environmental development.
7. According to this model, economic growth is centred on a few areas and the less developed areas depend on these developed centres. (7 x 1) (7)

ACTIVITY 14 – TRADE AND DEVELOPMENT

The following figure depicts a balance of trade situation.



1. Define the term *balance of trade*. (1 x 1) (1)
2. The cartoonist depicts a negative balance of trade.
 - (a) Why would you agree with the statement that the balance of trade is negative? (1 x 1) (1)
 - (b) Provide TWO protectionist policies that more developed countries implement to restrict imports. (2 x 1) (2)
3. Protectionist policies restrict fair trade. Explain how fair trade could help struggling countries to have a better balance in their trade. (2 x 2) (4)
4. In a paragraph of approximately EIGHT lines, evaluate the importance of a positive balance of trade for countries. (4 x 2) (8)

ACTIVITY 15 – TRADE AND DEVELOPMENT

Refer to the cartoon showing trade and answer the questions that follow.



1. Is the man with the cigar promoting free trade? (1 x 2) (2)
2. Give ONE reason for your answer in QUESTION 1. (1 x 2) (2)
3. Who in the cartoon represents the following:
 - (a) More economically developed countries (1 x 2) (2)
 - (b) Less economically developed countries (1 x 2) (2)
4. Give TWO regulations used to prevent free trade. (2 x 2) (4)
5. Explain why free trade is to the advantage of less economically developed countries. (3 x 2) (6)

ACTIVITY 16 – TRADE AND DEVELOPMENT

Read the extract on *Fair trade* and answer the following questions.

Fair Trade is a global trade model and certification allows shoppers to quickly identify products that were produced in an ethical manner.

For consumers, Fair Trade offers a powerful way to reduce poverty through their everyday shopping.

For farmers and workers in developing countries, Fair Trade offers better prices, improved terms of trade, and the business skills necessary to produce high-quality products that can compete in the global marketplace. Through vibrant trade, farmers and workers can improve their lives and plan for their futures.

Today, Fair Trade benefits more than 1.2 million farming families in 70 developing countries across Africa, Asia and Latin America.

[Source: www.fairtradeinternational.org]

1. Define the term *Fair trade*. (1 x 1) (1)
2. Name ONE way in which fair trade benefits farmers in developing countries. (1 x 1) (1)
3. Explain how fair trade can help consumers reduce poverty, through everyday shopping, as stated in the extract. (1 x 2) (2)
4. Discuss TWO similarities between fair trade and free trade. (2 x 2) (4)
5. To be certified as fair trade, producers need to maintain good environmental protection when developing sustainable agriculture. In a paragraph of approximately eight lines, provide FOUR criteria that producers need to maintain, to uphold environmental standards in fair trade. (4 x 2) (8)

ACTIVITY 17 – TRADE AND DEVELOPMENT

Read through the case study on the South African textile industry.

SOUTH AFRICAN TEXTILE INDUSTRY

The South African textile industry, which is an important industry in our four major industrial areas, namely PWV (Gauteng), Durban, Cape Town and Port Elizabeth has had to adapt to the global situation. The industry has imported fabrics to keep the marginalised factories open. Between 2003 and 2005 some 67 000 jobs were lost and many factories and businesses were forced to close down.

The South African industry has had to face China's dominance in the textile industry and the flood of cheap clothing being imported or sometimes entering the country illegally. (Source: DTI and Just-Style.com)

1. Define the term *globalisation*. (1 x 2) (2)
2. List any TWO positive impacts of *globalisation*. (2 x 2) (4)
3. Provide reasons why the South African textile industry has had to close down so many factories and businesses. (2 x 2) (4)
4. Evaluate why China's clothing exports has increased. (2 x 2) (4)
5. Give THREE reasons why many people are opposing globalisation. (3 x 2) (6)
6. In a short paragraph, give suggestions how globalisation can be more beneficial to developed countries. (6 x 2) (12)
7. In a paragraph of approximately EIGHT lines, comment on the social impact of globalisation on developing countries. (4 x 2) (8)

ACTIVITY 18 – TRADE AND DEVELOPMENT

Read the extract about export-led development in developing countries.

Export-led growth is an economic strategy used by some developing countries. This strategy seeks to find a place in the world economy for a certain type of export. Industries producing this export may receive governmental subsidies and better access to the local markets. By implementing this strategy, countries hope to gain enough hard currency to import commodities manufactured more cheaply somewhere else.

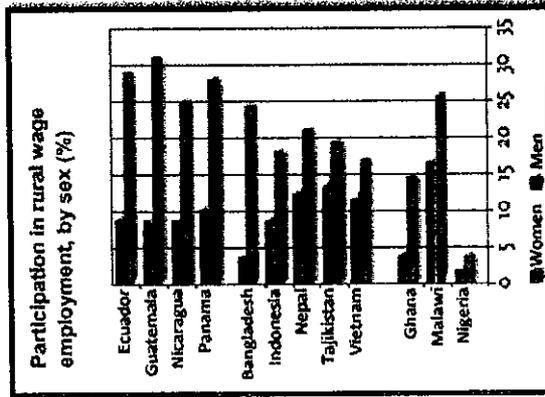
There are essentially two types of exports used in this context: manufactured goods and raw materials.

(Source: Adapted from <http://www.presentarticles.com/how-export-led-growth-is-used-as-a-development-strategy.html>)

1. Define the term *export-led development*. (1 x 1) (1)
2. Name ONE incentive that government can give industries to produce an export-led commodity. (1 x 1) (1)
3. What is the main aim of implementing an export-led growth strategy, according to the article? (1 x 1) (1)
4. Beside the main aim of export-led growth, mentioned in QUESTION 3, explain TWO reasons why export-led growth is important for developing countries. (2 x 2) (4)
5. Evaluate how manufactured goods can be a disadvantage to developing countries. (2 x 2) (4)
6. Comment on the importance of earning foreign exchange from export-led commodities. (2 x 2) (4)

ACTIVITY 19 – DEVELOPMENT ISSUES AND CHALLENGES

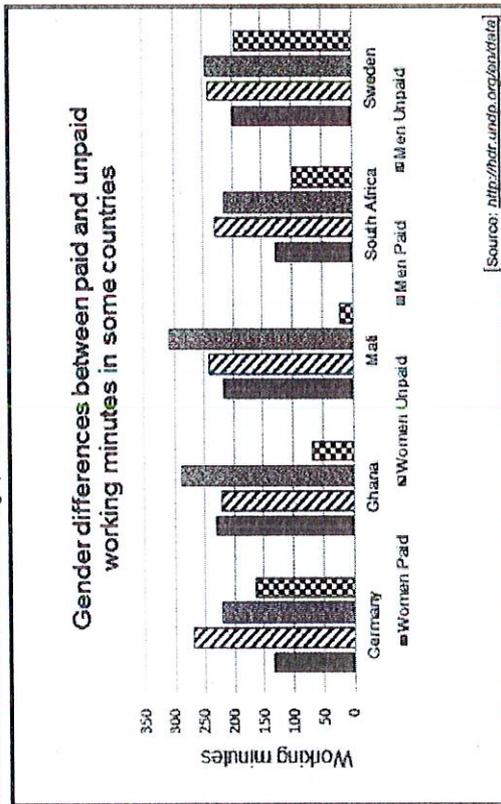
Refer to the figure which shows gender inequality.



1. What does the term gender inequality mean? (1 x 2) (2)
2. According to the bar graph, which gender is discriminated against? (1 x 2) (2)
3. State ONE form of gender inequality. (1 x 2) (2)
4. Which country in the bar graph experiences the worst gender inequality? (1 x 2) (2)
5. Give TWO reasons why gender inequality is more prominent in less economically developed countries than in economically developed countries. (2 x 2) (4)
6. State TWO measures that South Africa has put in place to address gender inequality. (2 x 2) (4)

ACTIVITY 20 – DEVELOPMENT ISSUES AND CHALLENGES

Study the bar graph depicting the gender differences between working minutes in some countries and answer the following questions.



1. Which country shows a fair balance between paid and unpaid working minutes for women? (1 x 1) (1)
2. Discuss visible characteristics shown on the graph regarding *paid* and *unpaid working minutes* between men and women. (2 x 2) (4)
3. Comment on the attitude by some governments of third world countries towards women's access to resources. (2 x 2) (4)
4. Explain why women are important to the economic development of third world countries. (2 x 2) (4)

ACTIVITY 21 – DEVELOPMENT ISSUES AND CHALLENGES

1. Use the information about gender equality.



- 1.1 What is gender equality? (1 x 1) (1)
- 1.2 Provide TWO pieces of evidence from the data which indicate that women are being financially disadvantaged. (2 x 1) (2)
- 1.3 Explain the impact of your answer to QUESTION 2 on female headed households. (2 x 2) (4)
- 1.4 In a paragraph of approximately EIGHT lines, outline the positive economic effects of the increase of women on the boards of companies. (4 x 2) (8)

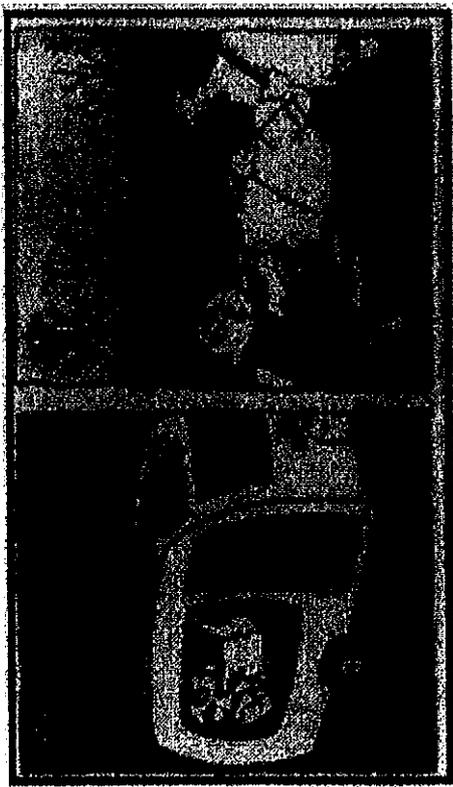
ACTIVITY 22 – ROLE OF DEVELOPMENT

Study the quotation below, which is based on the role the state and business plays in the development of Africa and answer the questions that follows.

"In Africa, many newly independent, developing countries placed their faith in the government as agents of economic development. However, in the last 30 years there has been a lack of success in government-driven economic programmes."

1. What role does private business play in the development of Africa? (1 x 2) (2)
2. Define the concept 'weak state control'. (1 x 2) (2)
3. 'The South African government allows a free-market system to operate in South Africa.' What do you understand by this statement? (1 x 2) (2)
4. Is this (statement to QUESTION 3) an example of weak state control? Give a reason for your answer. (1 + 2) (3)
5. In 2010, the South African government outlined its New Growth Path, (NGP) framework in response to the ongoing challenges we face in South Africa. In a paragraph of approximately 8 lines, identify at least FOUR challenges that the South African economy faces. (4 x 2) (8)

2. Study the cartoon about acid rain and answer the following questions.



- 2.1 What form of pollution is the cause of acid rain? (1 x 1) (1)
- 2.2 Identify the main greenhouse gas associated with acid rain. (1 x 2) (2)
- 2.3 Explain TWO detrimental effects of acid rain depicted in the cartoon. (2 x 2) (4)
- 2.4 What impact does acid rain have on human health? (1 x 2) (2)
- 2.5 Discuss TWO possible solutions to the problem of acid rain. (2 x 2) (4)

ACTIVITY 23 – ROLE OF DEVELOPMENT

Read the following passage and answer the questions that follow

A proposal has been put forward by the South African government and a major road-building consortium to build a new toll gate through Pondoland Wild Coast region that would reduce the distance between Durban and East London by 90 km. The road would cut through the steep valleys and indigenous forests and run near to a high priority conservation area. It is likely that the construction of the road in this pristine area will be detrimental to the natural environment.

1. This is an example of Public- Private Partnership. State what you understand with public private partnership in relation to the toll road development. (1 x 2) (2)
2. This area is one of the poorest areas in South Africa. Explain why this area has not been developed. (1 x 2) (2)
3. This road development might exclude access to outlying or peripheral areas such as Holy Cross. How would this impact the local people of this area? (2 x 2) (4)
4. Suggest four community-based developments that would uplift the local people's way of life. (4 x 2) (8)

ACTIVITY 24 – DEVELOPMENT AID

Read the extract from an article and answer the questions that follow.

EAST AFRICA'S DROUGHT: THE AVOIDABLE DISASTER

The deaths of tens of thousands of people during the drought in East Africa could have been avoided if the international community, donor governments and humanitarian agencies had responded earlier and more swiftly to clear warning signs that a disaster was in the making, according to a new report.

Figures compiled by the Department for International Development suggest that between 50 000 and 100 000 people, more than half of them children under five, died in the 2011 Horn of Africa crisis that affected Somalia, Ethiopia and Kenya. Hundreds of thousands remain at continuing risk of malnutrition.

The authors of the report, published by Save the Children and Oxfam, suggest current emergency response systems, which they believe to be seriously flawed, will soon be tested again as new humanitarian crises loom in West Africa and the Sahel, where growing food shortages are reported.

[Adapted from *The Guardian*, Wednesday 18 January 2012]

1. What does the term development aid refer to? (1 x 2) (2)
2. What is the difference between bilateral aid and humanitarian aid? (2 x 2) (4)
3. Name ONE humanitarian aid organisation that plays an important role in providing food to countries affected by famine. (1 x 2) (2)
4. Except food, name ONE other form of humanitarian aid. (1 x 2) (2)
5. Do you agree that humanitarian aid should be granted to avoid a humanitarian crisis in West Africa and the Sahel? Motivate your answer by discussing the advantages and/or the disadvantages of providing humanitarian aid. (6 x 2) (12)

ACTIVITY 25 – DEVELOPMENT AID

This is a cartoon depicting development and challenges in Africa.



1. List any TWO challenges depicted in the cartoon affecting Africa. (2 x 1) (2)
2. Interpret how the cartoonist illustrates these challenges affecting Africa. (1 x 2) (2)
3. Development aid has been seen as a possible solution to the challenges faced in Africa. Explain what you understand by this concept. (1 x 2) (2)
4. Explain why Africa continues to have these challenges despite being a recipient of development aid. (3 x 2) (6)
5. The Ebola outbreak in West Africa claimed the lives of more than 5 000 people in 2014. Write a paragraph (approximately 8 lines) in which you analyse how humanitarian aid could prevent the spread of the disease. (4 x 2) (8)

ACTIVITY 26 – DEVELOPMENT AID

Study the figure, which illustrates the effects of aid on the development of Third World countries.



1. Would you regard the type of aid in the illustration as being bilateral or multilateral? (1 x 1) (1)
2. Provide a reason for your choice in QUESTION 1. (1 x 1) (1)
3. Explain why the aid provided is unsustainable as depicted in the illustration. (1 x 2) (2)
4. Three types of aid, technical, conditional or humanitarian may be provided to recipient countries.
 - (a) Name the type of aid depicted in the illustration. (1 x 1) (1)
 - (b) Substantiate your answer to QUESTION 4 (a). (1 x 2) (2)
5. In a paragraph of approximately EIGHT lines, describe how aid might have a positive impact on development in Third World countries. (4 x 2) (8)

ACTIVITY 27 – RESOURCES AND SUSTAINABILITY

1. Indicate whether each of the following statements are related to Renewable or Non-renewable energy sources:

- 1.1 Wind turbines that generate energy with wind
- 1.2 Special equipment, such as photovoltaic panels are used to capture energy
- 1.3 Coal seams are often removed by open-pit or strip mining
- 1.4 Gas is a fossil fuel formed from plant matter
- 1.5 Eskom operates a number of hydro-electric power stations
- 1.6 Paper mills use millions of tons of sawdust and scrap wood to generate electricity
- 1.7 Ethanol as a biofuel is made from food crops
- 1.8 Geothermal energy is energy gathered from the hot rocks below the earth's surface (8 x 1) (8)

2. Refer to the newspaper extract on nuclear power.

MIXED REACTIONS TO SAY'S R11n NUCLEAR POWER DEAL

Eight new nuclear power reactors costing around R1-billion will in the not-too-distant future add up to 96 gigawatts of power to South Africa's national grid.

Yesterday it was announced that South Africa signed a partnership agreement with Russia's state-owned nuclear company that will see Rosatom build reactors in Africa's second-biggest economy.

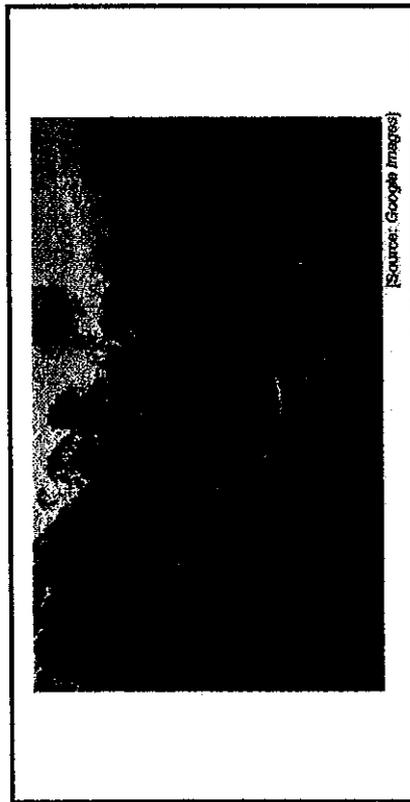
The agreement lays the foundation for a large-scale nuclear power-plant procurement programme. It will allow the country to implement its plan to create more nuclear capacity by 2030, she said.

Environment NGO Groundwork associate David Hallowes said: "I think it is an appalling development. If nuclear stations go wrong badly, disasters can be catastrophic."
(Source: Adapted from Daily Dispatch)

- 2.1 State what you understand by *nuclear energy*. (1 x 1) (1)
- 2.2 State why nuclear energy is a non-renewable source of energy. (1 x 1) (1)
- 2.3 Explain why South Africa's national grid needs extra power. (2 x 2) (4)
- 2.4 In a paragraph of approximately 8 lines explain why you think David Hallowes thinks that the R11n nuclear deal is a disaster. (4 x 2) (8)

ACTIVITY 28 – RESOURCES AND SUSTAINABILITY

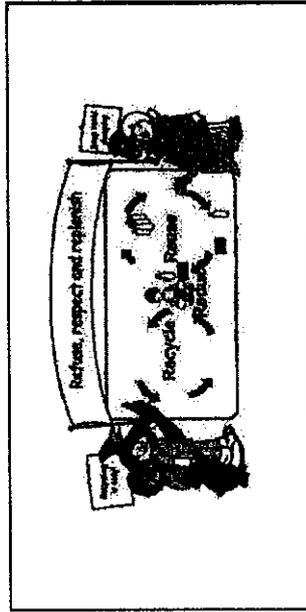
The photo illustrates the non-sustainable use of a resource. Use the photo to answer the following questions.



1. Which term is used to describe the process in the photo? (1 x 1) (1)
2. Explain why the resource in the photo, can be seen as a renewable resource. (1 x 2) (2)
3. Why do you think the use of the resource as observed (seen) on the photo can be seen as *resource depletion* rather than *resource exploitation*? (1 x 2) (2)
4. Discuss the impact that this non-sustainable use of the resource will have on the environment. (2 x 2) (4)
5. How can the resource in the photo help the local community with economic development? (2 x 2) (4)

ACTIVITY 29 – RESOURCES AND SUSTAINABILITY

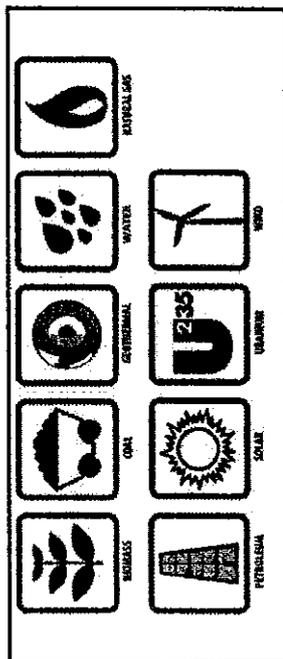
Study the figure showing the importance of recycling and reuse.



1. What is the meaning of *sustainable use of resources*? (1 x 1) (1)
2. Differentiate between *recycle* and *reuse*. (1 x 2) (2)
3. Discuss how recycling can cause economic development. (2 x 2) (4)
4. In a paragraph of approximately EIGHT lines, evaluate the impact of recycling and reuse for environmental sustainability. (4 x 2) (8)

ACTIVITY 30 – RESOURCES AND SUSTAINABILITY

1. The following figure are sketches of different energy sources for electricity/power generation. Various options are given as possible answers to the multiple choice Questions below. Choose the correct answer and write only the letter (A to D) next to the question number (1 - 8).



[Source: Google Images]

- 1.1 Which of the sources is not a renewable resource?
 A Biomass
 B Water
 C Natural gas
 D Wind
- 1.2 Which type of electricity is produced in volcanic areas where the heat of the rocks is used to create enough energy?
 A Petroleum
 B Coal
 C Geothermal
 D Hydroelectricity
- 1.3 Provide the name of the energy which produces ethanol fuel through the use of sugar and maize.
 A Biomass
 B Geothermal
- 1.4 Which of the following sources is not a fossil fuel?
 A Oil
 B Natural gas
 C Uranium
 D Coal
- 1.5 Where panels are used to produce electrical energy.
 A Coal
 B Solar
 C Geothermal
 D Wind
- 1.6 The source which produces nuclear energy.
 A Uranium
 B Coal
 C Petroleum
 D Natural gas
- 1.7 Which of the following sources has high potential, but is currently underutilised in South Africa?
 A Uranium
 B Coal
 C Water
 D Geothermal

- 1.8 Which of the sources causes more acid rain in urban areas?
- A Natural gas
 - B Biomass
 - C Uranium
 - D Coal
- (8 × 1) (8)
2. Why is wind-generated energy classified as a renewable energy source?
- (1 × 1) (1)
3. Why is the word 'clean' used to describe this type of electricity?
- (1 × 2) (2)
4. Explain how wind energy are generated at wind farms.
- (2 × 2) (4)
5. Explain what a 'green' power supply means.
- (1 × 2) (2)
6. Write an essay (not more than 12 lines) to describe the advantages and disadvantages of wind-generated electricity.
- (6 × 2) (12)