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STUDY Mate

Department of Education

GRADES 8–11 ISSUE 3 JULY 19 2007

Learning activities for Grades 8–11

Education Minister Naledi Pandor

Content

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ENGLISH LESSON NOTES

Lesson 3

Planning skills

Writing

There are many different ways in which you can plan. The mind map is a very effective tool. You need to practise using the mind map technique.

Note-taking and planning can be very similar, because you use similar skills, especially if you are using a mind map. You will need note-taking skills when you are taking notes in class from a teacher, from a lesson or from a book. You will also need planning and note-taking skills when you are taking notes from a book, a reference work or the Internet, or brainstorming you own ideas. So the two skills of planning and note-taking overlap. Also, for the rest of your life, you will be planning and taking notes, whatever profession you end up in. Planning is a life skill!

REMEMBER: Planning is never a waste of time. Teachers include planning in assessment grids because teachers try to encourage learners who do not see the point of planning to practise planning – just for marks, at the start, if necessary. When you do see how planning benefits you, you will do it always.

Think of planning and mind mapping as part of the process of writing:

The process of writing

P – planning and precision
R – revision
O – own experience
C – comparisons and other figures of speech
E – evaluation and editing
S – senses
S – strong verbs

Activities

Activity 1: A grocery list

Step 1: List all the things your family needs from a supermarket for a month.
Step 2: Divide these into categories.
Step 3: Put them onto a mind map.

Activity 2: Myself

Imagine you have been asked to write about yourself. List all the possible aspects of yourself. Make the different aspects sections of the mind map, for example: physical; emotional; skills/talents; educational qualifications; work experience; hopes; failings; hobbies/sports; clothes; music; etc.

Which of these would you use for the following:

a job application
a missing person report
a testimonial

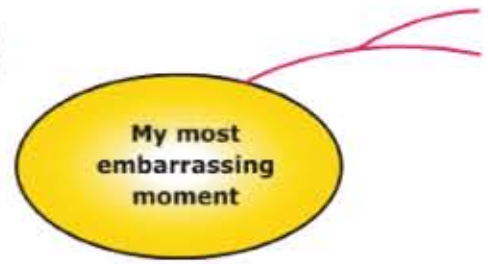
Once you have completed your mind map, do not forget other aspects of the planning and drafting process:

a. Planning or mind mapping
b. A gripping, exciting introduction
c. A conclusive ending
d. Unity of sentence content
e. Unity of paragraph content
f. Links between paragraphs
g. Variety of sentence beginnings
h. Variety of sentence length
i. Variety of sentence construction

Further activities

1. Complete the following mind map.

2. Complete the following mind



3. Draw a mind map in answer to the following topic:
The last day of the Christmas holiday

Answers and assessment

Assess your mind maps using the following assessment grid:

Assessment criteria for mind map

The learner has:	7	6	5	4	3	2	1
• Chosen a suitable topic for the centre of the mind map • Has organised key ideas as main branches from the centre. These branches form a paragraph each. The key ideas are expressed in single words, above and below the lines. Different colours are used for each paragraph.							
• Has developed each paragraph around those main ideas. The ideas are presented in key words, above and below the lines. The words can be read without turning the page, i.e., nothing is written upside down. There are sufficient ideas to create a paragraph (an average paragraph will be 8-10 lines long). Each paragraph is written in a different colour							
TOTAL: 14							

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GRADE 11 MATHEMATICS

Exponents

Lesson 3

Lesson Overview
- Laws of exponents covered in Grade 10
- Laws of exponents involving rational exponents and surds
- Simplification of expressions involving exponents and surds
- Activities in the form of worksheets for practice
- Investigation as a possible portfolio exercise.

Laws of exponents

1. **Product Law** : $a^m \times a^n = a^{m+n}$

2. **Quotient Law :** $\frac{a^m}{a^n} = a^{m-n}$

From the quotient Law we get

a) Negative exponents

$\frac{a^3}{a^4} = a^{-1} = \frac{1}{a}$ so

$4p^{-1}q^2 = \frac{4q^2}{p}$ and $3m^{-1} = \frac{3}{m}$ and

$\frac{6}{x^{-2}} = 6x^2$ and

$a + b^{-1} = a +$ and $(x+3)^{-2}$

$= \frac{1}{(x+3)^2}$

and $(2m)^{-2} = \frac{1}{(2m)^2} = \frac{1}{4m^2}$

b) The exponent zero

1) $\frac{a^4}{a^4} = a^0 = 1$ so $6^0 = 1$

2) $3p^0 = 3$ but $(3p)^0 = 1$

3) $3 + m^0$ but $(3 + m)^0$

$= 3 + 1 = 1$

$= 4$

4) $a + b^0$ but $(a + b)^0$

$= a + 1 = 1$

The power of law

THE POWER LAW
Example of using the Power Law

$(a^m)^n = a^{mn}$

$(a^m p^n)^q = a^{mq} p^{nq}$

$\left(\frac{a^m}{b^n}\right)^p = \frac{a^{mp}}{b^{nq}}$

RATIONAL EXPONENTS AND ROOTS

$\sqrt{p} = p^{\frac{1}{2}}$ $\sqrt[3]{m} = m^{\frac{1}{3}}$

$\sqrt[3]{a^2} = a^{\frac{2}{3}}$ $\sqrt{m^5} = m^{\frac{5}{2}}$

so in general

$\sqrt[q]{m} = m^{\frac{1}{n}}$

$\sqrt[q]{a^m} = a^{\frac{m}{n}}$

From Rational Exponents and Roots

1) $4^{\frac{1}{2}} = (2^2)^{\frac{1}{2}} = 2$

2) $\sqrt[3]{8} = 8^{\frac{1}{3}} = (2^3)^{\frac{1}{3}} = 2$

3) $(27)^{\frac{2}{3}} = (3^3)^{\frac{2}{3}} = 3^2 = 9$

4) $(8)^{-\frac{2}{3}} = (2^3)^{-\frac{2}{3}} = 2^{-2} = \frac{1}{4}$

5) $\sqrt[4]{16^3} = (16)^{\frac{3}{4}} = (2^4)^{\frac{3}{4}} = 8$

6) $\left(\frac{8}{27}\right)^{-\frac{2}{3}} = \left(\frac{2^3}{3^3}\right)^{-\frac{2}{3}} = \frac{2^{-2}}{3^{-2}} = \frac{9}{4}$

Watch the negative sign

1) $-9^{\frac{1}{2}} = -(3^2)^{\frac{1}{2}} = -3$

2) $(-9)^{\frac{1}{2}}$ is invalid. Why?

3) $-8^{\frac{1}{3}} = -(2^3)^{\frac{1}{3}} = -2$

4) $(-8)^{\frac{1}{3}} = (-2^3)^{\frac{1}{3}} = -2$ Why?

5) $(-27)^{\frac{2}{3}} = (-3^3)^{\frac{2}{3}} = (-3)^2 = +9$

6) $(-9)^{\frac{3}{2}}$ is invalid

7) $(-27)^{-\frac{2}{3}} = (-3^3)^{-\frac{2}{3}} = (-3)^{-2} = \frac{1}{9}$

8) $(-16)^{-\frac{4}{2}}$ is invalid

We can't find the square root of a negative (this applies to all even roots).

General Example

$\frac{2^{2n-1}4^{n+1}2}{16^n}$ (Write as prime bases)

$= \frac{2^{2n-1}.(2^2)^{n+1}.2^1}{(2^4)^n}$

$= \frac{2^{2n-1}.2^{2n+2}.2^1}{2^{4n}}$ (Multiply – Add exponents)

$= 2^{2n-1+2n+2+1-4n}$ (Divide – subtract exponents)

$= 2^2 = 4$

Activity 1

Simplify .

1) $\left(\frac{8}{27}\right)^{-\frac{4}{3}}$

2) $\frac{45^{-n+1}.5^{n-1}.81^{-1}}{4^{n-2}.36^{-n-1}}$

3) $\frac{(xy)^{\frac{1}{3}} \times (x^{-2})^{\frac{1}{6}} \times (x^4y^2)^{\frac{1}{3}}}{(x^{-3})^{\frac{2}{9}}}$

4) $\frac{(a^2)^{2n+2}(a^6.b^3)^{-n}}{[(ab)^{-2}]^n.b^{-n}}$

Example of addition and subtraction with exponents.

Rule: Break down and factorise
Example:

$\frac{3.2^x - 2^{x-1}}{2^x + 3.2^{x-2}}$

$= \frac{3.2^x - 2^x.2^{-1}}{2^x + 3.2^x.2^{-2}}$ (common factor)

$= \frac{2^x(3 - 2^{-1})}{2^x(1 + 3.2^{-2})}$

Simplify:

5) $\frac{3^x + 3^{x+1}}{3^x - 3^{x+2}}$

6) $\frac{2.2^{x+1} + 8.2^{x-3}}{4.2^{x-1} - 16.2^{x-4}}$

Answers and assessment

1) $\left(\frac{8}{27}\right)^{-\frac{4}{3}} = \left(\frac{2^3}{3^3}\right)^{-\frac{4}{3}}$

$= \frac{2^{-4}}{3^{-4}} = \frac{81}{16}$

2) $\frac{(3^2.5)^{-n+1}.5^{n-1}.(3^4)^{-1}}{(2^2)^{n+2}.(3^2.2^2)^{-n-1}}$

$= \frac{3^{-2n+2}.5^{-n+1}.5^{n-1}.3^{-4}}{2^{2n+4}.3^{-2n-2}.2^{-2n-2}}$

$= 3^{-2n-2+2n+2}5^0.2^{-2}$

$= \frac{1}{4}$

3) $\frac{x^{\frac{1}{3}}y^{\frac{1}{3}}x^{-\frac{1}{3}}x^{\frac{4}{3}}y^{\frac{2}{3}}}{x^{-\frac{2}{3}}}$

$= x^{\frac{4}{3}+\frac{2}{3}}.y^1$

$= x^2y$

4) $\frac{a^{4n+4}.a^{-6n}.b^{-3n}}{a^{-2n}.b^{-2n}.b^{-n}}$

$= a^{4n+4-6n+2n}.b^{-3n+2n+n}$

$= a^4.b^0 = a^4$

5) $\frac{3^x + 3^x.3}{3^x - 3^x.3^2}$

$= \frac{3^x(1+3)}{3^x(1-9)} = \frac{4}{-8} = -\frac{1}{2}$

6) $\frac{2.2^x.2^1 + 8.2^x.2^{-3}}{4.2^x.2^{-1} - 16.2^x.2^{-4}}$

$= \frac{2^x(8 + 8 \times \frac{1}{8})}{2^x(2 - 16 \times \frac{1}{16})}$

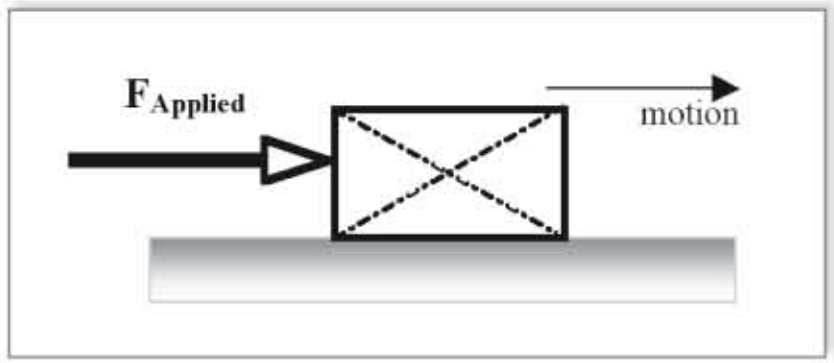
$= \frac{9}{1} = 9$

PHYSICAL SCIENCE

Mechanics

The force of friction (Part 1)

Lesson 3

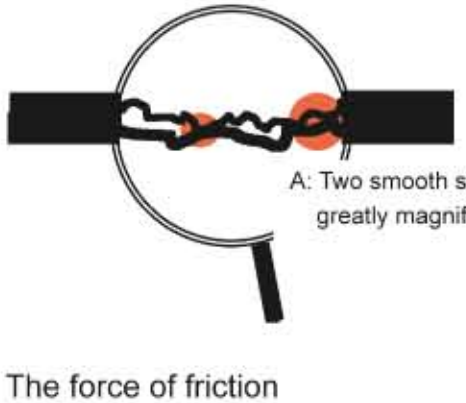


Introduction

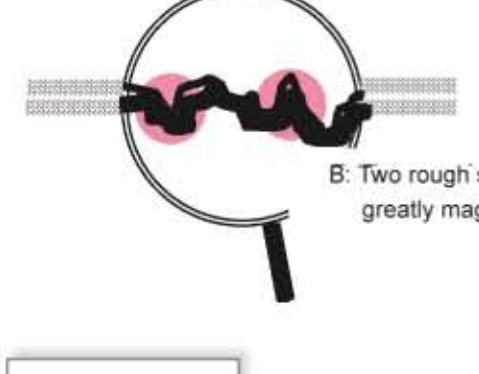
Look at this diagram. An applied force ($F_{Applied}$) acts on a block resting on a surface. If we want it to move we must apply a force.
Now imagine that once the body has begun moving, the applied force is adjusted so that the block now moves with constant velocity. But if we are pushing (i.e. applying a force) there must be some opposing force that balances our push. And in the case of our block being pushed along a surface this is what we call "the force of friction".

The frictional force: a brief explanation

Friction occurs when two surfaces are in contact. It actually consists of electromagnetic forces (we will deal with these in Lessons 9 and 11) that exists between atoms and molecules.



A: Two smooth surfaces, greatly magnified



B: Two rough surfaces, greatly magnified

The force of friction

The equation for calculating the force of friction is:

$$F_f = \mu N$$

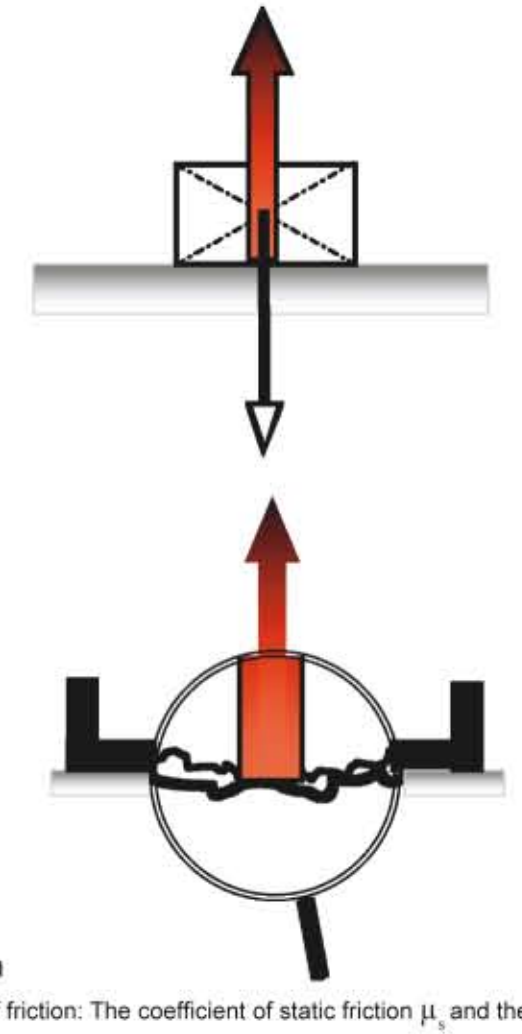
μ is a constant known as the coefficient of friction.
N is the normal force exerted between the surfaces.
[The normal force is explained in the next paragraph.]
F_f is the force due to friction. The force of static friction can have a range of values from zero up to a maximum value.

Normal force of reaction

A surface will exert a normal force (N) in reaction to the action of a body on that surface. The action will usually be due to the weight of the body (i.e. the force that the earth exerts on the body – the gravitational pull on the body, as discussed in Lesson 4) and any other forces acting downwards on the body (e.g. if someone or something is pressing down on it).

Note: The Normal and the Weight are not an action-reaction pair of forces.

Normal force of reaction (N) of the surface to the force exerted on it by the body.



Coefficients of friction

There are two coefficients of friction: The coefficient of static friction μ_s and the coefficient of dynamic or kinetic friction μ_k.

The force of friction (F_f) on each surface is exerted in the direction opposite to its motion relative to the other surface.

When surfaces are at rest relative to each other, the coefficient of friction is μ_s, the coefficient of static friction. This coefficient is usually greater than μ_k.

The force of static friction can be any value from zero up to F_f. What this statement means is that in the static case, the frictional force is exactly what it must be in order to prevent motion between the surfaces. F_f (static) it balances the net force that tends to cause the motion. The direction of the frictional force on a surface is always opposite to the motion that surface or the direction a body would move if there was no friction.
It is easier to say that μ_s gives us the maximum value for the frictional force above which sliding would start.

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LIFE SCIENCES

Tissues, cells and molecular study

Bacteria

Lesson 3

1. Introduction

Bacteria are found everywhere on earth, in water, soil and air. Disease causing bacteria are called pathogens. Some bacteria are parasites and are harmful, while others are not parasitic and are useful. Bacteria are spread by air, water, food, sores and cuts, flies and sexual contact.

2. Structure

Bacteria are unicellular and live as single cells or in a colony. They are prokaryotic because they have no nucleus. The bacterium is surrounded by a cell wall which is covered with a slime capsule to prevent the bacterium from drying out. The cell has no organelles like mitochondria, vacuoles or plastids. DNA strands are found in one area called a nucleoid.

Bacteria have four shapes

- Coccus – sphere shaped
- Bacillus - rod-shaped
- Vibrio - comma-shaped
- Spirillium – spiral or cork-screw shaped

1. Reproduction

Bacteria reproduce asexually by a process called binary fission under favourable conditions. The reproduction process takes about 20 minutes. It begins when the DNA sduplicates and moves apart. A transverse membrane develops to separate the cytoplasm and two identical cells result.

If conditions are unfavourable, the bacteria forms a structure called an endospore by forming a thick cell wall, which is protected against high temperatures and dehydration. This is why it requires temperatures of 120°C to destroy bacteria.

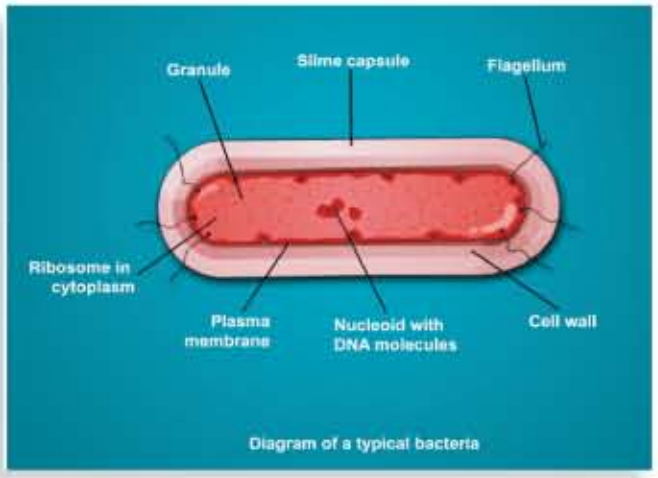


Diagram of a typical bacteria

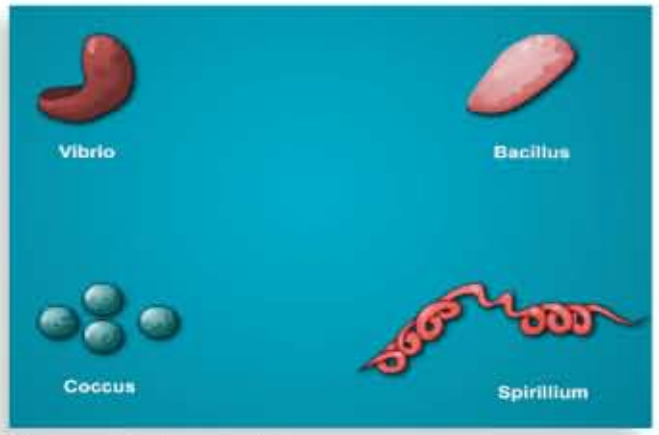


Diagram of various bacteria

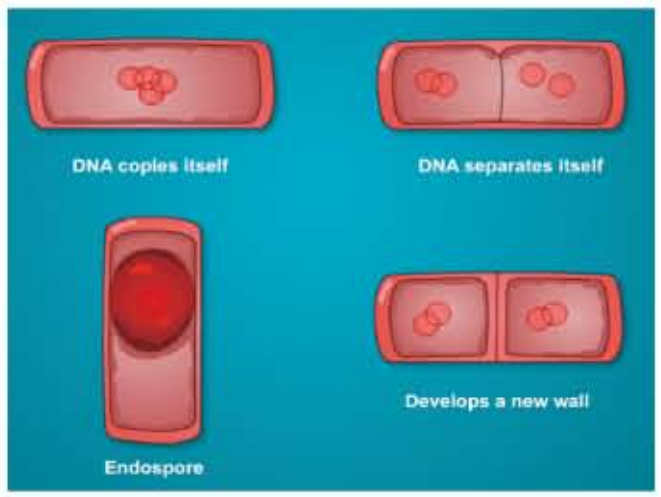


Diagram of the reproduction of bacteria

2. Treatment of bacterial infections

Antibiotics are used to treat bacterial infections. These antibiotics are produced by bacteria and fungi that live in the soil and produce chemicals to eliminate the competition of rivals. A mould fungus produces Penicillin, a substance used in most antibiotics. Antibiotics either stop the bacterial cell wall from developing or they stop protein production in the bacteria. A lack of protein eventually causes death. The course of antibiotics must be completed by an infected person because if any bacteria survive, re-infection will occur.

3. Diseases

Cholera: a disease that attacks the alimentary canal resulting in severe diarrhoea and vomiting,causing weakness and dehydration. Cholera is spread by ingestion of food and drinking water, contaminated with urine and faeces. Correct sewage disposal and good general hygiene prevents cholera, therefore wash hands after using the bathroom and wash vegetables and fruit before eating.

Tuberculosis (TB): a disease that attacks the lungs, kidneys and bones. An infected person will run a fever, feel chest pains, cough, lose weight and have difficulty breathing. As the infection progresses, the lungs become blocked with mucus. The pressure causes the alveoli to burst and blood is coughed up, resulting in weakness, as the absorptive surface for oxygen is reduced. TB is easily transmitted by air when coughing and also by infected milk. Infected people should be isolated. A course of antibiotics must be taken for a minimum of six months. Children are innoculated at local clinics, to ensure passive immunity against TB.

4. Genetic engineering

Genetic engineering is a process where genes are transferred from one organism to an unrelated species. Diabetes is a disease that results when the pancreas does not produce an adequate amount of the hormone insulin. Insulin is required to regulate a person's blood sugar. A lack of blood sugar results in seizures, comas and possible death. Biochemists, after much research, are able to produce artificial insulin. Restriction enzymes are removed from bacteria. The biochemists then remove DNA from a healthy person's pancreas cells. The restriction enzymes "cut" pieces of the DNA containing the genes required to produce insulin. The genes are placed inside a plasmid. The plasmid is then absorbed by a healthy bacterium. The genes on the piece of DNA produce proteins, which is converted into insulin. The insulin is then extracted from the bacterium cell. Diabetics inject the insulin into their body everyday and together with a proper diet, they are able to control their blood sugar.

5. Biotechnology

Bacteria are used to ferment pasteurized milk to produce cheese. The process begins when milk is separated into whey and curd. Bacterial enzymes partially digest the proteins and fats in the curd. Different bacteria are used to produce the different flavours of cheese.

6. Biological importances

- Bacteria are saprophytic decomposers and produce humus which makes the soil fertile.
- Bacteria are essential in the nitrogen cycle for nitrification, denitrification and nitrogen fixing processes.
- Bacteria are used:
- to produce butter, yogurt, cheese and maas,
- to produce vinegar by a process of bacterial fermentation
- by farmers to produce silage for feeding cattle.
- Bacteria decompose and convert urine and faeces into harmless substances like sulphates and nitrates, during sewage treatment.

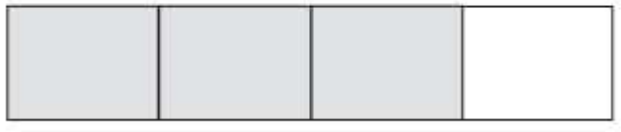
MATHEMATICAL LITERACY

Lesson 1

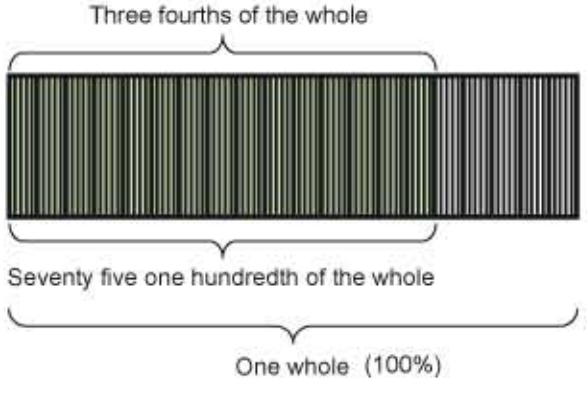
Percentage
An introduction

Lesson overview
In this activity we will be working with percentage. We will define percentage, learn how to change fractions into percentages and consider the advantages and disadvantages of using percentages.

Introduction
A percentage is a fraction. It is the part of the whole expressed in hundredths.
Consider the fraction three-quarters – it described three parts of a whole that has been divided into four equal parts. See diagram below.



To change three quarters into a percentage we need to divide the whole into one hundred equal parts instead of four. Since 100 divided by 4 is 25, we need to divide each of the fourths into 25 equal parts.



It follows that three-quarters corresponds to 75 of the 100 equal parts or 75%. Three-quarters and seventy-fife hundredths are equivalent fractions. This means that three-quarters is 75%.

METHODS AND WORKED EXAMPLES

Expressing a fraction as a percentage is useful because we have a better understanding or "feel" of what a percentage is than we have of the equivalent fraction. For example:

A water tank has a capacity of 5 500 litres. This means that it can contain 5 500ℓ of water. If there is only 1 950ℓ in the tank then the tank is $^{1\,950}/_{5\,500}$ full. This is clumsy and one gets a better "feel" of how full the tank is if we say that it is 35% full.

Another reason why percentages are useful is that it allows us to express a fraction as a whole number. For example:
35% is a lot easier to read and write than twenty-one sixtieths or 0,35.

One can calculate a percentage using a calculator. For example:

If seven of the eight girls in a class have boyfriends, what percentage of the girls has a boyfriend?
Use your calculator and type the following: 7 ÷ 8 and then the % key. This should give an answer of 87,5%.

Additional examples:
The following example shows how we can use percentage to compare situations. It also serves to show how we can lose some of the actual quantities when we use percentage.

(1) If a dam with a capacity of 1 625Mℓ has 1 072Mℓ in it, how full is the dam?

(2) If a second dam with a capacity of 13 488Mℓ has 8 902Mℓ in it, how full is this dam?

Solutions:
(1) Using the calculator we get about 66%.
(2) Using the calculator we get about 66%

The answer to both of those problems was 66%, but one of the dams has a lot more water in it. When we use percentage, we lose the actual values.

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Activities

1	25 out of a class of 37 are boys .
1.1	What percentage of the class are boys?
1.2	What percentage of the class are girls? Show two ways of getting this answer.
2	153 cars were parked in a carpark. The carpark has a capacity of 180 cars. Express how full the carpark was as a percentage.
3	Grace wrote two Mathematics tests. For the first test she go $^{23}/_{30}$ and for the second test she got $^{25}/_{40}$. In which of the two tests did she do better? Compare the two tests by converting each mark to a percentage.
4	The teacher said that if 85% of the class remembered to bring their train fare then she would take them on an outing. Did the learners go on the outing if 35 out of a class of 42 learners remembered to bring their money?
5	A restaurant has two seating areas, one outside and one inside. The inside area can seat 60 people and the outside area can seat 30 people.
5.1	There are 45 people eating in the inside area at a particular time. Express how full the inside area is as a percentage.
5.2	At the same time there are 24 people in the outside area. Express how full the outside area is as a percentage.
5.3	Percentage-wise which is fuller? Which area has more people to be served?
5.4	Express how full the whole restaurant is as a percentage.
6	A local rock band played in a concert on Friday and Saturday night.
6.1	On Friday night, 4613 out of the crowd of 6500 were under eighteen. What percentage of the crowd was under eighteen?
6.2	On Saturday night, 5023 out of a crowd of 7256 were under eighteen. What percentage of the crowd was under eighteen?
6.3	What percentage of the crowd for both nights together were under eighteen?
6.4	The concert venue can accommodate 7500 people. Express how full the venue was on Friday night as a percentage.
6.5	Express how full the venue was on Saturday night as a percentage.
6.6	Which night would you have preferred to go on and why?

Answers and assessment

1.1	68% boys	6.1	71% were under eighteen
1.2	32% girls	6.2	69% were under eighteen
2	85% full	6.3	70% were under eighteen
3	First test = 76,7% Second test = 62,5% She did better in the first test.	6.4 6.5 6.6	87% full 97% full Own answer.
4	83% brought their money so they went on the outing.		
5.1	60% full		
5.2	80% full		
5.3	The outside area is fuller percentage-wise but there are more people to be served in the inside area.		
5.4	77% full		

ENGLISH LANGUAGE PAPER GRADE 10 - Page 1

Enoch Sontonga

Comprehension

Read the following passage and answer the questions.

1 Under a pine tree in Braamfontein Cemetery a group of children from the *Sparrow School* sings *Nkosi Sikelel' iAfrika*, livening it up with their hip-hop moves. Adult choir members deliver a more formal gospel version of the song as part of a gathering organised by the Johannesburg City Parks to mark the death of Enoch Sontonga, the man who wrote the first verse, chorus and tune of the song which means, 'God bless Africa'. (5)

2 The song was written in 1897 when Sontonga was a teacher and choir master at a school in Nancefield, Soweto. The song gained popularity and in 1912, ANC members sang it after their first conference. In 1923 the writer and ANC co-founder, Sol Plaatje, recorded the song accompanied by pianist Sylvia Colenso. Later, poet Samuel Mqhayi added seven stanzas in Xhosa and the song was included in the Xhosa hymn book. The song was also included in various anthologies of poetry.

(10)

3 *Nkosi Sikelel' iAfrika* became the national anthem of several southern African countries. In our country it became a song of comfort and of defiance against the apartheid government. In 1994 it was combined with *Die Stem*, written by CJ Langenhoven, to form South Africa's new anthem.

(15)

4 As guests prepared to lay wreaths in Sontonga's honour, the chairman of the Cultural Committee, Oscar Oliphant, asked the teenagers from the *Sparrow School* to sing the original song composed by Sontonga. They were taken by surprise but gave a lively performance. Later when the national anthem was played, the teenagers could be seen mouthing the words and adding their hip-hop moves.

(20)

5 Before laying a wreath for Sontonga, Culture Minister Pallo Jordan said: 'There is no way that Sontonga could have dreamt of the massive impact that his song would have on this country.' He said that an exercise book containing other works by Sontonga disappeared during the forced removals in Sophiatown. 'Enoch Sontonga probably wrote many other songs but this is the only one we managed to preserve.' He asked composers, writers, artists and their families to send copies of their works to the national **archive*** for safe keeping. 'You never know what is going to be important one day,' he said.

(30)

[Adapted from Southern Heritage, July 2005]

Glossary:

**** archive – a place where public records and important state documents are kept.***

ENGLISH LANGUAGE PAPER GRADE 10 - Page 1

Questions:

1.1 Explain in your OWN WORDS why people met at the Braamfontein Cemetery (paragraph 1). (2)

1.2 Explain how the children's version of Nkosi Sikelel' iAfrika differed from the one sung by the adult choir (paragraph 1). (2)

1.3 What does the abbreviation 'ANC' stand for? (1)

1.4 Explain the meaning of '...the song gained popularity...' (line 8). (2)

1.5 Name TWO things that Sol Plaatjie will be remembered for (paragraph 2). (2)

1.6 Quote a word from paragraph 2 that means the same as:

1.6.1 Religious song (1)

1.6.2 Books of verse (1)

1.7 Explain why the song Nkosi Sikelel' iAfrika comforted people during the apartheid years (lines 15 and 16). (2)

1.8 Read the following statement and answer the questions:

Enoch Sontonga wrote the national anthem of the new South Africa.

1.8.1 Is the statement TRUE or FALSE? (1)

1.8.2 Give a reason using information from the passage to support your answer. (1)

1.9 In each case say if the statement is a FACT or an OPINION and give a reason for your answer.

1.9.1 Nkosi Sikelel' iAfrika is the national anthem of several southern African countries. (2)

1.9.2 Everyone knows that Nkosi Sikelel' iAfrika was sung as a song of defiance during the apartheid era. (2)

1.10 Complete the passage below by filling in the correct form of the word in brackets.

In paragraph 4 Mr Oliphant is referred to as the chairman of the Cultural Committee.
The writer should rather have used the word (1.10.1 chair) because the words chairman
and (1.10.2 chair) are regarded as sexist terms. (2)

1.11 Why are the words 'Die Stem' written in italics in paragraph 3? (1)

learning channel
Department of Education

ENGLISH LANGUAGE PAPER GRADE 10 - Page 3

1.12 Read the following statement and answer the questions:

Learners from the Sparrow School knew that they would be asked to sing the original Nkosi Sikelel' iAfrika (paragraph 4).

1.12.1 Is the statement TRUE or FALSE? (1)

2.2.2 Quote a phrase of not more than three words from paragraph 4 to support your answer. (1)

1.13 Refer to line 24. Do you agree with Minister Pallo Jordan that Nkosi Sikelel' iAfrika has had a 'massive impact' on South Africa? Give a good reason for your answer. (2)

1.14 Quote ONE word from paragraph 5 that means the opposite of destroy. (1)

1.15 Explain why the Minister of Culture wants the work of composers, authors and artists to be kept in the national archive. (2)

1.16 Give the passage a suitable title that summarises what the passage is about. (1)

[30]

Question 2: Summary writing

There is a lot to do and see in South Africa but very few people make the best of these opportunities.

Instructions and information

- Read the article, 'Experience South Africa'.
- Choose any SEVEN things FROM THE PASSAGE that you wish to do one day.
- In point form, summarise the SEVEN things you would like to do.
- Write each point as a full sentence.
- Your whole summary should not be more than 50 words.

Experience South Africa

South Africa offers something for every taste.

The view from the top of Table Mountain is simply stunning. Whether you take a ride in the cable car or climb to the top, the view of the sea and Cape Town, is an experience not to be missed. Another Cape experience is going on a boat trip to see the whales as they lazily play about in the Atlantic Ocean.

South Africa is known for its outstanding national wildlife parks, the largest of which is the Kruger National Park. You could go on a game drive or on a guided hiking tour where a game ranger takes visitors to see the animal and bird life on foot.

Department of Education

ENGLISH LANGUAGE PAPER GRADE 10 - Page 4

In August and September thousands of visitors flock to Namaqualand to view the carpets of spring flowers that stretch out as far as the eye can see. Be sure to book in time as accommodation can be a problem. City dwellers may enjoy a farm holiday where they can get away from it all. These holiday farms offer comfortable accommodation, excellent meals and the opportunity to experience farm life first hand.

You cannot go to Gauteng without visiting the Apartheid Museum where you can learn about the struggle and the many heroes of the time. We need to know our history to make sure that we do not repeat it. While you are in the area you could spice up your holiday with a ride on the roller-coaster at Gold Reef City, one of the largest entertainment playgrounds in the country.

For those who do not live in a coastal area, the sea and the sunny beaches will always remain a special holiday destination. Whether you go swimming, surfing, fishing or simply lie and soak up the sun, a seaside holiday is always a treat.

[Adapted from an article by Jennifer Stern in Travel, 22 April 2006] [10]

Question 3: Language in context – visual literacy

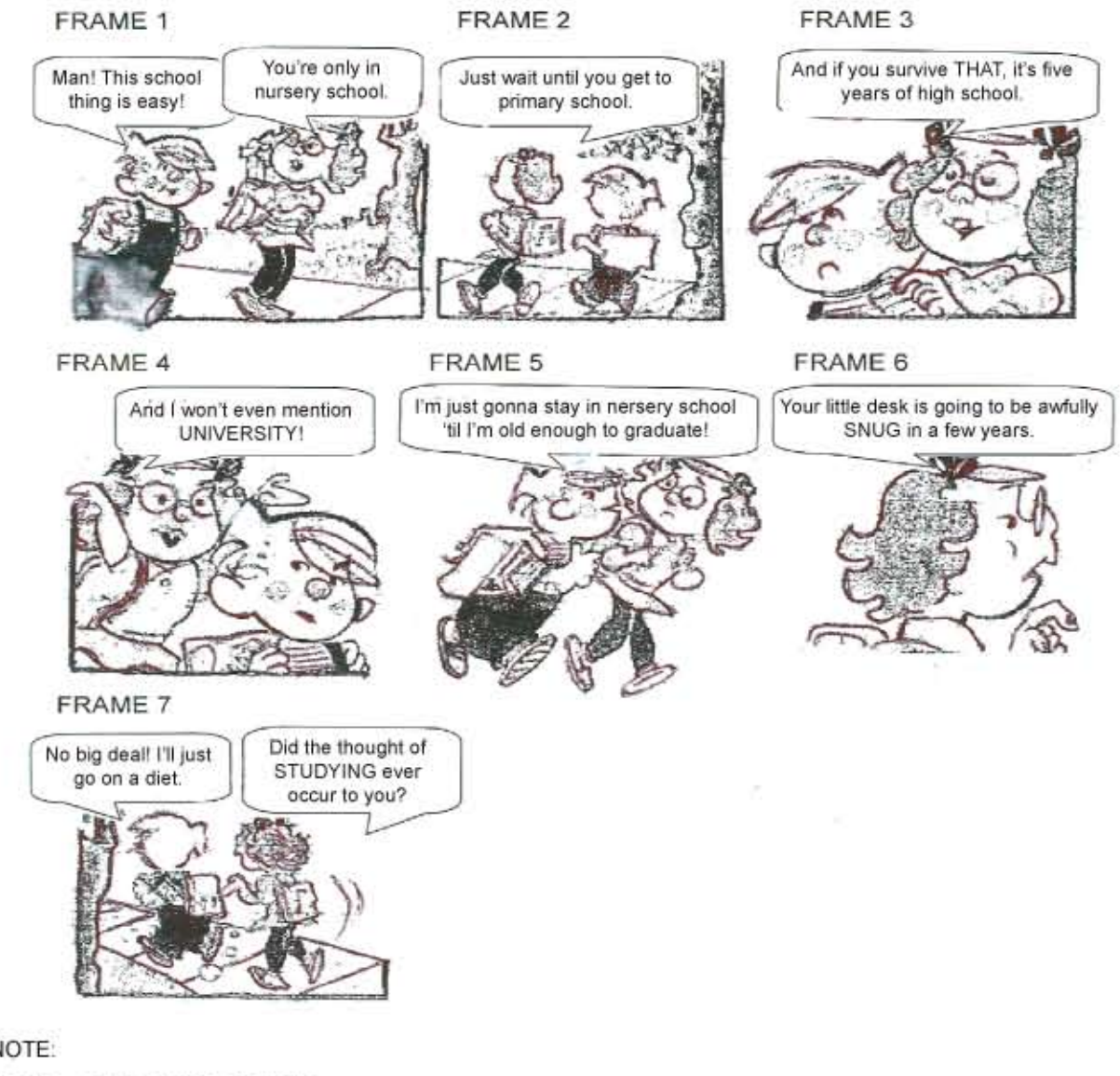
Analysing a cartoon

Study the following cartoon and answer the questions that follow.

DENNIS THE MENACE

by Hank Ketcham

[Adapted from Sunday Times, 14 May 2006]



NOTE:

Dennis – name of male character

Margaret – name of female character

Questions:

3.1 Who is the leading, most dominant figure in the cartoon?

3.1.1 Prove your answer by referring to what is SAID. (1)

3.1.2 Prove your answer by referring to what you SEE in the pictures. (1)

3.2 How does Dennis's mood change from frame 1 to frame 3? (2)

3.3 Explain why the word 'UNIVERSITY' (frame 4) is printed in bold letters. (1)

3.4 Dennis uses informal language in frames 5 and 7. Quote ONE example of informal language used in the cartoon. (1)

3.5 Quote a word from the cartoon that means the same as tight or small. (1)

3.6 Rewrite Margaret's words in frame 6 starting with the words given:
She said that... (2)

3.7 Rewrite 'No big deal!' (frame 7) in more formal language. (2)

[11]

Question 4: Using language correctly

Read the text and answer the questions based on it.

Survival is but an insect away

You may think that insects are all legs and very little else, but they are not. Just look at how quickly baby birds grow from eating insects. Insects are a very rich source of fat and protein.

If you need to survive in the veld, flying ants can be trapped by placing a close tangle of twigs over the hole that the ants are emerging from. Place a bowl under the tangle but do not close the opening that the termites are coming out of. As the flying ants crawl through the twigs, they lose their wings and fall into the bowl. (5)

Gently roast the flying ants over the fire or eat them fresh from the ground. You will be amazed at how delicious they are. Flying ants are so rich in fat that they leave a fatty deposit against the roof of your mouth when you eat them. (10)

[Adapted from, Outlook, 28 May 2006]

4.1 Choose the most likely answer from the list below.
The extract has been taken from…

A a magazine.
B a high school textbook.
C an encyclopaedia.
D a report. (2)

4.2 Considering the heading, what do you think the author's aim was when writing the text? (2)

4.3 Complete the following sentences by adding the missing question tags:

For example: All insects have legs, don't they?

4.3.1 Insects are not just all legs, … …? (1)
4.3.2 An insect is not just all legs, … …? (1)

4.4 Combine the following sentences using the word 'and':
Insects are very rich in fat.
Insects are very rich in protein. (2)

4.5 Rewrite the sentence below, starting with the words given. Do not change the meaning of the sentence.

You can eat flying ants straight from the ground.
Flying ants can …. (2)

4.6 Complete the following passage by:

- Giving the correct form of the word;
- Filling in the missing word; or
- By choosing the correct word from those given.

Give only the number and the correct answer.

When I realised how (4.6.1 taste) flying ants were, I (4.6.2 not) mind spending a (4.6.3 hole/whole) day trying to catch (4.6.4 this/these) tiny insects. At least I knew I (4.6.5 can/could) treat my family to a good meal (4.6.6 …) the end of the day. (6)
[16]

Question 5: Dictionary and language skills

Study the following dictionary entry concerning the word 'deposit' which is used in the previous passage, and answer the questions that follow.

deposit / n / 1 first payment you make when you agree to buy something expensive such as a house or a car: We've put down a deposit on a new house.
2 a layer of metal that has formed in soil or rock: There are rich gold deposits on the reef. **3** a layer of a substance that forms inside or on something: Layers of fat can be deposited in the arteries.
deposit / v / 1 to put or to leave something somewhere: They deposited their suitcases at the hotel.
2 to pay money into a bank account: He deposited money in his account. 3 to lay down or to layer: These sediments were deposited by floods.

[Adapted from Macmillan English Dictionary for Advanced Learners]

5.1 Read the sentence below and answer QUESTIONS 5.1.1 to 5.1.2.

Flying ants are so rich in fat that they leave a fatty deposit against the roof of your mouth when you eat them.

5.1.1 Is the underlined word used as a noun or as a verb? (2)
5.1.2 Quote the dictionary definition that gives the correct meaning of the word 'deposit' as it is used in the sentence above. (2)

5.2 Explain why the word 'deposit' has been printed in bold letters in the dictionary entry above. (2)

5.3 What is the function of the sentences that have been printed in italics in the dictionary entry? (1)

5.4 Explain why the words 'Macmillan English Dictionary for Advanced Learners' have been printed in italics. (1)
[8]

Question 1: Answers

1.1 The Johannesburg City Parks organized a function to commemorate the death of Enoch Sontonga. (Or words to this effect.) (NOT: "to mark the death") (2)

1.2 The children sang in a lively way whereas the adults sang the formal version./ The children sang in hip hop style but the adults sang the hymn. (Or words to this effect.) (Must be a comparison.) (Award 0 or 2) (2)

1.3 African National Congress (1)

1.4 More and more people starting singing the song./It became more popular. (Award 0 or 2) (2)

1.5 He was a writer.
He was co-founder of the ANC.
He recorded Nkosi Sikelel' iAfrica. (Any TWO answers 1 +1) (2)

ENGLISH LANGUAGE PAPER GRADE 10 - Page 9

1.6.1 hymn (1)

1.6.2 anthologies (Must be plural form) (1)

1.7 Learners' own responses are required and a variety of answers can be expected. Marker discretion is advised. Marks are awarded for the ability to argue a point.
Example: They felt comforted knowing that God would hear them and that they could look forward to the time they would be free. (2)

1.8.1 False (1)

1.8.2 He wrote only the first verse, chorus and tune. (Learners can quote.)/ The national anthem is a combination of Die Stem and Nkosi Sikelel' I Afrika. (1)

1.9.1 Fact (1) It can be proved.(1) (Or words to this effect.) (2)

1.9.2 Opinion (1) It is unlikely that "everyone" knows. (1) (Or words to this effect.) (2)

1.10.1 Chairperson (1)

1.10.2 Chairlady (1)

1.11 It is the title of the song. (1)

1.12.1 False (1)

1.12.2 "taken by surprise" (Learners should use quotation marks but do not penalise if they get the answer correct.) (1)

1.13 Learners' own responses are required and a variety of answers can be expected. Marker discretion is advised. Marks are awarded for the ability to argue a point. NB: It must be clear that learners understand the meaning of "massive impact".

Example: Yes, any song that becomes a national anthem has a big influence on people. (2)

1.14 "preserve" (Do not penalise if learners have not used quotation marks.) (1)

1.15 He wants the works to be kept safe to preserve them for future generations./Some of the works may become well-known like Nkosi Sikelel' iAfrika. (Or words to this effect.) (2)

1.16 A variety of answers can be expected. The answer should be a summary of the content of the text. Examples: Sontonga Honoured / Nkosi Sikelel' iAfrika (1)

ENGLISH LANGUAGE PAPER GRADE 10 - Page 10

Criteria for marking TRUE/FALSE questions:

1. If True or False is correct and there is a quote/substantiation, but it is wrong – 1 mark.
2. If True or False is incorrect – NO mark irrespective of correct quote/substantiation.
3. If True or False is correct and quote/substantiation is correct – 2 marks.
4. If candidates are asked to quote, words must be quoted from the passage and not contextualised. If True or False is correct but contextualisation is given – 1 mark.
5. If only True or False and no quote/substantiation – no marks.
6. If Yes or No instead of True or False – no marks.
7. If T or F instead of True or False – AWARD MARKS
8. Words contained in the quotation MUST be spelt 100% correctly.
9. If only the quotation/substantiation is given without True/False – NO MARKS.

[30]

Question 2: Answers

Points to look for: (ANY 7)

1. Table Mountain
2. Seeing the whales
3. National Wildlife Parks
4. Namakwaland flowers
5. Farm holiday
6. Apartheid Museum
7. Gold Reef City
8. Seaside/Coastal holiday

Points must be given in full sentences. Points need not be written in the first person (I would like to…)

Example: Look for the meaning and not the exact words reflected in the alternatives given.

1. See the view from Table Mountain./Take the cable car up Table Mountain./Climb Table Mountain. (1)
2. Go on a boat to see the whales. (1)
3. Visit an national wildlife park./ Visit the Kruger National Park. / Go on a game drive in a national wildlife park./ Go on a hike in a national wildlife park. (1)
4. See the spring flowers in Namaqualand. (1)
5. Experience a farm holiday. (1)
6. Visit the Apartheid Museum. (1)

7. Go to Gold Reef City./ Go on a roller coaster at Gold Reef City. (1)

8. Go on a coastal holiday./ Go to the seaside./ Go surfing/swimming/fishing at the coast./ Go to the beach and soak up the sun. (1)

Marking instructions:

- Award 1 mark for each correct point given. (7)
- Award 3 marks for language and cohesion, according to the grid below. (3)
- Consider each incomplete sentence as a language error.

Mark allocation	Descriptors
3	• Very good use of language with no more than 3 errors. • Good cohesion, logic and flow.
2	• Fairly good use of language with no more than 5 errors. • Points mentioned in a sensible manner.
1	• Poor language with more than 5 errors. • Points are disjointed or incorrect.
0	• Unintelligible. • Total misinterpretation. • Not attempted. (3)

Penalties:

- NB! Count the number of words up to the maximum word limit of 50 and draw a double slash (//). Do not award marks to points given after the word limit has been reached.
- Each incomplete sentence must be treated as a language error.
- The mark awarded for language may not exceed the marks obtained for the content.
- Deduct 1 mark from the total if the summary is written in paragraph form.

[10]

Question 3: Answers

3.1.1
Margaret. She speaks the most. / She talks down to Dennis./ She questions what Dennis says. / She criticises Dennis (Or words to this effect.) (1)

3.1.2 She walks in front of Dennis most of the time./She taps him on the shoulder in a rather bossy way in frame 3./ She throws up her hands to stress her point in frame 4. (Or words to this effect.) (1)

3.2 He is happy/confident in frame 1 but looks disappointed/miserable/unhappy in frame 3. (Learners must make a comparison.) (2)

3.3 Getting to university is the final step and Margaret wants to stress this point./ She says this word loudly to scare/belittle Dennis by showing him how far he still has to go. (1)

3.4 "Man" / "thing" / "gonna" / "'till" (Any one) (Need not use quotation marks) (1)

3.5 "snug" (Need not use quotation marks) (1)

3.6 She said that his (1) little desk was (1) going to get awfully snug in a few years. (Award marks for the two underlined words but deduct a mark from those awarded if the word order is incorrect.) (2)

3.7 That is not important. / That does not worry me. (Or words to this effect.) (Award 0 or 2) (2)

Question 4: Answers

4.1 A / A magazine (2)

4.2 To give survival tips./ To inform people how to survive in the bush. (Or words to this effect.) (2)

4.3.1 Insects are not all just legs, are they? (Comma, underlined words and question mark must be correct.) (1)

4.3.2 An insect is not all just legs, is it? (Comma, underlined words and question mark must be correct.) (1)

4.4 Insects are very rich in fat and protein./ Insects are very rich in both fat and protein. (0 or 2) (2)

4.5 Flying ants can be eaten straight from the ground. (0 or 2) (2)

4.6 SPELLING MUST BE CORRECT

GEOGRAPHY GRADE 10 - Page 1

Question 1

1.1 Choose the correct word(s) from the list below to complete the following sentences. Write only the word next to the question number.

(1.1.1 - 1.1.10) in the answer book, for example 1.1.16 isostacy.

earthquake; evaporation; epicentre; relief; soil creep; biome; isobar, desertification; temperature inversion; isotherms; radiation; insulation; Richter scale; Moho-level

1.1.1 The ... is the point on the earth's surface immediately above the focus of an earthquake.

1.1.2 The most gradual form of movement of material down a slope is called ... .

1.1.3 The process known as ... is where an area gradually becomes drier.

1.1.4 We use a/an ... to measure the size and speed of seismic waves during an earthquake.

1.1.5 The ... is the breakpoint that separates the mantle from the crust.

1.1.6 ... rain is formed when warm air rises above the mountain.

1.1.7 The amount of sun energy reaching the earth's surface, is called ... .

1.1.8 Lines connecting places with the same temperature on maps are called ... .

1.1.9 When temperature increases with altitude, it is known as ... . (10)

1.1.10 Conditions necessary for condensation are ..., sufficient condensation nuclei and rising air.

GEOGRAPHY GRADE 10 - Page 2

1.2 Indicate whether the following statements are TRUE or FALSE.
Write only 'true' or 'false' next to the question number (1.2.1 - 1.2.5) in the answer book.

1.2.1 A synoptic weather map is a summary of weather conditions.

1.2.2 An anabatic wind occurs during night time.

1.2.3 A barometer is used to measure the wind speed.

1.2.4 A desert area is dry and that is why chemical weathering is the major type of weathering in this area. (5)

1.2.5 A mesa is a good example of a landform which occurs in dry areas.

1.3 FIGURE 1.3 A and FIGURE 1.3 B show the air circulation that takes place on a small scale in a valley.

1.3.1 Give appropriate headings for FIGURE 1.3 A and FIGURE 1.3 B respectively and indicate next to each heading whether it happens during the day or night. (4 x 2) (8)

1.3.2 Explain the formation of the air circulation in FIGURE 1.3 B. (3 x 2) (6)

1.4 TABLE 1.4 below shows the rainfall for Mbabane.

Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
243	212	186	71	34	19	23	28	62	128	169	213

* Figures are in millimetres.

1.4.1 Show the rainfall figures by means of a line graph. Use a vertical scale where 1 cm represents 50 mm. (1 x 12) (12)

1.4.2 Which month has the highest rainfall? (1 x 2) (2)

1.4.3 Which season has the highest rainfall? (1 x 2) (2)

1.5 Study FIGURE 1.5 (PTO) showing a type of mountain and answer the following questions:

1.5.1 Identify the type of mountain. (1 x 2) (2)

1.5.2 State the process responsible for the formation of the mountain. (1 x 2) (2)

1.5.3 Explain the process that takes place in QUESTION 1.5.2. (3 x 2) (6)

1.5.4 The mountain shown in the sketch may be classified into three types. Name these THREE types of mountains. (3 x 2) (6)

Figure 1.3

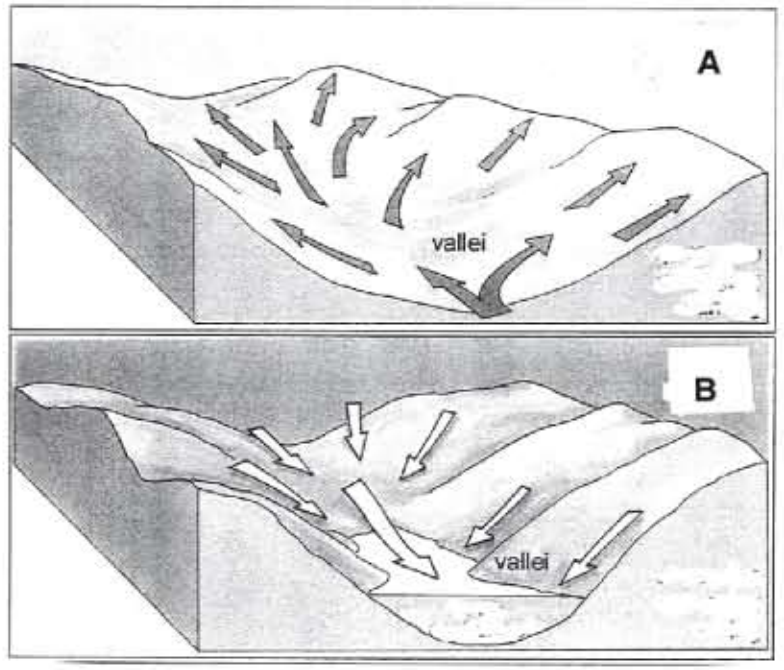
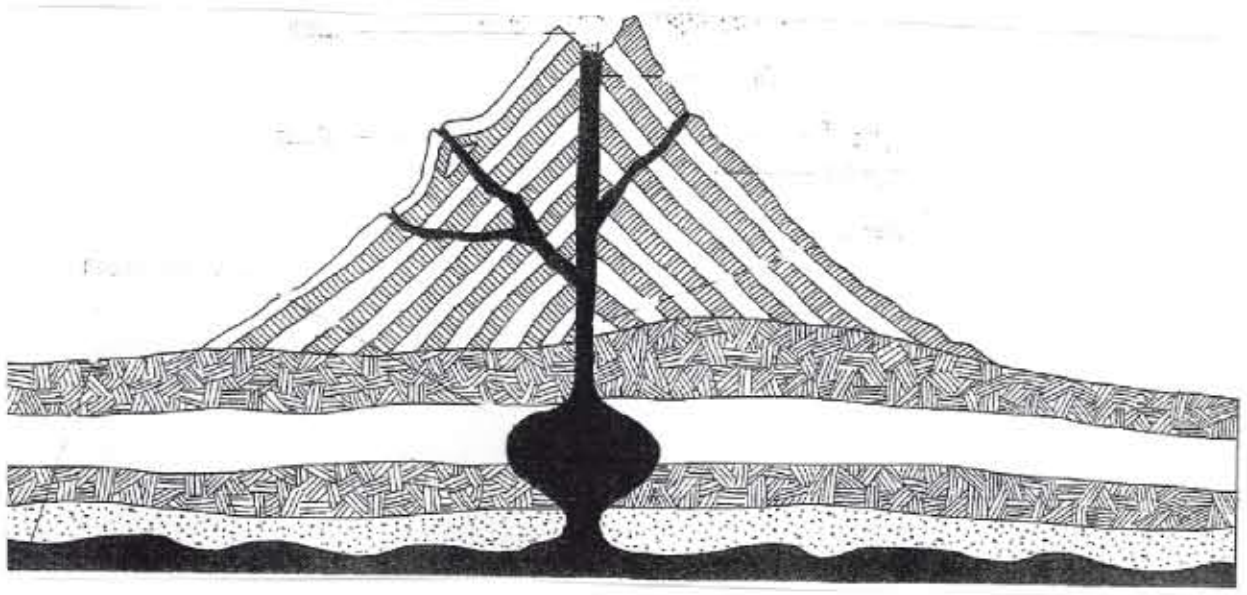


Figure 1.5



Question 1: Answers

1.1

1.1.1 Epicentre
1.1.2 Soil creep
1.1.3 Desertification
1.1.4 Richter scale
1.1.5 Moho-level
1.1.6 Relief
1.1.7 Insolation
1.1.8 Isotherms
1.1.9 Temperature inversion
1.1.10 Evaporation 1x10=10

1.2

1.2.1 True
1.2.2 False
1.2.3 False
1.2.4 False
1.2.5 True 1x5=5

1.3

1.3.1 A-Anabatic Day 2x2=4
B-Katabatic Night 2x2=4

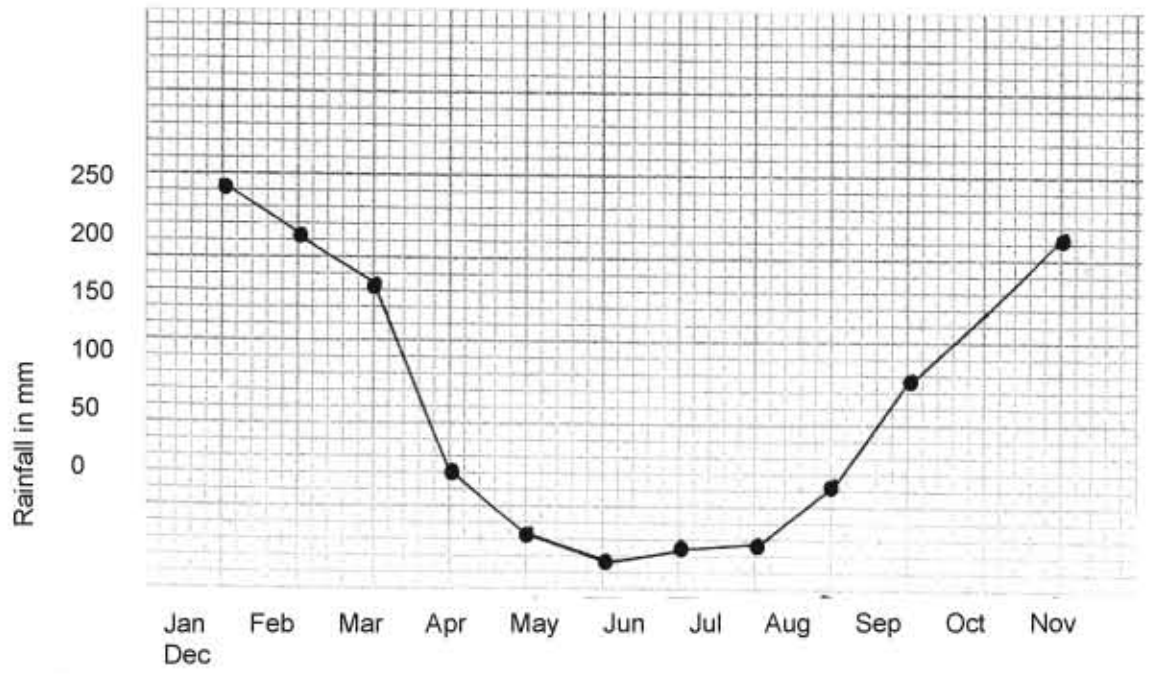
1.3.2 At night, the top part of the valley loses heat quicker than the bottom part of the valley. Cooler air flows down the slope. Cold frost pockets form in the valley in winter.

3x2=6

1.4

1.4.1 1x12=12

GEOGRAPHY GRADE 10 - Page 5



1.4.2	January	1x2=2
1.4.3	Summer	1x2=2
1.5		
1.5.1	Volcanic mountains	1x2=2
1.5.2	Volcanism	1x2=2
1.5.3	Molten rock material moves through the cracks of the earth's crust, until it reaches the surface, it solidifies to form hard rock.	3x2=6
1.5.4	Composite volcanoes Shield volcanoes Cinder cone	3x2=6

SUMMARY SKILLS

Summing it all up

As you reach the higher grades, the body of knowledge you have to understand and learn grows much bigger. Learning how to summarise becomes a very useful and important skill.

Summary skills are life skills

- A summary is a shorter version of a text.
- It contains only the main points and leaves out any additional information.
- Summarising teaches you to be brief and to get straight to the point.
- Writing a summary is a useful way of making sure you understand what you read and improves your comprehension skills.
- The ability to summarise will help you throughout your studies and future career.

How to write a summary

- Quickly read the text you want to summarise, so you have an overall idea of what it's about. This kind of reading is known as "skimming".
- Now read the text again more carefully and try to understand the meaning of the information. Underline key words as you read.
- Look at each paragraph and decide which sentence best sums up the main idea in the paragraph
- Write this sentence out in your own words.
- Check if there is any important information from the paragraph that you haven't used in your summary sentence? Briefly write this information up.
- You will end up with a set of notes containing important information from each paragraph in the text – a summary of what you have read. It should be about one-third of the length of the original text.

Writing summary notes: Practise makes perfect!

Do's	Don'ts
• Start writing your summary notes right from the beginning of the year so that you get better with each summary.	• Don't leave it until just before exams to start writing up your summary notes. It's too late!
• Once you have practiced writing summary notes for a while, allow your own style to develop.	• Don't copy summary notes from others. Those notes are some-one else's understanding of a text, not necessarily your own.
• Summary notes should be redrafted until you are comfortable with the flow of information.	• Don't give up on your summary notes at first draft stage. Work on them until they read right and feel right for you.

" You are what you repeatedly do. Excellence is not an event – it is a habit." – Aristotle