# STUDY Mate

SPECIAL 16-PAGE GRADE 12 SURVIVAL GUIDE

ISSUE 1 2009

# TOP TIPS TO HELP YOU PASS MATRIC

Stressed out about your school work? Don't panic, Study Mate is here to help!

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## LETTER FROM THE DEPARTMENT OF EDUCATION

**Dear Grade 12s**

This is IT – 2009, the year you write your National Senior Certificate Examinations!

Those of you who do well in these examinations will open up your learning and earning opportunities.

I urge you to use this final year of study well. Attend school and any extra tuition offered to you. Use every hour of the day to hone your knowledge and skills.

Keep healthy and avoid any activity that threatens or undermines your careful preparation.

Keep up to date with the latest matric news in Study Mate. Work through last year's examination papers as well as the exemplar papers that were prepared to assist you prepare for your examinations. Ask your teachers and fellow learners to work through the questions and answers with you.

In short, do everything you possibly can to convert twelve years of education into a National Senior Certificate with high marks for all your subjects.

**Good luck!**

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# 10 things to do to succeed in the Grade 12 examinations

1. The final matric timetable is out. There is a copy of it on page 16. Study it and start to plan now. There are sometimes two exams on one day so you will have to be super sharp and alert. ☐
2. There are only 200 days to the start of final exams. This includes all weekends and holidays. Start today and work everyday. Set targets for achievement. See the block on results on the right. ☐
3. Do not miss one day of school between now and your exams. Keep healthy and alert. Listen to your teachers. They have done this before and will help you succeed. ☐
4. Reading is a hot skill. Reading will change your life. Read at least 1 000 words everyday. Read everything you can get your hands on. Read accurately and quickly. ☐
5. Writing is power, but it requires practice. We are all judged, every day, on our writing – we can inspire, impress, persuade, congratulate and express love with writing. Write at least 400 words every day – carefully, accurately and beautifully. ☐
6. Textbooks are an essential student companion. Have you got a textbook for each subject? Make sure you do and that you work systematically through your textbooks. Don't wait for your teacher to explain it all. Look at what you have to cover for the year and plan accordingly. ☐
7. Your BMI can help you in matric. Your Body Mass Index (BMI) is an indication of how healthy you are. Calculate your BMI and then exercise and eat healthily throughout the year to keep an optimum BMI. ☐
8. Academic work requires concentration and focus. Every day you should be engaged in intensive, focused, individual academic work. Turn off iPods, music centres, the TV, the cellphone and have an intensive and rewarding academic workout everyday. Build your brain cells and be the envy of all your friends. ☐
9. Good vibes are good for success. Surround yourself with positive, happy people who want you to succeed. Your family and friends will be important in supporting you in the next 200 days. Be grateful for their support. ☐
10. Matric success requires planning and hard work. Start planning and working today. Attend school every day. Do homework every day. Read every day. Write and calculate every day. Stick to your year plan. ☐

### How did you do?

**Count up the ticks in the right-hand column.**

**1-2: Get help urgently.**

**3-4: Start planning today.**

**5-6: You are on your way. Intensify your efforts.**

**7-8: You're well organised and nearly ready for success.**

**9-10: You're doing great. Help someone else to get organised fo success.**

**It is important to know the codes and percentages for recording and reporting in Grade 10-12**

| Rating code | Description of competence | % |
|---|---|---|
| 7 | Outstanding achievement | 80-100 |
| 6 | Meritorious achievement | 70-79 |
| 5 | Substantial achievement | 60-69 |
| 4 | Adequate achievement | 50-59 |
| 3 | Moderate achievement | 40-49 |
| 2 | Elementary achievement | 30-39 |
| 1 | Not achievement | 0-29 |

*Aim for the highest mark possible!*

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# STUDY Mate What's still to come this year

The Department of Education together with Independent Newspapers will provide the following support to Grade 12 learners during 2009:

- Study Mate – Top Tips Survival issue – distributed free by Department of Education to schools via the Provincial Departments of Education at the beginning of the 2nd term.
- Study Mate (past papers) – 2008 Grade 12 National Senior Certificate Examination papers and supplementary examination papers with memoranda for the following subjects:

1. Maths
2. Maths Literacy
3. Physical Sciences
4. Life Sciences
5. Economics
6. Accounting
7. Business Studies
8. Tourism
9. History
10. Geography
11. English Home Language
12. English First Additional Language
13. Zulu Home Language
14. Xhosa Home Language
15. Afrikaans Home Language

These papers will be available from Independent Newspapers from June 2009.

- DVDs with expert teacher and Department of Education curriculum specialists who will talk learners through the papers, explaining common mistakes and giving useful tips. These will be available as a package with Study Mate (Past papers). Available from June 2009.
- Maths 911 for Grade 11 and 12 sponsored by Liberty Life is available from Independent Newspapers – April 2009.
- Matric Matters, a supplement which appears weekly in the Independent Newspapers titles, will be linked to the Maths 911 books.
- In addition, support will be provided for Maths 911 on DSTV on the Mindset channel.
- Maths 911 for Grade 10 and Science Catalyst will be available electronically on the websites from June 2009.
- Website support - All material will be available on www.education.gov.za and www.thutong.org

Look out for these support materials, work through them and make sure you are ready for your examinations in November 2009.

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The Star

# Get to it – do it: A+ce your Maths exam!

EISH! The Grade 12s at Kwamahlobo High School are already feeling the pressure

## Jacques du Plessis

A BEAUTIFUL MIND: Jacques today

*Jacques believes Mathematics draws the soul closer to truth*

Jacques matriculated at Benoni Technical High School, where he was a prefect and a provincial sportsman. He decided to study to become a Mathematics teacher and has been teaching Mathematics with great results over the past 20 years at four different schools.

His matric students have excelled under his tuition in both Mathematics and Additional Mathematics, for which he was an examiner for a period of time. Jacques is currently one of the Maths 911 broadcasters on DSTV channel 319.

He has written and edited various Mathematics publications based on the new curriculum and is the co-author of the new Xkit for Grade 12s. He has a huge passion for Mathematics – it is his belief that Mathematics draws the soul towards truth – and it is his mission to share that passion and belief with learners and teachers alike.

Jacques currently works at the School of Education at the University of the Witwatersrand in the division of Mathematics and Science Education. He has a Masters degree in Mathematics Education and is looking forward to completing his PhD in the next four years.

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## Managing your time in the examination

Paper 1 and Paper 2 are both 3-hour papers worth 150 marks. Paper 3 is a 2-hour paper for 100 marks. Use this information to schedule how much time to spend per question. Let's see how this works: 150 marks divided by 180 minutes = 0.83 marks per minute, so if a question is for 7 marks, you should not spend more than 8-and-a-half minutes answering it. It is important that you manage the 3 hours effectively. Try to make sure that in each hour of your exam, you answer questions worth at least 50 marks.

## The composition of the paper

Each of the Mathematics papers will have their fair share of "easy" questions. Approximately 70 to 75 marks could be testing straight-forward applications that are procedural in nature. If you know your work, have studied properly and can execute the basic procedures, you stand a good chance of scoring 50% just by answering all these questions correctly! Do not rely on the formulas you may be given in the exam – you will waste time if you have to keep going back and forth to the formula sheet, which should only be used as back-up. If you know your formulas well you will be able to identify where they apply in the paper.

The second half of the paper will focus mainly on applying the skills you have learnt: those types of questions where you have to decide which of the formulas and methods you have learnt over the years apply best to a particular situation. On the right are some examples of the different types of questions you can expect in your Mathematics examinations:

**PLEASE NOTE:** This analysis on the right is based on the 2008 exemplar for Paper 1 and the marks that were allocated for the different sections. It is the kind of weighting we can probably expect in the final Paper 1, but it is not guaranteed that this is what you will get in the actual exam! You therefore need to prepare yourself properly. Bear in mind that for every hour you spend in an examination, you should study for at least 8 hours. If you're aiming for a distinction, bargain on 12 hours of studying for every one hour in the examination session.

## BREAKDOWN OF PAPER 1:

Paper 1 will consist of the following sections:

**Q1: THE SOLVING OF BASIC EQUATIONS AND INEQUALITIES (19 marks/23 minutes)**

This section could include:

- Cubic equations – for example: $x^3 - 4x^2 - 11x + 30 = 0$
- Basic log / exponential equations: $5^{x+1} = 3$
- Quadratic equations: $x^2 - x = 6$ or $x(x + 4) = 7$
- Simultaneous equations

**Q2: FINANCIAL MATHEMATICS (19 marks/23 minutes)**

Know this section well – and which formulas apply to what situation. When is something an annuity and when is it a compound interest problem? For Present Value, you need to be able to work out the outstanding balance on a loan, the size of the periodic payments and the period of the loan. Use the present value formula for all loans. You also get a present value problem that is an investment problem – when you invest a lump sum now to make equal periodic withdrawals from the account – but investments are usually Future Value problems. Understand sinking funds well. Also make sure you can work out the regular payment in a hire purchase agreement (based on simple interest). It is likely you will also be asked about growth and decay, the doubling and halving of bacteria, etc.

**Q3, 4, 5: NUMBER PATTERNS AND SEQUENCES (27 marks/32 minutes)**

When you search for patterns in nature or in the context of numbers, look for what is regular and what is different. Patterns appear as number sequences, tessellations on diagrams, geometric shapes and periodic repetitions of situations. You could be asked to look at shapes and establish pattern, or to investigate an arithmetic, quadratic or exponential relationship between numbers. You need to be able to determine the sum of both arithmetic and geometric series, as well as find general rules that express the general term in a sequence of numbers both algebraically and in words - so familiarise yourself with all the relevant methods and formulas. Do not learn senseless recipes and big formulas off by heart, rather train your brain to do the mental gym required. Make sure you understand pattern conceptually as it also links well to functions and to transformation geometry.

**Q6, 7, 8 & 10: FUNCTIONS AND THEIR TRANSFORMATIONS (51 marks, including 26 for the cubic curve/62 minutes)**

This section is very important. Make sure you can draw the functions AND transform them - i.e. translate, rotate and reflect them all over the Cartesian plane. Again, do not learn things off by heart – you need to understand how the different parameter shifts translate into transformations of some parent function. Understand the inverse function concept and what transformation brings us to the inverse. Know how to determine the equation of a graph if you are given a certain point on the graph. Typical questions could investigate the domain and the range of a function. You will definitely be asked about the concept of *function* and *inverse function* so make sure you know which tests to perform. Make sure you can sketch the cubic function. (This question is usually part of the calculus section on the graph and can be worth 12 to 26 marks). The function concept integrates well with other sections in Maths, especially transformation geometry and number pattern, so it could pop up anywhere in the paper.

**Q9 & 11: DIFFERENTIAL CALCULUS (Excluding the 26 marks for the cubic, this section is for 20 marks. If we include the cubic curve, you can expect 46 marks of calculus and its applications/55 minutes)**

Understand differentiation an expression. Expect a first principles question and also differentiation by using the power rule: know that $f'(x) = \lim_{h \to 0} \frac{f(x+h) - f(x)}{h}$ and also that if $f(x) = ax^n$, then $f'(x) = a \cdot nx^{n-1}$. This could earn you 10 to 15 marks. The graph question that was included under function in the exemplar (26 marks) is usually in the calculus section, as it involves using the derivative to determine where the function has a stationary point, a point of inflection and where it is increasing and/or decreasing. Be able to apply the concept of the derivative to various application-type questions. You could be asked to find various dimensions of a shape based on the area being a minimum or the volume a maximum. You could be asked to maximise the profit a company makes or minimise the consumption of a vehicle. It is important to know how to find rules/formulas to express these answers with. Know the area and volume formulas, as well as how to calculate profit, etc.

**Q12: LINEAR PROGRAMMING (14 marks/17 minutes)**

Practise this section - it is an easy way to score marks. Know how to change sentences into mathematical statements (organise the information into a table format so it makes sense). Be able to find the constraints and express them mathematically, sketch them on the same set of axes, and indicate where the feasible region lies (this could earn you 8 to 12 marks). Be able to formulate and sketch the objective function and read off an optimum solution from your graph. Because you need to make accurate readings, your scale is very important. Remember that on the axes, the points that indicate your calibration (scale) must be equally spaced.

# Practice makes perfect

**EASY PEASY: Learners from Buhlebuzile High School find the Matric Revision tips have helped them in their studies**

Remember that the Grade 12 Mathematics examination papers are set on work that has been done in Grades 11 and 12. However, you should also know that the nature of the subject is such that knowledge learned in earlier grades is assumed in later grades and is incorporated into the examinations.

Like Paper 1, Paper 2 is a 3-hour paper out of 150 marks – so, once again, make sure that for each hour of the exam you answer questions worth at least 50 marks.

The following is a guide for the estimated mark distribution in Paper 2 per content area:

| Content Area | Marks |
|---|---|
| Analytical Geometry | ± 40 |
| Transformation Geometry | ± 25 |
| Trigonometry | ± 60 |
| Data Handling | ± 25 |
| **TOTAL** | **150** |

Take note that questions will not necessarily be compartmentalised into sections. Various topics can be asked in the same question. For instance, knowledge on transformations and knowledge on functions may be required in the same question.

## THE ANALYSIS AND CLARIFICATION OF CONTENT IN PAPER 2

**Analytical Geometry** (± 40 marks)

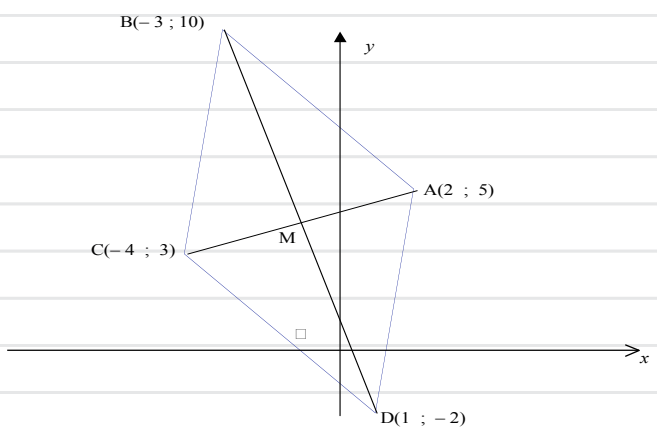
In Analytical Geometry, you will be expected to:

- Know the following Grade 11 content: the equation of a straight line through two given points; the equation of a straight line through one point and parallel or perpendicular to a given point; and the inclination of a line.
- Understand the concept of collinearity.
- Prove properties of polygons using analytical methods. For example: Prove that the quadrilateral A (–1 ; –2), B(–4 ; 2), C(1 ; 2) and D(4 ; –2) is a rhombus.
- Know and be able to use as an axiom: "The tangent to a circle is perpendicular to the radius drawn to the point of contact."

*Typical Questions*

*Question 1*

*ABCD is a quadrilateral with vertices A(2 ; 5), B(– 3; 10), C(– 4 ; 3) and D(1 ; – 2 ).*




- *Calculate the length of AC. (Leave the answer in simplest surd form.)*
- *Determine the coordinates of M, the midpoint of AC.*
- *Show that BD and AC bisect each other at right angles at M.*
- *Calculate the area of □ABC.*
- *Determine the equation of DC.*
- *Determine □, the angle of inclination of DC.*
- *Calculate the size of $A\hat{D}C$.*

**NOTE: The following concepts will NOT be examined: inscribed-centre; circumscribed; incentre; orthocentre; centroid.**

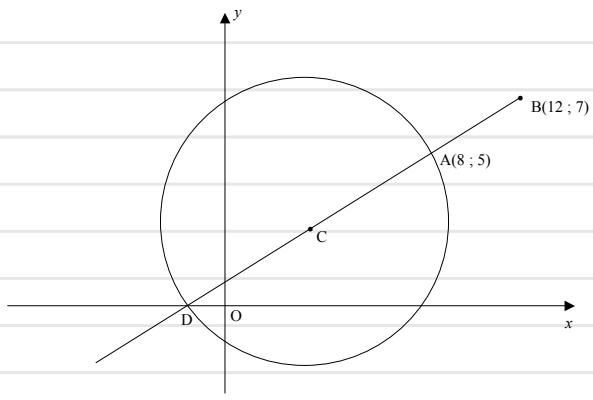
**Transformation Geometry** (± 25 marks)

Make sure you are able to:

- Determine the rule of transformations that has occurred.
- Determine the factor of an enlargement (the factor of enlargement is an element of the rational numbers).
- Use a transformation rule to sketch images of transformations of shapes; determine points of the image of a transformation of a shape; and determine the relationship of the area of the image in relation to its original shape.

*Question 2*

*A (8; 5) and B (12; 7) are two points in a Cartesian plane. BA produced intersects the x-axis at D. AD is a diameter of the circle centred at C.*




- *Show that the equation of the line through A and B can be given as $x - 2y + 2 = 0$.*
- *Determine the coordinates of D*
- *Determine the coordinates of C.*
- *Determine the equation of the circle.*
- *Determine the equation of the tangent passing through A (8; 5).*
- *Determine $A^{/}$, the image of A reflected about the straight line through C, perpendicular to the x-axis.*

NOTE: The following concepts will **NOT** be examined: inscribed-centre; circumscribed; incentre; orthocentre; centroid.

**NOTE: Rotations that are generated in an anticlockwise direction are regarded as positive whilst clockwise rotations are regarded as negative.**

*Typical Question*

*Question 3*

- *The point P ( 2 ; $\sqrt{3}$ ) lies in a Cartesian plane. Determine the coordinates of the image of P if:*
  - *P is reflected across the x-axis*
  - *P has been rotated about the origin through 90° in an anticlockwise direction*
- *A transformation T of the Cartesian plane is described as follows: A point is first rotated about the origin through 180° in the anticlockwise direction. Thereafter it is enlarged through the origin by a factor of 2. Quadrilateral ABCD is given with A (1; 2), B (1; 3), C (2; 4) and D (3; 2).*
  - *Sketch and label PQRS, the image of ABCD under the transformation T.*
  - *Write down the image of (x; y) in terms of x and y.*
  - *Write down the ratio of area ABCD: area PQRS.*

*(NB: See Questions 3.3 and 3.4 of the 2008 Exemplar paper for rotations.)*

**Trigonometry** (± 60 marks)

Make sure you are able to:

- Simplify and solve Pythagorean trigonometric problems using the definitions of trigonometric functions.
- Simplify expressions and prove trigonometric identities involving:
  - Reduction formulae

- Simplify expressions and prove trigonometric identities involving:
  - Reduction formulae
  - Special angles
  - Negative angles
  - Complementary ratios (sin 25° = cos 65°)
  - and using the identities $\tan\theta = \frac{\sin\theta}{\cos\theta}$ and $\sin^2\theta + \cos^2\theta = 1$
- Solve trigonometric equations with or without the use of a calculator and determining both general and specific solutions to the equation. Determining the solution to a trigonometric equation can be integrated with a graph question, specifically determining the point of intersection or in the form of an inequality. (See Question 8 of the 2008 Exemplar paper.)
- Solve non-right-angled triangles specifically including:
  - Area formula
  - Sine rule
  - Cosine rule
  - Solve 2-D & 3-D problems using the above rules.

**NOTE:**
Proofs are NOT required for examination purposes but should be part of the learning process to enhance understanding.

- Use the compound angle formula for cos (□ – □) and derive the formulae for sin (□ ± □) and cos (□ + □).

**NOTE:**
Proofs are NOT required for examination purposes but should be part of the learning process to enhance understanding.

- Use the compound angle formula for cos (α – β) and derive the formulae for sin (α ± β) and cos (α + β).
  - Proving identities
  - Solving trig equations (both specific and general solutions)
  - Solving trig equations where the denominator of an identity is undefined.
  - Integration with transformation geometry

*Typical Question*

*Question 4*

- *Simplify, without the use of a calculator:* $\frac{\sin 140°.\tan(-315°)}{\cos 230°.\sin 420°}$
- *Simplify:* $\tan(180° + x).\cos(540° + x)\left(\sin(-x) + \frac{\sin^2(90° - x)}{\cos(90° + x)}\right)$

**Data-handling** (± 25 marks)

*Take note that there is no new content in Data-handling that needs to be covered in Grade 12 for Paper 2. All Data-handling that is taught in Grades 10 and 11 will be examined in Grade 12.*

In Data-handling, make sure you are able to:

- Use and apply concepts including:
  - Measures of central tendency
  - Graphical representation of data
  - Measures of dispersion
- Write down a five number summary and draw box and whisker diagrams. Interpret and make comparisons between different box and whisker diagrams.
- Draw and interpret ogives.
- Calculate variance and standard deviation (use of the calculator is advised). Interpret standard deviations for normal distributions.
- Represent bivariate data including scatter plots and describe the line of best fit and interpret the graphs

Thomas Masango

**PRACTICALLY SPEAKING: Our Mathematics expert, Thomas Masango, Chief Educational Specialist at the national Department of Education, believes that his subject equips you to solve everyday problems in real-life situations**

Thomas Masango matriculated at Makhosana Secondary School in Mpumalanga in 1983. He holds a BA degree (Mathematics and Psychology) and HDE from Fort Hare, a BSc Honours degree and a Post Graduate Diploma in Science Education from Wits. He taught Mathematics before becoming a Mathematics subject adviser and then the regional head of subject advisers in Mpumalanga. He was a moderator and examiner in Mathematics in Mpumalanga and also served on the national panel of Mathematics examiners. He joined the national Department of Education in 2006 as a Chief Education Specialist for Mathematics and Mathematical Literacy, a position he still holds.

*Mathematics ensures access to an extended study of the mathematical sciences and a variety of career paths.*

# Master your Maths Literacy exam

**CALL A FRIEND: The matrics of Providence Academy in Johannesburg say they need all the help they can find for their forthcoming exams**

## An overview of Mathematical Literacy as a new subject

Welcome to the new world of Mathematical Literacy. Some of you may have been worried about having to take 'mathematics' as one of your subjects, but you have hopefully by now realised that Mathematical Literacy helps you handle real-life issues such as hire purchase, mortgage bonds, investments and the reading of maps, etc. It has also hopefully helped you acquire a critical stance about some of the mathematical arguments presented in the media and via other platforms.

The Mathematical Literacy examination papers will be set in such a way that the questions are based predominantly on the kind of issues you are likely to encounter in life – for example, paying your household bills (such as your electricity, water and telephone bills), dealing with tariffs and town plans, etc. However, you will definitely be expected to use mathematical content knowledge to make sense of and solve these real-life problems – and in order to help you demonstrate your content knowledge in the examinations, the examiners may set a few basic questions not related to a specific, practical problem. For example: calculate 450 – 45,2 × 36; write 0,45 as a percentage; or decrease R600 by 15%.

## The Mathematical Literacy examination

**The Grade 12 Mathematical Literacy examination consists of two papers:**

**Paper 1:** This paper is 3 hours long and it is out of 150 marks. It will consist of between five and eight questions. Basic content knowledge will be required to answer the questions.

**Paper 2:** This paper is also 3 hours long and out of 150 marks. It will consist of between four and six questions. These questions will require more interpretation and application of the information provided.

With both papers, make sure that in each hour of the examination you answer questions that are worth at least 50 marks. It will also help you to manage your time better if you start with the questions you understand better – just remember to number them as they appear in the question paper.

**There are four broad content areas dealt with in Mathematical Literacy:**

- Numbers and operations
- Functional relationships
- Space, shape and measurement
- Data Handling

Both papers will be set on all four content areas. They will differ only in the level of difficulty of the questions. Paper 1 will be less demanding than Paper 2.

## An analysis of Mathematical Literacy Paper 1

What follows is an indication of the type of questions you can expect in Paper 1 in each of the four broad content areas. Be aware that mathematical problems drawn from a real-life situation usually overlap in two or more broad content areas.

1. Numbers and operations (30 – 45 marks)

Make sure you are able to:

- Add a set of numbers to calculate total income/ expenses;
- Calculate profit/loss if income and expenses are both given;
- Calculate a direct percentage of a given amount;
- Write a ratio of two quantities which are already in the same unit;
- Substitute into a given formula;
- Round off to a given number of decimal places;
- Read information directly from a financial table;
- Convert fractions to decimals;
- Convert decimals to fractions;
- Convert a decimal to a percentage;
- Convert a fraction to a percentage;
- Understand and use appropriate vocabulary such as: equations, formulae, Cartesian plane, table of values, ratio, rate, average, etc;
- Calculate simple interest;
- Calculate compound interest compounded annually;
- Increase or decrease a given amount by a certain percentage;
- Determine a ratio when the quantities are not in the same unit;
- Calculate a one-step currency fluctuation;
- Calculate exchange rates; and
- Show awareness of the significance of digits.

2. Functional relationships (30 – 45 marks)

Make sure you are able to:

- Substitute number(s) into a given formula when there is a functional relationship (finding output values);
- Solve equations (finding input values for simple equations);
- Read answers directly from a given simple graph and/or table;
- Plot data on a point-by-point basis;
- Solve equations (finding input values for complex equations);
- Determine output values for given input values;
- Work with formulae to establish points to plot;
- Plot graphs on a point-by-point basis when data is given;
- Read answers directly from a complex graph and tables;
- Estimate answers to simpler equations and calculations;
- Solve equations by trial-and-improvement method or by inspection; and
- Identify maximum, minimum and critical points from a given graph.

3. Space, shape and measurement (30 – 45 marks)

Make sure you are able to:

- Calculate and estimate values using basic operations that involve length and distance, where each of the required dimensions is readily available.
- Understand and use formulae such as: perimeters and areas of polygons, volumes of right prisms, right circular cylinders, surface areas of right prisms and right circular cylinders, where the dimensions and formulae are readily available;
- Understand and use appropriate vocabulary such as: equation, formulae, Cartesian plane, area, surface area, perimeter, radius, diameter, length, breadth, height, base, circumference, volume, circle, cylinder, polygons, right prisms, triangular, rectangular and square.
- Read information directly from a table and use some given information and simple operations to complete a table of values;
- Measure values which involve length, distance, weight and time using appropriate measuring instruments sensitive to levels of accuracy in a familiar context;
- Draw simple scale drawings where the scale is given and based on the application of simple routine procedures in a familiar context;
- Describe relationships between input and output values in a table of data concerning space, shape and measurement;
- Use grids and maps in order to determine locations in a familiar context, applying routine procedures; and
- Convert units of measurement between different scales and systems using provided conversion tables, including:
- Converting to a smaller unit of length, time, weight, etc;
- Converting to a bigger unit of length, time, weight, etc;
- Converting units of area; and
- Converting units of volume.

4. Data-handling (30 – 45 marks)

Make sure that you are able to:

- Understand terminologies like mode, mean, range, quartiles, etc;
- Arrange data in ascending order;
- Identify the mode;
- Determine the median when data is already arranged in ascending order and n is odd (*n = number of scores*);
- Construct frequency tables from arranged data;
- Read information from graphs and frequency tables;
- Construct tally tables;
- Determine the median when data is already arranged in ascending order, and n is median *(n = number of scores)*;
- Calculate mean and the range of given scores;
- Draw graphs from given data (these graphs include pie charts, single and compound bar graphs, line and broken line graphs, and histograms);
- Calculate simple probability; and
- Express the probability of choosing a score in terms of fractions, ratios and percentages.

## CONCLUSION

The questions you will be asked will require some reading of the given scenario. Take time to understand the problem before you attempt to solve it. It helps to ask yourself questions about the problems. Often, the questions you ask yourself are actually in the paper! Good luck!

Thomas Masango

**PRACTICALLY SPEAKING: Our Maths Lit expert, Thomas Masango, Chief Educational Specialist at the national Department of Education, believes that his subject equips you to solve everyday problems in real-life situations**

Thomas Masango matriculated at Makhosana Secondary School in Mpumalanga in 1983. He holds a BA degree (Mathematics and Psychology) and HDE from Fort Hare, a BSc Honours degree and a Post Graduate Diploma in Science Education from Wits. He taught Mathematics before becoming a Mathematics subject adviser and then the regional head of subject advisers in Mpumalanga. He was a moderator and examiner in Mathematics in Mpumalanga and also served on the national panel of Mathematics examiners. He joined the national Department of Education in 2006 as a Chief Education Specialist for Mathematics and Mathematical Literacy, a position he still holds.

*Mathematical Literacy helps you handle real life issues such as hire purchase and investments.*

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# Hard work + these tips = SUCCESS

As you prepare for Paper 2, remember that there are a number of issues that apply to both Paper1 and Paper 2:

- You will be expected to use mathematical content knowledge to solve problems that are based on real situations.
- There are four broad content areas in Mathematical Literacy:
  - Number and operations;
  - Functional relationships;
  - Space, shape and measurement; and
  - Data-handling.
- Both papers will cover all four broad content areas. The papers will differ only with regard to the level of difficulty of the questions. Paper 2 will be more demanding than Paper 1.
- Paper 2 is also 3 hours long and out of 150 marks. This paper will consist of between four and six longer questions. These questions will require more interpretation and application of the information provided than the questions in the first paper.
- In both papers, make sure that for each hour in the examination you answer questions worth at least 50 marks.
- The questions in both papers will require some reading of the given scenarios – make sure you take time to understand a problem before you attempt to solve it.

## AN ANALYSIS OF MATHEMATICAL LITERACY PAPER 2

When you prepare for Paper 2, make sure you cover the following content and are able to answer the following kinds of questions. Take note that mathematical problems drawn from real-life situations usually overlap in two or more broad content areas.

**1. Number and operations (30 – 45 marks)**

- Calculate compound interest compounded more than once in the year.
- Calculate profit if only either income OR expenses is given and the other still needs to be calculated.
- Calculate compound growth/decline with reference to the rates of taxation, inflation and interest rates.
- Interpret answers in terms of the context, e.g. when to round up and when to round down.
- Rework a problem if the first answer is not sensible.
- Revise a budget if conditions change.
- Estimate and check profit/loss.
- Interpret answers in terms of context.
- Analyse and interpret the effects of changing taxation, inflation and interest rates.
- Rework a problem if the initial conditions change.
- Choose your own method to find a solution to a problem.
- Interpret calculated answers logically in relation to the problem and communicate processes and results.

**2. Functional relationships (30 – 45 marks)**

- Determine given input values for a given output value (changing the subject of a formula).
- Draw graphs from a given formula.
- Find break-even points involving linear functions by solving simultaneous equations (linear and inverse relationships).
- Solve equations algebraically.
- Perform one or two calculations before determining the desired solution (e.g. calculate $\pi R^2$ and $\pi r^2$ separately in order to calculate $A = \pi R^2 - \pi r^2$.)
- Identify maximum/minimum/critical points from a graph that you draw.
- Draw graphs with negative values on the axes.
- Describe trends.
- Determine how the calculated answer fits the actual situation and make adjustments. For example: If in the calculation it is found that 9 litres of paint are needed and paint is sold in 5ℓ tins, then two 5ℓ tins need to be bought.
- Generalise patterns and making predictions.
- Critically interpret graphs with negative values on the axes.
- Analyse graphs with more than one graph on the same set of axes.
- Critically interpret tables and graphs.
- Solve planning problems by reasoning out various options.
- Investigate the impact of compound change on situations.

**3. Space, shape and measurement (30 – 45 marks)**

- Make adjustments to calculated values to accommodate measurement errors and inaccuracies due to rounding.
- Use grids and maps to plan trips in an unfamiliar context and apply multi-step procedures where the information is readily available.
- Use grids, maps and compass directions (global positions) in order to:
  - Determine locations; and
  - Describe relative positions.
- Check values (applying multi-step procedures where the required procedure is not immediately obvious from the way the problem is posed) for solutions against the contexts in terms of suitability and degree of accuracy in a variety of contexts.
- Draw scale drawings where the scale is not given and derive the scale.
- Describe relationships between input and output values in a table of data (concerning space, shape and measurement) by means of an equation.
- Convert units of measurement between different scales and systems, applying multi-step procedures and using the conversion tables provided to deal with problems in a variety of contexts.
- Interpret scale drawings of plans to describe situations and answer questions about what mathematics they require to solve a problem.
- Use and interpret scale drawings of plans to estimate and calculate values according to scale.
- Use grids, maps and compass directions to determine locations in the context of the problem and, where necessary, to adjust the mathematical solution to make sense of relative positions.
- Critique solutions to problems and statements about situations made by others. Here you are expected to evaluate the statements and then critique the outcome based on your own real-life experiences.
- Generalise patterns observed in situations, make predictions based on these patterns and/or other evidence, and determine conditions that will lead to desired outcomes.

**4. Data-handling (30 – 45 marks)**

- Determine the median, quartiles and percentiles when data is not arranged in ascending order.
- Draw graphs if you still have to find appropriate data to use: *These graphs include pie charts, single and compound bar graphs, line and broken line graphs, and histograms*.
- Express a probability that:
  - An event will occur; or
  - An event will not occur.
- Communicate trends and predictions based on an analysis of data. You need to understand and be able to use terms such as: increase, decrease, constant, impossible, likely, fifty-fifty chance, etc.
- Identify and describe the use and misuse of statistics and make justified recommendations.
- Manipulate scale to create desired impressions.
- Decide whether to use a pie chart, a bar graph, a line graph or a histogram in order to create a particular impression, and be able to explain why you chose that particular graph.
- Select the most appropriate data from a number of options in a table of values and use them to make the problem understandable.
- Interpret quartiles and percentiles as measures of spread.
- Provide probable reasons for why certain scores are odd or strange.
- Critically interpret data and representations thereof.

## CONCLUSION

Because Paper 2 is more challenging than Paper 1, you should start with the questions you understand best (just make sure you number them exactly as they are numbered in the examination paper).

Always show all the necessary calculations – the person marking your script will not only be interested in your final answers, he or she also needs to see how you got to your answers. If you show all your working details, it will be easy for the marker to see where you missed the point: you will then only be penalised at that point and will still get most of the other marks.

It also helps to use a calculator where necessary – if in doubt, use it.

Good luck and enjoy the paper!

**PRACTICALLY SPEAKING: Our Maths Lit expert, Thomas Masango, Chief Educational Specialist at the national Department of Education, believes that his subject equips you to solve everyday problems in real-life situations**

## Thomas Masango

*Mathematical Literacy helps you handle real-life issues such as hire purchase and investments.*

Thomas Masango matriculated at Makhosana Secondary School in Mpumalanga in 1983. He holds a BA degree (Mathematics and Psychology) and HDE from Fort Hare, a BSc Honours degree and a Post Graduate Diploma in Science Education from Wits. He taught Mathematics before becoming a Mathematics subject adviser and then the regional head of subject advisers in Mpumalanga. He was a moderator and examiner in Mathematics in Mpumalanga and also served on the national panel of Mathematics examiners. He joined the national Department of Education in 2006 as a Chief Education Specialist for Mathematics and Mathematical Literacy, a position he still holds.

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**TEAM EFFORT: Learners from Pretoria High School for Girls have found the Pretoria News Matric Revision tips very helpful**
**Left to right: Shavani Vandeyar, Bernadette Fourie, Janneke Hattingh, Clementene Milton and Mabel Anyimadu**

# The formula for Science success

**POINTS TO PONDER: The matrics of Westbury High School in Westbury debate some of the scientifi c laws of the universe**

The Physical Sciences examination consists of two papers – Paper 1: Physics (3 hours, 150 marks) and Paper 2: Chemistry (3 hours, 150 marks). This issue of "Matric Revision: Top Tips from the Experts" provides you with guidance for Paper 1.

Before you leave home ensure that you have your pens, pencils, ruler, mathematical instruments and a non-programmable scientific calculator. Be in the examination room 30 minutes before the starting time and relax.

Read all the instructions and information provided before you start answering the question paper. You may be asked to answer certain questions on an ANSWER SHEET, in an ANSWER BOOK or on GRAPH PAPER. Make sure you write your examination number on all of these when you receive them in the examination room.

You have 180 minutes for 150 marks. A good rule of thumb is to spend approximately 1 minute per mark – this will leave you with enough time to check your work at the end of the exam.

Make sure you number your answers exactly as the questions are numbered. Answer the questions you are confi dent about first and quickly. You can come back to difficult questions later. Do not get bogged down on a question you fi nd difficult to answer – you will lose valuable time that could be spent on questions you know.

There are two sections in the paper: Section A and Section B: Section A has four questions worth a total of 35 marks. Spend about 35 minutes on this section. Section B is worth 115 marks. Spend about 135 minutes on this section.

Finally spend 10 minutes checking through your answers. Make sure you have answered all the questions.

## Data sheets

Use the data sheet provided with the examination paper. Know the values of constants – for example, the value for "g" will be 9,8 m·s-2.

## General study tips

When preparing for the exam, do as many practise examples as possible. Read the explanations of concepts and laws, and then answer as many exercises, questions and exemplar papers as you can find. WRITE down your solutions to these. You should also practise answering questions that require you to draw graphs – and make sure you actually DRAW the graphs. Remember, practice makes perfect!

**When solving problems, remember to do the following:**

- Make a sketch if it is not given (do not draw fancy pictures);
- Write down the information that is given in the question; and
- Write down what you need to find.

## Formulas and substitutions

If a question requires you to do a calculation using a formula, do the following:

- Write down the formula you are using;
- Show the substitution of values in the formula(s);
- Do the calculation; and
- Write the unit in the final answer.

## Drawing graphs

*Label* the axes correctly.

**SECTION A**

This section has four questions: one-word items, matching items, true/false items and multiple-choice items. Remember, in the true/false questions, if you say a statement is false, you then need to *provide the correct answer.*

**SECTION B**

This section consists of long questions.

**Here are some specifi c tips:**

***1. Vertical projectile motion***

- If an object is dropped or thrown downward, remember to write the sign convention that you are using in your answer – e.g. down (+) and up (-).
- Remember that displacement, velocity, force, momentum and acceleration will have to follow the sign convention since all these physical quantities are vectors.
- If you decide to change your sign convention from one problem to another, remember to state this in your answer.
- The magnitude of the acceleration due to gravity is: g=9.8 m·s-2.
- If an object is thrown upward and if, according to the sign convention, you take up as (+) then g= - 9.8 m·s-2 since g is a vector.
- Always interpret your answers with respect to the sign convention used for the problem
- When drawing graphs of motion, follow the sign convention (either the one given by the examiner or, if one is not specifi ed, then the one you have chosen). Remember the following:
  - o The slope of x-t tells us about the velocity (vector); and
  - o The slope of v-t tells us about the acceleration (vector).
- Write down the unit for the fi nal answer to a calculation.

***2. Momentum and impulse***

- Remember that momentum and impulse are vectors: sign convention (e.g. take east as positive, etc) is therefore vital.
- Remember that impulse is the change in momentum and that it is a vector quantity.
- If your answer is a vector, indicate the direction as well as the magnitude – for example, p = 67 Kg m·s-1, west.
- Interpretation of answers is also necessary.

***3. Work, energy and power***

- In the absence of friction, tension and air resistance, etc, mechanical energy will be conserved – i.e. $K_1+U_1=K_2+U_2$
- If other forces are present, use W + $K_1+U_1=K_2+U_2$, where W is the work done by other forces.
- For inclined plane problems (θ is the angle between the inclined plane and the horizontal), remember that the component of the weight acting down the plane is Wsinθ; and the component of the weight acting perpendicular to the plane (exerted on the object) is Wcosθ.

***4. Frames of reference***

- Remember that in this section you are working with velocity vectors.
- From the problem you will have to identify and give labels to the relative velocities – e.g. "The velocity of a train with respect to the ground is 12 m.s-1 east." This implies that $v_{TG}$ = 12 m.s-1 east.
- Remember that the velocity vectors can be added using either the parallelogram method (using the cosine and sine rule) or by using the method of components.

**Waves, sound and light**

***The Doppler effect***

- Draw a rough sketch if this is not provided. This helps. Write down the given information on your sketch.
- In the equation $f_L = \frac{v \pm v_L}{v \pm v_S} f_S$
  - For the numerator (), use (+) if the listener is moving towards the source and (–) if the listener is moving away from the source.
  - For the denominator ( ), use (+) if the source is moving away from the listener and (–) if the source is moving towards the listener.

  This equation includes all possibilities for the motion of the source and listener (relative to the medium) along the line joining them. If the listener happens to be at rest in the medium, vL is zero. If both the source and the listener are at rest or have the same velocity relative to the medium, then $v_L = v_S$ and $f_L = f_S$.
- Remember that the Doppler effect can be applied to an accelerating object – e.g. a bungee jumper. Here you may have to combine some projectile motion with Doppler.

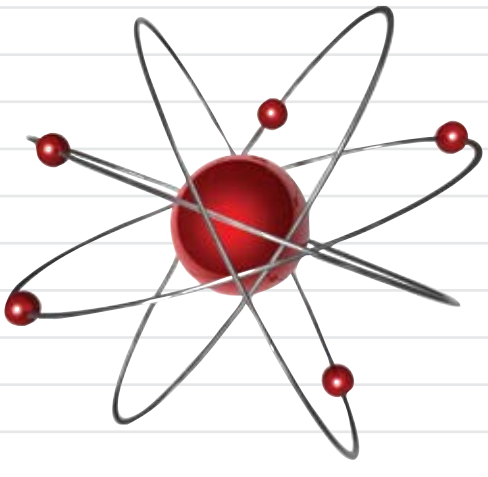
**Electricity and Magnetism**

***1. AC generators***

- Remember the direction of the induced current in the loop can be found using Fleming's Right Hand Rule (g in right hand - generator).
- Be able to differentiate between split-rings and slip-rings.

***2. Capacitance***

- The capacitance of a capacitor is construction dependant, i.e. the area of the plates, separation distance and material between the plates (dielectric).
- If the voltage across a capacitor increases, the charge increases so that the capacitance remains constant and vice-versa.
- The impact of the dielectric is to reduce the electric field, decrease the voltage across the plates and hence increase the capacitance.
- Capacitors in series are likened to resistors in parallel and vice-versa.



Veena Maharaj

**SCIENCE SUSS: Veena Maharaj, Chief Education Specialist for Physical Sciences at the national Department of Education, gives you the low-down on how to tackle your first Science paper**

Ms Veena Maharaj matriculated at Tongaat High School in KwaZulu-Natal. She graduated with a BSc degree at the University of Durban Westville in 1982. Her majors were Physics and Mathematics. She qualifi ed as a teacher in 1985 after obtaining the UHDE qualifi cation in education. She studied School Management and Educational Law at Rand Afrikaans University, where she obtained her Further Diploma in Education Management. She obtained her MEd degree in Physics Education in 2004.

Veena taught Physical Science, Mathematics and Computer Studies, Grades 10 to 12, during a teaching career that spanned 16 years. She served as Head of Department for Physical Sciences before she was promoted to Subject Advisor for Physical Sciences in Kwazulu-Natal. She also served as executive member of the National Standards Body for Mathematical, Physical, Computer and Life Sciences. She is currently the Chief Education Specialist for Physical Sciences at the national Department of Education.

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# Put your grey matter to the test

LEAN ON ME: The matrics from Jules High School in Johannesburg look to each other for support with their studying

**Some general tips:**

- Get a good night's sleep before the exam.
- Write your name and correct examination number on your examination book as well as on any loose sheets of paper that you will be handing in.
- Show your workings for all calculations.
- Remember to write the units for every answer.
- Obey all the examination rules.
- Read the instructions carefully and make sure you understand them
- Read the questions carefully and make sure you understand exactly what is being asked of you before attempting to answer them.
- Bring more than one pen to the examination room.
- Listen carefully when announcements are made during the examination: they could be very important and might even affect the paper you are writing.

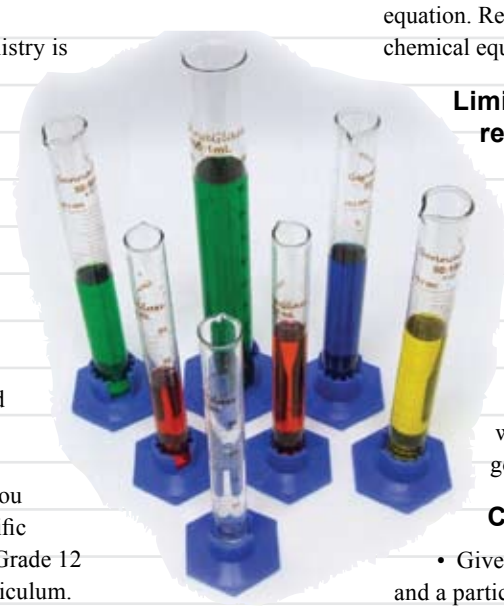
**Some tips on the Chemistry examination:**
You will mainly be required to provide either descriptions or calculations in your Chemistry exam.

**Descriptions:** You could be asked to provide definitions, principles and general descriptions of phenomena, concepts and processes. Questions beginning with "What is?", "Why?", "How?" and very rarely "Who?" will usually require descriptive answers.

**Calculations:** Calculations, on the other hand, will usually require you to use available data to calculate a required quantity.

In order to be able to carry out the calculations in your Chemistry exam, you need to understand the basic concepts you were taught in Grade 10 and Grade 11. Once you have mastered these concepts, you will find that studying Chemistry is relatively easy.

If you still battle with any of the concepts outlined below, you need help! Consult your teacher and/or textbook and make sure that you master the basics before you tackle the specific topics in your Grade 12 Chemistry curriculum.



Apart from mastering the basic concepts, you need to focus on understanding the descriptions and applying the principles you have learned.

Be aware that all Chemistry concepts are related. In other words, if you are answering a section on Electrochemistry, apply what you know from other sections like Rates of Reactions and Chemical Equilibrium, etc.

Do not try to put your Chemistry knowledge into little compartments as per the chapters in your textbook or the different sections in the curriculum. These different sections were created merely to make the teaching and learning of the principles in the subject easier. In life everything is integrated. Integrate your knowledge, especially when answering questions that deal with application: apply the relevant knowledge you have learned in other sections as well.

**What you need to know before you enter the exam room: Basic concepts:**

### Chemical formulae

- If you are given the name of a compound, you should be able to write its chemical formula. The subscripts and superscripts are very important and you should be able to interpret them in order to calculate molar mass and the number of moles, etc.

### Naming of compounds

- If you are given a chemical compound, you should be able to give its proper name. Name endings are very important as they mean different things that affect the masses or moles of compounds in a calculation or even a reaction.

### Oxidation states

- You should be able to look at a chemical reaction and decide which elements have been reduced or oxidised – and hence which of the compounds are reducing compounds or oxidising compounds. It will not help you much if you memorise what has been oxidised or reduced in a particular reaction: knowing why it was oxidised or reduced is much more helpful. The use of language is very important in the sections that deal with oxidation and reduction. Make sure you understand what a reducing agent is and what is being reduced. Do the same for oxidation.

### The mole concept

- If you are given a particular quantity, you should be able to calculate the mass, molar mass or the number of moles.

### Stoichiometry

- You should be able to balance a chemical equation. Remember: Always balance a chemical equation if you are going to use it.

### Limiting and excess reagents

- If you are given quantities in grams, moles or concentrations, you should be able to work out how much product (expressed in moles, mass or concentration) is formed, as well as how much of a reactant will be used up or will remain when the reaction goes into completion.

### Concentrations

- Given a particular mass of substance and a particular volume, you should be able to work out the required concentration.

### Unit conversions

- You should be able to convert quantities like ml to litres or $dm^3$, etc. You should be able to work out what quantities change when, for instance, you halve a solution of a particular concentration, etc.

**Pay attention to the following specific topics:**

**Organic molecules**

- Always remember that a carbon atom must have all four bonds around it for all functional groups.

**Chemical change**

- Remember all your basic concepts in this section!

**Chemical systems**

- Be able to apply everything you have learnt in electrochemistry, chemical equilibrium and basic concepts.

SUSSED AT SCIENCE: Chief Education Specialist Morongwa Masemula is well qualified to give you the low-down on your Chemistry exam

## Morongwa Masemula

*In life everything is integrated. Integrate your knowledge in Chemistry, especially when answering questions that deal with application.*

Morongwa Masemula completed her matric at St Pauls High School in Taung, in North West. She went on to study for a BSc Ed at the University of Bophuthatswana (now the University of North West, in Mafikeng). Her majors were Mathematics, Chemistry and Education. She later obtained her BSc Honours in Chemistry and Science Education at the University of the Witwatersrand.

Morongwa started off her working life as a laboratory analyst for Shell and the Coal Marketing Corporation. Her teaching career started at the Lehurutshe College of Education in Zeerust, where she lectured Physical Science to students enrolled for the Senior Primary Teacher's Diploma (SPTD) and Secondary Teacher's Diploma (STD). From there she went on to lecture Physical Science at the East Rand College of Education in Springs.

She joined the Department of Education as first Education Specialist in Benoni and currently works for the national Department of Education as a Chief Education Specialist.

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# Life Sciences: Cracking the code

There are two Life Sciences papers: **Paper 1** will be written on **Friday 21 November** and **Paper 2** on **Monday 24 November.** Both papers are **2½ hours** long.

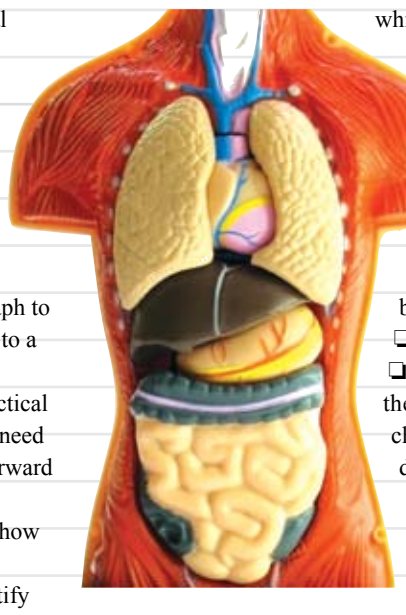
**PAPER 1: 60%** of the paper will be on **Nucleic Acids**, **Protein Synthesis**, **Meiosis** and **Genetics**; and **40%** of the paper will be on **Human Reproduction** and **Reproduction in Plants**.

**PAPER 2: 50%** of the paper will be on **Environmental Studies**; and the other **50%** of the paper will be on **Diversity, Continuity and Change**.

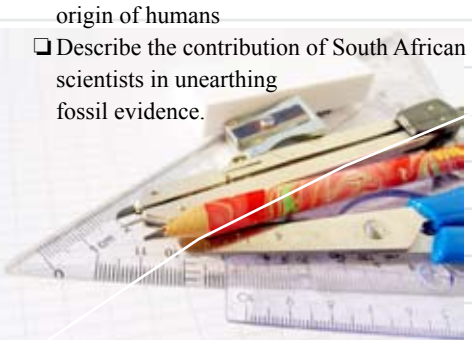
**POINTS TO PONDER: The matrics at Maxeke Secondary in Evaton mull over some of the more challenging aspects of Life Sciences**

## GENERAL GUIDELINES:

1. Use the preparatory examination papers and the national exemplar papers and the 2008 NSC Life Sciences examination papers. Paper 1 will be written on **Friday 20 November 2009** and Paper **Monday 23 November 2009**. Both papers are **2½ hours** long (available on www.education.gpg.gov.za) to familiarise yourself with:
   - ❏ The format and approximate mark allocation of the two papers;
   - ❏ The various types of questions you could be asked (e.g. multiple choice, matching, short paragraphs, mini-essays and interpretation of data given in the form of texts, drawings, diagrams, graphs, etc);
   - ❏ The kinds of skills you will be expected to demonstrate (e.g. measurements, calculations, biological diagrams/drawings, drawing various types of graphs – line graphs, bar graphs and pie graphs – and the 'translation' of information from one form to another, such as from a paragraph to a table or from a table to a graph, etc);
   - ❏ How investigative practical work is assessed (you need to know how to put forward a hypothesis, how to design investigations, how to identify and control variables, how to identify weaknesses in experimental design, etc); and
   - ❏ The depth of knowledge and skill required in the various aspects of the curriculum (the marking guidelines for these papers as well as the Examination Guidelines released in February this year will be of great help here).
2. When designing your study timetable, bear in mind the weighting that will be given to each Knowledge Area in the final examination papers.
3. When revising **DNA and Protein Synthesis**, make sure you are familiar with:
   - ❏ Complementary base-pairing (cytosine with guanine and adenine with thymine or uracil)
   - ❏ How to match the triplets of bases on tRNA (the anticodons) with complementary triplets on mRNA (the codons)
   - ❏ The formation of mRNA from DNA by transcription
   - ❏ The translation of mRNA to form a protein using tRNA
4. In **Meiosis**, you should be able to:
   - ❏ Distinguish the various phases (e.g. in prophase, the chromosomes begin to appear; whereas in metaphase the chromosomes are arranged along the 'equator' of the cell)
   - ❏ Distinguish between phases in the first division and phases of the second division (e.g. in Prophase 1 **crossing–over** takes place but not in Prophase 2; in Metaphase 1, the chromosomes are arranged along the equatorial plane in **homologous pairs,** while in Metaphase 2 they are arranged along the equatorial plane **singly**)



   - ❏ Explain the process and significance of crossing-over
5. **In Genetics**, you should be able to:
   - ❏ Solve genetic problems based on monohybrid crosses
   - ❏ Interpret pedigree diagrams
   - ❏ Explain and predict the possible blood groups of children from parents with different blood groups
   - ❏ Compare the value of the use of blood groups with DNA analysis in resolving cases of disputed parentage
6. In **Reproduction**, you should know:
   - ❏ How to draw and label the male and female sex organs of humans
   - ❏ Gametogenesis (spermatogenesis and ogenesis)
   - ❏ The ovarian and uterine cycles
   - ❏ Hormonal control of the above cycles
   - ❏ The role of the different parts of the developing embryo (chorionic villi, amnion and amniotic fluid, umbilical cord and placenta)
   - ❏ The causes, transmission, symptoms and treatment of sexually transmitted diseases such as syphilis, gonorrhoea and HIV/AIDS
   - ❏ The structure of a flower
   - ❏ The fate of various parts of the flower (such as the ovary and ovules) after fertilisation
7. In **Environmental Studies**, you should understand:
   - ❏ The biotic and abiotic components of an ecosystem and the interactions between them (revision of Grade 10 work)
   - ❏ Energy flow through food chains, food webs and pyramids of energy, numbers and biomass (revision of Grade 10 work)
   - ❏ The intricate balance that exists within ecosystems
   - ❏ How human activities affect this intricate balance by:
     - Altering the abiotic components through pollution (air, water and land)
     - Threatening the biodiversity of the biotic components by over-exploitation of the plant and animal resources for food and medicinal purposes and by invasion of alien species
   - ❏ The sustainable use of resources
   - ❏ How domestic and industrial waste may be managed to prevent destruction of the habitat
8. In **Biodiversity, Continuity and Change (Evolution)**, you should be able to:
   - ❏ Draw on your knowledge of meiosis and reproduction to explain the sources of variation in off-spring (crossing-over, random arrangement of chromosomes during first metaphase, chance fertilisation and mutations)
   - ❏ Explain and compare the theories of Lamarck and Darwin
   - ❏ Explain micro-evolution, speciation and macro-evolution
   - ❏ Explain the use of the geological time scale in explaining macro-evolution
   - ❏ Explain the earthly and extra-terrestrial theories of mass extinctions
   - ❏ Explain the 'evidence' that scientists provide to support their contention that evolution is a valid scientific theory (fossil evidence, evidence from comparative anatomy, comparative embryology, comparative biochemistry and biogeography)
   - ❏ List the characteristics we share with other primates
   - ❏ List the characteristics that make us different from other primates
   - ❏ Describe the trends in human evolution such as:
     - The shift in the position of the foramen magnum
     - The increase in size of cranium
     - The development of a more rounded skull
     - The development of a flatter face due to a less-sloping forehead, less protruding jaws and a more developed chin
     - The development of a more rounded jaw and change in dentition
     - The increased size of the skeleton
   - ❏ Interpret phylogenetic trees drawn to show possible evolutionary relationships between various groups of organisms
   - ❏ Explain how fossils of the following species are used by scientists as evidence for the origin of humans:
     - *Australopithecus* (Mrs Ples, Taung child, Little Foot, Lucy)
     - *Homo habilis* (Handy man)
     - *Homo erectus*
     - *Homo sapiens* (modern humans, Florisbad man)
   - ❏ Explain what the search for the Cradle of Humankind has revealed with regard to the origin of humans
   - ❏ Describe the contribution of South African scientists in unearthing fossil evidence.




Kanthan Naidoo

Kanthan is passionate about Life Sciences. He matriculated at Lenasia Secondary School in Lenasia before attending Wits University, where he obtained a BSc degree in Genetics and Advanced Biology. Kanthan subsequently qualified as a Biology teacher and taught at the Nirvana Secondary School in Lenasia, where his students obtained distinctions in Biology in Grade 12. Kanthan then joined the Gauteng Department of Education (GDE) as a subject advisor in Biology. While in this position he conducted workshops for teachers and also managed the Secondary School Intervention Programme (SSIP) in the Randfontein District. This programme provided quality tuition to matriculants to enhance their performance in the matric examinations. He later joined the Johannesburg East District where he conducted workshops for FET Life Sciences teachers. Kanthan was then promoted to coordinate Life Sciences for Gauteng.

He is currently a Life Sciences curriculum specialist for the national Department of Education.


**These guidelines are meant to provide:**

- An overview of the format of the question paper and the style of the questions;
- Direction regarding the focus areas within each strand; and
- Specific information on difficult areas.
- The guidelines will NOT:
- Provide an exhaustive guide to each and every concept contained in the curriculum; or
- 'Spot' particular questions in the examinations.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# Hints to help you handle History

Barbara Johannesson

**FUN & GAMES: "You have to take your teaching seriously, but you can't take yourself too seriously," says our History expert, Barbara Johannesson**

Barbara believes that teaching teenagers is the toughest work you get. "It's demanding but it's also more invigorating than any other job. Teaching is a wonderful way to learn," she says. "Teaching History is complex as it can be understood in many different ways. There are so many interpretations and biases, contradictions and ambiguities."

*"The study of History prepares you for a very complicated and confusing world. We are bombarded with information all day long. History gives you the opportunity to learn and think about the society we live in."*

"History is in my bones and I enjoy firing learners up too – those who enjoy the subject are the ones who tend to get better results," says Barbara. "The more learners know about the world they live in, and the more widely they read, the better their results as well."

Barbara has edited, written and published many textbooks in her time. She currently works as a freelance materials developer and teaches History part-time at Wynberg Girls' High School in Cape Town.

**Additional advice provided by SIMON HAW**

After qualifying as a teacher, Simon taught for 20 years, the last 10 as head of History at Maritzburg College. He then spent 18 years at the Department of Education, first as a researcher and later as a History subject advisor. He is the author of a number of History textbooks.

**11 DONT'S**

1. Do not use slang.
2. Do not use chatty or colloquial terms. In History, you must use plain formal language.
3. Do not write your essays in point form. Write full sentences in paragraphs.
4. Do not use the personal pronoun 'I'. Instead of saying 'I think that …' say 'It can be argued that …'
5. Do not call historical figures by their first names. For example, don't refer to Martin Luther King as Martin (not as) Nelson Mandela as Nelson!
6. Do not write personal notes for the person marking your paper, you will just irritate him or her.
7. Do not colour in, highlight or draw little smileys in your work.
8. Do not make comments or value judgements that are not directly asked for in the question.
9. Do not use 'etc'. 'Etc' usually indicates that you can't think of anymore examples. If you said 'Peas, carrots and potatoes, etc …' the reader knows that you know many other examples of vegetables. But, in a history essay, if you say "Those who were tried at the Rivonia Trial were Mandela, Sisulu, etc." it usually means that you do not know anymore names!
10. Do not make up your own abbreviations. Only use recognised abbreviations. You can use USA for United States of America or BC for Black Consciousness.
11. Do not use words that you do not understand, even if they sound 'cool'.

**HISTORY IN THE MAKING: Amy Wilkinson and Awonke Zidele, matric learners at Wynberg Girls High in Cape Town, have found that studying SA History has helped them understand their backgrounds better (Amy's father was in MK and Awonke's grandfather was a political prisoner on Robben Island)**

## Do the exemplars!

Example question papers and memoranda for History are available on the Department of Education's website: http://www.education.gov.za/Curriculum/grade12examplers.asp

As you are the first learners to write the new Grade 12 exam there are no 'past papers' .These exemplar papers are therefore absolutely essential for revision purposes. Remember that this is a skills-based curriculum and you need to practise those skills thoroughly if you want to do well in the examination.

## What and when?

You will be writing **two** exam papers for History. Make sure you prepare the correct work for the correct day! History Paper 1 is on **Thursday 5 November at 9am.** It is worth 150 marks and is three hours long. History Paper 2 is on **Tuesday 24 November at 9am.** It is also worth 150 marks and is three hours long. (The papers are identical in format, the only difference being that they cover different areas of work.)

## What's in Paper 1?

Paper 1 consists of four questions based on the prescribed content framework. Each question has source-based questions for 45 marks plus an extended writing question for 30 marks. You are required to answer **TWO** questions. This means you have a choice. You can choose to answer your two questions from the following four topics:

1. **What was the impact of the Cold War in forming the world as it was in the 1960s?**
2. **How was uhuru realised in Africa in the 1960s and 1970s?**
3. **What forms of civil society protest emerged from the 1960s up to 1990? (Focus 1960s: Civil Rights movement and Black Power movement in the USA)**
4. **What forms of civil society protest emerged from the 1960s up to 1990? (Focus 1970s: Black Consciousness Movement in South Africa) (Focus 1980s: Apartheid South Africa in the 1980s)**

## What's in Paper 2?

Paper 2 also consists of four questions based on the prescribed content framework. Each question has source-based questions for 45 marks as well as an extended writing question for 30 marks. You are required to answer TWO questions (i.e. you have a choice). You can choose to answer your two questions from the following four topics:

1. What was the impact of the collapse of the USSR in 1989?
   - On ending Apartheid in South Africa
   - On the dominance of the USA
2. What was the impact of the collapse of the USSR in 1989?
   - On Africa: reflection and re-imagining the nation in the 1990s – a case study from Central, West or North Africa
3. How did South Africa emerge as a democracy from the crises of the 1990s?
4. Dealing with the past and facing the future: the work of the Truth and Reconciliation Commission

## The Big Picture

It is useful to understand the Big Picture for the Grade 12 History content framework. The following sums it up concisely:

**The Cold War was the period of conflict and competition between the capitalist United States and the communist Soviet Union and their respective allies.**

**From the end of the Second World War (1945) until the late 1980s, world politics was dominated by the rivalry between these two Superpowers.**

**The Cold War spread outside Europe to every region of the world and drew to a close in the late 1980s. The Soviet Union gave up its power over Eastern Europe and the USSR was dissolved in 1991.**

**The Cold War and the end of the Cold War had consequences for SA.**

**Since the end of the Cold War, the world has been dominated by only one Superpower – the United States of America.**

## Starting blocks

Make a **timeline** so that you understand the sequence of events. For example, you should know that the Soweto Uprising (1976) was after the independence of Angola and Mozambique (1975). Start your timeline in 1960 and end in 1996. Skim through all your work for the year and fill in the timeline with key events. Take your time to get it right. Your completed timeline will help you to contextualise each event.

Keep a **world map** on your desk or pin one up on your wall. Make sure you know where all the places are that you are learning about.

Read your **textbook** and do the activities in it to test yourself.

Keep a **dictionary** on your desk to look up words you do not understand. Make sure you understand concepts like capitalism, communism, nationalism, etc.

## Specialise

You have to read a lot during the exam so make your choices beforehand. Specialise in two questions per paper. Choose a third question that you could answer if you get stuck on one of your first two choices. When you get into the exam room, go straight to your chosen specialisation questions and get moving. Only if you get seriously stuck, should you try your third choice. Make sure you have a sound knowledge of each of the sections you are going to answer. Try to study for understanding rather than simply cramming information into your head.

## Tackling source-based questions

The source-based work requires a fair amount of reading. A good tip is to first read the questions based on the sources. Then read the sources so you know what you are looking for. (The sources you are given in the exam will be varied – e.g. written sources; statistical sources such as tables and graphs; cartoons and photographs, etc.) Only after you have done this should you go back and answer the questions.

Remember that although the sources may prove useful in answering the questions, the focus will be on **your own knowledge** and your ability to reach an **independent conclusion.**

For instance, you might get a source-based exercise on the Berlin Wall. The extended writing question might well require you to write an essay explaining what factors led to the Wall being built. To answer this question successfully, you need to go right back to 1945. You will be expected to give a clear explanation of what the Cold War was and what factors contributed to it (e.g. the Iron Curtain, Truman Doctrine and Marshall Plan). You will be expected to present your knowledge on why Berlin was a focal point in the Cold War and to give an outline of the Berlin Blockade. Mention of NATO, the Cominform, and the Warsaw Pact would be a plus.

Always look at the **contextualisation** of the source carefully – it will help you decide on its reliability, accuracy and usefulness. Remember that most sources are **biased** to some degree as they reflect the perspective and purpose of the people who produced them (cartoons are always biased). The more you practise, the better you will become at your source work.

Make sure you number your questions exactly as they are numbered in the exam paper. Look at the mark allocation for each source-based question. If a question is only worth two marks, write a short answer. If the question is out of eight, write an answer of about eight to ten lines.

## Tips for essays or extended writing

Each question requires you to write an essay or extended piece of writing on a particular question. You have to write two essays per paper. Your essays should be about two pages in length. Make sure that you answer the question set: read it very carefully. Don't stuff your extended writing with irrelevant detail.

Plan your essay quickly in rough first, using a few key words and phrases. Start your essay with a short **introductory paragraph** which explains your argument briefly. The **body of your essay** should contain all the details needed to support your argument. Make sure you link each paragraph to the topic. At the end of the essay write a short concluding paragraph which refers directly to the question.

While subheadings and lists are appropriate in official reports and memos, etc, do not use them in essays.

Read your work when you have finished, making sure you have not made any silly errors.

Here's hoping that all your hard work pays off and you enjoy both your History papers!

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# Your world at your finger tips

TOP GEAR: When Dave Gear's not in the classroom, he's out showing tourists the geographical wonders of Joburg's mine dumps

TEARING THEIR HAIR OUT: The pressure of preparing for their matric finals is starting to get to the learners of Bhukulani Secondary School in Zondi, Soweto

## Dave Gear

Born in Johannesburg in 1948, Dave knows and loves the city and runs tours as a side-line. He matriculated from St John's college and studied Geography at Wits and Unisa. He was the founder chairman of the SA Students' Geography Association in 1970, as well as the chairman of the Association of Geography Teachers from 1977 to 1980. He has published several series of Geography textbooks and served as the vice chairman of the Geography Standards Generating Body. He was recently involved in the Matric 2nd Chance programme and is currently the director of the Thandulwazi Saturday Science School at St Stithian's College.

## Pule Rakgoathe

WEATHER MAN: Our Geography expert, Pule Rakgoathe, practises what he preaches

Pule Rakgoathe matriculated at Masedibu High School, in Limpopo. He qualified as a teacher in 1994 after obtaining a BA Ed degree from Vista University. He studied further at Wits University, where he obtained his B Ed and M Ed degrees in 1995 and 1998. He started his teaching career in 1995 at the Light Study Centre and later moved on to Seanamarena High School in Soweto, where he served as a Head of Department for Social Sciences. Because of his passion for Geography, his learners achieved several distinctions during his career as a Geography teacher. Pule also taught in the Secondary School Improvement Project (SSIP), organised by the Gauteng Department of Education for underperforming schools in District 11, during 2005 and 2006. He then went on to become the first Sepedi weather presenter for SABC 2. He also taught Geography on the Matric 2nd Chance satellite broadcast channel for the 2007 matrics who rewrote their exams in May/June this year. So now you know why his face looks so familiar!

## Managing your time in the examination

The Geography exam consists of two papers: Paper 1, Theory (3 hours, 300 marks), and Paper 2, Practical (1½ hours, 100 marks).
It is important to manage your time well so you are able to finish the whole paper. Do not write too much on sections you know well and leave out other questions. Be in the examination room 20 minutes before the starting time to get settled. Read through the question paper carefully before you start writing and decide which questions to choose.

**Paper 1 (Theory):** There are four questions, but you need answer ONLY THREE. You can therefore choose whether to do two questions from Section A and one from Section B OR whether to do two from section B and one from Section A. Each question counts 100 marks. Spend about one hour on each question.

**Paper 2 (Geographical Skills and Techniques):** Answer ALL the questions. Spend about 25 minutes on Question 1 (multiple choice) and about 65 minutes on the rest of the paper.

## PAPER 1: THEORY (300 MARKS, 3 HOURS)

There are two sections in Paper 1, Physical Geography and Human Geography, with two questions each (remember that you need to answer only three of these four questions). Be aware that Physical Geography mostly requires precise knowledge, whereas Human Geography requires the ability to interpret and understand, so make your selection according to what you are better at.

### Section A: Physical Geography – Climatology and Geomorphology

Know the vocabulary that will be used in this section – go through your notes carefully and make sure you know the meanings of all the terms and acronyms used. Study the resources carefully. For each resource, whether it is a photograph, map, drawing, table, graph or text, ask yourself: "What is this about? What is it telling me? What part of my theory knowledge does it relate to?" Read all the headings and labels carefully. When you are preparing for the exam, look at all the different maps in your notes and textbooks and make sure that you know where in South Africa they fit.

Don't be surprised if you get resources you have never seen before. The examiners do this on purpose: they want to know if you can use your knowledge, not just learn it off by heart. Yes, you must learn your definitions and supporting facts but if, for example, you have studied slope diagrams of the Magaliesberg, the same ideas will also apply to slopes in the Drakensberg or the Cape fold Mountains.

In this section, you will often be asked to explain your ideas. Very often this can best be done with a diagram. You do not have to be an artist to draw a good diagram. Keep your diagrams simple, use colours and label them neatly and accurately.

Make sure you know pressure belts and winds blowing along the pressure gradient, tropical and mid-latitude cyclones, subtropical anticyclones and their resultant weather. You need to be able to identify them on a synoptic map by interpreting the various symbols. Remember that a mid-latitude cyclone is identified by fronts (usually a cold front approaching south Western Cape), while a tropical cyclone is usually identified by circular isobars on the eastern side of the country, with the symbol of an eye in the middle and/or a name. Know the cross-section view of these systems and their impact on the areas over which they occur. Remember that an H on a synoptic map stands for a high pressure cell. Its name will depend on whether it is situated over the interior (Kalahari HP), on the eastern side over the ocean (South Indian HP), or on the western side over the ocean (South Atlantic HP). Know South Africa's weather patterns and local climates.

For fluvial processes, understand drainage, land forms, mass movements and hazards. Be able to differentiate between types of rivers, as well as explain key concepts related to river systems and the phenomenon of river capture. Be able to interpret information on a hydrograph, differentiate between various types of landforms, and describe slopes and mass movements.

### Section B: Human Geography

This section allows you more opportunity to express your own opinions. More questions in this section will start with **"Why…", "Explain…" or "Discuss…"** These questions may have more than one correct or valuable answer, so never leave out a question because you are not sure what to write.

Know rural and urban settlement as well as their related issues (the distinction between the two focuses more on function than anything else). Study the diagrams provided carefully and underline the key words. Know how the different sectors of the economy, such as the primary, secondary, tertiary and quartenary sectors, contribute to the development of South Africa. The roles of various industries and the government in developing the provinces are important. These will be linked to water as a critical resource, and to transport in promoting economic development. Be able to define concepts such as Gross Domestic Product, Gross National Product, trade balance and balance of payments.

## PAPER 2: PRACTICAL – GEOGRAPHICAL SKILLS AND TECHNIQUES (100 MARKS, 1 ½ HOURS)

In this paper you will be expected to read, analyse and interpret photographs, topographical and orthophoto maps. You also need some theoretical background on Geographical Information Systems.

### Let's unravel the secrets of this paper:

1. **Accuracy (because you will be dealing with measurements and calculations); and**
2. **Knowledge of the conventional sign-language used on a map to indicate particular features.**

Go into your map work exam with all the right equipment: a 30cm ruler with clear units, a pen, a protractor, pencil crayons, HB pencils, an eraser, string and a calculator.

You will be given a topographical map with a scale of 1: 50 000 and an aerial photograph. You may also be given an orthophoto, with a scale of 1: 10 000, covering part of the same area as the topo map. Before you start writing, spend time studying the map and orthophoto. Which part of the map is covered by the orthophoto? Where are the highest and lowest points? Where in South Africa is this? Which way are the rivers flowing? What economic activities take place here?

The exam will be divided into three main parts: The first group of questions will probably be multiple choice and will test basic map skills such as scale and direction. You will also be asked what the various symbols and numbers mean.

The second group of questions will ask you to do various calculations, such as gradient and area, as well as complete and interpret cross sections. Remember that to find distance in km, measure in cm and multiply by 0, 5 km. When you measure magnetic bearing, remember to always start from True North and measure in a clockwise direction. The Magnetic Bearing = True Bearing + Magnetic Declination. To find the coordinates of a place, you need to measure the latitude and longitude in degrees, minutes and tenths of minutes (or seconds). Height on all maps is shown in metres read from contour lines, spot height, trigonometric beacons and bench marks. Do not forget the formula for calculating gradient:

Be able to draw a cross section and determine the intervisibility of the places on a sketch you have drawn. Know how to calculate the vertical exaggeration of your cross-section.

The third group of questions will ask you to interpret information. For example, you might be asked why a particular site was suitable for a golf course and not a residential area.

Finally, there will be a fourth group of questions about more advanced mapping technologies such as GIS. These are covered in your textbook and the questions will not be difficult. Make sure you know the definitions and you will do well.

## Why study Geography?

Geography is the study of physical and human processes and spatial patterns on Earth in an integrated way over space and time. The study of Geography equips learners with knowledge, skills and attitudes which will stand them in good stead throughout their lives. Learners doing this subject can follow careers in geology, geomorphology, town and regional planning, education, climatology, environment and tourism, and weather presentation (radio and television).

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# A+ccumulate credit for Accounting

The Grade 12 NSC Accounting examination will be written at 9am on **Wednesday 11 November.** It consists of one 3-hour paper worth 300 marks. Manage your time well so you are able to finish everything. Use the first 10 minutes to skim through the whole paper and plan how long to spend on each section. Identify which topics you are best at and start with those. Show all your calculations in full.

### Let's look at how you should tackle the different topics:

**COMPANIES:**
You are likely to be asked about new company ledger accounts, so make sure you know all the formats. Know the following concepts well: ordinary share capital; ordinary share premium; SARS (income tax); ordinary share dividends; shareholders for dividends; appropriation accounts; retained income; and accumulated profit.

**COMPANY FINANCIAL STATEMENTS AND THEIR INTERPRETATION:**
You must know the formats of the income statement, the balance sheet and the notes to the balance sheet.

**Receivable notes:** Debtors = net trade debtors + accrued income + prepaid expenses.

**Payables:** Creditors less provision for bad debts, accrued expenses, income received in advance, SARS (income tax) and shareholders for dividends.

**Adjustments:** Do lots of exercises on adjustments under the different forms of ownership.

**Cash-flow statement:** Know the format of and the reason for completing the cash-flow statement. Study the five notes to the cash-flow statement. To arrive at the answer for taxation and dividends paid, complete the ledger account for SARS (income tax) and shareholders for dividends.

**Analysis and interpretation:** Know your ratios for companies (ask why you need to calculate something and know a basic comment to each).

**Companies theory:** Familiarise yourself with all the terminology – e.g. shares, dividends, taxation, etc.

**Corporate reporting:** Know how to prepare all financial statements and analyse an auditors' report.

**Managing resources:** Look at the code of ethics and the role of professional bodies.

**Auditors' report:** What is an auditors' report and who is responsible? Why is it addressed to the shareholders?

**Professional bodies:** Explain the significance of the reference to CA (SA). Know what action could be taken by professional bodies such as SAICA (South African Institute of Charted Accountants) if a company is negligent in drafting its financial statements.

**Corporate governance:** Familiarise yourself with the King Code. Be able to give examples of companies that comply with its recommendation that their annual reports should reflect the contributions they make to benefit the community at large. Expect a lot of interpretative questions that require a lot of writing.

Accounting equation: A favourable or unfavourable bank balance could have an effect on either assets or liabilities. Look at what stock system is in use, i.e. the periodic or perpetual inventory system.

**CLOSE CORPORATIONS:**
Only theory will be tested. Look at the differences between sold traders, partnerships, and private and public companies – e.g. the number of members, management, tax implications, continuity and legal personality.

**RECONCILIATIONS AND INTERNAL CONTROL:**
Be able to analyse and interpret reconciliations. Know what transactions can take place with debtors and creditors, what makes them increase or decrease, and possible mistakes that could occur and how to correct them. With bank reconciliations, know what should appear in the CRJ, CPJ, bank statement and bank ledger. Know how to treat post-dated cheques issued and received, how to treat a stale cheque, how to stop or cancel a cheque, and how to correct mistakes on a bank statement in the bank recon. Look at the control measure for determining how long one can keep cheques held over for payment. What is the difference between a debit order and a stop order?

**VAT:**
**Be able to do the following:** apply the principles of VAT; explain the difference between input and output VAT; work with the input and output ledger accounts; summarise the difference between input and output VAT; do calculations to add VAT (plus 14%) or exclude VAT (14/114); complete the VAT control account; calculate the mark-up amount by the retailer as well as the VAT mark-up ; record transactions by means of the periodic inventory system; complete a VAT 201 form; discuss the ethics of VAT, e.g. tax evasion; and distinguish between VAT-exempt items and zero-rated VAT items.

**MANAGERIAL ACCOUNTING (MANUFACTURING):**
Know the format of the production cost statement, and be able to prepare the ledger accounts and report on the cost information. Look at the types of manufacturing costs, their calculation and classification, and cost behaviour. Be able to calculate break-even point and know all the manufacturing ratios.

**BUDGETS:**
Be able to analyse and interpret a cash budget. Practise doing a debtors collection schedule, creditors payment schedule and age analysis. You have to know the function and characteristics of a cash budget and how to apply internal control processes.

**MANAGING RESOURCES:**
**Asset disposal:** You may be asked to complete ledger accounts, journal entries and the fixed asset note, as well as do the calculations involved in asset disposal. **Step 1:** Identify the cost price of assets sold. **Step 2:** Calculate the extra depreciation on the assets sold. **Step 3:** Take the total accumulated depreciation into account. Step 4: Determine how the fixed asset was sold. **Step 5:** Determine whether a profit or loss was made.

Analyse the fixed asset register and explain reasons for disposing of a fixed asset. You could be asked to make informed decisions on the result of the movement of an asset, interpret the asset disposal process, report on asset disposal, determine the age of an asset, calculate how often an asset needs to be replaced, and determine the life span of an asset.

**Stock systems (inventory valuations and validations): Know how to do the following:**
**1**. Differentiate between the FIFO and weighted average methods of valuation. (With the FIFO method, inventory items purchased first will be sold first. With the weighted average method, costs are assigned on the basis of the average cost of inventory on hand.) **2.** Determine why the cost price has changed, taking into account economic factors such as inflation. **3.** Draft the trading account and calculate the closing stock according to the two different valuation systems. For example: A business selling inventory relies on generating a continuous profit from its inventory in order to maintain a sustainable business. If the inventory is not controlled properly, profits may be lost. The value is calculated by multiplying the number of units of inventory on hand by cost price per unit.

Ethics, internal controls and audit processes: Differentiate between accounting and auditing: Accounting involves writing up the books and preparing financial statements. Auditing involves the vouching or checking of income and expenses, and the verification of the assets and liabilities in order to compile an auditors' report.

**ETHICS:**
A code of ethics enables a business to communicate its ethical standards effectively. Know the definition for a conflict of interest and what disciplinary and punitive measures may be taken.

**PUNISHABLE OFFENCES AS STIPULATED BY THE SAICA CODE OF CONDUCT:**
Examples include contravention, gross negligence and improperly obtaining or attempting to obtain work.

**INTERNAL CONTROL AND INTERNAL AUDIT PROCESSES IN A BUSINESS ENVIRONMENT:**
Be able to define an internal control, an internal audit and an external audit. This section requires a lot of studying, analysis and interpretation.

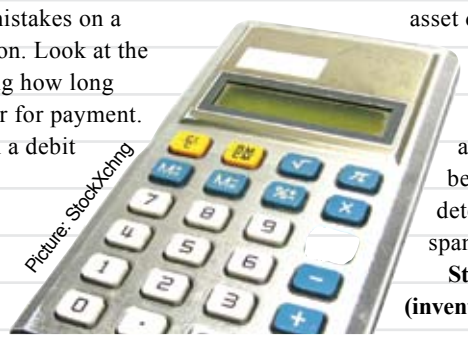
**TREE OF KNOWLEDGE: The Grade 12s of Benoni High School look to one another for inspiration for their looming exams**

Eurika Fourie

**POSITIVE BALANCE: Eurika Fourie's enthusiasm about her subject + her head for numbers = one great Accounting teacher!**

Eurika has taught at Parktown Boys' High School for the past ten years. She also teaches on the Learning Channel and has been a matric marker for ten years. She is passionate about Accounting, and says it is important to her that her learners are just as enthusiastic about her subject as she is - which is obviously the case as they have maintained an average of 75%+ every year. "Accounting is a life skill," she says. "It doesn't matter what career you pursue, you will always benefit from the accounting you have done at school. Believe in your own ability and good luck for your final exams!"

> *Accounting is a life skill. It doesn't matter what career you pursue, you will always benefit from the accounting you have done at school.*



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# Get to grips with the business of studying

### Structure of the Business Studies question paper

The Business Studies paper will be written on Wednesday 25 November 2008 at 9:00am. It is a 3-hour paper and is out of 300 marks.

### SECTION A

This section will be made up of **20 short questions** worth **2 marks each** (i.e. it is worth 40 marks in total). All the questions are compulsory. Various assessment styles covering all the Learning Outcomes will be used – for example: multiple choice, match the corresponding words in different columns, choose the correct word in brackets, etc. These questions are designed to test knowledge and understanding.

### SECTION B

This section will be made up of **three questions** worth **60 marks each** (i.e. it is worth 180 marks in total). All the questions in this section must be answered. Your answers should be written in paragraph style. Make sure you understand the meaning of verbs such as "discuss", "motivate", "compare", "differentiate" and "explain", etc so that you know how to approach each question. Be aware that case studies or source-based questions are likely to be included in this section.

### SECTION C

You will be given a **choice of four questions** in this section, of which you need to answer any **TWO only**. Each question is worth **40 marks**, which means this section is worth 80 marks in total (2 x 40 = 80).

This section will contain cognitive-type questions aimed at assessing your insight into the theory you have studied as well as your ability to interpret information and scenarios given to you in the examination. The questions are likely to include verbs such as "design", "plan", "appraise", "evaluate", etc, so make sure you know what all of these words mean in order to understand exactly what is being asked of you. Your answers should be in paragraph style. Keep your sentences short, simple and to the point. Make a list of all of the key terms and make sure that you can define and explain them. Avoid circular definitions such as "market size is the size of the market".

### General tips

- The examiners are not testing or marking your ability to write in English, but they do expect you to be able to use business terminology appropriately and correctly.
- Before you start writing, you should read and analyse each question carefully.
- Try to break every question down into the following segments:
  - An action
  - A subject
  - A context (where appropriate)
- Each question will contain an **ACTION** word such as *state, explain, analyse, discuss,* etc. Questions may start with *How, Why or Do you agree,* which implies an action (e.g. *discuss*). Make sure that you understand what is meant by these action words.
- Each question will contain a **SUBJECT** word or phrase – e.g. *business strategy, ethical issues,* etc. Make sure you are clear about which part of the curriculum the question is examining.
- Some questions will have a **CONTEXT** such as *small business, macro environment, primary sector,* etc. They might also be set in the specific context of a case study or data response, etc.
- Try to put yourself in the mind of someone who is managing a business in the given context.
- Try to answer these questions in the given context and avoid general answers that could apply to almost any business.
- Answer the questions in the paper and not the ones you wished had been set!
- When you study topics, don't just learn the facts, but also try to understand how they might be used and what their limitations might be.
- Remember that the examiners are not just testing knowledge. They are also testing **application, analysis and evaluation**.
- Typical "trigger" phrases leading to **analysis** include: *because ... this leads to ... as a result ... if ... then... this could mean...* etc.
- Typical "trigger" phrases leading to **evaluation** include: *on the one hand ... the most important ... I recommend... could be serious ... in the short term ... however, in the long term ... before they can consider ...* etc.
- You should try to justify any evaluative comments that you make.
- It is useful to start an essay-style question with a **definition** of the subject of the question. For example, if you are asked a question which begins as follows, "Discuss whether Corporate Social Responsibility (CSR) ..." you could start with a definition of CSR and finish with a **conclusion,** which might be a *decision, a judgement or a recommendation.*
- Where appropriate, you can use formulae or diagrams to illustrate an answer.
- Use your common sense – and local knowledge if appropriate.

**MONKEY BUSINESS: Exam pressure is getting to the matric class of 2009**

Picture: StockXchng

### Some more advice

- The paper covers the whole Business Studies curriculum for Grade 12.
- Make sure that you read the instructions carefully at the beginning of the exam paper and that you attempt the right number of questions.
- Don't start writing until you have read the exam paper from cover to cover.
- Take time to consider each question.
- Decide upfront how much time you are going to spend on each question, with the ones carrying the most marks being allocated the most time.
- If you find difficulty answering a question leave it out (just remember to leave a space in your answer book for it) and move onto a question you feel more confident about answering. You can always come back to the difficult question later.
- At the start of the exam, take deep breaths to relax yourself.
- Don't write irrelevant information.

### Managing your time in the examination

- The number of marks allocated to a question will give you a clear guide about how much time you should spend on it. It is suggested that you allocate your time as follows:
  - Section A: 30 minutes
  - Section B: 90 minutes
  - Section C: 60 minutes
- Read the paper at the beginning of the exam, especially the data-response and case-study questions. Don't waste time rewriting the question and try to avoid repeating yourself in your answers.
- Look at where the marks are to be gained and allocate your time appropriately. Stick to your plan! Many candidates spend too much time earning small numbers of marks, thereby losing time to spend on the questions worth more marks.
- Try to relax – keep an eye on the clock, but don't check it every five minutes.
- Leave yourself enough time to go back through all your answers at the end of the exam: complete any you may have left out and check your answers.

Good luck!

## Eugenia Maila

**BUSINESS BOFFIN: Eugenia Maila has a wealth of experience in the field of Business, Commerce and Management**

*Remember that the exams are not set to trip you up – they are designed to allow you to show your knowledge of the curriculum. Be positive and have confidence in your ability.*

Eugenia Maila matriculated at Mokomene High School in Limpopo. She studied to be a commerce teacher and majored in Accounting, Business Economics and Economics. Eugenia was a Business Economics teacher at Daliwonga Secondary School in Soweto. Her students excelled in this subject and produced good results. She worked at the Gauteng Department of Education as a subject advisor, WSE supervisor and Business Economics internal moderator. Eugenia has a Bachelor of Economic and Management Sciences degree from Vista University, majoring in Accounting and Business Economics. She also has an Advanced Postgraduate Diploma in Business Management (SBS) and an MBA (ASBE). Eugenia is currently a Chief Education Specialist in Business, Commerce and Management (BCM) at the national Department of Education.

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# Take a trip to the top

The Tourism exam consists of only one paper: Paper 1 (3 hours, 200 marks). There are five COMPULSORY questions.

Be in the examination room 20 minutes before the starting time to get settled. Don't forget to bring a **calculator**.

Read through the question paper carefully before you start writing. When you're allowed to start writing, jot down any thoughts or ideas you have about each of the questions – this rough work will be a useful memory trigger when you actually come to answer the question. Be careful you do not write too much on the sections you know well and too little on other questions.

Study each resource, whether it is a cartoon, photograph, map, table, graph or text, and ask me? What part of my knowledge does it relate to?" Read all the headings and instructions carefully. Don't be surprised if you get resources you have never seen before. The examiners do this on purpose: they want to know if you can use your knowledge, not just learn it off by heart.

Elsabé Engelbrecht

**TWO HEADS ARE BETTER THAN ONE: Tourism expert Elsabé Engelbrecht (right) with her daughter Cynthia, a chef**

Elsabé started her teaching career in 1982 as an English teacher, but got involved in Tourism teaching in 1997. She always encouraged her learners to use opportunities to travel and since 1997, her learners won no less than 3 local and 3 overseas trips. Elsabé's passion is travelling and she has travelled extensively – both locally and overseas. She received numerous teaching awards, of which the American Express award for excellence in Tourism education is her most cherished. She has published a number of Tourism teaching and learning materials and is currently working on a Tourism dictionary.

After more than 20 years in the classroom, Elsabé has been appointed Provincial Tourism Coordinator for the Northern Cape Department of Education in Kimberley. She is married to Fritz and they have a daughter, Cynthia, who is a qualified chef.

## WHY STUDY TOURISM?

The tourism industry is one of the largest and most diverse industries in the world, yet it remains largely untapped when it comes to attracting young individuals.. It is one of the fastest growing industries globally and the second largest industry in the world in terms of turnover. Tourism is an industry that currently offers a lot of opportunities to individuals who not only have a passion for working closely with people, but are keen to be part of an industry that is a key contributor to the South African economy. Employment is offered directly to millions of people worldwide and indirectly through many associated service industries including government tourism departments, immigration and customs services, travel agencies, airlines, tour operators, hotels, car rental companies, luxury trains and cruise liners, airline catering and laundry services, tour guides, interpreters, tourism promotion and sales agencies, and tourism media.

Questions in which you will be required to express your own opinions will appear in all sections except Section A. These questions may start with phrases like **"Give your views on …", "Explain why …", "Discuss how …**"or **"Do you agree …"**. Remember, the examiners do not only want to test your knowledge of the subject, they also want to test your ability to understand, interpret, apply and reason – which is why you will often be asked to explain/motivate your answers.

It is important to manage your time well so you are able to finish the whole paper. Here is a suggestion on how to spend your time in the Tourism exam room:

| | | | |
|---|---|---|---|
| SECTION A | Short Questions (covering the entire syllabus) | 40 marks | 20 minutes |
| SECTION B | Tourism as an Interrelated System | 40 marks | 40 minutes |
| SECTION C | Responsible and Sustainable Tourism | 40 marks | 40 minutes |
| SECTION D | Tourism Geography, Attractions and Travel Trends | 50 marks | 50 minutes |
| SECTION E | Customer Care and Communication | 30 marks | 30 minutes |

Try to leave time at the end of the exam to check your answers and correct any mistakes.

**SECTION A: SHORT QUESTIONS [40]**

In this section you can expect multiple-choice questions, match-type questions (Column A/ Column B), select the correct word from the options given, give the correct term, etc. Know the vocabulary well, it may be tested in this section – go through your notes carefully and make sure you know the meanings of all the terms and acronyms used.

**SECTION B: TOURISM AS AN INTERRELATED SYSTEM [40]**

This section will test whether you understand the relationship between the various sectors, sub-sectors and role players in the tourism industry.

Make sure you understand the concept of 'service' and the components within 'service': The product/service, the way in which the product/service is offered and the co-operation received from the service provider. Revise the concepts '**economic growth'** and '**community development'**.

**The impact of service excellence on economic growth and community development in the country**: Look at the term 'Gross Domestic Product' (GDP) and ensure that you understand the meaning. You may be required to make links to GDP growth and benefits to the South African economy. You must also be able to make recommendations for the improvement of service delivery.

**The government's strategy with regard to redressing past imbalances in tourism participation:** Make sure you are able to write short notes to explain each of the following documents and programmes: White Paper on the Development of Tourism in South Africa, Domestic Tourism Growth strategy of the DEAT, the DEAT `s Tourism Community Road Show, Black Economic Empowerment (BEE) Charter and score card, Tourism Enterprise Programme (TEP), Fair Trade in Tourism South Africa (FTTSA)

**Working conditions in the tourism industry**: Make sure you understand and can explain the following terms: working hours, uniform allowances, travel benefits, professional accountability and responsibility, service ethic, conflict handling, grievance, etc.

**The purpose and value of a Code of Conduct**: The examiners may give you extracts to read and then ask you to interpret and apply your answers to the information in the extract. It is not necessary for you to know any legislation off by heart.

**SECTION C: RESPONSIBLE AND SUSTAINABLE TOURISM [40]**

This section will assess whether you understand and can explain the importance and benefit of responsible and sustainable tourism on social, economic and environmental growth. You can expect to be given resources such as extracts, cartoons and photographs to interpret.

If you revise the following, you will be able to answer the questions: Environmental factors - the physical environment / Social factors - the role of the local community / Economic factors - the role of business / The role of local government - legislation and law enforcement / Types of resources integral to sustainable and responsible tourism.

**International agencies responsible for protecting and restoring the environment**: Ensure that you know basic information about the following strategies: the World Heritage Convention, (1972); the World Summit on Sustainable Development (2002); the Ramsar Convention on Wetlands (1975); UNESCO's Man and Biosphere Programme (MAB); the WWF (World Wildlife Fund); and the Kyoto Protocol. Be able to discuss South Africa's involvement in international organisations that develop strategies to protect the environment (e.g. protection of endangered species and sites, legislation, the World Summit on Sustainable Development, etc). Look at community involvement, community benefits and partnerships and respect for the integrity of communities.

**The marketing** of local tourism products or services that have the potential to develop into a unique tourism venture: Revise the development of a basic marketing plan and know how to do a SWOT analysis. Make sure you understand the pricing structure when developing a marketing strategy (these are ways to measure whether the money spent on marketing and promotion has brought in more business/money). Remember that **products** refer to **manufactured items** (e.g. crafts, toys, jewellery, beadwork and clothing) as well as to **services provided** (e.g. transport, laundry and tourist guiding services).

Understand and be able to explain how diversity in South Africa celebrates and is used to promote inbound and domestic tourism. **Know about South Africa's heritage and the differences among its various cultures:** Remember the term "Rainbow nation"? Make sure you know about the San and Khoi, various black cultures, Indian, Coloured, Malay, white (English/Afrikaans) and minority groups (Jews, Chinese, Germans, Lebanese, Portuguese and Greeks). You may be required to discuss each culture in terms of their festivals, folklore, dress, traditions, food, history, housing, religion and other belief systems.

**SECTION D: TOURISM GEOGRAPHY, ATTRACTIONS AND TRAVEL TRENDS [50]**

This section will test whether you understand and can explain the impact that physical features, attractions, travel trends and events/occurrences can have on a destination.

**Time zones and daylight saving time (DST):** You must be able to make these calculations. The examiners may give you a time-zone map, but you also have to be able to workout the answer by using degrees. You also need to be able to explain the impact DST has on travel planning and travelling.

This part you will recognise … the **PAT!** Revise the following: How to develop tour plans to suit specific tourists' profiles; the interpretation of a general itinerary; the tourist's available budget and time; the costing of a tour; places of interest and activities in the area; transport and accommodation to suit customers' needs and preferences; health and safety information for tourists; passport and visa requirements and customs regulations; weather and clothing; travel insurance; foreign exchange and exchange rates; travel entry documents and regulations and customs requirements.

**The role of SA Tourism in marketing South Africa:** Can you still remember what are considered "new" and "existing" markets?

When assessing tourism arrival statistics to determine foreign market share, you may be expected to interpret graphs and statistical information on countries of origin, types of tourists and their interests. Revise the criteria used to select new target markets and make sure you can explain how SA Tourism continues to maintain its market share of existing markets.

Make sure you do some revision exercises in converting major currencies to South African rands - and that you can convert South African rands into another currency. Don't forget your calculator: you will not be able to answer these questions without one. Remember, the **Bank Selling Rate (BSR)** is used when people buy foreign currency from a bank or foreign exchange dealer and the **Bank Buying Rate (BBR)** is used when the tourist exchanges foreign currency for SA rands. Don't forget that exchange rates fluctuate daily.

Understand the impact current affairs and recent political situations all over the world have on tourism trends. Remember that **current affairs** refer to events that may have a short or long term, direct or indirect impact on tourism – e.g. floods could result in a water shortage, the outbreak of diseases (cholera), and damage to infrastructure (affecting accessibility).

**SECTION E: CUSTOMER CARE AND COMMUNICATION [30]**

This section will assess whether you understand and can explain how effective communication skills are vital in the tourism industry. You need to be able to communicate well in order to demonstrate professional conduct, deliver service excellence and function as a member of a team.

Make sure you understand the different cultural needs of tourists who visit South Africa and can identify South Africa's major inbound tourism markets, taking current trends into account. Be able to explain that each of these markets has different expectations and cultural and other needs. Make sure you can discuss ways in which businesses in the tourism industry should adapt their own behaviour to meet these needs.

**Ways and methods to obtain customer feedback to confirm customer satisfaction**: How does a business know if its customers are satisfied with its service? (It conducts surveys, questionnaires, follow-up calls, etc.) Remember that the impact of the service delivered by an organisation impacts on its business profitability. Be able to give reasons for why service differs from one organisation to another and to explain how your own actions contribute towards service excellence. Make sure you can discuss strategies to achieve and maintain quality service, e.g. performance management, quality control checks, customer surveys and team reviews.

Be able to review the effectiveness of your own participation in teamwork and how your contribution (or lack of it) impacts on a team or business and its profitability. Understand how the use of people's different strengths in a team environment supports the achievement of goals and quality service.

Be familiar with the **available technology to communicate:** e.g. telephone, fax, computer, email, cell phones, internet, photocopiers etc.

This, in a nutshell, sums up what you may be examined on. Use this information to draw up a revision program for Tourism. Don't wait until the last minute or the evening before you write Tourism to start studying. Good luck!

# Tips to help you pass Afrikaans

There are THREE papers for this subject. **Paper 1** (Comprehension, Summary and Language Skills – 80 marks); **Paper 2** (Literature: Prose and Poetry – 70 marks); and **Paper 3** (Writing Skills – 100 marks)

You need the necessary **vocabulary** to understand the instructions and the texts you will have to read, but most importantly, to answer the questions in Afrikaans or to express yourself in Afrikaans!

You still have time to learn your vocabulary.

- First take your literature and make an **adequate summary of vocabulary and catch phrases** relevant to the prescribed novel, set of short stories or drama which your school chose to do in your matric year. Your approach to the poetry will differ: read through each poem and take out all the words you don't understand.
- Then concentrate on a variety of possible topics for Paper 3. Do an analysis of the topics.
  - First put **yourself** in the centre: who and what you are; your family and your place in your community.
  - Move away from yourself to people in your community and be aware of **cultural diversity.**
  - Then look at events (positive and negative) which take place in your school and social community: your **social interaction and involvement** are of importance.
  - Investigate **environmental** issues: conservation, factors which threaten our environment and therefore also affect our daily lives.
  - Investigate **health** issues.
  - Think of **entrepreneurship** as a topic.

## PAPER 1: COMPREHENSION, SUMMARY AND LANGUAGE SKILLS (2 hours; 80 marks)

- **Section A: Kyk- en leesbegrip (30 marks)**
  In this section, 40% of answers could come almost directly from the text, 30% of answers will require some understanding of the text and another 30% of answers will demand a higher skill than mere understanding, in other words: understanding and voicing an opinion/ comparing/listing a number of factors from the text, etc.
  - Vraag 1 – 2: Leesbegrip (28 marks). Expect any THREE of the following types of text: an article from a magazine/ newspaper, advertisement, comic strips, review of a book/movie/ restaurant, and letters written to magazines/newspapers.
  - Vraag 3: Kykbegrip (2 marks). Expect to be given an advertisement which you have to study visually in order to answer one question/two questions.
  - Make sure you know the difference between: *denotiewe/letterlike/ direkte and konnotiewe/figuurlike/ geïmpliseerde betekenis.*
  - You must be able to comment on font types and/or sizes and meanings of headings.
  - NB: Where you are required to give *EEN WOORD/TWEE OPEENVOLGENDE WOORDE/TWEE APARTE WOORDE/'N DEEL VAN 'N SIN* – you **may not write more than is asked** – you will get no marks!
  - **NB:** If the question asks, "haal ... aan" (and you must read the questions carefully for these two words), it means you must quote and, therefore, you must put your answer in *aanhalingstekens* (" ... "). No quotation marks, no marks!
- **Section B: Summary (10 marks)**
  - Vraag 4: Make good use of your 10 minutes reading time to get a good idea of the main ideas/pointers in the text you have to read.
  - Use a highlighter to mark the **seven main ideas** you have to write down for the summary. Always bear in mind that **the summary has a definite heading and purpose.**
  - Write these seven main ideas down **in point form / paragraphs.**
  - Write only **ONE SENTENCE** for each pointer.
  - Lastly, check your sentences for **grammatical errors.**
  - Remember to write the **number of words clearly at the end of the summary in square brackets.**
- **Section C: Word and language structures (40 marks) 5.1 – 5.2**
  - Vraag 5.1 – 5.20 (20 marks). You are given a cartoon which is summarised in a left-hand column with specific instructions in the right-hand column.
  - Left-hand column: the words which have been placed in round brackets have to be written in the *meervoud/verkleining;* you may have to give the *sinoniem/antoniem, manlik/vroulik, intensiewe vorm, samestelling; verskaf die korrekte vorm van die woord* for a number of words or description*; kies die korrekte woord (voorsetsel, voornaamwoord, spelling); skryf die getal uit.* NB: The correct answer will then complete the summary of what the cartoon depicts and will read correctly.
  - Vraag 5.21 – ±5.33 (16 marks). In the left-hand column you have sentences (on a chosen topic) in round brackets which have to be rewritten according to specific instructions which are typed in the right-hand column, such as *direkte rede > indirekte rede; ontkennende vorm; teenwoordige tyd > toekomende/verlede tyd; infinitief; aktiewe/bedrywende > passiewe/lydende vorm; woordorde met voegwoord 1/2/3; tyd, wyse en plek; stelsin > vraagsin and korrekte leestekens* in these sentences.
  - Vraag 6 (4 marks). You are given a cartoon/comic-strip and expected to comment on the meaning of a caption/ dialogue in a specific social situation/ commentary.

## PAPER 2: LITERATURE (2 hours; 70 marks)

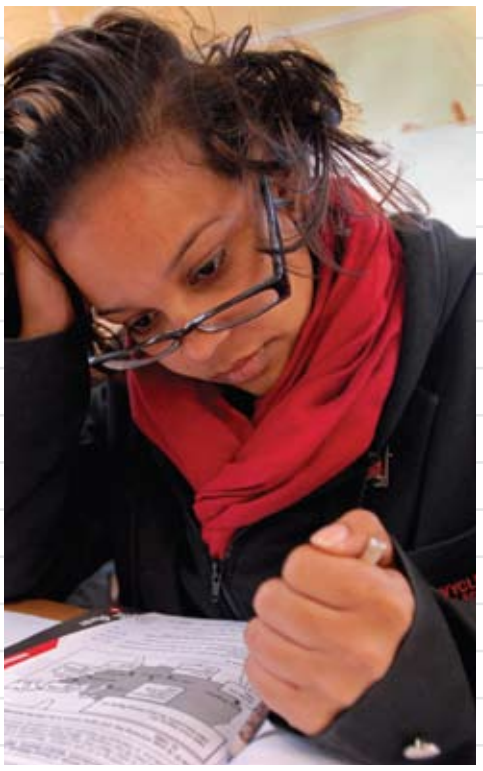
You have to answer questions on the literature your educator did with you. For example:

- **Poetry (35 marks)**
  - You are given two sets of contextual questions, that will cover four of the poems you have studied this year. You have to answer any two of them.
  - Ask your educator which of the following you could be asked about: *Metafoor/Vergelyking/Personifikasie/ Metonimia/Klanknabootsing/Simbool/ Hiperbool/Kontras/Sarkasme/Karikatuur (spot)/Ironie/Satire/Paradoks/Inversie/ Antitese/Antiklimaks/ Soorte rym/ Woordspeling/Herhaling/Assonansie/ Alliterasie/Punktuasie [bv. ellips (. . . )/ aandagstreep ( – )]*
  - Know the senses in Afrikaans: *sien > sig, hoor > gehoor, ruik > reuk, proe > smaak en voel > gevoel/tas.*
- **Short stories/Novel/Drama (35 marks)**
  - LEARN the facts and be sure that you have the necessary vocabulary to answer the questions.
  - Make sure you know: *Intrige/Subintrige/ Konflik/Karakter/Verteller/Boodskap/ Tema/Agtergrond en milieu (ruimte)/ Stemming/Tydsverloop/Ironie/Afloop van die verhaal.*

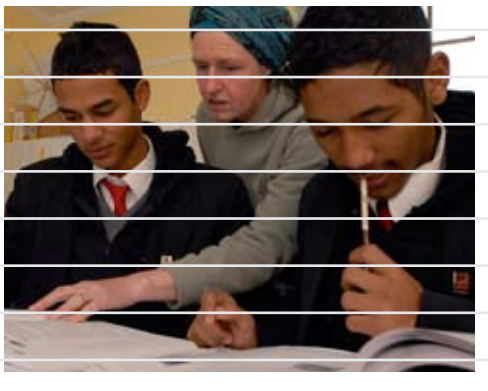
**NB: Although you are given a choice to answer either the contextual (short) questions OR to write an essay of 250 – 300 words on the literature, it is wise to follow your educator's advice.**

## PAPER 3: (2½ hours; 100 marks)

- **AFDELING A: OPSTEL (50 marks)**
  - Vraag 1.1 – 1.5 (1.5.1 – 1.5.3: a choice of three pictures to write on). Choose **ONE**
  - Write a *verhalende/beskrywende/ beredenerende/bespiegelende/feitelike/ argumenterende* essay.
  - **PLAN** your essay on the left-hand page **AND** show how you **EDIT** this planning in order to write your **FINAL** work on the right-hand page.
  - Essay length: 250 – 300 words (give a word count at the end). Do not go over the limit; remember to write the question number; give your essay a title.
- **AFDELING B: LANGER TRANSAKSIONELE TEKSTE (30 marks)**
  - Vraag 2.1 – 2.4. Choose **ONE**
  - You need to know the format and tone of voice of the text you choose to write: *brosjure/curriculum vitae/ onderhoud/dialoog/formele en informele brief aan die pers/agenda plus notule van vergadering/redakteursbrief/ vriendskaplike brief/koerant- en tydskrifartikel/ huldeblyk/verslag/ resensie/toespraak.*
  - **PLAN** your text on the left-hand page **AND** show how you **EDIT** this planning in order to write your **FINAL** work on the right-hand page.
  - Length: 120 – 150 words.
- **AFDELING C: NASLAAN-, INFORMATIEWE EN TRANSAKSIONELE TEKSTE (20 marks)**
  - Vraag 3.1 – 3.3. Choose **ONE**
  - You need to know the format and tone of voice of the text you choose to write: *advertensie/dagboekinskrywing/ poskaart/uitnodiging/vorm voltooi/ padaanwysings/instruksies.*
  - **PLAN** your text on the left-hand page **AND** show how you **EDIT** this planning in order to write your **FINAL** work on the right-hand page.
  - Length: 80 – 100 words.



**GET TO IT, DO IT: This matric learner from John Wycliffe Christian School, Wynberg, Cape Town, knows that hard work now will pay off later**



## Wilma Grobler



**SETTING THE TONE: Wilma Grobler is not just an expert on her subject, she is also wise about life**

A passion for teaching is the name of the game! When my son was in primary school he once asked me what hobbies I had. The spontaneous answer was that I set exam papers! He was horrified and insisted that I should have something totally divorced from teaching. But you cannot teach an old dog new tricks - and I still spend a large portion of my time setting exam papers.

I hope you are going to work hard and be well prepared for your Afrikaans examinations. Good luck!

*En die waarheid? Soms moet ons na ons kinders luister: 'n stokperdjie is gesonder as net neus in die boeke!*

*"And the truth? Sometimes we must listen to our children. A hobby is healthier than always having your nose in a book."*

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# 2009 NATIONAL SENIOR CERTIFICATE (NSC) EXAMINATION TIMETABLE OCTOBER/ NOVEMBER 2009 AMENDED ON 6 FEBRUARY 2009

**PRACTICAL SUBJECTS/NON OFFICIAL LANGUAGES**

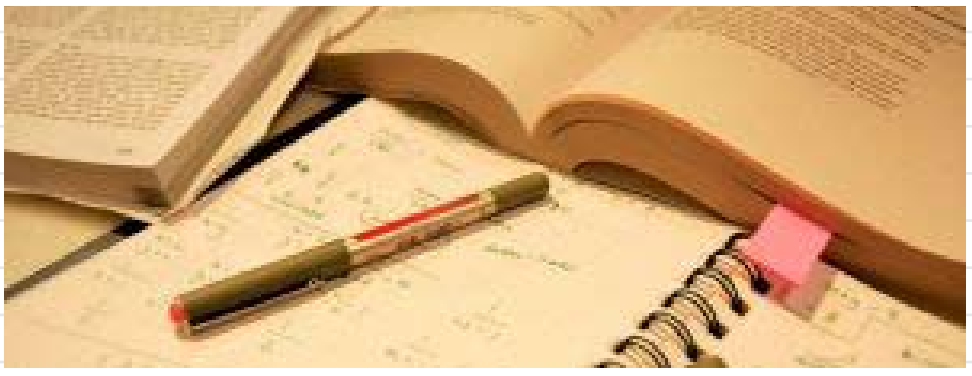
| WEEK 1 | 09:00 | 14:00 |
|---|---|---|
| Monday 26/10 | German, Portuguese Hebrew P1 Home; First and Second Add Languages (2hrs) Electrical Technology (3hrs) | Hindi, Gujarati, Urdu, Tamil, Telegu Arabic, French, Italian; Spanish, Home; First and Second Add Languages P1 (2hrs) Latin P1 (2½hrs) |
| Tuesday 27/10 | Information Technology P2 Theory (3hrs) | German, Portuguese Hebrew P2 (2hrs) Home; First and Second Add Languages |
| Wednesday 28/10 | Consumer Studies (3hrs) Nautical Science P1 | Hindi, Gujarati, Urdu, Tamil, Telegu Arabic, French, Italian; Spanish, Home; First and Second Add Languages P2 (2hrs) Latin P2 (1½ hrs) |
| Thursday 29/10 | Mechanical Technology (3hrs) | Agricultural Management Practices (2½ hrs) |
| Friday 30/10 | Afrikaans Home Lang P1 (2hrs) and First (2hrs) and Second Add. Languages P1 (2½hrs) | German, Portuguese Home and First Add Languages P3 (2½hrs) |
| **WEEK 2** | **09:00** | **14:00** |
| Monday 2/11 | English Home Lang P1 (2hrs) and First (2hrs) and Second Add. Languages P1 (2½hrs) | Hindi, Gujarati, Urdu, Tamil, Telegu Home and First Add Languages P3 (2½hrs) |
| Tuesday 3/11 | Geography (Theory) P1 (3hrs) | Geography (Map work) P2 (1½hrs) |
| Wednesday 4/11 | IsiZulu, isiXhosa, SiSwati, isiNdebele Home Lang P1 (2hrs) and First (2hrs) and Second Add. Languages P1 (2½hrs) | Music P1 Theory (3hrs) |
| Thursday 5/11 | History P1 (3hrs) | Computer Application Tech P2 Theory (3hrs) |
| Friday 6/11 | Mathematics P1 (3hrs) Mathematical Literacy P1 (3hrs) | Civil Technology (3hrs) |
| Saturday 7/11 | | |
| **WEEK 3** | **09:00** | **14:00** |
| Monday 9/11 | Mathematics P2 (3hrs) Mathematical Literacy P2 (3hrs) | |
| Tuesday 10/11 | Afrikaans Home Lang P2 (2½hrs) and First and Second Add Languages P2 (2hrs) | SePedi, SeSotho, SeTswana, XiTsonga, TshiVenda Home Lang P1 (2hrs) and First (2hrs) and Second Add. Languages P1 (2½hrs) |
| Wednesday 11/11 | Accounting (3hrs) | |
| Thursday 12/11 | English Home Lang P2 (2½hrs) and First and Second Add. Languages P2 (2hrs) | |
| Friday 13/11 | Physical Science (Physics) P1 (3hrs) | Dance Studies (3hrs) |
| Saturday 14/11 | | |
| **WEEK 4** | **09:00** | **14:00** |
| Monday 16/11 | Physical Science (Chemistry) P2 (3hrs) | Visual Arts (3hrs) |
| Tuesday 17/11 | IsiZulu, isiXhosa, SiSwati, isiNdebele Home Lang P2 (2½hrs) and First and Second Add Languages P2 (2hrs) | Dramatic Arts (3hrs) |
| Wednesday 18/11 | Economics (3hrs) | |
| Thursday 19/11 | SePedi, SeSotho, SeTswana, XiTsonga, TshiVenda Home Lang P2 (2½hrs) and First and Second Add Languages P2 (2hrs) | Agricultural Technology (3hrs) |
| Friday 20/11 | Life Sciences P1 (2½hrs) | Afrikaans Home Lang P3 (2½hrs) and First Add Lang P3 (2½hrs) |
| Saturday 21/11 | | |
| **WEEK 5** | **09:00** | **14:00** |
| Monday 23/11 | Life Sciences P2 (2½hrs) | |
| Tuesday 24/11 | History P2 (3hrs) Maritime Studies Equine Studies | Religion Studies P1 (2hrs) |
| Wednesday 25/11 | Business Studies (3hrs) | SePedi, SeSotho, SeTswana, XiTsonga, TshiVenda Home Lang P3 (2½hrs) and First Add Language P3 (2½hrs) |
| Thursday 26/11 | IsiZulu, isiXhosa, SiSwati, isiNdebele Home Lang P3 (2½hrs) and First Add Lang P3 (2½hrs) | Design (3hrs) |
| Friday 27/11 | | |
| Saturday 28/11 | | |
| **WEEK 6** | **09:00** | |
| Monday 30/11 | Agricultural Science P1 (2hrs) | English Home Lang P3 (2½hrs) and First Add. Lang P3 (2½hrs) |
| Tuesday 1/12 | Agricultural Science P2 (2hrs) Nautical Science P2 | Tourism (3hrs) |
| Wednesday 2/12 | Engineering Graphics and Design P1 (3hrs) | Music P2 Comprehension (1½hrs) |
| Thursday 3/12 | Mathematics P3 (2hrs) | Hospitality Studies (3hrs) |
| Friday 4/12 | Engineering Graphics and Design P2 (3hrs) | Religion Studies P2 (2hrs) |

**CONCLUSION OF THE 2009 NSC EXAMINATION: 4 DECEMBER 2009**

| WEEK 0 | 09:00 | 14:00 |
|---|---|---|
| Wednesday 07/10 | Computer Application Speed Test (Optional) at 8:00 | Must still form part of monitoring plan so that very good monitoring takes place |
| Thursday 08/10 | Computer Application Tech P1 (3hrs) Practical | |
| Friday 09/10 | Information Technology P1 (3hrs) Practical | |

**CAT and IT Practical will be administered prior to the official examination period. Learners not offering CAT and IT will attend school as normal on 7, 8 and 9 October 2009. From 12 October to 23 October normal classes continue. No Gr. 12 learner may be released for study purposes before 23 October 2008 to secure three weeks contact time in the 4th term.**

**Enquiries: SNP Sishi – Chief Directorate: National Examinations, Assessment and Measurement**
**012-312 5717**



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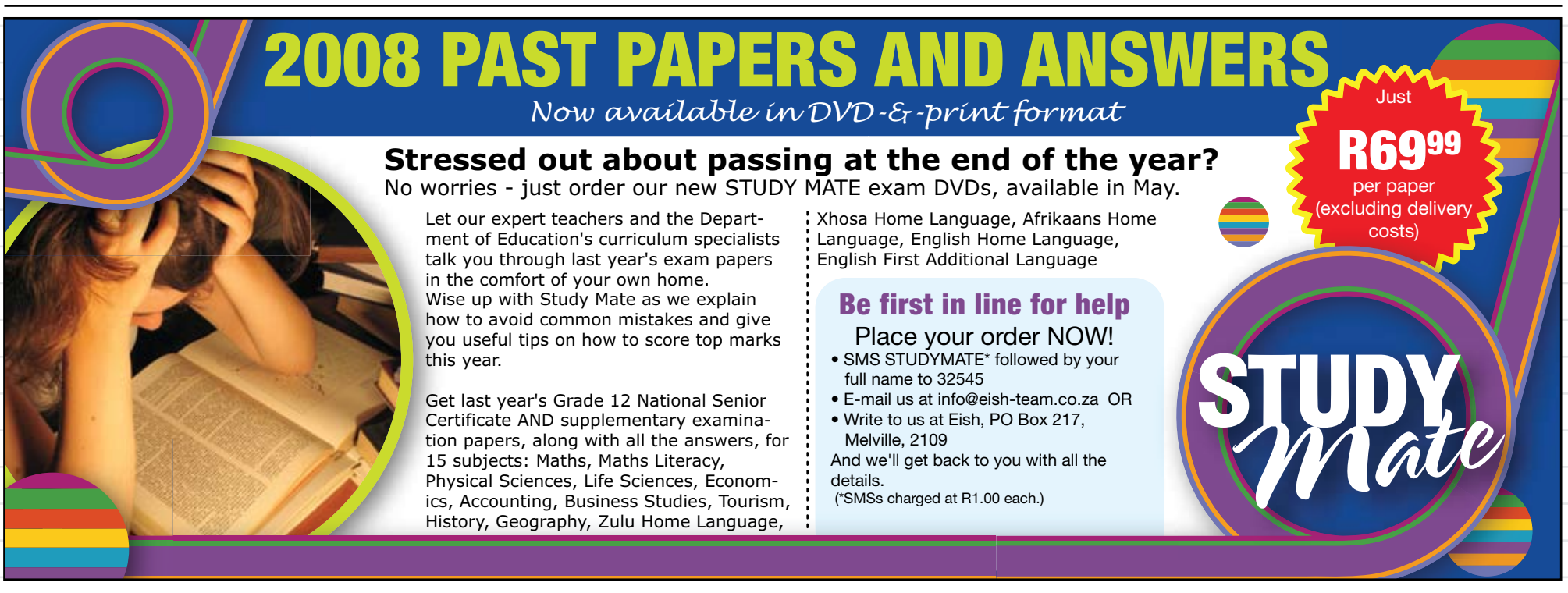
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