Seatides Combined School

P.O. Box 124
Desainagar
4405

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23 August 2021

Dear Parent/Guardian

GRADE 9 – COURSE SELECTION - 2022

As your child enters the final phase of basic education, that all important decision of possible career choice has to be taken. Robust discussion between parent and child, research and consultation are essentials in this process.

Learner interest, strengths and consistent achievement in the various subjects may also be good indicators. Having exhausted all options, learners and parents need to make an informed choice suited to the learner's interest, aptitude and ability to avoid any need to change subjects/s in the course of the FET phase.

Please use the information booklet given to your child in respect of course selection for 2022 to make an informed choice best suited to your child.

Due to the rise in covid infections the scheduled date for the course selection meeting had to be Re-Scheduled. You will be informed accordingly of the new date. It is imperative to attend the parent meeting to assist learners and parents to finalize subjects for 2022 in grade 10.

We look forward to your co-operation

KWA ZULU DEPT. OF EDUCATION
SEATIDES COMBINED SCHOOL
P.O. BOX 124 DESAI NAGAR 4405
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PRINCIPAL

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Dear Parent / Guardian

SUBJECT SET OFFERED AT SEATIDES 2022

	SUBJECTS	CODE
1	Physical Science; Life Science; Accounting	**SC1**
2	Physical Science; Life Science; Geography	**SC2**
3	Physical Science; Life Science; Information Technology	**SC3**
4	Physical Science; Geography; Information Technology	**SC4**
5	Physical Science; Life Science; EGD	**SC5**
6	Physical Science ; Information Technology ; EGD	**SC6**
7	Physical Science; Geography; EGD	**SC7**
8	Accounting; Information Technology ; Business Studies	**SC8**
9	Life Science; Business Studies ; Geography	**SC9**
10	Accounting; Life Science; Geography	**SC10**
11	Life Science; Information Technology; Geography	**SC11**

- Note that the **EGD combination** will be restricted to the following 3 stated above (SC5, SC6, and SC7).
-

TAKE NOTE OF THE FOLLOWING :

1. It is compulsory for learners choosing Information Technology and Physical Science to do **Mathematics**.
2. Pupils choosing to do Physical Science or Information Technology must obtain **60% and above in Mathematics** at grade 9.
3. New subjects maybe introduced unless a minimum of **25 learners** opt to do the course, as well as a **qualified educator** is available.
4. A minimum of **25 learners** only can be accommodated in the I.T. Lab. Preference will be given to learners with **a good Maths Mark.**
5. Final decision will depend upon the number of pupils offering to take a specific subject and the feasibility of the combinations

LEARNERS CONSIDERING EGD TO TAKE NOTE OF THE FOLLOWING :

- The school will be offering EGD only to those learners doing **Mathematics.**
- Pupils choosing to do EGD must obtain **60% and above in Mathematics** in grade 9 Final Exam.
- A minimum of **25 learners** only can be accommodated to do EGD. Preference will be given to learners with **a good Maths Mark.**
- Learners will be **responsible to purchase their own equipment** required for the subject.

*PLEASE COMPLETE ANNEXURE A WITH YOUR SUBJECT SET CHOICE (1st Choice, 2nd Choice or 3rd choice) AND RETURN IT TO SCHOOL ON OR BEFORE **8 OCTOBER 2021**

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Dear Parents/Guardians

SUBJECT CHOICE FOR GRADE 10 :

Here are some general information relating to subject choices, pass requirements for the National Senior Certificate, entrance requirements for tertiary institutions and subject choice guidelines:

- **There are 4 compulsory subjects:**
  - English Home Language
  - Afrikaans 1st Additional Language
  - Mathematics ***OR*** Mathematical Literacy
  - Life Orientation

- **Learners will then choose 3 further subjects from the following list.**
  - Physical Science
  - Life Sciences
  - Accounting
  - Geography
  - Information Technology
  - Business Studies

It may not be possible to cater for every learner's subject combination choice.

  - The most important choice to make is between Mathematics and Mathematical Literacy. Please remember that Mathematical Literacy is a complete subject in its own right and places particular demands upon learners. If a learner is unsure of what career they intend following, then they should continue with Mathematics, provided they have the ability to do so, in order not to limit potential career options later.
  - However, should a learner achieve less than 50% for Mathematics in Grade 9, they should seriously consider taking Mathematical Literacy in Grade 10. It is important to remember that Mathematical Literacy will allow learners entrance into certain courses at universities.
  - If a learner wishes to do Physical Science and Information Technology, they will have to do Maths. Therefore a good maths pass will give learners a greater choice.

- **Minimum requirements for a National Senior Certificate pass:**
  (this does not ensure that a learner will gain entry into an institution of higher learning)
  - 40% in English Home Language
  - 40% in 2 other subjects
  - 30% in 3 other subjects
  - A learner may 'fail' 1 subject as long as there is a portfolio of assessment for that subject.

- **Minimum requirements for entry into Degree courses at institutions of higher learning:**
  - 40% or more in the language of teaching and learning at the institute - generally English
  - 50% or more in 4 subjects from the designated subject list
  - The designated subject list is a list of subjects that the institutions of higher learning have deemed suitable for university.
  - Life Orientation is not included on this designated list. However, universities require learners to have passed Life Orientation with at least 50% (60% for some courses) to gain entrance.

    However faculty requirements will take priority for admission

- **Please consider the following to ensure that the best subjects choices is made:**

  - Every subject has relevance for today.

  - Each subject is important in its own right and has its own challenge and role to play in the development of knowledge and skills. We want our learners to leave school with the necessary academic qualifications for tertiary study and/or careers.

  - We want our learners to be able to cope with each subject they choose so that this will allow them to feel confident and in control. This will allow them to experience the joy of achievement and develop positive self-esteem and a positive self image.

  - We also want them to have grown in character and personality. They must be given every opportunity to develop into independent young men and women who can take up their role in society with confidence.

  - Great care must be exercised when choosing subjects as learners will only be allowed to change their subject if the school can implement the change in its timetable and staff structure. It must also be noted that this would not be easy for the learner as he/she would need to catch up on all the work for that subject he/she wishes to change to. Some subjects are almost impossible to start late, as the learner would need to cover all the past work before any present work can be done, e.g. Physical Science and Information Technology. The requirements of the new curriculum make it very difficult to make these changes at a later stage in a learner's school career.

- The **following factors need to be taken into consideration when making a choice of subjects:**

ABILITY

- You and the learner should look at the learner's Grade 8 examination results as well as the learner's Grade 9 second and third term results. These will give an indication of the learner's ability in each subject.
- Some subjects have a minimum entrance requirement as guidelines.
- Educators are available to give guidance regarding the suitability of subjects for particular learners.

INTERESTS

- If at all possible, the subjects chosen should either fall within the learner's range of interest or should be necessary auxiliaries to those subjects which are important to him/her.
- If unsure, a general subject choice combination would be most advisable.
- Refer to website for aptitude test **www.gostudy.co.za**

INFLUENCE ON CAREERS

- Please note that compulsory subject requirements differ from one tertiary institution to another.
- The only subjects where choices made now will seriously affect future studies and careers are Mathematics and Physical Science.
- However, if Mathematics and Physical Science marks are poor, careers that demand these will not be an option in the future. Lack of achievement would preclude the learner from being accepted for a course of study which requires Mathematics as a prerequisite.
- It is important to be **REALISTIC** with regard to future careers.
- Ultimately, ability will influence career choice as well. It is, for example, not advisable to select Mathematics when the learner concerned lacks numerical ability and cannot cope with the subject.

WHO WILL HAVE TO COPE?

- The learner is the one who will have to fulfil the requirements and demands of the subject and not the parents/guardians. **The learner must therefore be the centre of the decision-making process.**
- Parents/guardians should not force learners to do subjects which they consider important or "better" than others. The best choice will always be the subjects with which the learner feels he/she can cope, and those that interest him/her the most.

Yours faithfully

MR.K.GOVENDER

Principal

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ANNEXURE: A

SUBJECT SET SELECTION: 2022

Choice of Subject Set: Grade 10

I have read the information on Subject Set Selection and studied your schedule of subjects carefully, and hereby grant my child/ward
(Name) _____ in
Grade/Div _____ to offer **ONE** of the following subject sets, in order of preference.

My child will be taking: MATHS ☐ or Maths Literacy ☐

1st Choice: _____

2ND Choice: _____

3RD Choice: _____

I am also aware that:

1. A Subject Set will only be offered if an **Economic Unit (25 Learners)** can be established and adequate facilities are available.

2. Academic Performance in rank order will be applied **for learners choosing Mathematics,Information Technology and Physical Science.**

3. My Child /Ward will be allowed to change a **maximum of TWO subjects in Grade 10 and 11 before 31 March 2022**

4. My Child/Ward will **NOT BE ALLOWED** to make any subject changes in **Grade 12.**

SIGNATURE OF PARENT/GUARDIAN _____ **DATE:** _____

CONTACT NO. _____

ADDRESS

_____

_____

_____

This is what you need to do to select your subjects for Grade 10.

- Study your current Grade 9 results in each of your subjects.
- List the three compulsory subjects that you have to do in Grade 10 (i.e. Home Language, First Additional Language and Life Orientation).
- Think about the other subjects that you like and list them in order of preference.
- Ask yourself a few key questions for each of these subjects: Am I doing well in this subject? What career would I like to pursue after school? How will this subject help me in my further studies and career?
- Lastly, assess your performance in Mathematics and with the advice of your mathematics teacher or your parents decide whether it is best to take Mathematics or Mathematical Literacy.
- Make your subject selection. Reflect on it again after a few days.
- Now draw up your final list of subjects that you will do. Use the table on the next page to assist you with your decision.

Pass requirements for Grade 9

You need to meet the following requirements to pass Grade 9:

The table (figure 1) shows the minimum requirements to pass Grade 9.

Subject	Minimum requirement	
	Level	%
Home Language	4	50
First Additional Language	3	40
Mathematics	3	40
Any other three subjects	3	40
Any other two subjects	2	30

Table (figure 2) gives the possible levels of achievement.

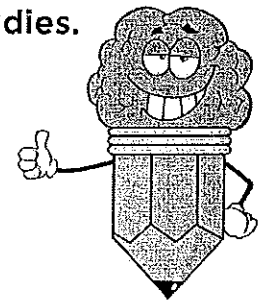
Achievement level	Achievement descriptor	%
7	Outstanding achievement	80 - 100
6	Meritorious achievement	70 - 79
5	Substantial achievement	60 - 69
4	Adequate achievement	50 - 59
3	Moderate achievement	40 - 49
2	Elementary achievement	30 - 39
1	Not achieved	0 - 29

Set goals for passing Grade 9:

Choose your Grade 10 subjects based on the strength of your marks. You may also want to consider attending an FET college after Grade 9.

1. Set goals higher than the minimum requirements. For example, in Home Language the minimum is 50% to pass, but you could set it at 60% or higher to ensure you have a safety margin.
2. If you are struggling with Mathematics and want to take it in Grade 10, consider a goal of at least 50%, otherwise Mathematical Literacy may become compulsory for you. To be successful in Mathematics you have to work hard.
3. Complete all the required Formal Assessment Tasks or School Based Assessment in all of your subjects. Remember at the end of the year, the examination will count 60% of the total mark for each subject. The other 40% will come from the marks you obtained through your school-based assessment during the year.

Good luck, Grade 9 learners!
Enjoy your studies.



You are now heading towards the FET Phase (Grades 10-12).

The subjects you study in Grade 9 are linked to study fields and FET subjects.

This is where you are now (Grade 9) ↓	This is where you are heading ↓		
	Study Fields for Grades 10-12	**Subject Choices in Grade 10 (underline your seven subjects)**	**Possible Careers**
Languages **(Home Language and First Additional Language)**	Languages: Home Language & First Additional Language	Afrikaans Home Language/ Afrikaans First Additional Language English Home Language/ English First Additional Language Xhosa Home Language/ Xhosa First Additional Language	Attorney; Journalist; Teacher; Writer; Interpreter; Translator; Editor; Lecturer; etc.
Mathematics	Physical Sciences, Mathematical Sciences, Computer Sciences and Life Sciences	Life Sciences, Physical Sciences, Mathematics, Mathematical Literacy, Computer Application Technology and Information Technology, Agricultural Sciences, Geography	Teacher; Engineer; Medical doctor; Environmentalist; etc.
Natural Sciences			
Social Sciences	Human and Social Sciences	Geography, History, Religion Studies	Teacher; Topologist; Geologist; Historian etc.
Life Orientation		Life Orientation	Psychologist; Politician; Councillor; Attorney; etc.
Economics and Management Sciences	Business, Commerce & Management Sciences	Accounting, Business Economics, Economics	Accountant; Cashier at a bank; Financial analyst; Debt counsellor; etc.
	Services	Consumer Studies, Hospitality Studies, Tourism	Hotel manager; Tourist guide; etc.
Creative Arts	Arts and Culture	Dance Studies, Design, Dramatic Arts, Music and Visual Arts	Actor; Artist; Film producer; etc.
Technology	Engineering and Technology	Civil Technology, Electrical Technology, Engineering and Graphic Design and Mechanical Technology	Engineer; Artisan; Technologist; etc.
	Agricultural Sciences	Agricultural Sciences, Agricultural Management Practice and Agricultural Technology; Physical Sciences; Life Sciences	Farmer; Farm manager; Food inspector; Engineer; etc.

INTRODUCTION TO THE
FURTHER EDUCATION AND TRAINING (FET) PHASE CURRICULUM

The FET phase comprises Grades 10, 11 and 12 and requires learners to take seven subjects, as follows:

FOUR CORE SUBJECTS (compulsory):
- Two languages, one of which must be a Home Language
- Mathematical Literacy **OR** Mathematics
- Life Orientation

THREE ELECTIVES, chosen from the other subjects offered by the school

Learners emerging from the FET band must:

- have access to, and succeed in, lifelong education and training of good quality;
- demonstrate an ability to think logically and analytically, as well as holistically and laterally;
- be able to transfer skills from familiar to unfamiliar situations.

It is envisaged that, at the end of this three year phase, a learner will be "... imbued with the values and act in the interests of a society based on respect for democracy, equality, human dignity and social justice as promoted in the Constitution ..."

SUBJECT CHANGES

Learners and parents should understand that, as SBA/CASS happens throughout the year and is a requirement for promotion, it is not advisable (and sometimes not even possible) for learners to change subjects during the academic year. The June examination mark, for example, is an integral part of the final year mark.

According to National Education Department policy, subject changes are allowed in the following instances:

GRADE 10	A learner may change a maximum of **TWO** subjects	**Before 30 June**
GRADE 11	A learner may change a maximum of **TWO** subjects, if the school deems it to be in the best interest of the learner	**Before 31 March**
	In exceptional cases a learner may change **ONE** additional subject at the end of Grade 11 change	**Before 15 December** of the Grade 11 year
GRADE 12	**NO SUBJECT CHANGE IS ALLOWED** in the Grade 12 year	**Not applicable**

Subject changes **must be avoided**, unless it is regarded as absolutely essential, in which case the following procedure will apply:

- The parent/guardian must apply for the subject change in writing to the school.
- The decision whether to effect the necessary subject change will be based on the learner history, the performance of the learner in the old subject and the reason for the change.
- Consultation will take place, where necessary, with the learner, parent/guardian, the subject teacher and the curriculum advisor in order to decide whether or not it is in the best interest of the learner to change a subject.
- If there is agreement regarding the subject change, the parent will be required to sign a memorandum of agreement with the school and subject teacher.
- Requests for the approval of subject changes must be submitted by the school to the WCED.
- In order to facilitate the administration of these applications, the requests for subject changes must be sent to the school at least one week before the dates indicated in the table above. The CED requires us to adhere to these dates.

PLEASE NOTE: Due to these constraints, learners need to think very carefully when choosing subjects such as Mathematics and Physical Sciences.

If there is any possibility that you may have to change to Mathematical Literacy, you should not choose to do Physical Sciences.

(Bear in mind that Physical Sciences becomes very Mathematical in Grades 11 and 12)

ADDITIONAL SUBJECTS

Since the National Senior Certificate is a three-year qualification, each subject must be offered in Grades 10, 11 and 12. **Learners MAY NOT apply at the beginning of the Grade 12 year to register for an extra subject**, according to the prescripts of the Western Cape Education Department.

ENTRANCE REQUIREMENTS FOR TERTIARY STUDIES

Please note that these are the **minimum requirements**, and that each institution has additional requirements for particular courses. Achievement of these minimum requirements does not guarantee a learner's admission to any programme of study in higher education. The number of places at any institution is limited, and many thousands of applications are received annually. Learners should, therefore, always aim for the best results possible in their FET examinations.

1. MINIMUM REQUIREMENTS FOR ADMISSION TO THE HIGHER CERTIFICATE:
   A National Senior Certificate, with a minimum of 30% in the Language of Learning and Teaching (i.e. English)

2. MINIMUM REQUIREMENTS FOR ADMISSION TO A DIPLOMA:
   A National Senior Certificate), with a minimum of 30% in the Language of Learning and Teaching (i.e. English), and with **an achievement rating of 3 (40-49%)** or better in **four subjects** (excluding Life Orientation)

3. MINIMUM REQUIREMENTS FOR ADMISSION TO A BACHELOR DEGREE:
   A National Senior Certificate, with a minimum of 30% in the Language of Learning and Teaching (i.e. English), and with **an achievement rating of 4 (50-59%)** or better in **four subjects**

NOTE:

In most degree programmes there is fierce competition for places, and acceptance is based on quotas and a points system.

Mathematical Literacy is recognised for acceptance to degree courses, except for programmes where Mathematics is a requirement.

Mathematics

LEARNING OUTCOMES

- Number and Number Relationships
- Functions and Algebra
- Space, Shape and Measurement
- Data Handling and Probability

KEY SKILLS THAT WILL BE DEVELOPED

- Problem solving skills – the learner is able to recognise, describe, represent and work with numbers and their relationships to estimate, calculate and check solutions.
- The learner is able to investigate, analyse, describe and represent a wide range of functions and solve related problems.
- The learner is able to describe, represent analyse and explain properties of shapes in 2- and 3-dimensional space with justification.
- The learner is able to collect, organise, analyse and interpret data and establish statistical and probability models to related problems.

TOPICS COVERED OR CONTENT OUTLINE

- General Algebra – numbers and exponents. Sections introduced: number patterns, simple and compound growth and converting between fractions and decimals.
- General Algebra – manipulation of algebraic expressions, solving linear equations/inequalities and general graphs. Sections introduced: exponential equations, trigonometric and exponential functions and mathematical modelling.
- Geometry and Trigonometry – volume and surface areas of right prisms, polygons, similarity of triangles and solving triangles. Sections introduced: analytical geometry, transformations and history of geometry and trigonometry.
- Statistics and Probability.

METHOD OF ASSESSMENT IN GRADE 12

- Written Examination - 75%
- Continuous Assessment - 25%

MINIMUM ENTRANCE REQUIREMENT GUIDELINES

Based on Grade 9 achievement in Mathematics

TERTIARY EDUCATION

Mathematics is the basis of many careers in the South African system. Most university studies in Science, Engineering, Medicine, Architecture and Commerce require Mathematics, as do some diplomas at colleges or universities of technology.

Mathematical Literacy

LEARNING OUTCOMES

- Number and Operations in Context
- Functional Relationships
- Space, Shape and measurement
- Data Handling

KEY SKILLS THAT WILL BE DEVELOPED

- The learner is able to use knowledge of numbers and their relationships to investigate a range of different contexts which include financial aspects of personal, business and national issues.
- The learner is able to recognise, interpret, describe and represent various functional relationships to solve problems in real life and simulated contexts.
- The learner is able to measure using appropriate instruments, to estimate and calculate physical quantities, and to interpret, describe and represent properties of and relationships between 2- and 3-dimensional objects in a variety of orientations and positions.
- The learner is able to collect, summarise, display and analyse data and to apply knowledge of statistics and probability to communicate, justify, predict and critically interrogate findings and draw conclusions.

TOPICS COVERED OR CONTENT OUTLINE

- General Algebra – fractions, decimals exponents, rate, ratio, direct/inverse proportion, simple and compound growth and scientific notation.
- General Algebra – Cartesian co-ordinate system, tables/formulae/graphs depicting relationships between variables, rates of change.
- Geometry and Trigonometry – measurement (length, distance, volume, area, perimeter, time), polygons, circles, angles, Pythagoras, conversions of units in the metric system, scale drawings, basic transformation geometry.
- Statistics and Probability.

METHOD OF ASSESSMENT IN GRADE 12

- Written Examination - 75%
- Continuous Assessment - 25%

TERTIARY EDUCATION

At present some Universities will not recognise Mathematical Literacy as a Mathematical Qualification for certain degrees.

What is the difference between mathematics and mathematical literacy?

Your choice between mathematics (maths) and mathematical literacy (maths lit) is an important decision, think carefully about it. Deciding between taking maths or maths lit should depend on your future goals. Whether your goals involve higher education or getting a job, both pathways need numerical (mathematical) understanding.

What is the difference between mathematics and mathematical literacy?

Mathematics and mathematical literacy both teach you important numeracy skills. People often think that maths lit is a lower level or easier version of maths, but this is not true. The reality is that maths and maths lit are two very different numeracy subjects. They both work with numbers but apply it differently. In maths lit, you will learn practical maths that apply to everyday situations, such as budgeting, interest and rates. In maths, you will learn technical and theoretical maths such as algebra, trigonometry and basic calculus. Both subjects will develop your critical thinking and problem-solving skills.

Mathematics:

- You will learn concepts such as algebra, trigonometry and basic calculus.
- You will develop practical problem solving and reasoning skills.
- It is needed to enter most universities, and you will have more course and programme options.
- You can change to maths lit if you are struggling with maths.
- Maths is harder than maths lit because it deals with theoretical concepts and equations, not used in everyday life.

Mathematical Literacy:

- It is a highly practical and realistic subject.
- It teaches you practical maths skills to apply to everyday situations and helps you solve real life problems. For example, understanding a bank statement,

What are employers looking for?

Employers look for people who have strong basic numeracy skills because it shows that you have practical problem-solving skills. In maths and maths lit you will develop good numeracy skills that you can use in the workplace.

JobStarter's learning can help you develop these numeracy skills, click to Get Ready (http://jobstarter.co.za/user/signup).

Did you know?

- It is better to get 40% in maths than it is to get 100% in maths lit!
- It is harder to get into university if you have taken maths lit. You need an A or level 7 code to enter most universities with maths lit.
- Maths is one of the most important subjects you need to study further and get into university
- You need maths if you are interested in doing engineering, science, health, computer science and business courses at a university.
- All colleges and universities have different subject requirements for acceptance. Check what the university or college has to offer before choosing or changing your high school subject.

Deciding between maths and maths lit is a big decision that can impact your whole career! If you are still unsure, the best option is to take maths. You can always switch over to maths lit later.

CORE MATHEMATICS VERSUS MATHEMATICAL LITERACY

WHY CORE MATHS?

Core Mathematics is an intellectual discipline, an art form and a challenging game. Core Mathematics is an abstract course, and develops thinking and problem solving skills which are in high demand in the workplace.

Careers in Mathematics include, all types of Engineering, Mathematical Sciences, IT, Medicine, Maths Education, Statistics, Finance and Actuarial Fields, Biomathematics and Biostatics, Computer Science, Operations research.

If a learner is coping well with the course, we recommend that it is taken so as not to limit career choices later on.

HOWEVER, YOU CAN STILL GO ON TO TERTIARY STUDY WITH MATHEMATICAL LITERACY!!!!!

WHAT IS MATHEMATICAL LITERACY?

Mathematical Literacy is a course, driven by life-related applications of Mathematics. It develops the ability and confidence of the learners to think numerically and spatially, which leads to critical analysis and interpretation of everyday situations. Mathematical Literacy is a more concrete subject than core Mathematics and suited to many careers.

WHAT IS THE PURPOSE OF MATHEMATICAL LITERACY?

The purpose of Mathematical Literacy is to provide the learner with the ability and skills to understand mathematical terminology, and make sense of numerical and spatial information encountered in every day life, (e.g. tables, statistical trends, quotations, areas, volumes, percentages, graphs, diagrams, text, finance, bond rates, interest rates, budgets, ratio and proportion)

Mathematical Literacy focuses on developing a self-managing individual and a contributing and participating employee when exposed to mathematical issues. Mathematical literacy contributes to entrepreneurial success.

A BRIEF COMPARISON BETWEEN MATHS AND MATHS LITERACY (NEW FET CURRICULUM

MATHEMATICS	MATHEMATICAL LITERACY
Mathematics focuses on the discipline of Mathematics, incorporating abstract and hypothetical thinking.	Mathematical literacy focuses on the role of mathematics in the real world using relevant examples in day to day life.
Applications are most important, not necessarily in real life contexts. Content is also emphasized.	The contexts chosen are employment based being current and relevant.
Content is expanded on as the learners progress annually.	The contexts become more advanced as the learners progress annually.
Mathematics is designed for those wish to pursue careers in the natural sciences or engineering.	Maths Literacy is designed for learners wanting to pursue tertiary qualifications in the social and life sciences, e.g. law, marketing, advertising etc, or entrepreneurs who wish to start their own businesses

Physical Sciences

LEARNING OUTCOMES

- Use process skills, critical thinking, scientific reasoning and strategies to investigate and solve problems
- Explain, interpret and evaluate scientific and technological knowledge and apply it in everyday contexts.
- Critically evaluate scientific knowledge and its impact on the quality of socio-economic, environmental and human development

KEY SKILLS THAT WILL BE DEVELOPED

- conducting investigations
- interpreting data
- solving problems
- communicating and presenting information and scientific arguments
- recalling, stating and discussing prescribed concepts
- applying and evaluating scientific knowledge

TOPICS COVERED OR CONTENT OUTLINE

PHYSICS

- Mechanics (Force, energy and motion)
- Waves (Sound and light)
- Electricity and magnetism

CHEMISTRY

- Systems
- Chemical Change

INTEGRATED

- Matter and materials

METHOD OF ASSESSMENT IN GRADE 12

- Written Examination - 75%
- Continuous Assessment - 25%

MINIMUM ENTRANCE REQUIREMENT GUIDELINES

Based on Grade 9 achievement in:

- Mathematics (a minimum of 65%)
- Natural Science (a minimum of 60%)

TERTIARY EDUCATION

Physical Science is the basis of many areas of scientific study, including Electronics, Engineering, Medicine, etc. Many of the technology diplomas at require or recommend it, as do many degrees in the faculties of Science, Engineering, Medicine, Veterinary Science, etc.

Life Sciences

LEARNING OUTCOMES

- Scientific Inquiry and Problem-solving skills
- Construction and Application of Life Sciences Knowledge
- Life sciences, Technology, Environment and Society

KEY SKILLS THAT WILL BE DEVELOPED

- Identify and question phenomena
- Plan an investigation
- Data collection and manipulation
- Analyse, synthesize and evaluate data
- Communicate findings
- Interpret and make meaning of knowledge
- Application to everyday life
- Explore and evaluate scientific ideas – past, present and future
- Motor skills relating to laboratory work translation

TOPICS COVERED OR CONTENT OUTLINE

TISSUES, CELLS AND MOLECULAR STUDIES

- Colloids, emulsions, solutions etc...
- The microscope and its history
- The cell and all organelles in detail
- Osmosis and turgidity
- Microscopic investigation of cells
- Membrane practical
- Differences between plant and animal cells
- Cell differentiation and cell growth
- Uncontrolled cell growth – cancer
- Chromosome structure (briefly)
- Cell division – mitosis
- Tissues – plant tissues and mammalian tissues
- Cell biotechnology – tissue cultures and stem cells

ENVIRONMENTAL STUDIES

- Biodiversity – meaning
- Levels of biodiversity - genetic diversity, species diversity and ecosystem diversity
- Biodiversity under threat – monoculture, deforestation, pollution, alien plants
- Medicines and biodiversity
- Fynbos and Rocky Shores

STRUCTURE, CONTROL AND PROCESSES

- Biochemistry of life
- Human Nutrition and balanced diet
- Vitamins and minerals
- Energy requirements linked to anorexia, bulimia and obesity
- Nutrient deficient diseases – kwashiorkor etc ... and food allergies
- Photosynthesis and respiration
- Photosynthesis and respiration practicals
- Breathing and gaseous exchange
- Smoking and your lungs

DIVERSITY, CHANGE AND CONTINUITY

- Classification
- Fossil studies
- History of life on earth

METHOD OF ASSESSMENT IN GRADE 12

- Written and Practical Examinations - 75%
- Continuous Assessment - 25%

Accounting

LEARNING OUTCOMES

- Financial information
- Managerial accounting
- Managing resources

KEY SKILLS THAT WILL BE DEVELOPED

- Communication
- Problem solving
- Organisation and management skills
- Analytical evaluation of information
- Create "financial awareness" – LIFE SKILL

TOPICS COVERED OR CONTENT OUTLINE

- Ethics
- Budgeting
- VAT
- Salaries and Wages
- The Accounting Cycle – Source Documents
- Journals
- Ledgers
- Trial Balance
- Final Accounts
- Financial Statements

METHOD OF ASSESSMENT IN GRADE 12

- Written Examination - 75%
- Continuous Assessment - 25%

TERTIARY EDUCATION

Its main function is to prepare those who will go into the general field of business directly after school, or after qualifying at a university or colleges and universities of technology. It is recommended for those who intend to study for a B.Com at university or any of the business-related diplomas at colleges and universities of technology.

Geography

LEARNING OUTCOMES

- Identify and solve problems
- Collection, analysis and organisation of information
- Critical and creative thinking skills
- Effective communication using a variety of media
- Organisation and management of self

KEY SKILLS THAT WILL BE DEVELOPED

- Observation
- Application of skills
- Analysis
- Research
- Data handling
- Map Reading
- GIS (Grade 10)
- Spatial analysis

TOPICS COVERED OR CONTENT OUTLINE

Grade 10

- Climate
- Geomorphology
- Population
- GIS
- Development
- Mapwork

Grade 11

- Mapwork
- Water Masses
- Ecology
- Development and Sustainability
- People and their Needs

Grade 12

- Mapwork
- Climate
- Geomorphology
- Climatology
- Regional

METHOD OF ASSESSMENT IN GRADE 12

- Written Examination (Theory Paper, Mapwork Paper) - 75%
- Continuous Assessment - 25%.

TERTIARY EDUCATION

Geography is recommended for career fields such as Cartography, Climatology, Education (primary, secondary and tertiary teaching), Environmental Management, Journalism, Marketing, Regional and Urban Planning, Remote Sensing, Research, Tourism and Travel, Hydrology, Geology, Economics, Public Relations and Health Sciences.

Information Technology

TOPICS COVERED OR CONTENT OUTLINE

- **Solution Development** (60% of the course)
  Algorithms, Web Development (XHTML), Introduction to Solution Development, Application Development, Software Engineering Principles
- **Communication Technologies**
  Networks, E-communication
- **Systems Technologies**
  Hardware, Software, Computer Management
- **Internet Technologies**
  Internet, WWW, Internet Services
- **Data and Information Management**
  Data Representation, Database Design and Management
- **Social Implications**
  Legal, Ethical, Social, Environmental and Health Issues

SPECIFIC AIMS

A learner will:

- use appropriate techniques and procedures to plan solutions and devise algorithms to solve problems using suitable techniques and tools
- understand and use appropriate communication technologies for information dissemination
- appreciate and comprehend the various systems technologies used in the developing of a computer-based system
- understand that all ICT systems are built upon software engineering principles
- understand and use Internet technologies for various tasks
- comprehend and apply the concepts of data and information management to understand how a knowledge-driven society functions
- understand the social implications of ICT and how to use ICT technologies responsibly

METHOD OF ASSESSMENT IN GRADE 12

- Written (Theory) Examination – 25%
- Practical (Programming) Examination – 25%
- Practical Assessment Task – 25%
- Continuous Assessment – 25%

MINIMUM ENTRANCE REQUIREMENT GUIDELINES

Based on:

- Grade 9 achievement in Mathematics (a minimum of 65%)
- Levels of personal organisation and analytical skills

RESOURCES REQUIRED

- Access to a computer running Windows XP (or later version)
- Access to a computer with MS Office XP (or later version)
- Access to the Internet
- A USB memory stick
- At least an hour (or more) per day spent on this subject.

THINGS YOU NEED TO KNOW BEFORE ATTEMPTING THIS SUBJECT

- This is a highly specialised subject that will require complete dedication and hard work.
- There are no short cuts. You cannot get away with doing the minimum academically.
- You should have the character traits of a programmer: attention to detail, tenacity, the ability to work under pressure and good time management.
- You will probably have to spend a great deal of time over weekends programming.

Business Studies

TOPICS COVERED OR CONTENT OUTLINE

- **Business environment**
  - Micro, market and macro environments
  - Business sectors
  - Contemporary socioeconomic issues

- **Business venture**
  - Entrepreneurship
  - Business opportunity and related factors
  - Business Plan
  - Management and Leadership
  - Forms of ownership
  - Setting up a business
  - Contracts
  - Business location
  - Investment: securities and insurance
  - Presentation of business information

- **Business role**
  - Creative thinking and problem-solving
  - Self-management, professionalism and ethics
  - Human rights, inclusivity and environmental issues.
  - Social Responsibility
  - Stress, crisis, change and conflict management
  - Relationship and team performance

- **Business operation**
  - Business functions
  - Quality of performance

SPECIFIC AIMS

A learner will:

- acquire and apply essential business knowledge, skills and principles to productively and profitably conduct business in changing business environments
- create business opportunities, creatively solve problems and take risks, respecting the rights of others and environmental sustainability
- apply basic leadership and management skills and principles while working with others to accomplish business goals
- become motivated, self-directed, reflective lifelong learners who responsibly manage themselves and their activities while working towards business goals
- be committed to developing themselves and others through business opportunities and ventures
- be able to secure formal employment, and are in a position to pursue sustainable entrepreneurial and self employment career pathways

METHOD OF ASSESSMENT IN GRADE 12

- Written Examination – 75%
- Continuous Assessment – 25%