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IN CRUCE SALUS

HOLY CROSS HIGH SCHOOL

SUBJECT POLICY: MATHEMATICS

This policy is informed by:

- NATIONAL POLICY PERTAINING TO THE PROGRAMME AND PROMOTION REQUIREMENTS OF THE NATIONAL CURRICULUM STATEMENT GRADES R – 12 (NPPPPR)
- CURRICULUM AND ASSESSMENT POLICY (CAPS)
- PREVIOUS SUBJECT POLICIES
- LOCAL ADAPTATIONS OF CURRICULUM BY THE WCED AS IMPARTED AT MEETINGS
- AMENDED IN LINE WITH:
 - THE NATIONAL HEALTH ACT 61 OF 2003
 - THE DISASTER MANAGEMENT ACT 61 OF 2002
 - THE STATE OF EMERGENCY 64 OF 1997.
 - THE RECOMMENDATIONS OF WHO AND THE NCCC.

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1. GENERAL POLICY

1.1 PREAMBLE

Mathematics is a creative and highly inter-connected discipline that has been developed over centuries, providing the solution to some of history's most intriguing problems. It is essential to everyday life, critical to science, technology and engineering, and necessary for financial literacy and most forms of employment. A high-quality mathematics education therefore provides a foundation for understanding the world, the ability to reason mathematically, an appreciation of the beauty and power of mathematics, and a sense of enjoyment and curiosity about the subject.

1.2 AIMS AND OBJECTIVES

The National Curriculum for Mathematics aims to ensure that all pupils are able;

- To become fluent in the fundamentals of mathematics, including through varied and frequent practice with increasingly complex problems over time, so that pupils develop conceptual understanding and the ability to recall and apply knowledge rapidly and accurately.
- To reason mathematically by following a line of enquiry, conjecturing relationships and generalisations, and developing an argument, justification or proof using mathematical language.
- To solve problems by applying their mathematics to a variety of routine and non-routine problems with increasing sophistication, including breaking down problems into a series of simpler steps and persevering in seeking solutions. Our aims in teaching mathematics are:
- To equip pupils with the mathematics they need to become numerate.
- To develop pupils ability to apply mathematical skills with confidence and understanding when solving problems.
- To enable pupils to express themselves and their ideas with assurance, using the language of mathematics
- To develop positive attitudes to mathematics, recognising that mathematics can be both useful and enjoyable.
- To nurture a fascination and excitement of mathematics and problem solving
- To be able to use and apply the skills in other curricular areas and everyday life

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1.3 GRADE 8 AND 9

1.3.1 GENERAL

- A diagnostic test will be performed on learners entering the Holy Cross Girls High.
- Classes of mixed ability Learners will be established as far as possible.
- Extension work will be made available to high ability learners.
- High ability learners will be managed in such a way that they add value to the class.
- A minimum of 9 lessons per 10-day cycle are scheduled in grade 8 and in grade 9

TYPES OF ASSESSMENTS

1.3.1.1 PORTFOLIO ASSESSMENTS [SCHOOL BASED ASSESSMENT(SBA)]

These combined assessments constitute 25% of the learner's term and year mark. The breakdown of the SBA is given according to the CAPS document. **Incomplete or unsatisfactory work may result in a 0% mark.** Learners who consistently neglect their work may be referred to the Grade Head, who will take whatever measures deemed necessary.

1.3.1.2 END OF YEAR EXAMINATIONS

The curriculum content is strictly adhered to according to the most recent CAPS document. Summative formal assessments are written during Standardised Tests, Cycle Tests and Examinations. Educators must ensure that they understand the SBA/EXAMINATION breakdown and the purpose for the SBA results to lie within 10% of the examination result. Regular explanation must be given by the HOD should the process not be understood.

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The head of department has the duty to orient departmental teachers on the SBA process and the underpinning information thereof, to ensure the smoother and proper enactment of the curriculum.

1.3.2 **ABSENTEES**

In order to promote positive attitude towards mathematics and to instil discipline in the subject, absenteeism should be discouraged and restrained.

If a learner is absent for a standardized/formal test due to absenteeism, they will be awarded **ZERO**. Should the learner submit a doctor's note, this will be amended to absent. Should the learner be away on a sporting commitment or a school function, it is up to the Educator to decide on a replacement test in place of an 'absent'. The learner away for school commitments may not be penalized for the absenteeism.

If a learner is absent due to transport/bus strike, family arrangements or any unforeseen circumstance, a written letter from the parent/guardian should accompany the learner and the teacher responsible should decide on the replacement test.

The onus is on the learner to catch up any work that has been missed during a period of absenteeism. The learner must then approach one of the teachers if there is anything that they do not understand – the teacher must be shown that the work has been caught up and exercises attempted.

1.3.3 **ARRIVALS DURING THE YEAR**

- Learners who enrol at Holy Cross High School during the year must be given guidance and direction to catch up all work that has been covered during that year to date.
- These learners **MUST** borrow study notes from one of their classmates and make sure that all notes have been copied and worked through. Once a gallant attempt has been made and is evident, learners can approach their teachers for assistance with any aspects that they do not understand.

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1.3.4 FURTHER STUDY OF MATHEMATICS AND MATHEMATICAL LITERACY

In the FET (Grade 10-12), the learner may either undertake PURE Mathematics or Mathematical Literacy. However, their choice is guided and informed by their overall Mathematics performance in Grade 9.

If the mark attained at the end of Grade 9 year is **LESS than 60%** overall the learner will undertake Mathematical Literacy in grade 10. Alternatively, the learner will need to repeat grade 9 in order to meet the minimum required standards set by Holy Cross Girls High school. This decision must also take into account that possible courses require Mathematics.

- It is important to state that the learner's best interests will be considered at all times. Recommendations will be made bearing in mind the learner's potential and work ethic. Our teachers have many years of experience and will make suggestions that facilitate a realistic standard and generate a sound work ethic. The wrong subject choice could have a detrimental effect on the OTHER subjects that the learner is studying.
- A teacher receiving learners from another teacher(grade 8 to grade 9 or grade 9 to 10) should undertake a baseline assessment of the learners during the first week upon receiving them in order to ascertain the challenges, strengths and general needs of the learners. The baseline report should be filed in the teachers file and given to the HOD to effectively plan for the learners.

1.4 GRADE 10,11 AND 12

1.4.1 GENERAL

- Any learners who have obtained less than 40% as a promotional mark for Mathematics in Grade 10 or 11, providing they have met all other promotional criteria, will be awarded a condoned pass on condition that he proceed with Mathematical Literacy the following year.
- Learners entering Holy Cross High School in Gr 10, 11 or 12, must provide their most recent report indicating their level of competence in

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Mathematics, in order to maintain the promotional standards of Holy Cross High School.

- Because of the difference in subjects in Mathematics and Mathematical Literacy, changes ideally should be made at the beginning of the year or as soon as the need is identified.
- Should Learners enter the Mathematical Literacy programme during the academic year, the onus will be on them to catch up the work missed under the guidance of their Educator.
- The Grade 10-12 Curriculum is strictly adhered to in accordance with the most recent CAPS curriculum.

1.4.2 ALTERNATE SCHOOL BASED ASSESSMENTS

These constitute 25% of the learner's year mark.

- Grade 10 - 12 will keep a portfolio folder where all of their SBA assessments are kept.
- Learners will not be allowed to remove their SBA folder from the class, but may work from them on request.

1.4.3 CORRECTION OF WORK AND TESTS

- The test must be redone once the learner has received the marked test and memoranda.
- It is the Educator's discretion on how he/she wishes to go through a test. Memoranda should be available for learners to access. In the lower grades, however, it is advisable for the Educator to work through the test step by step.

1.5 SUBJECT AND CLASSROOM DISCIPLINE

The role of the mathematics Subject H.O.D/Leader

The subject leader for mathematics:

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- is an effective teacher of mathematics and has secure subject knowledge of the subject;
- is aware of current issues and developments in education;
- manages the mathematics budget and organises resources;
- monitors teaching and learning
- sets and monitors whole school targets;
- leads staff development in mathematics;
- co-ordinates inclusive practices and ensures that the needs of all children are met;
- advises on assessment issues in mathematics;
- involves parents in their children’s learning

CLASSROOM DISCIPLINE

- Discipline must be maintained at all times in order to ensure an environment conducive to learning.
- Classroom management is the responsibility of individual teachers. At all times the dignity of learners must not be compromised – there must be no belittling of learners.
- At the same time, each learner must show respect to other learners as well as any teachers or visitors that may be present.
- Under no circumstances can insulting or disrespectful behaviour from the learners be accepted.
- When an individual teacher’s methods of discipline are not working with particular learners, the Grade Head and HOD must be notified. In extreme cases, a meeting with the parents can be notified.
- Issues relating to School policy (e.g. dress violations, arriving late repeatedly for lessons) can be resolved by making use of Detention times.
- Academic issues (e.g. homework not being done) are the responsibility of each individual teacher, with the full support of the Disciplinary committee. Detention can be instituted when deemed effective to a specific learner.

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2. EXTRA LESSONS AND ACADEMIC SUPPORT

2.1. GENERAL

- Academic support must be available to all learners who need it and who are doing their best.
- A detailed time table of the Extra Lessons must be placed on the website at all times and any changes must be updated immediately.
- Learners must take responsibility for their learning. An effort must have been made by the learner to attempt work.
- Once an individual teacher is satisfied that the learner has made a significant effort, the teacher must arrange a suitable time to meet with the learner. This can be at break, during lunch or after school as suits the teacher in consultation with the learner.

2.2 MATHS EXTRA LESSONS

- Mathematics extra lessons may be arranged by the subject teacher when necessary
- Attendance is voluntary unless a learner is underperforming (less than 50%) in which case the teacher concerned will recommend compulsory attendance for a specified time.
- The objective of the Extra lesson is to provide an environment in which learners who are struggling with their work can obtain support and revision on work that is currently being taught in class. Learners who have been absent must be encouraged to attend these lessons so that they may catch up the missed work.
- The extra lessons will be carefully designed to revisit the previous week's work. Educators across the grade must ensure that the pace and topics of the various classes are kept constant to ensure maximum support is given.

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- A detailed attendance register will be kept and attendance at optional revision sessions may depend on commitment shown throughout the term. This attendance register must always be available to the Year Heads and the relevant Mathematics Educators
- External tutors, approved by the school management, may be engaged when the need arises to assist the subject teachers.

3. STANDARDISED ASSESSMENT AND EXAMINATIONS

3.1 GENERAL

- An Assessment Schedule/Programme must be developed by the HOD, in consultation with the members of staff at the beginning of each term.
- Wherever possible, this timetable must be strictly adhered to. Any changes must be discussed at Department Meetings before they are implemented
- All tests and examinations must be of the correct standard, of the correct length and must be professionally presented. Cognitive levels must be evident on major Assessments as well as a breakdown or description of Assessment Standards.
- Thorough moderation is a vital part of the assessment process and all tests and examinations prior to the date scheduled, must be rigorously moderated. A detailed worked memorandum must be submitted for moderation with the assessment. For examination purposes, a grid reflecting the cognitive level breakdown and another grid for learning outcomes breakdown must accompany the examination.
- After a standardized test or examination has been written, the HOD will moderate the marking process.

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- An analysis of the various classes will be done, post testing, to determine the validity, reliability and dependability of the particular assessment. Patterns of 'inadequate learning' or 'inadequate teaching' should present themselves during this process. The HOD will carry out the analysis and act on any unforeseen patterns or trends.

3.2 STANDARDISED/CYCLE TESTS

- Standardised tests are set regularly throughout each term and test sections of work recently completed.
- These tests are standardised and all learners in that grade write them on the same day, under strict invigilation, and preferably during the same lesson. Should the time table be unable to accommodate the same lesson, a preferred time in between break times must be found to minimize any security breach of the paper.
- Standardised tests must be set timeously prior to being written. They MUST be accompanied by a completed memo.
- Standardised tests must be moderated by any teacher who teach that particular grade before prior to printing and a copy must be send to the HOD for moderation. Teachers are to constructively moderate, analyse and suggest any areas of improvement of an assessment.
- Standardised tests must be typed and represent the professionalism of the school. All equations must be typed using Equation Editor and all diagrams and graphs must be drawn on the computer.
- Marking must be completed within a week of the test being written and returned to learners. Educators must assist the learners regarding corrections, either by going through the test in class, providing hard copies of memoranda or by placing them on an electronic site (school website) available to all learners.
- Tests are to be kept by the learners in their Maths Portfolios and a copy of the test with memo must be filed by the teacher.

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- Post assessment moderation will occur, particularly if each educator has marked his/her own class. Should group marking have taken place, a random selection of papers will be called for moderation by the HOD.

3.3. EXAMINATIONS

- Examinations are held at the end of Term 2 and 4. (June/July and November) for Grades 8- 11) in accordance with general school policy. Grade 12 (June/July, September & November)
- Examinations must cover all work relevant to grade level (this includes all Grade 11 work for all Grade 12 examinations)
- Examinations are standardised and are compulsory for all learners in that grade to write them.
- Examinations must be set according to a schedule agreed upon by all members of the Mathematics Department. They MUST be accompanied by a completed memo, analysis grid for both cognitive levels and learning outcomes when submitted for internal moderation. The balance of cognitive levels according to the most recent CAPS document are:

4. ALTERNATE ASSESSMENTS

- Alternate assessment other than Standardised Tests and Examinations must be completed each term in accordance with DoE and Umalusi policy.

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- Alternate assessments comprise both Long Assessments(Project) and Short Assessments(Assignments).
- Long Assessments are specifically designed pieces of work that takes a minimum of 5 hours to complete. These must be standardised and completed by an entire grade. They may be done individually or in groups, in class time or in private time depending on the type of work.
- Short Assessments include Spot tests, Correction of work, Metacogs, Mind Maps, Projects or Homework assignments. Teachers are encouraged to be creative and to use as many as possible. While some Short Assessments must be standardised and completed by the entire grade, others may be used as individual teachers decide depending on the demands of particular classes. They may be done individually or in groups, in class time or in private time.
- All Alternate Assessments must be marked timeously using agreed-upon memos or rubrics and returned to learners.
- All Alternate Assessments must be kept in the learners' Portfolios and a copy of each Assessment with accompanying memo or rubric must be kept in each teacher's file.
- Depending on the Grade and breakdown of the SBA requirements, Learners may select the pieces of work that constitute the SBA compilation.

LEARNERS' PORTFOLIOS

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- Each learner in each grade must keep a Portfolio with all work completed during the year
- The Gr 12 Portfolio will comprise an agreed-upon file and must include a Front Page and Contents Page
- The Front Page must be designed by each learner and must reflect creativity around a Mathematical theme. The learner's name and grade must appear on the Front Page
- Portfolios must be kept in each teacher's classroom and may only be taken home when learners wish to study for examinations or by agreement with the Educator.
- Grade 12 portfolios are moderated externally. All learners in Grades 12 must submit their portfolios at the beginning of the First Term and all the learners work must be filed regularly on return of an assessment. This ensures the gradual compilation of the learners portfolio.
- Portfolios must have a front page summarising the work within the portfolio. These form appendices will be updated annually and found on the WCED website.

5. TEACHERS' FILES

- All teachers in the Mathematics Department are deemed to be professionals who take a pride in their work
- Files must be kept according to each individual teacher's needs informed by the standards set by the school academic guidelines
- Separate Administrative details from work files must be kept
- An Administrative File must include a copy of this Policy Document, the minutes of all meetings, a record of any policy decisions, copies of letters to parents re grade changes or compulsory attendance at Maths Extra lessons, and any other administrative matters. This Administrative File may be in electronic format or in hard copy.
- A certain teacher will be appointed as the person in charge for each Grade in Maths. These teachers are responsible for keeping a comprehensive file for that grade. These must include the relevant Scheme of Work, and copies of all tests, examinations and alternate assessments completed by classes throughout the

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year. Memos and rubrics must also be included. This is the property of the school and must not be removed from the school. Micro planning must also be developed on each topic and comprehensive records of this planning must be kept and updated continuously.

6. DEPARTMENT MEETINGS

- Meetings will be held at regular intervals and must be attended by all members of the Mathematics Department
- Minutes will be kept at each meeting and distributed to all members as soon as possible Decisions made will be minute. It is each teacher's responsibility to keep a copy of all minutes and to follow up immediately on all decisions made
- Where possible, some meetings will be devoted to discussing individual learners and any problems that may be evident. Copies of the minutes of these meetings will be forwarded to all members of the department, the HOD and the Principal.

7. SCHEMES OF WORK

- These will be drawn up at the beginning of each year by the HOD in consultation with all members of the Department
- These must be referred to at all times when the term's work is planned. The order of work or the time allocated to each section may only be changed if this has been discussed at a Department Meeting and agreed upon by all Educators. It is the responsibility of the HOD to make any changes and to distribute them to all members of the Department.
- It is the responsibility of the HOD and the SMT to monitor and evaluate the effective enaction of the curriculum.

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9. PARENT INTERVIEWS

- These may be requested by members of the Mathematics Department, the Academic Head or parents themselves.
- These may take place telephonically, via e-mail or in person, and may include just the teacher involved or any other person involved in the learner's academic process.
- Teachers must act promptly on any decisions and commitments made in the meeting and must follow up where promised with the parents
- Feedback on learner performance can also be given during the after-term consultations.

10. CLASS VISITS

- The HOD must visit new staff members within the first few months of their arrival.
- The aim of Class Visits is to become familiar with different styles of teaching Mathematics and to suggest improvements and to provide support where necessary.
- A Class Visit form must be completed and filed for reference and remediation purposes.
- All classroom visits are done after the concerned teachers are informed and it is the duty of the HOD to have monitoring schedule for each term and copies given to teachers in the department.

11. Emergency Intervention Protocol

With the emergence of the novel Coronavirus, we have had to take to developing a digital learning policy in an attempt to adapt to the pandemic in its entirety. As such we have taken to implementing the following interventions:

- a. The implementation of the ATPs for 2020-2023.

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- b. A socially distant schooling environment has been offered, taking COVID protocols into consideration.
- c. A fully functional website with all works published weekly.
- d. The use of various digital platforms including examples such as Whatsapp and Google Classroom. (Amendments and additions are to be approved via the SMT.
- e. A weekly roster containing all works, which is published to all digital platforms.
- f. The creation of a plan for concession learning as from 2021, in additions where the pandemic poses a severe threat to a students learning abilities.
- g. Pre-recorded lessons are to become a part of the 2021 strategy plan.

