



education

Department:
Education
REPUBLIC OF SOUTH AFRICA

CIVIL TECHNOLOGY

GUIDELINES FOR GRADE 12 PRACTICAL ASSESSMENT TASK

2009

This guideline consists of 27 pages.

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1. INTRODUCTION TO (PAT) IN GENERAL

The seventeen National Curriculum Statement subjects which contain a practical component all include a Practical Assessment Task (PAT), i.e. a Practical or Performance Assessment Task. These subjects are:

- AGRICULTURE: Agricultural Management Sciences, Agricultural Technology
- ARTS: Dance Studies, Design, Dramatic Arts, Music, Visual Arts
- HSS: Life Orientation
- SCIENCES: Computer Applications Technology, Information Technology
- SERVICES: Consumer Studies, Hospitality Studies, Tourism
- TECHNOLOGY: Civil Technology, Electrical Technology, Engineering Graphics and Design, Mechanical Technology

A PAT allows the educator to directly and systematically observe applied competence. The PAT comprises the application/performance of the knowledge, skills and values particular to that subject and counts 25% (i.e. 100 marks) of the total promotion/certification mark out of 400 for the subject. In the two Art subjects, Design and Visual Arts, the PAT counts 37,5% (i.e. 150 marks) of the total promotion/certification mark out of 400 for the subject.

The PAT is implemented across the first three terms of the school year and should be undertaken as one extended task, which is broken down into different phases or a series of smaller activities that make up the PAT. The planning and execution of the PAT differs from subject to subject.

CIVIL TECHNOLOGY

GR 12 PRACTICAL ASSESSMENT TASK (PAT)

2009

Guidelines for the teacher

1. GUIDELINES FOR THE TEACHER

1.1 The structure of the PAT

Practical Assessment Tasks are designed to develop and demonstrate a learner's ability to integrate a variety of skills in order to solve a problem. The PAT also makes use of the technological process outlined in Learning Outcome 2, to guide the learner which steps need to be followed to arrive at a solution for the problem at hand.

The PAT is based on investigations, simulations and the application of skills, knowledge and principles acquired by the learners that will cover the technological process in the building environment.

The Practical Assessment Task consists of two components: the design portfolio which makes up 25% of the PAT and the product or model which makes up 75% of the PAT.

1.2 The Design Portfolio

The design portfolio of the PAT should include evidence of how the development of the product or model was approached, namely:

- The planning process
- The knowledge and skills accumulated in the process
- The technological process followed
- The safety and environmental aspects considered
- The calculations used – if applicable, sketches or diagram
- The starting time and ending time – how long it took to complete from start to finish
- The investigations undertaken
- User manual of model or product (if applicable)
- Bill of materials
- List of tools and equipment needed; and
- Any other information that is relevant to the project

As part of the design process learners must:

- Identify the problem and investigate means of solving the problem
- Generate possible solutions
- Develop the preferred solution
- Evaluate the chosen solution
- State the process followed in the development of the PAT
- Construct the solution to the problem in the form of a product or model

1.2.1 Structure of the Design Portfolio

The Design Portfolio consists of a collection of evidence, which shows the progression throughout the PAT, and contains all the documentation produced during the development of the artefact.

The Design Portfolio is divided into phases, which follow the technological process as specified in Learning Outcome 2.

A. Phase 1 – The Problem Statement

- **Scenario** (*First Term*)
 - i. During this phase the learner is presented with the problem statement.
 - ii. The learner identifies the problem(s) or challenges and lists possible solutions to the problem.
- **Design Brief** (*First Term*)
 - i. The learner is **supplied with the criteria** of the PAT, including items such as cost limitations, design requirements and other criteria relevant to the problem statement.
 - ii. The learner draws up his/her own list of criteria as a planning structure (management plan/plan of action) for the development of the PAT.

B. Phase 2 – The Design

- **Acquisition of information and skills** (*First and Second Term*)
 - i. The learner needs to **conduct a short investigation** on **each** of the possible solutions he/she has listed, and this is placed in the portfolio. The teacher can provide learners with possible sources of information and as far as possible make the same resources available to all learners.
 - ii. The learner **compares the investigation** conducted and from this makes a critical decision on which solution will best solve the problem.
 - iii. The learner **motivates in a short description** why the design/solution chosen is the best in his/her opinion.
 - iv. All the research is retained in the portfolio.
 - v. Teachers need to ensure that learners do not select a solution that would pose a challenge **beyond** that of a Grade 12 Learner in the NCS.

- vi. Upon deciding the best possible solution, the learner needs to refine the research done and now prepare a final design. This should include the following:
 - 1. The planning process
 - 2. The knowledge and skills accumulated in the process
 - 3. The technological process followed
 - 4. The safety and environmental aspects considered
 - 5. The calculations used – if applicable, sketches or diagrams
 - 6. The starting time and ending time – how long it took to complete from start to finish
 - 7. The investigations or research undertaken
 - 8. Any other information that is relevant to the project
- vii. The learner must **list the materials and tools** needed for the completion of the PAT (as if in a real-life situation). Again it is emphasized that the teacher must **guide** and ensure that learners do not embark on a process that is not viable on a Grade 12-level.

C. Phase 3 – The Make and Evaluation

- i. During this phase the teacher will supply learners with scenarios and ability tasks which will give learners the opportunity to gain the skills needed for the completion of the PAT. These Scenarios and ability tasks will include:
 - 1. Scenarios on: Sewerage disposal systems and their operation, components and their operation, test and measurement exercises and calculations etc.
 - 2. Ability tasks such as simulations, drawing skill exercises, correct use of tools and instruments relevant to the PAT.
 - ii. The skills of learners are paramount to the completion of PAT and it is imperative that learners have MULTIPLE opportunities from the first week of school at the beginning of the year, thus enabling learners to exhibit the maximum skills levels possible for a Grade 12 Learner.
 - iii. Teachers will assess only the Ability tasks, which are chosen for formal assessment purposes. Self, group and peer assessment will form the basis of the developmental assessment.
- **Production and Self Evaluation** (*Second and Third term*)
 - i. The learner now **simulates the final design** and effects any changes that are necessary. These changes are recorded and included in the design portfolio. Learners may use electronic equipment where available, e.g. Cellphone cameras, digital cameras, etc. to document their progress.
 - ii. Finally the learner **manufactures and assembles** all the needed parts of the artefact. Learners are allowed to make use of recycled materials, which can be revamped and re-fitted for the purpose of the PAT.

- iii. It should be noted that learners will have to make use of extra-curricular time in the Civil Technology workshop for the hand skills needed to manufacture the artefact, although this should still be done under supervision of the teacher.

IMPORTANT NOTE

- iv. Teachers that do not plan well in advance and implement the PAT thoroughly will be deemed to have acted negligently and not in the best interests of the learner.
- v. It is therefore re-emphasized that work on the PAT should commence from the first term, as this is a lengthy and drawn out process and **CANNOT** be left to the last minute.

- **Presentation**

- i. All the components of the PAT (Design portfolio, building plans and model) should be completed and presented for assessment by the time the preparatory exam starts at the end of the third term to allow sufficient time for the external moderation.
- ii. At this phase the teacher will do any final assessments, which are outstanding, and all learner portfolios and models are kept safely until the moderation process is completed (Both Provincial and National moderation).
- iii. It is imperative that the criteria are adhered to from the beginning, as this will form the basis for assessment.
- iv. Teachers cannot penalize learners on points, which are not included in the initial criteria.
- v. Upon selection, learners may be required to showcase skills and knowledge during moderation (Face moderation).

The communication of the design is a continuous process and the learner will continuously make changes to this part of the portfolio as the PAT progresses.

Table 1 on page 9 can be used as checklist of the stages that should be followed for the development of the PAT. This table also gives a guideline in terms of which tasks could be formally assessed and which ones could be informally assessed, and the possible assessment tool(s) for the different tasks.

Every teacher must design a pace-setter to indicate the completion dates for the different stages of the PAT, and manage this process in order to avoid crisis management and unnecessary stress nearer to the completion date of the PAT.

EXAMPLE OF A MANAGEMENT PLAN FOR THE PAT

Date Planned	Date Completed	PAT Stage	PAT Task	Purpose of Assessment		Assessment of Portfolio	Assessment of product or model	Self	Peer	Group	Educator	Possible Assessment Tool(s)			
				Informal	Formal							Rubric	Checklist	Memo	Observe
		1. Scenario	Analyse the Scenario/Problem	✓		✓		✓				✓	✓		
			Identify the problem statement		✓	✓					✓	✓	✓		
		2. Design Brief	List possible solutions		✓	✓					✓		✓		
		3. Acquisition of information and skills	Investigation		✓	✓		✓	✓		✓	✓	✓		
			Research		✓	✓		✓	✓		✓	✓	✓		
			Case study		✓	✓					✓			✓	
		4. Production and Evaluation	Layout design and drawings		✓	✓		✓			✓	✓	✓		
			List of equipment		✓	✓					✓		✓		
			Simulation		✓		✓				✓		✓		✓
			Investigation		✓		✓				✓		✓		✓
			Measurement		✓		✓				✓		✓	✓	
			Manufacturing and assembly		✓		✓				✓		✓		
			Hand skills & fitting of model		✓		✓				✓	✓	✓		
			Final model or product assessed according to criteria		✓		✓				✓	✓	✓		
		5. Presentation	Portfolio of evidence assessed according to criteria		✓	✓					✓	✓	✓		

Table 1

1.3 Administration of the PAT

The PAT should be completed in the first three terms and handed in at the end of the third term, before the commencement of the preparatory examination. The PAT should be based on real-life situations and completed under controlled conditions. (Refer to the SAG Jan 2008.)

Teachers must set dates for the different phases of the PAT in Table 1 on page 9. In this manner learners can assess their progress. Instances where formal assessment tasks take place, it is the responsibility of the teacher to administer assessment tasks.

Teachers are requested to make copies of Section 2 (Instructions for the learner) and give it to the learners at the beginning of the year. Learners should receive the assessment criteria of the PAT when the PAT is handed out.

-

The PAT cannot leave the classroom/workshop and must be kept in a safe place at all times when learners are not working on it.

1.4 Assessment and moderation of the PAT

The Practical Assessment Task for Grade 12 is externally set and moderated, but internally assessed.

1.4.1 Assessment

Frequent developmental feedback is needed to guide and give support to the learner in ensuring that the learner is on the right track.

Both formal and informal assessment should be conducted on the different tasks that constitute the PAT. Informal assessment can be conducted by the learner himself or herself, by a peer group, or by the teacher. Formal assessment should always be conducted by the teacher and will be recorded.

Learners submit the product or model for assessment by the end of the third term, before the commencement of the preparatory examination. The design portfolio must accompany the model or product.

The teacher must take into account the requirements of the assessment of all the components of the PAT and therefore plan the assessment programme for the PAT accordingly.

1.4.2 Moderation

During moderation of the PAT the design portfolio and the model will be presented to the moderator.

Where required the moderator should be able to call on the learner to explain the function, principles of operation and also request the learner to exhibit the skills acquired through the capability tasks for moderation purposes. The sequence of events according to the technological process may also be requested from the learner.

CIVIL TECHNOLOGY

GR 12 PRACTICAL ASSESSMENT TASK (PAT)

2009

Instructions for the learner

2. INSTRUCTIONS TO THE LEARNER

**Department of Education
Grade 12 National Senior Certificate 2009
Practical Assessment Task**

Time Allowed: 1st – 3rd Term 2009

Learner Name: _____

Examination Number:

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Instructions to the Learner:

- ✓ This practical assessment task counts 25% of your final promotion mark.
- ✓ All work produced by you must be your own effort. Group work and cooperative work is not allowed.
- ✓ All sources used must be acknowledged.
- ✓ Calculations should be clear and include units.
- ✓ Calculations should be rounded off to TWO digits.
- ✓ Drawings can be hand-drawn (Use drawing instruments) or drawn on CAD. No photocopies or scanned files of drawings are allowed.
- ✓ Photos are allowed and can be in colour or greyscale. Scanned photos are allowed.
- ✓ SI units should be used.
- ✓ You are allowed to use recycled materials.
- ✓ This document must be placed inside the design portfolio.

The Practical Assessment Task (PAT) consists of a practical task to be completed over three terms. The PAT consists of a design portfolio and a product/artefact.

The final scale drawings of the floor plan, elevations, sectional view, drainage plan and electrical layout plan will be assessed as part of the final product/model. These marks form part of the final product and count 25 marks.

2.1 Scenario: Double-storey Sports Club House (*This section is compulsory for all candidates*)

Your school wishes to erect a double-storey sports clubhouse at the school sports ground. As Civil Technology learners you are tasked by the School Governing Body to design a double story sports clubhouse with a balcony.

Specifications:

1. The clubhouse should not exceed 150 square meters per level excluding the balcony.
2. The ground floor should have toilet facilities, showers and cloak/change room facility.
3. The upper floor should have a small kitchen, toilet, lounge facility with balcony.
4. The kitchen should be fitted with:
 - Cupboards
 - Double wash sink
 - Power points for electrical devices
5. The clubhouse should be furnished with an appropriate roof.

Instructions:

1. Design the double storey sports club house
2. Make neat scale drawings of the floor plans of both floors of the clubhouse
3. Make a neat scale drawing of **THREE** different elevations of the clubhouse
4. Make a scale model of the double storey sports club house

AND

Choose any ONE of the following three options below to serve as the specialisation part of the PAT.

Note: Each option consists of different instructions and different specifications.

Option 1**Instructions:**

1. Design and provide **a means of access** between the floor levels of the clubhouse.
2. Make detailed drawings and recommendations for the system of your choice. Take into consideration the number of people that use the clubhouse.
3. Make a separate scale model of the construction method that you chose to provide access to the upper floor.
4. Make a neat scale drawing of a Vertical section through the building showing the provision to access to the upper floor (Submit this drawing along with the drawings of the floor plans and elevations of the clubhouse.)

NOTE: See the attached table (**TABLE 2**) that indicates the steps that you should follow when you develop your PAT.

Option 2**Instructions:**

1. Investigate and choose the best method to be used to dispose of the sewage and waste water from the clubhouse in your area taking into consideration your local government/municipality by-laws (no municipal sewage disposal system is available. Other hygienic and appropriate options have to be considered).
2. Make detailed drawings and recommendations for the system of your choice. Take into consideration the number of people that will use the clubhouse.
3. Make a separate scale model of the recommended system.
4. Make a neat scale drawing of the drainage plan of the clubhouse. (Submit this drawing along with the drawings of the floor plans and elevations of the clubhouse).

NOTE: See the attached table **(TABLE 2)** that indicates the steps that you should follow when you develop your PAT.

Option 3

Instructions:

1. Investigate and choose the most efficient method to provide electricity to the clubhouse (**NO ESKOM POWER IS AVAILABLE AND NO GENERATORS MAY BE USED**).
2. Make detailed drawings and recommendations for the system of your choice. Take into consideration the number of appliances and people that will use the clubhouse.
3. Make a separate scale model of the recommended system.
4. Make a neat scale drawing of the plan for an alternative source of power/electricity for the clubhouse (Submit this drawing along with the drawings of the floor plans and elevations of the clubhouse).

NOTE: See the attached table **(TABLE 2)** that indicates the steps that you should follow when you develop your PAT.

TABLE 2

The following steps should be followed in developing your PAT:

Steps	Information needed:	Examples of Resources:
Step 1: ➤ Do research ➤ Compile research report	✓ Building regulations ✓ Building specifications ✓ Materials ✓ Construction processes ✓ Roof construction ✓ Civil services	✓ Textbooks ✓ Internet ✓ Magazines ✓ Site visits ✓ Interviews
Step 2: ➤ Design sketches ➤ Freehand drawings	✓ Floor plan ✓ Elevations ✓ Hand rails at stairs are a requirement, not an option	
Step 3: ➤ Working drawings	✓ Floor plan ✓ Sectional view to show the detail of the staircase. (Do not section the staircase) where applicable ✓ Elevations (N, E, S, W) ✓ Drainage where applicable ✓ Electrical system and lay-out where applicable	NOTE: ✓ Use scales according to SANS code 0143 ✓ Indicate all relevant notes on construction, materials, finishing, sizes, window codes, etc.
Step 4: ➤ Quantities and cost of materials for specific option: ➤ Staircase ➤ Drainage system ➤ Electrical/energy system	✓ Suitable information on material to cater for your design	
Step 5: ➤ Scale model	The model should include the following: ✓ Windows and doors ✓ Indoor layout ✓ Roof ✓ Specific requirements of your option	NOTE: ✓ Any available material can be used ✓ The model should be according to the working drawings ✓ An appropriate scale should be used. ✓ The model may be proportionally larger than the scale drawing.

CIVIL TECHNOLOGY

GR 12 PRACTICAL ASSESSMENT TASK (PAT)

2009

Assessment Tools

3. ASSESSMENT TOOLS

The assessment tool(s) below will be used to assess the different sections of your PAT. Use these to assist you in making your product or model.

3.1 Rubric for assessment of the design portfolio

CRITERIA	7	6	5	4	3	2	1
	80 –100%	70 - 79%	60 - 69%	50 - 59%	40 - 49%	30 - 39%	0 - 29%
Presentation	Exceeded the required information, extremely neat: Name Register class Year 20... Appropriate cover illustration Appropriate title Index All sections Page numbers	Required information extremely neat: Name Register class Year 20... Appropriate cover illustration Appropriate title Index All sections Page numbers	Adequate information from list below, neatly presented: Name Register class, Year 20... Appropriate cover illustration Appropriate title Index All sections Page numbers	Necessary information from list below, neatly presented: Name Register class Year 20... Appropriate cover illustration Appropriate title Index All sections Page numbers	Limited information from list below, neatly presented: Name Register class Year 20... Appropriate cover illustration Appropriate title Index All sections Page numbers	Lack of essential information, not very neatly presented	Only name and register class untidily presented
Development of a design brief	The design brief is extremely well formulated and defines the need or opportunity. It lists detailed specifications and constraints.	The design brief is very well constructed and defines the need or opportunity. It lists detailed specifications and constraints.	The design brief is well constructed and defines the need or opportunity. It lists detailed specifications and constraints.	The design brief defines the need or opportunity and provides a list of specifications and constraints.	The design brief defines the need or opportunity and provides limited specifications.	The simple design brief makes little reference to the need or problem.	The design brief is vague and lists no specifications or constraints.

CRITERIA	7	6	5	4	3	2	1
	80 –100%	70 - 79%	60 - 69%	50 - 59%	40 - 49%	30 - 39%	0 - 29%
Investigation and analyses information	Shows evidence of a variety of strategies *(6) of investigation used to obtain all relevant information to assist in developing innovative design ideas.	Uses a wide range*(5) of appropriate information sources to develop innovative design options.	Uses a range of information sources*(4) which shows understanding of the problem or need.	Uses adequate sources *(3) to collect relevant information to assist with design ideas.	Uses relevant research *(2) to address the problem or need identified in the design brief.	Uses less than adequate sources* (1) and collects less than adequate information.	Collects very little relevant information *(0).
Generation of design ideas	Generates an excellent variety of alternative and innovative ideas with different approaches to address the problem or need. Justifies the preferred option with clear links to the design brief.	Shows evidence of a wide range of communication methods used to develop original and creative design options. Substantiates well-reasoned choice of final design.	Shows evidence of a range of communication methods used to develop original and creative design options including modelling design ideas. Explains well-reasoned choice of final design.	Uses a good variety of alternatives exploring different approaches. Well-reasoned choice of final design.	Considers alternatives but lacks in originality and flair. Indicates final design choice.	Offers some alternatives but tends to be a collection of existing products with limited reasoning of choice. Shows limited links with research done.	Shows little or no exploration of alternatives.

Communication of ideas	Develops a very interesting solution and communicates it exceptionally well using appropriate techniques and methods. Uses modelling ideas to test and explore design thinking.	Develops a very interesting solution and communicated it very well using appropriate techniques and methods.	Develops an interesting solution and communicates it effectively using appropriate techniques.	Reasons well for choice of solution. Uses good overall communication techniques.	The solution lacks creativity with limited communication techniques used.	The solution lacks creativity with inappropriate communication techniques used.	The solution lacks detail, making interpretation difficult. Scant attention is given to communication techniques.
Evaluation of product or model	Comprehensively evaluates the product against the design brief taking account of the user and cost-effectiveness. Evaluates procedures, techniques and processes and indicates possible improvements. Evaluates the appropriateness of the materials used.	Evaluates the product against the design brief taking account of the user and cost-effectiveness. Evaluates procedures, techniques and processes and indicates possible improvements. Evaluates the appropriateness of the materials used.	Evaluates the product against the design brief. Presents suggestions to improve on function. Evaluates the appropriateness of the materials used with limited suggestions for improvement.	Evaluates the product against the design brief. Evaluates the appropriateness of the materials used.	Superficially evaluates the product against the design brief. Makes recommendations to improve its functionality.	Very superficially evaluates with limited recommendations.	Shows little or no evidence of an evaluation of the project.

MARK SHEET FOR THE DESIGN PORTFOLIO										
NAME OF LEARNER		CRITERIA								
		Presentation	Development of a design brief	Investigation and analyses information	Generation of design ideas	Communication of ideas	Evaluation of product or model	TOTAL: 42 (6 x 7)	TOTAL: 100 %	TOTAL: 25
		7	7	7	7	7	7	42		
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
TOTAL OF PAGE										
GROUP AVERAGE										

 Signature (Teacher)

 Date

 Signature (Moderator)

 Date

SCHOOL STAMP

EXAMPLE OF A MARK SHEET FOR THE DESIGN PORTFOLIO										
NAME OF LEARNER		CRITERIA								
		Presentation	Development of a design brief	Investigation and analyses information	Generation of design ideas	Communication of ideas	Evaluation of product or model	TOTAL: 42 (6 X 7)	TOTAL: 100 %	TOTAL: 25
		7	7	7	7	7	7	42		
1										
2	EXAMPLE MILO	3	6	4	7	2	3	25	60%	15
3										
4										
5										
6										
7										
8										
9										
10										
11										
12										
13										
14										
15										
TOTAL OF PAGE								60	15	
GROUP AVERAGE								60%	15	

3.4 Rubric for assessment of the final product/model

CRITERIA	7	6	5	4	3	2	1
	80 -100%	70 – 79%	60 - 69%	50 - 59%	40 - 49%	30 - 39%	0 - 29%
FITNESS FOR PURPOSE	This product has an outstanding level of functionality. It shows a very high level of innovation that is appropriate to the design brief.	The product demonstrates a high level of functionality. It shows a high level of innovation that is appropriate to the design brief.	The product adequately fulfils the purpose for which it was designed. It shows some innovation that is appropriate to the design brief.	The product satisfactorily fulfils the purpose for which it was designed. It shows limited innovation for the identified need or problem.	The product fulfils its functional requirements. The solution shows no innovation for the identified need or problem.	The product barely fulfils functional requirements but lacks any refinement or innovation.	The project is incomplete and does not fulfil the identified need or problem.
MANUFACTURING COMPETENCY	Demonstrates an outstanding level of skill and competence to correctly and safely use a wide range of materials, tools, equipment and machines under educator supervision.	Demonstrates a very high level of skill and competence to correctly and safely use a wide range of materials, tools, equipment and machines under educator supervision.	Demonstrates a high level of skill and competence to correctly and safely use a range of materials, tools, equipment and machines under educator supervision.	Demonstrates a satisfactory level of skill and competence to correctly and safely use appropriate materials, tools, equipment and machines under educator supervision.	Demonstrates an acceptable level of skill and competence to correctly and safely use appropriate materials, tools, equipment and machines under educator supervision.	Demonstrates some regard for accuracy and safety in the use of materials, tools, equipment and machines under educator supervision.	Demonstrates a lack of skill or competence in the use of appropriate materials, tools, equipment and machines under educator supervision. Pays little attention to safety.

CRITERIA	7	6	5	4	3	2	1
	80 -100%	70 – 79%	60 - 69%	50 - 59%	40 - 49%	30 - 39%	0 - 29%
MANAGEMENT OF PROCESS	Demonstrates continual review of the making process. Shows outstanding ability to adapt and modify the design when difficulties arise. Adopts procedures to minimise waste. Manages time outstandingly well.	Reviews design during the making process. Demonstrates resourcefulness and adaptability in making modifications to ensure a high-quality product. Manages waste and time excellently.	Shows ability to adapt and modify the design when difficulties arise. Plan adequate to minimise waste. Manages time well.	Applies knowledge of materials and processes to overcome problems in the making process. Demonstrates some sense of material and time management.	Shows evidence of adopting alternative ways of proceeding when difficulty is experienced. Seeks assistance from educator to proceed. Demonstrates some sense of material and time management.	Shows little evidence of alternative ways of proceeding when difficulty is experienced. Does not seek assistance from educator. Proceeds regardless of time and material management.	Makes no attempt to overcome making problems. Shows no proper planning resulting in no regard for time and material management.
MODELLING THE PRODUCT	Exceptionally modelled to illustrate, realistically the function for which it was developed.	Specialist modelling techniques used to demonstrate, realistically, the function for which it was developed.	Product is effectively modelled to illustrate the function for which it was developed.	Product is adequately modelled to illustrate the function for which it was developed.	Product is modelled to illustrate the function for which it was developed.	Model barely illustrates the function for which the product was developed.	The model shows no clarity as to how the product is to function.

MARK SHEET FOR THE FINAL PRODUCT								
NAME OF LEARNER		FITNESS FOR PURPOSE	MANUFACTURING COMPETENCY	MANAGEMENT OF PROCESS	MODELLING THE PRODUCT	TOTAL: 28 (4 x 7)	TOTAL: 100 %	TOTAL: 50
		7	7	7	7	28		
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
						TOTAL OF PAGE		
						GROUP AVERAGE		

 Signature (Teacher)

 Date

 Signature (Moderator)

 Date

SCHOOL STAMP

COMPOSITE MARK SHEET						
PARTICULARS OF LEARNER			DESIGN PORTFOLIO	FINAL PRODUCT		TOTAL
				SCALE DRAWINGS	MODEL	
No.	EXAMINATION NUMBER	FULL NAME	25	25	50	100
e.g.	2008092199995	EXAMPLE MILO	18	0	32	50
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						
			TOTAL OF PAGE			
			GROUP AVERAGE (LAST PAGE)			

Signature (Teacher)

Date

Signature (Moderator)

Date

SCHOOL STAMP

4 DECLARATION OF AUTHENTICITY

-

NAME OF THE SCHOOL:

NAME OF LEARNER:

(FULL NAME(S) AND SURNAME)

EXAMINATION NUMBER:

NAME OF TEACHER:

SCHOOL STAMP

I hereby declare that the project submitted for assessment is my own, original work and has not been previously submitted for moderation.

SIGNATURE OF CANDIDATE

DATE

As far as I know, the above declaration by the candidate is true and I accept that the work offered is his or her own.

SIGNATURE OF TEACHER

DATE