



# **basic education**

---

Department:  
Basic Education  
**REPUBLIC OF SOUTH AFRICA**

## **CIVIL TECHNOLOGY (CONSTRUCTION)**

### **GUIDELINES FOR PRACTICAL ASSESSMENT TASKS**

**GRADE 12**

**2022**

**These guidelines consist of 15 pages.**

**TABLE OF CONTENTS**

	<b>PAGE</b>
<b>SECTION 1</b>	
<b>1. INTRODUCTION</b>	<b>3</b>
<b>SECTION 2</b>	
<b>2. GUIDELINES FOR THE TEACHER</b>	<b>4</b>
2.1 The structure of the PAT for Civil Technology	4
2.2 Management of the PAT	4
2.3 Administration of the PAT	5
2.4 Assessment and moderation of the PAT	5
2.5 Assessment	5
2.6 Moderation	5
<b>SECTION 3</b>	
<b>3. GUIDELINES FOR THE LEARNER: CONSTRUCTION TASKS</b>	<b>6</b>
3.1 Instructions to the learner	6
3.2 Phase 1: Joining part of a timber door frame stile to a one-brick wall	7
3.3 Marking guidelines for Phase 1	8
3.4 Phase 2: Concrete garden table	9
3.5 Marking guidelines for Phase 2	10
3.6 Composite mark sheet for Construction PAT	12
<b>SECTION 4</b>	
<b>4. OTHER RELEVANT INFORMATION</b>	<b>13</b>
4.1 Absence/Non-submission of task	13
4.2 Requirements for presentation	13
4.3 Recommended time frames for the completion of the PAT	13
4.4 Declaration of authenticity	14
<b>SECTION 5</b>	
<b>5. CONCLUSION</b>	<b>15</b>

**SECTION 1****1. INTRODUCTION**

The following 18 Curriculum and Assessment Policy Statement subjects contain a practical component must include a practical assessment task (PAT).

- **AGRICULTURE:** Agricultural Management Practices, Agricultural Technology
- **ARTS:** Dance Studies, Design, Dramatic Arts, Music, Visual Arts
- **SCIENCES:** Computer Applications Technology, Information Technology, Technical Sciences, Technical Mathematics
- **SERVICES:** Consumer Studies, Hospitality Studies, Tourism
- **TECHNOLOGY:** Civil Technology, Electrical Technology, Mechanical Technology, Engineering Graphics and Design.

A practical assessment task (PAT) mark is a compulsory component of the final promotion mark for all candidates offering subjects that have a practical component and counts 25% (100 marks) of the end-of-year examination mark. The PAT is implemented across the first three terms of the school year. This is broken down into different phases or a series of smaller activities that make up the PAT. The PAT allows for learners to be assessed regularly during the school year and it also allows for the assessment of skills that cannot be assessed in a written format, e.g. test or examination. It is therefore important that schools ensure that all learners complete the practical assessment tasks within the stipulated period to ensure that learners are resulted at the end of the school year. The planning and execution of the PAT differ from subject to subject.

## SECTION 2

### 2. GUIDELINES FOR THE TEACHER

(These guidelines must be explained clearly to the learners.)

#### 2.1 The structure of the PAT for Civil Technology

The PAT accounts for the skills the learner has mastered. The PAT is assessed at intervals and requires the learner to engage in multiple practical sessions. During these weekly sessions, skills such as simulation, experimentation, hand skills, tool skills, machine skills and workshop practice are honed and perfected to the point where the learner may engage in the tasks set out for that particular term. The PAT accounts for 25% of the learner's promotion mark.

#### 2.2 Management of the PAT

The PAT should commence in Term 1, as this is a lengthy and drawn-out process and CANNOT be left to the last minute. The model should be done over THREE terms starting in Term 1 and Phase 1 should be done concurrently with the model in Term 1. Phase 1 must be completed, marked and internally moderated by the end of Term 1. Phase 2 must be completed, marked and internally moderated by **2 September 2022**.

- (a) All the phases of the PAT should be completed and presented for assessment by **2 September 2022** to allow sufficient time for external moderation.
- (b) During this phase, the teacher will conduct any final assessments that are outstanding. All the phases of the PAT are to be kept safely until the moderation process is completed at all levels (both provincial and national moderation).
- (c) **The internal moderator/departmental head must conduct moderation of the PAT throughout the year.**
- (d) It is imperative that the criteria are adhered to from the beginning, as this will form the basis for assessment.
- (e) Teachers cannot penalise learners on areas that are not included in the initial criteria.
- (f) When learners are selected during moderation (face moderation), they may be required to showcase their practical or drawing skills and knowledge.

All **teachers** must **design a pacesetter** in line with the time frames specified in the PAT to indicate the completion dates for the different phases of the PAT. The teacher must manage this process to avoid crisis management and unnecessary stress closer to the completion date of the PAT.

The submission dates for the different phases of the PAT, as indicated in the pacesetter, should be given to the learners in writing.

#### 2.3 Administration of the PAT

The PAT should be based on real-life situations and should be administered and completed under controlled conditions.

After studying the guidelines teachers must fully explain the requirements of the different phases of the PAT and the criteria, as indicated in the assessment tools and mark schedules, to the learners. This will ensure that learners and teachers have a common understanding of the assessment tools and what is expected of the learners.

Teachers are requested to make copies of **SECTIONS 3 to 5** of this document and hand it to the learners not later than the **first week after the opening of schools in January 2022**.

**The products/models should not leave the classroom/workshop and must always be kept in a safe place when learners are not working on them.**

## **2.4 Assessment and moderation of the PAT**

The PAT for Grade 12 is externally set and externally moderated, but internally assessed by the teacher and moderated by the internal moderator/departmental head.

## **2.5 Assessment**

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

Both formal and informal assessments should be conducted on the different phases of the PAT. Informal assessment may 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 the results will be recorded.

The teacher must consider the requirements of the assessment of all the phases of the PAT and therefore plan the assessment programme of the PAT accordingly.

## **2.6 Moderation**

During moderation of the PAT all phases of the PAT must be presented to the internal moderator as well as the external moderator.

Where required, the moderator should be able to call the learner to explain the function and working principles and also request the learner to exhibit the skills acquired during practical sessions for moderation purposes.

**SECTION 3****3. GUIDELINES FOR THE LEARNERS: CONSTRUCTION TASKS**

Learner's name: \_\_\_\_\_

Time allowed: Term 1 to Term 3

The practical assessment task (PAT) consists of TWO phases to be completed over THREE terms.

The PAT should be done over THREE terms starting in Term 1 with Phase 1 and Phase TWO.

**TIME SCHEDULE FOR THE COMPLETION OF THE PAT:**

It is recommended that learners and teachers use this time schedule to finish the PAT in the allocated time.

<b>TERM</b>	<b>WORK TO BE DONE</b>	
Term 1	Phase 1	Joining of part of a timber door frame stile to a one-brick wall
Term 1	Phase 2 (Part 1)	Research, drawings and cutting list
Term 2	Phase 2 (Part 2)	Making of formwork and reinforcement
Term 3	Phase 2 (Part 3)	Casting of concrete, striking of formwork, finishing

**3.1 Instructions to the learner**

- This PAT counts 25% of your final promotion mark.
- All work you produce must be your own effort.
- Use your discretion where dimensions and/or information have been excluded.
- Where available you may use electronic equipment, e.g. cellphones, cameras and digital cameras, to document your progress.
- **The product/model should NOT leave the classroom/workshop and must be kept in a safe place at all times when you are not working on it.**

**3.2 Phase 1: Joining part of a timber door frame stile to a one-brick wall****Term: 1****Duration of phase 1: 5 hours per learner****Mark allocation: 20 marks****TASK:**

Joining of part of a timber door frame stile to a one-brick wall

**INSTRUCTIONS:**

- Measure and make part of a door frame stile (the frame stile can be made from any suitable timber).
- Measure, cut and bend TWO frame ties at an angle to be fixed against the frame stile and built into the wall.
- Cut a strip of DPC (damp-proof course) to fit.
- Mark out the wall on the floor.
- Dry pack 6 courses of a one-brick wall in stretcher bond to form a stopped end on the one side and tothing on the other side. (The wall should be of such a length to hold the frame stile.)
- Fix the frame ties to the frame stile with sufficient spacing between the different courses of the brick wall.
- Place the frame stile plumb with stays (brandering) and bricks to keep it stable.
- Position the frame ties correctly between the brick courses.
- Position the part of the door frame stile with the frame ties vertically/plumb using the correct tool.
- Round off with quarter rounds.

**3.3 Marking guidelines for Phase 1**

<b>ASSESSMENT OF JOINING PART OF A TIMBER DOOR FRAME STILE TO A ONE-BRICK WALL</b>				
<b>LEARNER'S NAME AND SURNAME:</b> _____				
<b>ASSESSMENT CRITERIA</b>	<b>GOOD/ EXCELLENT</b>	<b>AVERAGE</b>	<b>POOR/ NOT ATTEMPTED</b>	<b>MODERATED MARK</b>
<b>PLANNING</b>	<b>8-10</b>	<b>4-7</b>	<b>0-3</b>	<b>0-10</b>
Measure, cut and make part of a door frame stile with rebate				
Measure, cut and bend the frame ties				
Fix ties in correct positions to door frame stile				
Measure, cut and fix the DPC				
Plumbing of door frame				
<b>FIXING OF FRAME STILE AGAINST WALL</b>	<b>8-10</b>	<b>4-7</b>	<b>0-3</b>	<b>0-10</b>
Six courses of a one-brick wall in stretcher bond with stopped end and tothing				
Wall is straight and plumb				
Round off with quarter rounds				
<b>TOTAL OUT OF 80</b>				
<b>CONVERTED TOTAL OUT OF 20</b>				

*It is recommended that video clips and photos of the learner performing the task be kept electronically at the school and on a disc or memory stick (Backup).*



**3.4 Phase 2: Concrete garden table****Terms 1, 2 and 3**  
**Duration: 20 hours****TASK:**

You are required to design and make a concrete garden table.

**INSTRUCTIONS:**

- Research different types of designs of reinforced concrete garden tables and formwork.
- Draw (freehand or with instruments) at least THREE designs of a concrete garden table.
- Select the preferred design and draw a scale drawing of the front, top and left views (working drawings) of the garden table that you are going to make. Show ALL measurements/dimensions on your drawing.
- Compile a cutting list for the formwork.

**Use the following specifications:**

- The concrete garden table must consist of a concrete table top for serving refreshments.
- The concrete table can rest on one or more supports to keep the table top in a stable position.
- Reinforcement for the concrete slab and legs must be added for strength.
- Formwork must be made for the table top and supports.
- Learners should use innovation and creativity when making the concrete garden table.
- Finish off the model.

**NOTE: Evidence of research, drawings, cutting list, templates and stages in the making, as well as the model self, should be available for moderation.**

**3.5 Marking guidelines for Phase 2**

<b>ASSESSMENT OF THE CONCRETE GARDEN TABLE</b>				
<b>LEARNER'S NAME AND SURNAME:</b> _____				
<b>ASSESSMENT CRITERIA</b>	<b>GOOD/ EXCELLENT</b>	<b>AVERAGE</b>	<b>POOR/NOT ATTEMPTED</b>	<b>MODERATED MARK</b>
<b>PLANNING</b>	<b>8–10</b>	<b>5–7</b>	<b>0–4</b>	<b>0–10</b>
Research on different types of reinforced concrete garden tables and formwork				
THREE freehand/instrument drawings of different designs of concrete garden tables				
Compiling a cutting list for the formwork of the preferred design				
<b>SCALE DRAWINGS</b>	<b>4–5</b>	<b>2–3</b>	<b>0–1</b>	<b>0–5</b>
Correctness of front view				
Correctness of top view				
Correctness of left view				
Dimensions and application of scale				
<b>TOTAL: 50</b>				
<b>MARKING AND CUTTING OUT OF FORMWORK MEMBERS</b>	<b>11–15</b>	<b>6–10</b>	<b>0–5</b>	<b>0–15</b>
Marking and cutting of formwork for the top of the concrete garden table				
Marking and cutting of formwork for the support(s) of the concrete garden table.				
<b>TOTAL: 30</b>				
<b>ASSEMBLY OF FORMWORK</b>	<b>8–10</b>	<b>4–7</b>	<b>0–3</b>	<b>0–10</b>
Marking and drilling of holes for screws to assemble formwork				
Joining formwork members for the table top				
Joining formwork members for the support(s) of the table				
<b>TOTAL: 30</b>				
<b>REINFORCEMENT</b>	<b>8–10</b>	<b>4–7</b>	<b>0–3</b>	<b>0–10</b>
Placing of reinforcement				
<b>TOTAL: 10</b>				

<b>ASSESSMENT CRITERIA</b>	<b>GOOD/ EXCELLENT</b>	<b>AVERAGE</b>	<b>POOR/NOT ATTEMPTED</b>	<b>LEARNER MARK</b>
<b>CONCRETE</b>	<b>8–10</b>	<b>5–7</b>	<b>0–4</b>	<b>0–10</b>
Mixing of concrete				
Placing, compacting and curing of concrete				
<b>TOTAL: 20</b>				
<b>STRIKING OF FORMWORK</b>	<b>8–10</b>	<b>5–7</b>	<b>0–4</b>	<b>0–10</b>
Striking of formwork members without damage to concrete				
<b>TOTAL: 10</b>				
<b>FINISHING OFF PRODUCT</b>	<b>8–10</b>	<b>5–7</b>	<b>0–4</b>	<b>0–10</b>
Finishing off the external surface of the concrete				
<b>TOTAL: 10</b>				
<b>FINAL PRODUCT</b>	<b>4–5</b>	<b>2–3</b>	<b>0–1</b>	<b>0–10</b>
The concrete garden table fits securely on the support(s)				
Neatness and appearance of the final product				
<b>TOTAL: 10</b>				
<b>INNOVATION AND CREATIVITY</b>	<b>4–5</b>	<b>2–3</b>	<b>0–1</b>	<b>0–5</b>
The learner adapted his/her chosen design and added features to improve the appearance and functionality of the concrete garden table				
<b>TOTAL: 5</b>				
<b>GENERAL ASPECTS</b>	<b>4–5</b>	<b>2–3</b>	<b>0–1</b>	<b>0–5</b>
Adherence to deadlines				
<b>TOTAL: 5</b>				
<b>TOTAL OUT OF 180</b>				
<b>CONVERTED TOTAL OUT OF 80</b>				

**3.6 Composite mark sheet for CONSTRUCTION PAT**

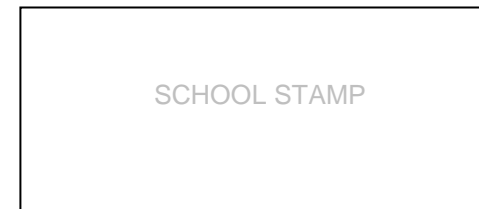
		PHASE 1		PHASE 2 (MODEL)										TOTAL					
		TERM 1		PART 1 TERM 1	PART 1 TERM 2	PART 3 TERM 3													
NO.	SURNAME AND NAME OF LEARNER	JOINING A TIMBER DOOR FRAME TO A ONE BRICK WALL	MODERATED MARK	PLANNING AND SCALE DRAWINGS	MARKING OUT AND CUTTING OF FORMWORK	ASSEMBLY OF FORMWORK	REINFORCEMENT	CONCRETE	STRIKING OF FORMWORK	FINISHING OFF PRODUCT	FINAL PRODUCT	INNOVATION AND CREATIVITY	GENERAL ASPECTS	TOTAL PHASE 2	MODERATED MARK	CONVERTED TOTAL	MODERATED MARK	TOTAL: (PHASE 1 + PHASE 2)	MODERATED MARK
		20	20	50	30	30	10	20	10	10	10	5	5	180	180	80	80	100	100
1																			
2																			
3																			
4																			
5																			
6																			
7																			
8																			
9																			
10																			
	<b>TOTAL</b>													<b>TOTAL</b>					

\_\_\_\_\_  
Signature of (Teacher)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of (Moderator)

\_\_\_\_\_  
Date



## SECTION 4

### 4. OTHER RELEVANT INFORMATION

#### 4.1 Absence/Non-submission of task (What are the consequences?)

The absence of a PAT will be dealt with in accordance with the regulations as stipulated in the *National Policy on Protocol for Assessment Grades R–12*, page 6, Chapter 3, paragraphs 7 and 8.

The *National Protocol for Assessment Grades R–12*, Chapter 3, paragraph 8, subsection (4) clearly states that the absence of a practical assessment task mark will result in the candidate, registered for that particular subject, receiving an incomplete result.

#### 4.2 Requirements for presentation

The following must be presented by the candidate for assessment and moderation:

- Phase 1: Mark sheet with evidence
- Phase 2: Evidence of planning of the model
- Phase 2: A completed model
- The candidate's name and class must be clearly indicated on all components of the PAT
- Completed Declaration of Authenticity with school stamp

The following document must be presented by the teacher for moderation:

- A composite mark sheet (ONE composite mark sheet comprising all candidates' names and marks for all phases)

#### 4.3 Recommended time frames for the completion of the PAT

##### Term 1:

- Phase 1 and Phase 2 (Part 1)

##### Term 2:

- Phase 2 (Part 2)

##### Term 3:

- Phase 2 (Part 3)

**The product/model should be manufactured in the workshop under the teacher's supervision.**

**NOTE:** The learners should start with the model at the beginning of Term 1 and complete it by **2 September 2022**. The teacher should properly plan and manage the available resources so that all learners will be busy with some part of the tasks throughout the year.



**SECTION 5****5. CONCLUSION**

On completion of the practical assessment task learners should be able to demonstrate their understanding of the built environment/industry, enhance their knowledge, skills, values and reasoning abilities as well as establish connections to life outside the classroom and address real world challenges. The PAT furthermore develops learner's life skills and provides opportunities for learners to engage in their own learning.