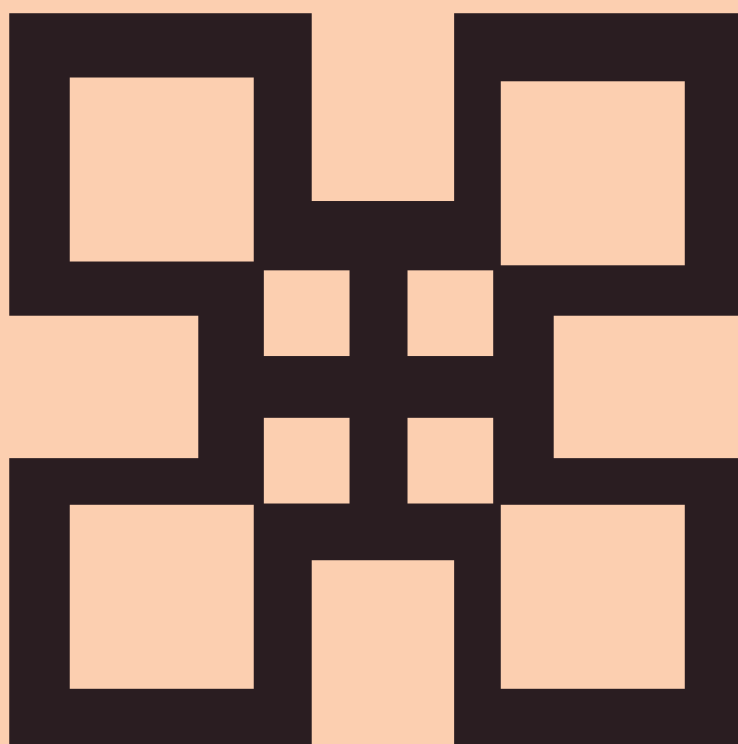


Professional Learning Community Handbook

# Economics

Year One



Ghana Education  
Service (GES)



# Professional Learning Community Handbook

## Economics

Year One



REPUBLIC OF GHANA



Published by the Ministry of Education, Ghana under Creative Commons Attribution 4.0 International License.

# Contents

<b>Introduction</b>	<b>1</b>
<b>PLC SESSION 0: Internal Assessment Structure and Transcript System for SHS, SHTS and STEM Schools</b>	<b>3</b>
<b>PLC SESSION 1: Economics Starts from the Home and the Economist</b>	<b>5</b>
Appendix A: Sample of Portfolio	8
<b>PLC SESSION 2: Economics Tools and the Fundamental Concepts in Economics I</b>	<b>10</b>
Appendix B: Sample of Group Project Work	14
<b>PLC SESSION 3: Fundamental Concepts in Economics II</b>	<b>16</b>
<b>PLC SESSION 4: Role of Buyers and Sellers in a Market and Concept of Demand</b>	<b>19</b>
<b>PLC SESSION 5: Law of Demand and Types of Demand</b>	<b>22</b>
<b>PLC SESSION 6: Preparing for Mid–Semester Examination</b>	<b>25</b>
Appendix C: Sample Table of Specification for Mid–Semester Examination	29
<b>PLC SESSION 7: Law of Diminishing Marginal Utility in Everyday Life</b>	<b>30</b>
<b>PLC SESSION 8: The Factors of Production</b>	<b>33</b>
<b>PLC SESSION 9: Rewards of Factors of Production</b>	<b>36</b>
<b>PLC SESSION 10: Relating Production to Productivity</b>	<b>39</b>
<b>PLC SESSION 11: Assess Location and Localisation of Industries</b>	<b>42</b>
<b>PLC SESSION 12: Preparing for End of Semester Examination</b>	<b>46</b>
Appendix D: Sample Table of Specification for the End of Semester Examination	50
<b>PLC SESSION 13: Supply and Types of Supply</b>	<b>51</b>
<b>PLC SESSION 14: Law of Supply</b>	<b>54</b>
Appendix E: Sample Individual Project Work	57
<b>PLC SESSION 15: Concept of Market and its Types</b>	<b>59</b>
<b>PLC SESSION 16: Concept of Price</b>	<b>62</b>
<b>PLC SESSION 17: Factors that affect Pricing in the Economy</b>	<b>65</b>
<b>PLC SESSION 18: Preparing for Mid–Semester Examination</b>	<b>68</b>
Appendix F: Sample Table of Specification for Mid–Semester Examination	72
<b>PLC SESSION 19: Fundamental Macroeconomics Variables</b>	<b>73</b>
<b>PLC SESSION 20: Concept of Money</b>	<b>76</b>

<b>PLC SESSION 21: Types of Financial Institutions</b>	<b>79</b>
<b>PLC SESSION 22: Importance of Agriculture to the Ghanaian Economy</b>	<b>82</b>
<b>PLC SESSION 23: Importance of Industry to the Ghanaian Economy</b>	<b>85</b>
<b>PLC SESSION 24: Preparing for End of Semester Examination</b>	<b>88</b>
Appendix G: Sample Table of Specification for the End of Semester Examination	92
<b>Appendices</b>	<b>93</b>
Appendix 1: Structure of The Senior High School Internal Assessment and Transcript System	93
Appendix 2: Excerpts from The Teacher Assessment Manual and Toolkit	101
Appendix 3: Teacher Lesson Observation Form	135
Appendix 4: How to Check CPD Points and Training Records on Teacher Portal Ghana	139
<b>List of Contributors</b>	<b>142</b>

# Introduction

This Professional Learning Community (PLC) Handbook is designed to enable teachers to deliver effective lessons for Year One of the new Economics Curriculum. 'Effective' is defined as meaning that each lesson:

- i. Has a weekly learning plan which is aligned with the content and pedagogy set out in the relevant Teacher Manual;
- ii. Incorporates the relevant Learner Materials which are available on the curriculum microsite;
- iii. Contains assessment strategies which are aligned with the Teacher Manual, Learner Materials and Transcript Assessment Guidance;
- iv. Is delivered by the teacher in close adherence (Fidelity of Implementation) with i.) to iii.) above.

The PLC Handbook has a strong focus on assessment, outlining structured approaches to assessment derived from the Teacher Assessment Manual and Toolkit (TAMT), emphasising the attainment of learning outcomes, timely feedback to learners and recording learning outcomes accurately.

Additionally, this Handbook prescribes nine (9) main assessment events which teachers should score and record to constitute each learner's academic transcript for the academic year as follows: Two (2) Class exercises or Homework, one (1) Individual Portfolio, one (1) Group Project, two (2) Mid-semester examinations (in first and second semesters), two (2) End of Semester examinations (in first and second semester) and one (1) Individual project. It also promotes continuous weekly assessment for learning across all DoK levels, supporting teachers to deliver an all-inclusive Economics education by inculcating 21<sup>st</sup> century skills, ICT, national values and support to special needs learners.

The TAMT identifies six modes of assessment which cover the nine events described above. The modes are described below.

- a) **Class Exercise/Homework as assessment strategy:** This assessment strategy reinforces immediate practice and feedback on learning. Week 1 and 3 of the first semester are recommended for these assessment strategies and they are discussed in PLC Sessions 1 and 3. In the second semester, they are recommended in week 13 and 20 as discussed in PLC session 13 and 20. Out of these class exercises and homework, 2 of the highest scoring will be selected and recorded in the learner's academic transcript.
- b) **Individual Portfolio:** Portfolio building should commence during the first week of the first semester. Teachers should discuss with learners and decide on the artefacts/pieces of work (what qualifies) to be included in the portfolio so that learners can prepare accordingly. Portfolios should be submitted latest by the 22<sup>nd</sup> week of the second semester. However, the portfolio could be submitted earlier for

scoring depending on its nature. The scores will be recorded in learner's transcript. Refer to Appendix A of PLC session 1 for sample portfolio.

- c) **Group Project:** Project work as an assessment strategy does not only promote research skills and academic prowess but also encourages the inculcation of national values. One (1) group project should be given to learners by the second week of the first semester. Teachers should explain the context and scope of the project before the groups commence. It should be submitted for scoring latest by the 8th week of the first semester. However, the group project work could be submitted earlier depending on its nature. The scores will form part of learner's academic transcript. Refer to Appendix B of PLC session 2 for a sample group project work.
- d) **Mid-semester examination:** This assessment will be done in week 6 of first semester and week 18 of the second semester. PLC session 6 and 18 are dedicated as preparatory sessions for this examination. The questions for first semester should cover work done in weeks 1-5 of the Teacher Manual and second semester should cover work done in weeks 13-17 of the Teacher Manual. Note that mid-semester assessment scores are mandatory for learners' transcript. Refer to Appendix C and F of PLC Sessions 6 and 18 respectively for sample Table of Specification for mid-semester examination.
- e) **Individual Project:** This focuses on problem-solving skills of the learner, encouraging independent research skills, innovation and critical thinking. Project work should be given to learners in the 2<sup>nd</sup> semester, latest by the second week. Explain the context and scope of the project before learners commence the project. This project should be submitted latest by week 20 in the second semester for scoring. The scores for the individual project also form part of the learner's transcript for the academic year. See Appendix E of PLC session 14 for sample Individual Project for learners.
- f) **End of Semester examination:** This summative assessment evaluates learning outcomes of each semester. First semester examination questions should cover weeks 1-12 of the Teacher Manual and second semester examination should cover weeks 13-24. PLC session 12 and 24 are dedicated as preparatory sessions for this assessment. The scores for these assessments are mandatory for the learner's academic transcript. Refer to Appendix D and G of PLC sessions 12 and 24 respectively for sample Table of specification for end of semester examination.

# PLC SESSION 0: Internal Assessment Structure and Transcript System for SHS, SHTS and STEM Schools

## 1. Introduction (20 minutes)

This Professional Learning Community (PLC) session focuses on enhancing internal assessment and transcript system to ensure it aligns with the new Senior High School, Senior High Technical School and Science, Technology, Engineering and Mathematics curriculum and effectively supports student learning.

In this session, you will discuss the structure and frequency of assessments, strategies for involving learners in the assessment process, methods for providing constructive feedback and the implementation of a robust transcript system.

- 1.1 Share two ways in which you have used assessment in the past to support teaching and learning.
- 1.2 Share your observation on how a colleague used assessment in the past to support teaching and learning.

## 2. Internal Assessment Structure and Frequency (60 minutes)

- 2.1 Read the purpose, learning outcome and learning indicators for the session.

### Purpose

The purpose of the session is to strengthen teachers' understanding and competence in assessment techniques to effectively teach and assess the new SHS, SHTS and STEM Curriculum.

### Learning Outcome

To ensure teachers understand the assessment structure and acquire the skill to design, administer and provide feedback of the assessments that accurately reflect the learning outcomes for each week.

### Learning Indicators

1. Discuss the formative and summative assessment strategies recommended for the new curriculum.
2. Discuss in detail, the relevance and structure of the assessment transcript system and its use/implementation.



**2.2** Discuss *formative assessment strategies* which can be used in your subject area.

**E.g.**

*Questioning, etc.*

**2.3** Discuss *summative assessment strategies* which can be used in your subject area.

**E.g.**

*End of Semester Examination, etc.*

**2.4** Discuss as a subject group how you would administer a given assessment strategy.

**E.g.**

*Class Exercise:*

- i. *Inform learners ahead of time*
- ii. *Write the questions on the board, etc.*

**2.5** Discuss methods of providing constructive feedback to learners on their performance.

**E.g.**

*Provide individual comments on learners' work, etc.*

**2.6** Discuss as a subject group some of the do's and don'ts of constructing assessment items/tasks.

**E.g.**

*Do: Align the purpose of the assessment with the task, etc.*

*Don't: Do not give clues in the stem, etc.*

**2.7** Discuss as a subject group the main assessments that would be recorded in the transcript system in the academic year.

**E.g.**

*Class exercise, etc.*

**2.8** Discuss how and where you would record and submit learners' assessments for the transcript system.

**E.g.**

*Record learners scores immediately, etc.*

### **3. Reflection (10 minutes)**

**3.1** Reflect and share your views on the session.

**3.2** Remember to:

- a) read PLC Session 1 and related learner materials
- b) bring along your Teacher Manual, PLC Handbook and learning plan on *week 1* in preparation for the next session.

# PLC SESSION 1: Economics Starts from the Home and the Economist

## 1. Introduction (20 minutes)

- 1.1 Share two things you did in the classroom based on your experience in the various PLC sessions you have attended (NTS 1a, 1f, 3a, 3c, 3e-3j and 3k-3p).
- 1.2 Share your observation on what a colleague did by way of application of lessons learned from previous PLC sessions attended (NTS 1e, 1g, 2b-2c, 3e-3j and 3k-3m).

## 2. Review of learning plans (60 minutes)

- 2.1 Read the purpose, learning outcome and learning indicators for the session.

### Purpose

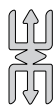
The purpose of the session is to review the learning plan for *week 1* by aligning the plan with the Learner Material and appropriate assessment strategies.

### Learning Outcome

Review your learning plan for *week 1* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

### Learning Indicators

3. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
  4. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.
- 2.2 Review the pedagogical approaches proposed for teaching *week 1* lessons in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan*

**2.3** Develop assessment tasks/items based on the learning indicator(s) for the week. This week's recommended mode of assessment is **individual class exercise** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*You wish to eat rice for lunch, but you have only Ghc 20.00. At the school canteen, a plate of plain rice is sold for Ghc 15.00 and a plate of jollof rice is sold for Ghc 20.00.*

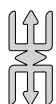
*Explain Economics using this life experience.*

*Refer to Teacher Manual (TM) page 17 and Learner Material (LM) section 1 for more examples of assessment tasks.*

#### Hint



Give task on Portfolio to learners to be done individually and **submitted in week 22**. Refer to **Appendix A** for sample portfolio.



#### Note

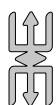
- i. The assessment tasks may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

*Explanation should cover basic concepts such as scarcity, opportunity cost, rational choice, marginal benefits [5marks]*



#### Note

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

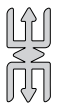
- a) Give prior notice about the exercise at the beginning of the lesson
- b) Teacher should go round the class during the exercise and support learners who may be having difficulties in one way or the other, etc.

Refer to *Teacher Assessment Manual and Toolkit (TAMT)* page 168 for more information on how to use class exercise as an assessment strategy.

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) Score, share and discuss the scoring rubrics and results of the class exercise with the learners
- b) Clarify misconceptions that learners may have about Economics, etc.



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 1 to provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- b) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- c) read PLC Session 2 and related Learner Materials (NTS 1b, 2c and 3b).
- d) bring along your Teacher Manual, PLC Handbook and learning plan on week 2 in preparation for the next session (NTS 1c, 1f).



## Appendix A: Sample of Portfolio

### Task:

#### E.g.

Create a portfolio of your class works and projects to showcase your learning journey throughout the academic year. After your portfolio is complete, write a brief reflection of not more than 200 words, stating some valuable skills that you have learned, the challenges you faced and things you can do to improve upon your academic progress in the next academic year.

### Artefacts (items) to be included in the Portfolio:

#### E.g.

- a) Learner's class exercise and homework book for Economics
- b) Copy (ies) of group class exercise (handwritten or photocopied)
- c) Individual project(s)
- d) A copy of group project (handwritten or photocopied)
- e) A brief reflection (not more than 200 words) on your academic journey for the year, stating what skills you've learned, what challenges you faced on the journey and things you can do to improve upon your achievements in next academic year, etc.

### Structure and organisation of the Portfolio:

#### E.g.

As part of the structure of the portfolio, learners should have the following details

- a) Cover Page (Title, Student name, Class, Date of submission)
- b) List of Content
- c) Items/artefacts should be arranged in order in a 'clear bag/file', thus exercise book, group exercise, individual project, group project, reflection, etc.

### How to Administer:

#### E.g.

- a) Explain the type of portfolio to the learners; a collection of assessments done throughout the academic year
- b) Give the portfolio assignment/task to learners in week 1 of first semester
- c) Call for the portfolios intermittently for evaluation, ensuring that learners are keeping record/evidence of work done as intended
- d) By the 20<sup>th</sup> week, instruct learners write their reflections and design a cover page for their portfolio
- e) Portfolio should be submitted in the 22<sup>nd</sup> week at a time agreed on by both teacher and learners, etc.

Refer to *Teacher Assessment Manual and Toolkit (TAMT)* pages 143–149 for more information on how to use portfolio as an assessment strategy.

**Feedback:**

**E.g.**

- a) *Inspect portfolio intermittently and provide feedback, pointing out any omissions identified in the portfolio*
- b) *Share the results of the portfolio with the learners and commend their efforts*
- c) *Return the items/artefacts to the learners unless otherwise decided by the entire class*
- d) *Encourage learners to keep record of their academic works for future reference, etc.*

**Rubrics for scoring:**

**E.g.**

- |  |                   |
|--|-------------------|
| a) <i>Cover page</i>   | <i>[2 marks]</i>  |
| b) <i>List of content</i>  | <i>[2 marks]</i>  |
| c) <i>At least a copy of one group class exercise</i>            | <i>[5 marks]</i>  |
| d) <i>Individual project work</i>                                | <i>[5 marks]</i>  |
| e) <i>A copy of group project work</i>                           | <i>[5 marks]</i>  |
| f) <i>Learner's reflection for the year</i>                      | <i>[10 marks]</i> |
| g) <i>Demonstration of creativity and self-directed learning</i> | <i>[1 mark]</i>   |

# PLC SESSION 2: Economics Tools and the Fundamental Concepts in Economics 1

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson(s) for *week 1* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 2e, 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the PLC session for *week 1* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 2* by aligning the learning plan with the Learner Material and appropriate assessment strategies.

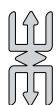
### Learning Outcome

Review your learning plan for *week 2* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators for the lessons of the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 2* lessons in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **group presentation** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Mobile phones have become an integral part of daily life for many Ghanaians. Most young Ghanaians own a mobile phone. A student collected data from class members on the cost of their mobile phones. Here is the tabular representation of the data collected.*

Student	Cost of Mobile Phone (Gh¢)
A	570
B	527
C	559
D	1800
E	500
F	420
G	400
H	420
I	430

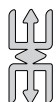
- What is the total number of students that were interviewed of the data?
- Calculate the mean of the cost of phones for the data in the table above

Refer to Teacher Manual page 22 for this task and Learner Material Section 1 for other sample tasks.

#### Hint



Give out group project work this week. It should be submitted latest by week 8.  
See **Appendix B** for sample group work.

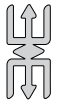


#### Note

- The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).



**E.g.***Marking scheme for the task in Activity 2.3*a) *Total frequency**The number of alphabets 'A-I' is 9.**Hence the number of students interviewed = 9* [4 marks]b) *Calculation of mean**Mean = (Sum of all values) / (number of values)* [1 mark]*Mean = (570+527+559+1800+500+420+400+420+430) / 9* [2 marks]*Mean = 5,626/9* [1 mark]*Mean = Gh¢ 625.11* [1 mark]c) *Clarity of work, collaboration and problem solving skills* [1 mark]**Note**

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

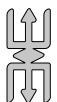
- a) *Help learners to form convenient groups and assign roles to members for the presentation*
- b) *Project or print out or write the task on the board and explain it to the learners before they commence, etc.*

*Refer to TAMT page 14 and 16 for more information on how to use presentation as assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Share the scoring rubrics and results of the task with the groups and discuss it*
- b) *Guide the groups to review their work and give them feedback on how to calculate mean on a given data, etc.*

**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1 Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2 Identify a critical friend to observe your lesson in relation to PLC Session 2 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3 Remember to:
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 3 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 3* in preparation for the next session (NTS 1c, 1f).



## Appendix B: Sample of Group Project Work

### Assessment Strategy: Reflective Journal

(Reflective Journal is the recording of facts, activities or events with date and time that they occur).

### Sample Task:

#### E.g.

In your groups, visit any office within the school community and find out about the work people do, whether their activities/work relates to the job of an economist or not. Interview at least 15 workers from these offices.

1. School's Administration offices
2. HODs/Teachers' offices
3. School Security office
4. School Matron/Dining Hall
5. Health Centre/Facility within your school

You can also visit any other office or institution not mentioned.

- a) Keep a reflective Journal on your project, stating date and time for each visit
- b) Record daily attendance for all group members in your journal
- c) Summarise your findings using a table as shown in the table below.

**Sample Summary table on the work people do and whether it relates to the work of economist.**

Date / Time	Name of Office/ Workplace	Name of Worker	Work/ Occupation of Person	Relates to the Work of Economist/ Does Not Relate to Economist
16/07/2024 4;00pm	Headmaster's Office	Mr. Wisdom Adeti	School Headmaster	Relates to Economist
17/07/2024 3;48 pm	School Library	Ms. Rita Abbah	School Librarian	Does not Relate to Economist

**Submission:** Project should be submitted latest by the 8th week of the first semester for scoring. However, project could be submitted earlier depending on its nature.

**How to Administer:**

**E.g.**

- a) *At the beginning of lessons for week 2, inform learners that there will be a group project for them and help the learners to form convenient groups*
- b) *Share the task with learners and explain it to them*
- c) *Where necessary, inform the school authorities about the exercise for their cooperation*
- d) *Encourage cooperation among the group members, etc.*

*Refer to TAMT page 19 and pages 151–153 for more information on how to use reflective journal and project as an assessment strategy.*

**Feedback:**

**E.g.**

- a) *Discuss the scoring rubrics with the learners and share the results with them for discussion*
- b) *Let each group share their success and challenging stories during data collection for the project and how they overcame it, etc.*

**Rubrics for Scoring:**

**E.g.**

- a) *Good documentation of visit, showing details of interview, date and time [10 marks]*
- b) *Learners' records on group members' participation and collaboration [5 marks]*
- c) *Table of summary for the journal, indicating at least 15 workers and the work they do [1 mark each for 15 workers interviewed – 15 marks]*

# PLC SESSION 3: Fundamental Concepts in Economics II

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 2* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.1** Share your experience in conducting and/or recording the assessment for the previous week.

**1.2** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 2* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 3* by aligning the learning plan with Learner Material and appropriate assessment strategies.

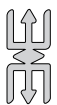
### Learning Outcome

Review your learning plan for *week 3* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 3* in your learning plan, identify activities that align with these in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

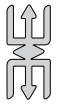
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **individual homework** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Explain the fundamental concepts 'scarcity and opportunity cost' and examine their role in decision making process within the socialist economic system.*

*Refer to TM page 26 for task and LM section 1 for further examples.*



#### Note

- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

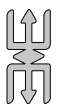
**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity*

- a) *Correct explanation of scarcity, opportunity cost [2 marks]*
- b) *Appropriate link between scarcity and opportunity cost in decision making process for socialist economies [6 marks]*
- c) *Demonstration of responsibility, critical thinking and digital literacy in task performance [2 marks]*

*Refer to TM page 26 for task and Section 1 of LM for further examples.*



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/ learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

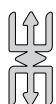
- a) *Explain the task and recommend learning resources such as LM, textbooks, online links/ URL to support learners in completing the homework successfully*
- b) *Encourage time management and honesty for independent work at home, etc.*

*Refer to TAMT pages 57–60 for more information on how to use homework as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Analyse learners' work to know if they have followed the instructions given to them, note their strengths and weaknesses for discussion in class*
- b) *Give support to learners approaching proficiency and special needs learners, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 3 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 4 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 4* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 4: Role of Buyers and Sellers in a Market and Concept of Demand

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 3* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 2e, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 3* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 4* by aligning the learning plan with Learner Material and appropriate assessment strategies.

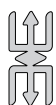
### Learning Outcome

Review your learning plan for *week 4* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 4* in your learning plan, identify activities that align with these in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*



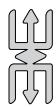
**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **case study – group** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*One common factor that determines the quantity of a commodity that an individual, firm or government can either buy or sell in any market is **price**. Without price, one would not be sure of the value of what they buy or sell. As a case study, analyse the effect of price on buying and selling by considering the following themes;*

- a) *Definitions (selling, buying)*
- b) *Effect of price on buying*
- c) *Effect of price on selling*

*Refer to TM pages 33 – 34 for this task and TM Section 2 for other examples.*



#### Note

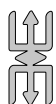
- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- i. *Areas for consideration in scoring the essay (a to c)*  
*Clear and relevant information/fact in definition of price, selling, buying, effect of price*  
*[Excellent = 5 marks; very clear, relevant and realistic information]*  
*[Good = 4 marks; clear but somewhat relevant]*  
*[Average = 3 marks; somewhat clarity and relevance]*  
*Any key area that the teacher finds excellent should be scored 5 marks and so on.*
- ii. *Collaboration, problem solving skills and orderly presentation of facts [5 marks]*



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*

iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

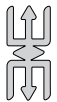
- a) *Give prior notice to the learners and give them adequate time to prepare their answers*
- b) *Give out the task to the groups, encourage collaboration and tolerance, etc.*

*Refer to TAMT page 168 for further information on how to use class exercise as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Share the scoring rubrics and results of the group exercise with learners, discuss it and comment on positive behaviours demonstrated*
- b) *Allow learners to talk about what they did well, what challenges they faced when working, and clarify concepts that were misrepresented in the group work, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 4 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) *provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).*
- b) *read PLC Session 5 and related Learner Material (NTS 1b, 2c and 3b).*
- c) *bring along your Teacher Manual, PLC Handbook and learning plan on week 5 in preparation for the next session (NTS 1c, 1f).*

# PLC SESSION 5: Law of Demand and Types of Demand

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 4* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 2e, 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 4* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 5* by aligning the learning plan with Learner Material and appropriate assessment strategies.

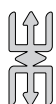
### Learning Outcome

Review your learning plan for *week 5* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 5* in your learning plan, identify activities in your plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

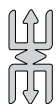
**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **test of practical knowledge** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) Explain the Law of demand
- b) Draw a demand curve using the data in the table below

Price (Ghc)	Quantity of pencils
2	20
4	15
6	10
8	5
10	1

Refer to TM page 37 for this task and LM Section 2 for more examples.

**Note**

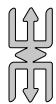
- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

Marking scheme for the task in Activity 2.3

- a) Definition of demand that captures basic keywords like quantities, goods and services, consumers, willing, able and price. [4 marks]
- b) Diagram for demand curve [5 marks]  
[1 mark each for title, labelling of price on y-axis, quantity demanded on x-axis and 2 marks for the correctness of the graph]
- c) Demonstration of creativity, critical thinking and self-directed learning [1 mark]

**Note**

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/ learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

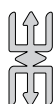
- a) Give clear instructions to learners on what is expected in the graph work
- b) Instruct learners to get the necessary materials such as pencils and graph sheet for the task, etc.

Refer to TAMT pages 180–181 for further information on how to use test of practical knowledge as an assessment strategy.

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) Discuss the scoring rubrics and reinforce the need to indicate origin (0) of the graph
- b) Allow learners to talk about their work, what challenges they faced when working on the graph/demand curve and how they overcame, etc.



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 5 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- d) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- e) read PLC Session 6 and related Learner Material (NTS 1b, 2c and 3b).

bring along your Teacher Manual, PLC Handbook and learning plan on week 6 in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 6: Preparing for Mid-Semester Examination

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 5* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 2e, 3j, 3p).

**2.2** Share your experience in conducting and/or recording the assessment for the previous week.

**3.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 5* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 6 lessons and mid-semester examination* by aligning the learning plan with Learner Material and appropriate assessment strategies.

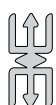
### Learning Outcome

Review your learning plan for *week 6 and prepare for mid-semester examination* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators for the mid semester examinations.

**2.2** Review the pedagogical approaches proposed for teaching *week 6* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

The selected activities should be included in the teacher/learner activity section of the learning plan.

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **mid-semester examination** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) 20 objective test items (comprising multiple choice, fill-in/supply answer, etc.)
- b) 3 essay questions of which learners answer any 2

**Multiple choice question**

- c) Economic resources are limited in
  - A. all countries.
  - B. developed countries.
  - C. poor countries.
  - D. rich countries.

**Essay (data response) question**

In a school's mini-super market, economics students observed that the price of mathematical set kept increasing every semester. They decided to record the prices and quantities demanded anytime there is an increase. They presented the data in a table as shown below.

Semester	Price (Ghc)	Quantity of mathematical set bought by students
1	2	20
2	4	15
3	6	10
4	8	5
5	10	1

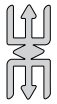
- d) From the table above;
  - i. calculate the total demand for mathematical set over the 5 semesters
  - ii. which semester recorded the highest demand for mathematical set?
  - iii. what is the total income made by the super-market in semester 3?
  - iv. at what price is demand for mathematical set lowest?
  - v. the relationship between the price and quantity demanded for math set is.....

Refer to TM weeks 1-5 for tasks and LM sections 1-2 for other task examples for the mid-semester examination.

**Hint**



Refer to **Appendix C** for Table of Specification for examination.



### Note

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 2e, 3c, 3e, 3f and 3j).

### E.g.

Marking scheme for the task in Activity 2.3

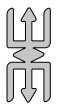
- a) 1 mark each for question 1-20 [20 marks]
- b) 15 marks each for any 2 essay questions [30 marks]
- c) Correct answer **A- all countries** [1 mark]
- d) **Solution –**
  - i. Total demand for mathematical sets  

$$= 20 + 15 + 10 + 5 + 1$$

$$= 51 \text{ math sets} \quad [4 \text{ marks}]$$
  - ii. Semester 1 [2 marks]
  - iii. Total income = price  $\times$  quantity sold  

$$= \text{Ghc } 6.00 \times 10 \text{ units}$$

$$= \text{Ghc } 60.00 \quad [4 \text{ marks}]$$
  - iv. At price Ghc10.00 [2 marks]
  - v. Negative [2 marks]
  - vi. Clarity of work and demonstration of problem solving skills [1 mark]



### Note

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/ learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.



**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

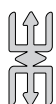
- a) *Decide on exams format as a subject group (e.g. multiple choice, essay) and craft the questions to cover TM weeks 1 – 5 and table of specification*
- b) *Schedule date, time and venue for the exams and prepare all materials needed for the examination, e.g. question papers and answer booklet, etc.*

*Refer to TAMT pages 83–86 and 94 for more information on how to use multiple choice questions and essay as an assessment strategy*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Score, share and discuss mid-semester exam scripts on time using the scoring rubrics*
- b) *Offer remedial on content areas that recorded very low performance in the mid-semester exams, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 6 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 7 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 7* in preparation for the next session (NTS 1c, 1f).



## Appendix C: Sample Table of Specification for Mid-Semester Examination

Week	Focal Area(s)	Type of Question	DoK Levels				Total
			1	2	3	4	
1	<i>Economics starts from the home; The Economist</i>	<i>Multiple Choice</i>	1	1	-	-	2
		<i>Essay</i>	-	-	1	-	1
2	<i>The Language of Economics or Economics Tools; The fundamental concepts in Economics I</i>	<i>Multiple Choice</i>	2	3	-	-	5
3	<i>Fundamental concepts in Economics II</i>	<i>Multiple Choice</i>	2	2	-	-	4
4	<i>The Role of buyers and Sellers in a Market; The concept of Demand</i>	<i>Multiple Choice</i>	2	3	-	-	5
		<i>Essay</i>	-	-	1	-	1
5	<i>The Law of Demand; The types of Demand</i>	<i>Multiple Choice</i>	1	3	-	-	4
		<i>Essay</i>	-	-	1	-	-
	<b>Total</b>		<b>8</b>	<b>12</b>	<b>3</b>	<b>-</b>	<b>23</b>

# PLC SESSION 7: Law of Diminishing Marginal Utility in Everyday Life

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 6* and *mid semester examination* that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 6* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 7* by aligning the learning plan with Learner Material and appropriate assessment strategies.

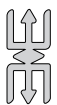
### Learning Outcome

Review your learning plan for *week 7* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 7* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

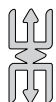
The selected activities should be included in the teacher/learner activity section of the learning plan.

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **essay** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*A teacher returned home from school very exhausted. As he so thirsty, he quickly dashed to the fridge for water. He drank the first glass of water and drank the second one but for the 3<sup>rd</sup> glass, he could only drink half. Analyse this scenario and use it to explain the law of diminishing marginal utility.*

Refer to TM page 46 for this task and LM Section 3 for more examples for learners.



#### Note

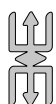
- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) *The law of diminishing marginal utility explained in relation to the scenario* [6 marks]
- b) *Critical thinking and self-reliance exhibited by the learner* [2 marks]
- c) *Organisation of essay in chronological order* [2 marks]



#### Notes

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

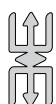
- a) *Clarify the task and communicate the format of essay writing to the learners*
- b) *Allocate time and page limit, e.g. 30 minutes and not more than 1 page, etc.*

*Refer to TAMT pages 94–96 for further information on how to use essay as assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Provide feedback to the learners by highlighting areas for improvement, reinforcing correct techniques, and encouraging the need to follow guidelines in essay writing*
- b) *Provide support to learners who may be struggling to explain the concept of diminishing marginal utility through extra tuition or a whole class remediation, etc.*



**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### **3. Reflection (10 minutes)**

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 7 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 8 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 8* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 8: The Factors of Production

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 7* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 7* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 8* by aligning the learning plan with Learner Material and appropriate assessment strategies.

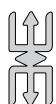
### Learning Outcome

Review your learning plan for *week 8* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 8* in your learning plan, identify activities that align with these in the Learner Materials. Select and indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **short quiz** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

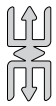
There are several resources in our environment. As an Economics student, study the resources listed below and present them in a table under the four factors of production.

Laptop, Economics Teacher, Rain, Sunlight, School money, Windows and Microsoft Applications, Time management skills, Visionary skills, Savings in a bank account, Negotiation ability, School Nurse, School farm, Creating a new product.

**Hint**

Facilitator should carefully select resources for this task as some fall under 2 factors of production. E.g. 'Economics teacher' can be considered as labour and as entrepreneur because he/she offers entrepreneurial services.

Refer to TM pages 51–52 for this task and LM Section 4 for more examples for learners.



**Note**

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

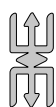
**E.g.**

Marking scheme for the task in Activity 2.3

a) 1 mark for each correct resource listed under the right factor of production [13 marks]

Land	Labour	Capital	Entrepreneurship
<ul style="list-style-type: none"> <li>• Rain</li> <li>• Sunlight</li> <li>• School farm</li> </ul>	<ul style="list-style-type: none"> <li>• Economics teacher</li> <li>• School nurse</li> </ul>	<ul style="list-style-type: none"> <li>• Laptop</li> <li>• Windows and Microsoft applications</li> <li>• Savings in bank account</li> <li>• School money</li> </ul>	<ul style="list-style-type: none"> <li>• Time management skills</li> <li>• Visionary skills</li> <li>• Negotiation skills</li> <li>• Creating a new product</li> </ul>

b) Independent work, adherence to guidelines and clarity of table [2 marks]



**Note**

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.

- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

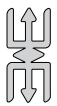
- a) *Clarify the question(s) and ensure that they are visible to all learners*
- b) *Give timeline for submission and encourage independent work, etc.*

*Refer to TAMT pages 10 – 11 and page 14 for further information on how to use short quiz as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Score, share and discuss the outcome of the test using the scoring rubrics*
- b) *Allow learners to talk about their work, what challenges they faced when classifying the resources under the factors of production and clarify any misinformation from learners' work, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 8 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 9 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on week 9 in preparation for the next session (NTS 1c, 1f).



# PLC SESSION 9: Rewards of Factors of Production

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 8* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 8* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 9* by aligning the learning plan with Learner Material and appropriate assessment strategies.

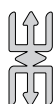
### Learning Outcome

Review your learning plan for *week 9* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 9* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

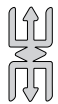
**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **critiquing** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) Owners of banks and businesses enjoy profit as their reward. Critique this statement and state the reason why you agree or disagree.
- b) Consider the pairing done in the table below. Draw the table in your exercise book, critique and re-match each factor of production to its appropriate reward.

Factor Of Production	Reward	Appropriate Reward
Land	Profit	
Entrepreneurship	Interest	
Capital	Rent	
Labour	Wages	

Refer to TM page 54 for sample task and LM Section 4 for more examples.



#### Note

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

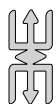
**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

Marking scheme for the task in Activity 2.3

- a)
  - i. Correct answer is **Disagree**; this is because banks and businesses are capital resources/assets, and they enjoy **interest** as their reward. [2 marks]
  - ii. For each correct matching [2 marks]
  - iii. Demonstration of critical thinking in answering question a) [1 mark]
- b) Creativity and accuracy in drawing of the table for 'b' [1 mark]

Factor Of Production	Reward	Appropriate Reward
Land	Profit	Rent
Entrepreneurship	Interest	Profit
Capital	Rent	Interest
Labour	Wages	Wages

**Note**

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

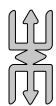
*Explain the concept of critiquing to the class; critiquing is not the same as criticising, but a review of work done and stating opinions for improvement, etc.*

*Refer to TAMT pages 74 –76, 166–167 for more information on how to use critiquing as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

*Share the scoring rubrics on matching of the factors of production to the appropriate reward and let learners correct their own work by using the correct scoring rubrics, etc.*

**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 9 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 10 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 10* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 10: Relating Production to Productivity

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 9* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 9* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 10* by aligning the learning plan with Learner Material and appropriate assessment strategies.

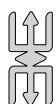
### Learning Outcome

Review your learning plan for *week 10* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons or the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 10* in your learning plan, identify activities in the learning plan that align with those in the Learner Materials and indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

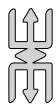
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

- 2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **discussion** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Evaluate the factors that influence productivity*

*Refer to TM page 57 for this task and LM Section 4 for more examples on discussion.*



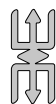
#### Note

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

- 2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*It is suggested that scores should not be awarded for this discussion. The aim of the discussion should focus on encouraging active class participation, enhancing learners' communication skills, collaboration, tolerance, etc. These skills and values should be communicated to learners verbally during and after the discussion.*



#### Note

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

- 2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

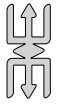
- a) Define the mode of assessment and encourage active participation among learners
- b) Lead the discussion by asking learners to mention the factors that influence productivity, take the factors one after the other and let learners explain them in their own words, etc.

*Refer to TAMT pages 66–69 and 162–164 for more information on how to use discussion as an assessment strategy.*

- 2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Comment on, and encourage positive behaviours displayed by learners during the discussion*
- b) *Call learners randomly to summarise the key ideas on the factors that influence productivity as a way of reinforcing correct information, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 10 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3** Remember to:
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 11 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 11* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 11: Assess Location and Localisation of Industries

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 10* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 10* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 11* by aligning the learning plan with Learner Material and appropriate assessment strategies.

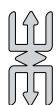
### Learning Outcome

Review your learning plan for *week 11* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 11* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **concept mapping** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Map each statement below to the appropriate column in the table to form the differentiation between location and localisation of industry.*

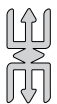
Statements;

- i. *Refers to a specific geographical area where an industry is situated*
- ii. *It is largely influenced by agglomeration economies/benefits of clustering*
- iii. *Involves the tendency of industries to group together in a particular locality*
- iv. *Refers to the concentration or clustering of industries in a geographical area*
- v. *It is largely influenced by proximity to raw materials and access to transportation*
- vi. *Involves choosing a particular region, city or town for setting up an industry*

**Table showing the difference between location and localisation of industry**

Location of Industry	Localisation of Industry

Refer to TM page 60 for sample tasks and LM section 4 for more examples for learners.



**Note**

- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

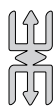
*Marking scheme for the task in Activity 2.3*



**Table showing the difference between location and localisation of industry**

<b>Location of Industry</b>	<b>Localisation of Industry</b>
<i>Refers to a specific geographical area where an industry is situated</i>	<i>Refers to the concentration or clustering of industries in a geographical area</i>
<i>It is largely influenced by proximity to raw materials and access to transportation</i>	<i>It is largely influenced by agglomeration economies/benefits of clustering</i>
<i>Involves choosing a particular region, city or town for setting up an industry</i>	<i>Involves the tendency of industries to group together in a particular locality</i>

- a) *Accuracy and completeness of mapping for each column on the table [2 mark each]*
- b) *Demonstration of creativity and clarity of table, and self-reliance in task performance [3 marks]*

**Note**

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group. (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

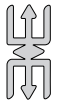
- a) *Explain the assessment strategy and give out the task by clearly stating the central ideas or theme for the mapping*
- b) *Give adequate time for learners to prepare their response and submit work for scoring, etc.*

*Refer to TAMT page 14 for a gist on concept mapping as an assessment strategy. Teachers should use ICT tools to further explore the varied ways of using concept maps as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

*Share the scoring rubrics with the learners and comment on learners' demonstration of depth of understanding and analysis of the differences between location and localisation, etc.*

**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 11 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3 Remember to:**
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 12 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 12* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 12: Preparing for End of Semester Examination

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 11* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 11* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 12 lessons and end of semester examination* by aligning the learning plan with Learner Material and appropriate assessment strategies.

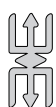
### Learning Outcome

Review your learning plan for *week 12 and prepare for end of semester examination* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 12* in your learning plan, identify activities that align with these in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**1.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is *end of semester examination* (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) 40 objective type questions (comprising of multiple choice, fill-in/supply answer, etc.)
- b) 5 essay type questions of which learners answer any 3

**Multiple choice question**

- c) The relationship between price and quantity demanded is
  - A. direct.
  - B. linear.
  - C. inverse.
  - D. diverse.

**Essay type question**

- d) i. Examine and state the law of demand using the demand function below

$$Q_d = 50 - 0.5P$$

Use Price Ghc 50.00 and Ghc 20.00 in your analysis.

- ii State the relationship that exist between quantity demand and price

Refer to TM weeks 1-12 and LM sections 1-4 for tasks for the end of semester examination.

**Hint**

See **Appendix D** for Table of Specification for end of semester examination.

**Note**

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) 1 mark each for question 1-40 [40 marks]
- b) 20 marks each for any 3 essay questions answered [60 marks]
- c) Correct answer is C – inverse. [1 mark]

d) **Solution to Essay question**

- i.
- Using price Ghc50 and Ghc20 to prove the law of demand*

*When price is 50.00,*

$$Q_d = 50 - 0.5(50)$$

$$Q_d = 50 - 25$$

$$Q_d = 25 \text{ units} \quad [8 \text{ marks}]$$

*When price is 20.00,*

$$Q_d = 50 - 0.5(20)$$

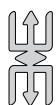
$$Q_d = 50 - 10$$

$$Q_d = 40 \text{ units.} \quad [8 \text{ marks}]$$

*Summary/statement of the law of demand;**At a higher price (Ghc50), quantity demand is low (25 units), and at a lower price (Ghc20), quantity demand is high (40 units), ceteris paribus. [2 marks]*

- ii.
- The relationship between quantity demand and price is **negative or inverse** [1 mark]*

- e)
- Clarity of work, independence and problem solving skills demonstrated by learner [1 mark]*

**Note**

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

- 2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

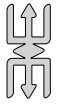
- a) *Decide on exams format as a subject group (e.g. multiple choice, essay) and craft the questions to cover TM week 1 – 12 and table of specification*
- b) *Schedule date, time and venue for the exams and prepare all materials needed for the examination, e.g. question papers and answer booklet, etc.*

*Refer to TAMT pages 83–86 and 94 for more information on how to use multiple choice questions and essay as an assessment strategy.*

- 2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class. (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) Give timely feedback to the learners by holding a discussion on the scoring rubrics and exams scripts as soon as school resumes
- b) Remediate lessons on content areas that recorded lower performance in the end of semester examination, etc.



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 12 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3 Remember to:**
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 13 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 13* in preparation for the next session (NTS 1c, 1f).



## Appendix D: Sample Table of Specification for the End of Semester Examination

Week	Focal Area(s)	Type of Question	DoK Levels				Total
			1	2	3	4	
1	<i>Economics starts from the home; The Economist</i>	<i>Multiple Choice</i>	1	3	-	-	4
2	<i>The language of Economics or Economics Tools; Introduction to the fundamental concepts in Economics</i>	<i>Multiple Choice</i>	3	1	-	-	4
3	<i>Fundamental concepts in Economics</i>	<i>Multiple Choice</i>	2	2	-	-	4
4	<i>The Role of buyers and Sellers in a Market; The concept of Demand</i>	<i>Multiple Choice</i>	4	1	-	-	5
		<i>Essay</i>	-	-	1	-	1
5	<i>The Law of Demand The types of Demand</i>	<i>Multiple Choice</i>	1	2	-	-	3
		<i>Essay</i>	-	-	1	-	1
6	<i>The Concept of Utility</i>	<i>Multiple Choice</i>	1	2	-	-	3
7	<i>The Law of Diminishing Marginal Utility in Everyday Life</i>	<i>Multiple Choice</i>	2	-	-	-	2
		<i>Essay</i>	-	-	1	-	1
8	<i>The factors of Production</i>	<i>Multiple Choice</i>	2	2	-	-	4
		<i>Essay</i>	-	-	1	-	1
9	<i>The rewards of factors of Production</i>	<i>Multiple Choice</i>	1	2	-	-	3
10	<i>Relating Production to Productivity</i>	<i>Multiple Choice</i>	-	2	-	-	2
		<i>Essay</i>	-	-	-	1	1
11	<i>Location and localisation of Industries</i>	<i>Multiple Choice</i>	3	-	-	-	3
12	<i>Division of Labour and Specialisation in Production</i>	<i>Multiple Choice</i>	-	2	-	-	2
		<i>Essay</i>	-	1	-	-	1
<b>Total</b>			<b>20</b>	<b>20</b>	<b>4</b>	<b>1</b>	<b>45</b>

# PLC SESSION 13: Supply and Types of Supply

## 1. Introduction (20 minutes)

- 1.1 Share one thing on the lesson for *week 12* and the end of semester examination that:
  - a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
  - b) you found challenging (NTS 3j, 3p).
- 1.2 Share your experience in conducting and/or recording the assessments for the previous semester.
- 1.3 Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 12* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

- 2.1 Read the purpose, learning outcome and learning indicators for the session:

### Purpose

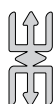
The purpose of the session is to review the learning plan for *week 13* by aligning the learning plan with Learner Material and appropriate assessment strategies.

### Learning Outcome

Review your learning plan for *week 13* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
  2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.
- 2.2 Review the pedagogical approaches proposed for teaching *week 13* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

The selected activities should be included in the teacher/learner activity section of the learning plan.

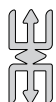


**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **group class exercise** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) *Explain the concept of supply*
- b) *With the use of relevant illustrations, distinguish between the types of supply*

Refer to TM Book 2 pages 8–9 for this task and LM Section 5 for more examples.



#### Note

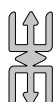
- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) *Good explanation of the concept of supply, indicating keywords such as quantities, goods and services, suppliers, willing to sell, price, long run, short run. [4 marks]*
- b) *Illustrations that support the types of supply [1 mark each]*
- c) *A good distinction/definition of the types of demand [2 marks each]*
- d) *Creativity and critical thinking in illustrations/diagrams for the types of supply [2 mark]*



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

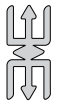
- a) *Give prior notice to the learners and give them adequate time to prepare their response*
- b) *Give out the task to the groups, encourage collaboration and time management, etc.*

Refer to TAMT page 168 for further information on how to use class exercise as an assessment strategy.

- 2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) Comment on positive behaviours when discussing the scoring rubrics and results of the presentation with learners
- b) Where necessary, let groups do a correction to their work, following the scoring rubrics, etc.



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 13 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3** Remember to:
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 14 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 14* in preparation for the next session (NTS 1c, 1f).

## PLC SESSION 14: Law of Supply

### 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 13* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 13* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

### 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

#### Purpose

The purpose of the session is to review the learning plan for *week 14* by aligning the learning plan with Learner Material and appropriate assessment strategies.

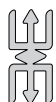
#### Learning Outcome

Review your learning plan for *week 14* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

#### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 14* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



#### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **poster** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

Using an A3 sheet of paper or manila card;

- State the law of supply
- Construct the supply curve using the data below

Price of Rice (\$)	Quantity (cup of rice)
1	5
2	10
3	15
4	20
5	25

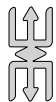
Refer to TM Book 2 page 13 and 14 for this task and Section 5 of LM for more examples.

#### Hint



Give out individual project work to learners this week. To be submitted, latest by the 20<sup>th</sup> week. See **Appendix E** for sample individual project work.

#### Note



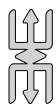
- The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

Marking scheme for the task in Activity 2.3

- Statement of the law of supply indicating keywords such as quantities, goods and services, suppliers/sellers, willing and able, sell, price [2 marks]
- Diagram of supply curve [5 marks]  
[1 mark each for title, labelling of price on y-axis, quantity supplied on x-axis and 2 marks for the correctness of the graph].
- Creativity and data analysis skills demonstrated [2 marks]
- Tolerance and time consciousness during poster presentation 1 mark]



### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21st century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

#### E.g.

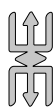
- a) *Give clear instructions to learners on what is expected for the poster*
- b) *Instruct learners to get the necessary materials such as pencils and A3 paper or manila card for the task, etc.*

*Refer to TAMT pages 97 – 99 for further information on how to use poster as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

#### E.g.

- a) *Discuss the scoring rubrics with the learners and reinforce the need to indicate origin (0) of the graph*
- b) *Allow learners to analyse the work of their peers, identifying common strengths and areas for improvement, etc.*



### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

## 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 14 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) *provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).*
- b) *read PLC Session 15 and related Learner Material (NTS 1b, 2c and 3b).*
- c) *bring along your Teacher Manual, PLC Handbook and learning plan on week 15 in preparation for the next session (NTS 1c, 1f).*



## Appendix E: Sample Individual Project Work

### Assessment Strategy: Individual Project Work

#### Task: E.g.

Abishika Kariss, a journalist of Waywayo FM conducted a documentary in the Nokofio market. She focused on the rate at which price changes and how suppliers respond to it. Within a period of two years, she observed and documented her findings for Gari and Techno mobile phone within the market and presented the data using a schedule. As a student of Economics, use the data in the schedule/table below to draw 2 separate supply curves on separate manila cards or A3 papers. Present each supply schedule at the top of your paper before drawing the graph beneath it.

Price of Gari (Ghc)	Quantity supplied for (Cup of Gari)	Price of techno Mobile phone (\$)	Quantity of phones supplied
2	5	50	100
4	10	40	80
6	15	30	60
8	20	20	40
10	25	10	0

Refer to TM week 13 –14 and LM sections 5–8 for any task that you can use for this project.

#### How to Administer: E.g.

- Provide clear guidelines for developing the project and how it will be assessed
- Provide (assist learners with) the necessary resources such as A3 papers if possible
- Deadline for the submission of this project is week 17, etc.

Refer to TAMT pages 151–153 for more information on how to use project as an assessment strategy.

#### Feedback: E.g.

- Provide individual feedback on learners' project and let them reflect on the outcome of their work
- Allow learners to talk about their work, what challenges they faced when working on the individual project; clarify difficulties of learners and give further support where necessary, etc.

**Rubrics for scoring: E.g.**

- a) *Presentation of schedule/table on top of each graph* [1 mark × 2]
- b) *Accurate drawing of supply curves, indicating title, price, quantity supplied, etc.* [8 marks × 2]
- c) *Demonstration of creativity, integrity and responsibility in task* [1 mark × 2]

# PLC SESSION 15: Concept of Market and its Types

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 14* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 14* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 15* by aligning the learning plan with Learner Material and appropriate assessment strategies.

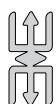
### Learning Outcome

Review your learning plan for *week 15* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 15* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

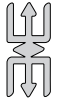


**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **short quiz** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) Explain the term market and state 2 examples of market
- b) Outline 2 differences between online market and physical market

Refer to TM book 2 pages 19–20 for sample task and Section 6 of LM for more examples.



**Note**

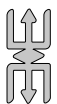
- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

Marking scheme for the task in Activity 2.3

- a) Appropriate definition of market; is a system or a set of arrangements where buyers and sellers interact to exchange goods, services or resources. [2 marks]
- b) Two appropriate examples of markets [1 mark]
- c) Two (2) differences between the 2 forms of market (using sentences and conjunctions)
  - i. Physical market = physical space **but** online market = internet platform [3 marks]
  - ii. Physical market = face to face interaction **but** online market = virtual interaction [3 marks]
- d) Demonstration of Integrity, time management and responsibility in performing task [1 mark]



**Note**

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/ learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

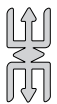
- c) *Clarify the questions and ensure that they are visible and accessible to all learners*
- d) *Give timeline for submission and encourage independent work, etc.*

*Refer to TAMT pages 10 – 11 and page 14 for further information on how to use short quiz as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Let learners talk about their work, what they did well, what challenges they faced when differentiating the types of market*
- b) *Celebrate learners' achievements to boost self-esteem and encourage self-study/ further reading among the learners, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 15 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 16 and related Learner Material (NTS 1b, 2c and 3b).
- e) bring along your Teacher Manual, PLC Handbook and learning plan on *week 16* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 16: Concept of Price

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 15* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 15* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 16* by aligning the learning plan with Learner Material and appropriate assessment strategies.

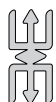
### Learning Outcome

Review your learning plan for *week 16* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 16* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

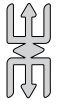
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **investigation/Research** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Investigate how prices of goods and services are determined in the market.*

*Refer to TM Book 2 page 24 for sample task and Section 7 of LM for more examples.*



#### Note

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

a) *Things to look out for when scoring*

**Key idea:** [2 marks]

*Prices of goods and services are determined in the market through the interaction of the forces of demand and supply.*

**Supplier and Demander perspective:** [2 marks]

*Suppliers produce goods and services at a cost, and they are willing to sell at a price that covers their costs and their profit. Demanders (consumers) on the other hand are willing to buy goods and services at a price that reflects their income levels.*

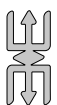
**Price Adjustment:** [2 marks]

*When demand is high and supply is low, businesses raise prices to capture the excess demand and maximise profit, and when demand is low and supply is high, businesses lower prices to encourage sales and clear excess supply.*

**Market Equilibrium Price:** [2 marks]

*The price at which the quantity supplied equals the quantity demanded is the equilibrium price, and this becomes the price at which the commodity will be sold in the market.*

b) *Clarity of work, research skills exhibited and orderly presentation of answers.* [2 mark]



#### Note

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.

- iii. *Discuss how you will observe and integrate character qualities, national values and 21st century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

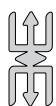
- a) *Instruct learners to get pencil and other working materials and explain the task to them*
- b) *Give clear instructions to learners on what is expected in the diagram, etc.*

*Refer to Teacher Assessment Manual and Toolkit pages 77–80 for more information on how to use research as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

*Discuss the scoring rubrics with the learners and let them reflect on the outcomes of their work, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 16 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3 Remember to:**

- a) *provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).*
- b) *read PLC Session 17 and related Learner Material (NTS 1b, 2c and 3b).*
- c) *bring along your Teacher Manual, PLC Handbook and learning plan on week 17 in preparation for the next session (NTS 1c, 1f).*

# PLC SESSION 17: Factors that affect Pricing in the Economy

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 16* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 16* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 17* by aligning the learning plan with Learner Material and appropriate assessment strategies.

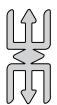
### Learning Outcome

Review your learning plan for *week 17* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 17* in your learning plan, identify activities in the plan that align with these in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

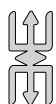
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **group presentation** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) *List the three basic factors that determine price in the economy*
- b) *Explain the three basic factors that affect pricing decisions in a market*

*Refer to TM Book 2 pages 25–26 for this task and Section 7 of LM for other task examples.*



#### Note

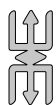
- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) *Factors that determine price*
  - i. *Scarcity of the good or service* [1 mark]
  - ii. *Durability of the product* [1 mark]
  - iii. *Usefulness of the product or service* [1 mark]
- b) *Correct explanation of each factor above* [2 marks each]
- c) *Collaboration, leadership and presentation skills* [1 mark]



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

- a) *Give prior notice to the learners and give them adequate time to prepare their response*

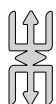
- b) Give out the task to the groups, encourage collaboration and let groups submit a copy of their final work for scoring, etc.

Refer to TAMT pages 14–16 for further information on how to use group presentation as an assessment strategy.

- 2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

Discuss the scoring rubrics and test results with the learners and let them reflect on the outcomes of their work, etc.



#### Note

In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 17 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3 Remember to:**
- provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - read PLC Session 18 and related Learner Material (NTS 1b, 2c and 3b).
  - bring along your Teacher Manual, PLC Handbook and learning plan on *week 18* in preparation for the next session (NTS 1c, 1f).



# PLC SESSION 18: Preparing for Mid-Semester Examination

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 17* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 2e, 3j and 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 17* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 18 lessons and mid-semester examination* by aligning the learning plan with Learner Material and appropriate assessment strategies.

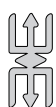
### Learning Outcome

Review your learning plan for *week 18 and prepare for mid-semester examination* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 18* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **mid-semester examination** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) 30 objective test items (comprising multiple choice, fill-in/supply answer, etc.)
- b) 4 essay questions from which learners answer any 2

**Multiple choice question**

- c) Which of the following factories is likely to be located near a market?
  - A. Bread
  - B. Steel
  - C. Car
  - D. Sugar

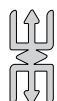
**Essay question**

- d) i. Explain the term **localisation** of a firm
- ii. Highlight **four** factors that influence the localisation of a firm

Refer to TM Book 2 weeks 13–17 for tasks and LM sections 5–7 for more examples on this mode of assessment.

**Hint**

Refer to **Appendix F** for sample Table of Specification for mid-semester examination.



**Note**

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

Marking scheme for the task in Activity 2.3

- a) 1 mark each for question 1–30 [30 marks]
- b) 10 marks each for any 2 essay questions answered [20 marks]
- c) Correct answer is **A. – Bread** [1 mark]

d) **Solution to Essay**

i. *Localisation refers to the process of adapting a product, service, or content to meet the language, cultural, and other requirements of a specific target market or locale.* [1 mark]

ii. *Natural Resources in the localisation*

*Access to transportation network*

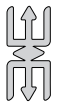
*Availability of labour*

*Government policies and incentives*

*Agglomeration economies*

[2 marks for each explanation]

e) *Clarity in expressions, critical thinking and demonstration of self–reliance* [1 mark]



**Note**

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the ‘Assessment DoK aligned to Curriculum and TM’ section below teacher/ learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

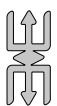
- a) *Decide on exams format as a subject group (e.g. multiple choice, essay) and craft the questions to cover TM week 13 – 17 and table of specification*
- b) *Schedule date, time and venue for the exams and prepare all materials needed for the examination, e.g. question papers and answer booklet, etc.*

*Refer to TAMT pages 83–86 and 94 for more information on how to use multiple choice questions and essay as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Score, share and discuss mid–semester exam scripts on time using the scoring rubrics or marking scheme*
- b) *Offer support, remedial on content areas that recorded lower performance in the mid–semester exams, etc.*



**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1 Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2 Identify a critical friend to observe your lesson in relation to PLC Session 18 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3 Remember to:
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 19 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 19* in preparation for the next session (NTS 1c, 1f).



## Appendix F: Sample Table of Specification for Mid-Semester Examination

Week	Focal Area(s)	Type of Question	DoK Levels				Total
			1	2	3	4	
13	<i>Supply and Types of Supply</i>	<i>Multiple Choice</i>	1	5	-	-	6
		<i>Essay</i>	-	-	1	-	1
14	<i>The Law of Supply</i>	<i>Multiple Choice</i>	3	3	-	-	6
15	<i>Concept of Market and its Types</i>	<i>Multiple Choice</i>	4	2	-	-	6
		<i>Essay</i>	-	-	1	-	1
16	<i>Price</i>	<i>Multiple Choice</i>	2	4	-	-	6
		<i>Essay</i>	-	-	1	-	1
17	<i>Factors that affect Pricing in the Economy</i>	<i>Multiple Choice</i>	3	3	-	-	6
		<i>Essay</i>	-	1	-	-	1
<i>Total</i>			13	18	3	-	34

# PLC SESSION 19: Fundamental Macroeconomics Variables

## 1. Introduction (20 minutes)

- 1.1** Share one thing on the lesson for *week 18* and the *mid-semester examination* that:
- went well (NTS 1a, 2c, 3e–3j and 3k–3n).
  - you found challenging (NTS 3j, 3p).
- 1.2** Share your experience in conducting and/or recording the assessment for the previous week.
- 1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 18* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

- 2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

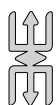
The purpose of the session is to review the learning plan for *week 19* by aligning the learning plan with Learner Material and appropriate assessment strategies.

### Learning Outcome

Review your learning plan for *week 19* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

- Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
  - Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.
- 2.2** Review the pedagogical approaches proposed for teaching *week 19* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

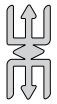
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **reflective journal** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Reflect and write on your understanding of any 4 macroeconomic variables and state one example of each variable in your reflection.*

*Refer to TM Book 2 page 34 for this task and LM Section 8 for more examples.*



#### Note

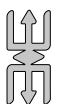
- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) *Demonstration of global awareness (as a national value) of macroeconomic variables and innovation in reflective journal writing [3 marks]*
- b) *One appropriate example of the macroeconomic variables [4 × 1 mark each]*
- c) *A good reflection that captures key areas in any 4 of the macroeconomic variables correctly [4 × 2 marks each]*
  - i. *Gross domestic product (GDP)*
  - ii. *Inflation rate*
  - iii. *Unemployment rate*
  - iv. *Exchange rate*
  - v. *Government budget deficit/surplus*
  - vi. *Trade balance (balance of payment)*



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

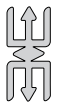
- a) *Explain the task and the assessment strategy to the learners*
- b) *Give duration for the task. E.g. 20 minutes, not more than 1 and half pages, etc.*

*Refer to TAMT pages 18–19 for further information on how to use reflective journal as an assessment strategy. Teachers should use ICT tools to further explore how to use reflective journal.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Share the scoring rubrics and results of the task with the learners and let learners reflect on the outcomes of their work*
- b) *Correct any misrepresentation of facts on the macroeconomic variables from learners' work, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 19 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- d) *provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).*
- e) *read PLC Session 20 and related Learner Material (NTS 1b, 2c and 3b).*
- f) *bring along your Teacher Manual, PLC Handbook and learning plan on week 20 in preparation for the next session (NTS 1c, 1f).*



# PLC SESSION 20: Concept of Money

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 19* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 19* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 20* by aligning the learning plan with Learner Material and appropriate assessment strategies.

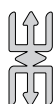
### Learning Outcome

Review your learning plan for *week 20* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 20* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

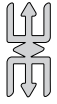
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **individual homework** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) Explain the meaning of money
- b) Explain 3 functions of money to you as a learner

Refer to TM Book 2 page 40 for this task and LM Section 9 for more assessment tasks.

**Note**

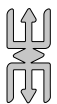
- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

Marking scheme for the task in Activity 2.3

- a) Check content for facts and keywords in learners' definition of money  
E.g. medium of exchange, unit of account, store of value, transactions [3 marks]
- b) Explanation of any 3 functions of money [2 marks each – 6 marks]
- c) Demonstration of self-reliance and information literacy [1 mark]

**Note**

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

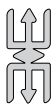
- a) Recommend resources such as LM, textbooks, online links to support learners in completing the homework successfully
- b) Encourage time management at home so that learners do not spend all their time on the task alone, etc.

Refer to TAMT pages 57–60 for further information on how to conduct homework as an assessment strategy.

- 2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

*Analyse learners' work and provide feedback on their strengths and weaknesses on the concept of money, etc.*



**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 20 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3** Remember to:
- provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - read PLC Session 21 and related Learner Material (NTS 1b, 2c and 3b).
  - bring along your Teacher Manual, PLC Handbook and learning plan on *week 21* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 21: Types of Financial Institutions

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 20* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 20* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 21* by aligning the learning plan with Learner Material and appropriate assessment strategies.

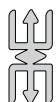
### Learning Outcome

Review your learning plan for *week 21* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 21* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

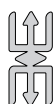
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **case study – individual** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*There are many financial institutions in Ghana that offer a wide range of financial services. Given the depository financial institution (DFI) as Commercial Banks and the Non-depository financial institution (NDFI) as Insurance Companies. As a case study, analyse and;*

- a) *identify 5 differences between the DFIs and the NDFIs*
- b) *state 5 similarities between the DFIs and the NDFIs*



#### Note

- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

**Differences;**

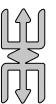
- a) *DFIs accept deposits but NDFIs do not accept deposits, etc.*

*[2 marks for each valid point]*

**Similarities;**

- b) *Both DFIs and NDFIs offer financial services such as investment advice, risk management etc. [2 marks for each valid point]*
- c) *Demonstration of critical thinking, self-reliance and time management skills [5 marks]*

*Refer to TM Book 2 page 43 and Section 9 of LM for more examples.*



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

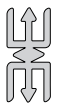
- a) *Prepare the case study and distribute it to the groups*
- b) *Communicate clear instructions to the groups, stating how work should be presented on paper, when to start and when to submit for scoring, etc.*

*Refer to TAMT pages 31–34 and 182–183 for more information on case study as an assessment strategy.*

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n)

**E.g.**

- a) *Evaluate learner's responses based on a fair and predetermined criteria*
- b) *Offer feedback to the entire class on the case study by pointing out the appropriate similarities and differences of DFIs and NDFIs, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 21 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 22 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 22* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 22: Importance of Agriculture to the Ghanaian Economy

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 21* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 21* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 22* by aligning the learning plan with Learner Material and appropriate assessment strategies.

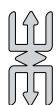
### Learning Outcome

Review your learning plan for *week 22* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 22* in your learning plan, identify activities in the plan that align with these in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

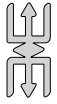
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **discussion** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

*Explain the importance of agriculture to the economy of Ghana*

*Refer to TM book 2, page 48 and LM Section 10 for more examples.*



#### Note

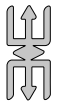
- i. *The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.*
- ii. *The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.*

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) *It is recommended that this assessment should be non-scoring as the aim is to encourage active class participation, communication, collaboration, tolerance, etc.*
- b) *Teachers can however take note of the learners that demonstrated the values well and write such appropriate comments on their transcript.*



#### Note

- i. *The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.*
- ii. *Take into consideration different modes of responses provided by learners.*
- iii. *Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.*

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

- a) *Define the mode of assessment and encourage active participation among learners*
- b) *Lead the discussion by asking learners to mention the importance of agriculture and randomly calling on learners to explain each importance to the economy of Ghana, etc.*

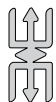
*Refer to TAMT pages 66–69 and 162–164 for more information on how to use discussion as an assessment strategy.*



**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Allow learners to talk by saying what they have learnt for the day*
- b) *Commend learners for their active participation and motivate them to do better next time, etc.*



**Note**

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### **3. Reflection (10 minutes)**

**3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).

**3.2** Identify a critical friend to observe your lesson in relation to PLC Session 22 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).

**3.3** Remember to:

- a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
- b) read PLC Session 23 and related Learner Material (NTS 1b, 2c and 3b).
- c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 23* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 23: Importance of Industry to the Ghanaian Economy

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 22* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 22* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 23* by aligning the learning plan with Learner Material and appropriate assessment strategies.

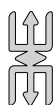
### Learning Outcome

Review your learning plan for *week 23* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Materials and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 23* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

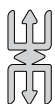
*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **essay** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

Choose any one Ghanaian industry from either the primary, secondary or tertiary sector and describe their activities, stating 3 relevance of such an industry to the Ghanaian economy.

Refer to TM Book 2 page 51 and LM Section 10 for more examples.



#### Note

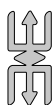
- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

Marking scheme for the task in Activity 2.3

- a) Good and accurate content (intended outcome)
  - i. Name of Ghanaian industry [1 mark]
  - ii. Indication of the sector it belongs to [1 mark]
  - iii. Description of their activity that corresponds to the sector [4 marks]
  - iv. Three (3) importance/relevance to the Ghanaian economy [4 marks × 3]
- b) Demonstration of self-reliance and good language communication [1 mark]



#### Note

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21st century skills that align with the lesson for the week and include these in your scoring.

- 2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

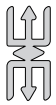
*Clarify the task and give adequate time and instruction to the learners to complete it, etc.*

*Refer to TAMT pages 94–96 for further information on how to use essay as an assessment strategy.*

- 2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) *Provide feedback to the learners by highlighting areas for improvement, reinforcing correct techniques, and encouraging the need to follow guidelines in essay writing*
- b) *Support learners with special needs and those approaching proficiency in the task, etc.*



#### Note

*In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.*

### 3. Reflection (10 minutes)

- 3.1** Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2** Identify a critical friend to observe your lesson in relation to PLC Session 23 and provide feedback on your lesson (NTS 3f, 3l, 3n and 3o).
- 3.3** Remember to:
  - a) provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).
  - b) read PLC Session 24 and related Learner Material (NTS 1b, 2c and 3b).
  - c) bring along your Teacher Manual, PLC Handbook and learning plan on *week 24* in preparation for the next session (NTS 1c, 1f).

# PLC SESSION 24: Preparing for End of Semester Examination

## 1. Introduction (20 minutes)

**1.1** Share one thing on the lesson for *week 23* delivered last week that:

- a) went well (NTS 1a, 2c, 3e–3j and 3k–3n).
- b) you found challenging (NTS 3j, 3p).

**1.2** Share your experience in conducting and/or recording the assessment for the previous week.

**1.3** Share your observation on what a colleague did by way of application of lessons learned from the previous session for *week 23* that supported learning (NTS 1e, 1g, 2b–2c, 3e–3j and 3k–3m).

## 2. Review of Learning Plans (60 minutes)

**2.1** Read the purpose, learning outcome and learning indicators for the session:

### Purpose

The purpose of the session is to review the learning plan for *week 24* by aligning the learning plan with Learner Material and appropriate assessment strategies. The session will also provide the opportunity for teachers to plan the end of semester examination.

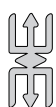
### Learning Outcome

Review your learning plan for *week 24* considering the cross-cutting issues (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

### Learning Indicators

1. Review the activities in the Learner Material and identify appropriate activities based on the pedagogical approaches in the Teacher Manual that can support your lesson for the week.
2. Discuss and develop assessment tasks and rubrics/marking scheme for the learning indicators of the lessons for the week.

**2.2** Review the pedagogical approaches proposed for teaching *week 24* in your learning plan, identify activities in the plan that align with those in the Learner Material. Indicate the activity (ies) in your learning plan (NTS 2c, 3b).



### Note

*The selected activities should be included in the teacher/learner activity section of the learning plan.*

**2.3** Develop assessment tasks/items based on the learning indicator(s) on assessment for the week. This week's recommended mode of assessment is **end of semester examination** (NTS 2c, 3e, 3h, 3k and 3p).

**E.g.**

- a) 40 objective type questions (consisting of multiple choice, fill-in/supply answer, etc.)
- b) 5 essay type questions of which learners will answer any 3

**Essay type question**

- c) i. Examine and state the law of supply using the supply function below

$$Q_s = 50 + 0.5P$$

Use Price Ghc 50.00 and Ghc 20.00 in your analysis.

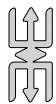
- ii. State the relationship that exist between quantity supply and price

Refer to TM Book 2 Weeks 13–24 and LM Sections 5–10 for more task examples.



**Hint**

See **Appendix G** for sample Table of Specification for End of Semester Examination.



**Note**

- i. The assessment tasks/items may cover levels 1 to 4 where appropriate to ensure that assessment is differentiated for all.
- ii. The selected activities should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/learner activities of the learning plan.

**2.4** Discuss (and agree as a subject group) how you will develop the marking scheme/ rubrics for scoring the assessment task(s)/item(s) for the week's recommended assessment (NTS 2c, 3j, 3l and 3p).

**E.g.**

*Marking scheme for the task in Activity 2.3*

- a) 1 mark each for question 1–40 [40 marks]
- b) 20 marks each for any 3 essay questions answered [60 marks]

**Solution for Essay question**

- c) i. Using price Ghc50 and Ghc20 to proof the law of supply

$$\text{When price is } 50.00, Q_s = 50 + 0.5(50)$$

$$Q_s = 50 + 25$$

$$Q_s = 75 \text{ units}$$

[8 marks]

$$\text{When price is } 20.00, Q_s = 50 + 0.5(20)$$

$$Q_s = 50 + 10$$

Qs = 60 units.

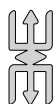
[8 marks]

Summary/statement of the law of supply;

At a higher price (Ghc50), quantity supplied is high (75 units), and at a lower price (Ghc20), quantity supplied is low (60 units), *ceteris paribus*. [2 marks]

ii. The relationship that exist between quantity supply and price is **positive or direct** [1 mark]

d) Clarity, independent work, problem solving sills demonstrated [1 mark]



### Note

- i. The marking scheme and rubrics for scoring the assessment tasks/items should be included in the 'Assessment DoK aligned to Curriculum and TM' section below teacher/ learner activities in the learning plan.
- ii. Take into consideration different modes of responses provided by learners.
- iii. Discuss how you will observe and integrate character qualities, national values and 21<sup>st</sup> century skills that align with the lesson for the week and include these in your scoring.

**2.5** Discuss how you will administer the assessment task(s)/item(s) as a subject group (NTS 2c, 2e, 3c, 3e, 3f and 3j).

**E.g.**

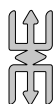
- a) Decide on exams format as a subject group (e.g. multiple choice, essay) and craft the questions to cover TM weeks 13–24 and table of specification
- b) Schedule date, time and venue for the exams and prepare all materials needed for the examination, e.g. question papers and answer booklet, etc.

Refer to TAMT pages 83–86 and 94 for more information on how to use multiple choice questions and essay as an assessment strategy.

**2.6** Discuss how to provide feedback, and where appropriate, record and submit the assessment scores for each learner in the class. (NTS 1a, 3l, 3m and 3n).

**E.g.**

- a) Score, share and discuss the scoring rubrics and learners' exams scripts as soon as school resumes
- b) Offer support, remedial lessons on content areas that recorded lower performance in the end of semester examination, etc.



### Note

In giving feedback on assessment tasks/items, guide learners to make the necessary corrections that will improve learning.

### 3. Reflection (10 minutes)

- 3.1 Reflect and share your views on the session (NTS 1a, 1e and 3o).
- 3.2 Identify a critical friend to observe your lesson in relation to PLC Session 24 and provide feedback (NTS 3f, 3l, 3n and 3o).
- 3.3 Remember to provide constructive feedback to learners and record their assessment scores in the required format and document where appropriate (NTS 3l, 3m and 3n).





## Appendix G: Sample Table of Specification for the End of Semester Examination

Week	Focal Area(s)	Type of Question	DoK Levels				Total
			1	2	3	4	
13	<i>Supply and Types of Supply</i>	<i>Multiple Choice</i>	1	3	-	-	4
14	<i>The Law of Supply</i>	<i>Multiple Choice</i>	3	1	-	-	4
15	<i>Concept of Market and its Types</i>	<i>Multiple Choice</i>	2	2	-	-	4
16	<i>Price</i>	<i>Multiple Choice</i>	4	1	-	-	5
17	<i>Factors that affect Pricing in the Economy</i>	<i>Multiple Choice</i>	1	2	-	-	3
		<i>Essay</i>	-	-	1	-	1
18	<i>Economic Systems</i>	<i>Multiple Choice</i>	1	2	-	-	3
19	<i>The Fundamental Macroeconomics Variables</i>	<i>Multiple Choice</i>	2	-	-	-	2
		<i>Essay</i>	-	-	1	-	1
20	<i>The Concept of Money</i>	<i>Multiple Choice</i>	2	2	-	-	4
		<i>Essay</i>	-	-	1	-	1
21	<i>The Types of Financial Institutions</i>	<i>Multiple Choice</i>	1	2	-	-	3
22	<i>The Importance of Agriculture to the Ghanaian Economy</i>	<i>Multiple Choice</i>	-	2	-	-	2
		<i>Essay</i>	-	-	-	1	1
23	<i>The importance of Industry to the Ghanaian Economy</i>	<i>Multiple Choice</i>	3	-	-	-	3
		<i>Essay</i>	-	-	1	-	1
24	<i>The Features of Domestic Trade</i>	<i>Multiple Choice</i>	-	2	-	-	2
		<i>Essay</i>	-	1	-	-	1
<b>Total</b>			<b>20</b>	<b>20</b>	<b>4</b>	<b>1</b>	<b>45</b>

## Appendix 1: Structure of The Senior High School Internal Assessment and Transcript System

### Introduction

This document provides details on the structure of the internal assessment and transcript system for effective implementation of the standards-based curriculum at the SHS level. The structure of the internal assessment involves a comprehensive and systematic approach to evaluating learners' performance and learning progress. The frequency of assessment is carefully planned to ensure regular and consistent monitoring, typically occurring at multiple points throughout the academic term. It is crucial to capture learner assessment scores promptly and accurately for the transcript. Therefore, guidance has been provided to ensure that each assessment is recorded in a timely manner. Effective management of the transcript system requires meticulous organisation and updated technology to handle and store data efficiently. Capacity building and training on effective internal assessment are essential for teachers, heads, assessments officers, providing them with the skills and knowledge to conduct assessments that are fair, ethical and align with learning outcomes for valid results. Engaging learners in internal school assessments fosters a sense of responsibility and self-awareness, encouraging them to take an active role in their educational journey through prompt and effective feedback.

### A. Structure

#### Formative Assessment

This assessment may be conducted during a class period, after completing or during a practical activity, or after a teacher completes a sub-strand, strand, or a learning indicator(s). Distinct types of assessment tools can be used for Formative Assessment. These include:

- Observation during in-class activities
- Standard homework exercise for class discussion
- Question and answer sessions (formal and informal)
- Quizzes (e.g. class pop-ups)
- In-class activities and presentations (individuals and groups)
- Project work (individuals and groups)
- Practical assessments
- Field trips/Presentation of Reports

- Class assignments/Self/Peer Assessments
- Class tests
- Portfolios
- Performance assessments (roleplay, demonstration oral/aural)

### Summative Assessment

Summative Assessment is conducted at the end of the learning sequence (end-of-semester). It records the learners’ overall achievement/performance at the end of the learning sequence. The type of tools used may include:

- Mid-Semester Examinations
- End-of-Semester examinations.
- Project work/Portfolio/Research/Practical assessments

**TABLE 1:** *Proposed Structure, assessment activities and marks distribution*

	Mode of Assessment	Contribution/ Weight	Submission per Year
1	Class Assessments (e.g., Classwork, Quizzes, Homework, Debate, Presentation, Drama & Roleplay, Case Study)	10 %	2
2	Mid-Semester Examination (Assessment/Project/ Research)	10%	2
3	Practical or Portfolio or Performance Assessment (Individual)	10 %	1
4	Group Projects, Research, or Case Studies, Practical/Lab work, Workshops, Performances, Presentations (Out of Class)	10 %	1
5	Individual Projects, Research, or Case Studies, Practical/Lab work, Workshops, Performances, Presentations (Out of Class)	20%	1
6	Supervised Individual Semester Assessment/Project/ Research/ End-of-Semester Exam	40 %	2
	Total	100 %	9

#### Note

**Character Qualities/National, Values, 21<sup>st</sup> Century Skills:** Teachers should make a conscious effort to observe these soft skills as learners go about their activities in the class, take notes, and award marks appropriately. Assessment of these skills should be deliberately embedded in the various modes of assessment outlined in the table above.

## B. Frequency of Assessment

Table 2 provides a suggested schedule of internal assessment for SHS. It is important to note that whilst assessments should comply with the specific learning outcomes of the subject area, they should cover the 21<sup>st</sup> century skills and competencies, GESI, SEL and National values as espoused in the TAMT using diversity in assessment modes as suggested in Table 1. Teachers may increase the frequency of assessments using other assessment strategies. The schedules presented should serve as **milestones** for schools to comply with.

**Table 2: Suggested schedules of internal assessment for SHS**

Semester One															
SN	Modes of Assessment	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Individual Class Assessment(s)				→										
2	Practical or Portfolio** or Performance Assessments (Individual)					→	→	→	→	→	→				
3	Group Projects, Research or Case Studies (out of class)	→	→	→	→	→	→	→	→	→	→				
4	Supervised Individual Semester Assessment													→	→
Semester Two															
SN	Modes of Assessment	15	16	17	18	19	20	21	22	23	24	25	26	27	28
5	Individual Class Assessment(s)				→										
6	Group work or Exercises						→	→	→	→					
7	Practical or Portfolio or Performance Assessments (Individual)	→	→	→	→	→	→	→	→	→					
8	Individual Project work or Research or Case Study		→	→	→	→	→	→	→	→	→				
9	Supervised Individual Semester Assessment													→	→

**Note: How and when to capture learner assessment scores for the Transcript.**

- Individual Class Assessment:** This can include individual classwork. This assessment can begin before week 4, but the evaluation scores should be ready by weeks 4 and 18.
- Individual Practical/Performance Assessment:** This form of assessment should include orientation of learners at the beginning to provide enough information

concerning the deliverables, progress review, and feedback processes. The assessment score should be ready by the end of weeks 5 through 10, and 15 through 22.

3. **Group Projects/ Research/Case Studies:** Learners should be grouped to work on a common project, case study or research-based problem. The learners should be given orientation concerning the rubrics and ethical or professional conduct concerning the assessment. The problems, projects, research assignments, or case studies should be related to the learners’ environment. The assessment score should be ready by week 10.
4. **Supervised Individual Semester Assessment:** This may be a written examination or project work. It must be noted that regardless of the mode of assessment, there should be supervision throughout. This assessment should be completed by weeks 13/14 and 27/28.
5. **Individual Project Work/Research/Case Study:** This can include mini-design assignments, investigative or case studies or research-based assignments. The assessment score should be ready by week 24.

Assessments should cover the scope of the 21<sup>st</sup> century skills and competencies, GESI, SEL and national values espoused in the TAMT. Table 3 gives examples of the scope. Refer to the TAMT for a comprehensive list of the scope.

**Table 3: Examples of 21st Century skills and competencies, GESI, SEL and National Values to be covered by scope of assessment**

21 <sup>st</sup> Century Skills & Competencies	GESI & SEL	National Values
<ul style="list-style-type: none"> <li>• Critical Thinking and Problem Solving</li> <li>• Creativity</li> <li>• Innovation</li> <li>• Collaboration</li> <li>• Communication</li> <li>• Global and Local Citizenship</li> <li>• Learning for life</li> <li>• Leadership</li> <li>• Analytic skills</li> <li>• Digital Literacy</li> </ul>	<ul style="list-style-type: none"> <li>• Gender Equality and Social Inclusion</li> <li>• Self-Awareness</li> <li>• Self-Management</li> <li>• Social Awareness</li> <li>• Relationship Skills</li> <li>• Responsible Decision Making</li> <li>• Tolerance</li> </ul>	<ul style="list-style-type: none"> <li>• Respect</li> <li>• Truth and Integrity</li> <li>• Tolerance</li> <li>• Respect</li> <li>• Equity</li> <li>• Communalism</li> <li>• Appreciation</li> <li>• Stewardship</li> <li>• Time Management</li> </ul>

Table 4 shows the recommended assessment strategies for the scope in Table 3.

**Table 4:** Recommended assessment strategies for 21st century skills and competencies

21 <sup>st</sup> Century Skills & Competencies	Assessment Strategies
Critical Thinking, Problem Solving, Analytical skills	<ul style="list-style-type: none"> <li>• Debates</li> <li>• Analysis of Case Studies based on learners' environment.</li> <li>• Research &amp; Project work.</li> <li>• Objective and Essay type questions/items</li> </ul>
Creativity and Innovation	<ul style="list-style-type: none"> <li>• Individual and group projects</li> <li>• Analysis of Case Studies based on learners' environment.</li> <li>• Design &amp; product creation to solve societal problems</li> </ul>
Communication and Collaboration	<ul style="list-style-type: none"> <li>• Debates</li> <li>• Group projects.</li> <li>• Presentations</li> <li>• Drama &amp; Role play</li> </ul>
Global and Local Citizenship	<ul style="list-style-type: none"> <li>• Research &amp; Project work.</li> <li>• Analysis of Case Studies based on cultural and global issues</li> </ul>
Leadership and learning for life	<ul style="list-style-type: none"> <li>• Individual and Group projects</li> <li>• Presentations</li> </ul>
Digital Literacy	<ul style="list-style-type: none"> <li>• Research &amp; Project work.</li> <li>• Presentations using ICT tools.</li> <li>• individual and group projects</li> </ul>

The TAMT details the rubrics for the assessment strategies suggested in Table 3. A combination of the assessment strategies could provide diversity and ensure that the assessment scope is effectively covered during formative and summative assessments. It is important to note that the GESI, SEL and National values espoused in the TAMT should be incorporated into the assessment strategies.

## C. Learner Involvement

### What should learners contribute?

Learners' involvement in the internal assessment processes in schools offers valuable insights into how the learner perceives and experiences of the assessment process. This engagement process grants learners the opportunity to explain areas of confusion, frustration, or unfairness, and these help teachers refine their assessment approaches.

Again, learner involvement fosters communication between teachers and students. This can help clarify expectations, address concerns, and create a more positive learning environment.

#### *When to involve learners*

As part of the initial needs assessment for teacher training, gather learner input on areas needing improvement in the Internal Assessment Score (IAS) process. This helps to incorporate learner feedback in developing appropriate teacher training materials.

#### *How should learners be involved?*

Teachers should organise focus group sessions, to gather learner feedback on past assessments. This feedback can be used to inform future training sessions for teachers. e.g., Mock assessments and Co-creation of rubric.

Guide learners on the learning outcome expected. Involve them in the development of the assessment rubrics, and checklists to evaluate their progress and identify areas for improvement. Learners would demonstrate respect for diverse perspectives and the ability to work cooperatively with others.

### **Reflection**

Integrate reflective activities such as journaling or discussions where students can analyse their learning experiences and identify areas for growth.

By actively involving teachers and learners in the SBA process, we create a dynamic learning environment. This empowers students to take ownership of their learning journey while equipping teachers with the tools to effectively guide and assess student progress.

### **Transparency and Setting Goals**

At the beginning of a lesson, communicate clearly, the assessment criteria to the learners using appropriate language and structure. Present the information in an organised and coherent manner.

### **Self-assessment**

Incorporate opportunities for self-assessment throughout the learning process. Learners can use rubrics or checklists to evaluate their progress and identify areas for improvement. Learners would demonstrate respect for diverse perspectives and the ability to work cooperatively with others.

### **Goal Setting**

Encourage learners to set achievable learning goals aligned with the assessment criteria. This empowers them to take ownership of their learning journey.

### **Peer Assessment**

Strategically incorporate peer assessment activities where students evaluate each other's work based on established criteria. This fosters critical thinking and collaboration skills.

## Student-led presentations or projects

Provide opportunities for students to display their learning through presentations or projects. This allows them to develop communication and presentation skills.

By actively involving teachers and learners in the SBA process, we create a dynamic learning environment. This empowers students to take ownership of their learning journey while equipping teachers with the tools to effectively guide and assess student progress.

## D. Feedback Mechanism

A feedback mechanism is a systematic approach for providing learners with information about their performance. This information helps them understand their strengths, identify areas for improvement, and achieve their learning goals. In the multi-subject environment of senior high school, timely and constructive feedback is crucial.

Timely means that feedback is provided soon enough for learners to act upon it after each assessment. Here are suggested general timelines to consider for the following types of assessments:

Type of Assessment	Expected Timeline for Feedback
Individual class assessments (mostly written)	1–3 days
Group assignments	1 week, with interim check-ins for assignments over extended periods of time.
Project work/Semester paper/End of Semester examinations	after key milestones and a final comprehensive review upon completion

For feedback to be constructive, it should focus on the task and not the learner's personality. It should be specific, actionable, and delivered in a way that motivates improvement.

In providing feedback, use the sandwich method (CCC), which starts with a positive aspect of the work (*compliment*), followed by constructive criticism (*correction*), and concludes with another positive note (*compliment*). To set the stage for effective feedback, clearly communicate the learning objectives, expectations, and scoring rubrics before any assessment.

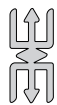
Learners must maintain an “assessment portfolio” where they compile all their assignments, reports, and feedback. Parents and other stakeholders review this portfolio during open days, parent-teacher meetings, or monitoring activities.

Feedback can be delivered using different methods after the assessment is done and marked. The choice of delivery should be guided by best practices and constraints that may exist, such as available time and class sizes. The following are some delivery methods to consider:

- Whole Class Feedback:** The teacher facilitates a discussion about the assessment with all the learners. During the discussion, the teacher should highlight common strengths and weaknesses, provide clarifications, and share best practices.



- **Individual Feedback:** The teacher gives learners personalised (one-on-one) guidance or written comments. Provide *prompts to guide learners* to self-correct their wrong responses.



#### Note

*Provide checklists or rubrics that learners can use to assess their own work before submitting it. This helps them independently identify errors and make the necessary adjustments.*

- **Group Feedback:** The teacher groups learners facing similar challenges for targeted instruction and provides them with feedback.
- **Peer Review Feedback:** The teacher allows learners to learn from one another by giving constructive feedback to peers.
- **Self-Reflection:** After receiving feedback, the teacher should encourage learners to analyse their work, identify areas for improvement, and set goals using rubrics as a guide.
- **External Feedback:** In specific cases, the teacher should consider feedback from subject experts, teachers from other institutions, parents, and other stakeholders.

Regardless of the chosen feedback mechanism, note that self-reflection is essential. This allows learners to internalise feedback, set personal targets for improvement, and develop a growth mindset. Following the feedback, teachers are to provide opportunities for learners to correct mistakes through targeted exercises and reassessments.

By implementing these feedback strategies, teachers can empower senior high school learners to become active participants in their learning journey.

## E. Transcript System

Effective data management is crucial for informed decision-making in today's dynamic educational landscape. The computerised transcript system achieves this purpose by offering second-cycle institutions with a comprehensive record of learner performance. The transcript system is a centralised repository for learner information. It gathers key details such as learner profiles, semester information, subjects taken with their respective scores (including continuous assessments and end-of-semester exams), credits, grades, semester, and overall Grade Point Averages (GPAs). Additionally, a dedicated section captures brief descriptions of learners' character qualities at the end of each semester.

There should be at least three individual class assessments, at least one group work and at least one project work.

## Appendix 2: Excerpts from The Teacher Assessment Manual and Toolkit

### A. Principles of Effective Assessment

As a process of determining the nature and extent of learning and development among learners, it is important to ensure that the assessment process meets the following principles:

1. Validity
2. Reliability
3. Fairness and ethics
4. Transparency
5. Inclusivity
6. Practicability
7. Assessment utility

#### Developing a valid assessment (Validity of Assessment Results)

To ensure that assessment scores or results are useful and interpreted appropriately, the teacher should:

- i. Clearly state the purpose of the assessment (e.g., what the test will be used for).
- ii. Create a learning and assessment plan (i.e., table of test specification tots)
- iii. Write assessment items or tasks that measure important learning outcomes of the curriculum (e.g., Skills, competencies, collaborative efforts, and lifelong learning).
- iv. Clearly define the performance criteria or standards/schemes/rubrics (i.e., define the specific knowledge, skill or behaviour that learners should demonstrate)
- v. Score or grade assessment task based on the performance criteria to avoid biases, stereotyping, among others.
- vi. Ensure that the content of the assessment aligns closely with the defined criteria (thus, the assessment questions, tasks, or activities should directly measure what they want to assess).
- vii. Interpret the assessment results based on the purpose and the performance criteria.

#### Reliability (Consistency of Assessment Results)

In assessment, consistent standards of teacher assessment and fairness are important goals to aim for. The ‘connoisseur’ approach to assessment; that is, ‘I know it when I see it, but I can’t put it into words’ is not acceptable. Reliable results must be dependable for decision making.

For an Assessment result to be reliable, the teacher should:

- i. Clearly identify the learning outcomes to be assessed.

- ii. Give learners work or completed assessment tasks and activities to other teacher(s) to review.
- iii. Use multiple assessment strategies to measure the same or similar learning outcomes (e.g., giving the tasks or items of a class exercise as another class exercise or homework or group project) or using different item formats to assess learning outcomes.
- iv. Prepare scoring rubrics or marking schemes with specific weighting (marks)
- v. allocated to the items and use it consistently.
- vi. Give rubrics of tasks/activities in the case of performance or practical assessment ahead of time.
- vii. Ensure that the load or the length of the tasks are appropriate to the level of the learner (e.g., 25 minutes for 20 items; a project for a week or the term/ semester).
- viii. Administer assessment in a conducive environment that minimise disruption (e.g., noise, lightening, ventilation, among others) and devoid of any cheating.

### **Fairness and Ethics**

Assessment strategies should give learners equitable opportunity to demonstrate what they know and can do taking into consideration their ability, learning styles, gender, special educational needs (SEN), among others. The teacher should:

- i. Ensure that the assessment tasks/activities align with the learning outcomes and content covered in class.
- ii. Use different forms of assessment tasks to assess learning outcomes (e.g., oral assessment, class exercises, class tests, homework, assignments, written tests, projects, and practical demonstrations as well as the end-of-term/ semester assessment).
- iii. Provide clear and detailed instructions to learners about the assessment's format, expectations, and criteria for evaluation.
- iv. Identify learners with SEN and make the necessary adaptation by providing extra time, alternative formats and other necessary accommodations.
- v. Avoid using culturally biased or discriminatory content, unfamiliar words, questioning, or examples in assessments.
- vi. Communicate the assessment plan in advance. For example, date, time, location, and any other relevant logistics.

### **Transparency**

Transparency in assessment refers to making the assessment process and criteria clear and understandable to learners. The teacher should:

- i. Make learners aware of the demand of the assessment tasks.
- ii. Share performance criteria and indicate what will constitute the pass mark.

- iii. Readily share assessment results with the appropriate stakeholders (learners, parents/guidance, teachers).
- iv. Provide opportunity for learners to seek review and redress.
- v. Share the learning outcomes the assessment is designed to measure with learners.
- vi. be ready to share assessment criteria or rubrics when the need arises.

### **Inclusivity**

Inclusivity in assessment will allow teachers to create assessment practices that are fair and accessible to ALL learners (GESI, SEL and SEN).

The teacher should:

- i. Familiarise with the section of inclusivity on the national pre-tertiary learning and assessment framework (NPLAF, page 32).
- ii. Select assessment strategies that are appropriate for different learning needs.
- iii. Assign workload in connection with the developmental and learning needs of learners.
- iv. Work with special education experts in the school system to adapt and accommodate assessment to the needs of all learners (i.e., extra time, alternative formats, or other necessary accommodations should be available).
- v. Make use of different formats (braille, oral translation, text-to-speech, ai, sign language interpretation and other assistive technology forms).
- vi. Develop rubrics that are inclusive (taking into consideration grammar, vocabulary, handwriting, presentation of ideas).

### **Practicability**

For assessment strategies or processes to be feasible, convenient, efficient and successful.

The teacher should:

- i. Ensure that appropriate and adequate assessment materials, resources and security are available.
- ii. Consider appropriate assessment format to match the learning outcome(s), class size, age and ability levels.
- iii. Consider the time available to develop, administer, score and give constructive feedback.

### **Assessment Utility (utilisation and benefits)**

To enhance the usefulness and practical value of assessment tasks/activities, the teacher should:

- i. Clearly state the intended use of the assessment results.
- ii. Identify the essential learning outcome(s) to be covered in the assessment.

- iii. Construct assessment tasks/activities that are well aligned to real-life situations.
- iv. Select and allocate the appropriate resources for the assessment activities.
- v. Provide constructive feedback to learners on their performances.
- vi. Provide credible information that are useful to learners and other stakeholders (teachers, parent/guardians).
- vii. Weigh and indicate the benefits and the cost of the assessment strategies
- viii. to be used.
- ix. Justify the selection of a particular assessment format over the others (objective-type, essay, project, portfolio, demonstration, etc.).

## **B. Ethical considerations in Assessment**

### **1. Designing and Developing the Assessment**

- i. Identify the specific learning outcome(s) to be assessed.
- ii. State clearly the purpose of the assessment(s).
- iii. Specify the content area (i.e. Content Standards and/or Indicators) to be assessed and align them to the learning outcome(s).
- iv. Select appropriate format or strategy that should be in line with the learner's characteristics, learning outcome(s) and resources.
- v. Design different versions (differentiated assessment) of the assessment including the use of alternative strategies of assessment.
- vi. Avoid biased assessment tasks (e.g., task favouring a group of learners such as males among others).
- vii. Avoid using unfamiliar language and materials in writing the assessment tasks.
- viii. Adapt different versions to suit the needs of all learners. For example, make provision for learners with visual impairment by enlarging the font sizes of the assessment instrument and providing braille versions.
- ix. Develop the marking scheme/ scoring rubrics when developing the assessment task.
- x. Include mark allocation on the individual questions that are given when necessary.
- xi. Ensure that the assessment task is stored securely.
- xii. Provide clear direction for administration of the assessments.
- xiii. Consider logistics.

### **2. Administering the Assessment**

- i. Communicate the assessment nature/structure/format, time, content coverage and location of the assessment tasks clearly to learners.

- ii. Ensure the setting is suitable and conducive for the assessment (e.g., lighting, ventilation, less noise among others).
- iii. For learners with SEN establish rapport and communicate in simple and clear language. Provide alternative settings for learners with SEN to meet their specific needs. (e.g., providing individualised accommodations such as writing the assessment in a separate room).
- iv. Provide needed logistics (e.g., answer booklets, first aid, pens and pencils among others) for the assessment task.
- v. For learners with SEN make room for the use of translators, assistive devices such as hearing aids, braille, computers, recorders, and other technologies that are relevant to their needs.
- vi. Administer assessments within appropriate time limits to enhance validity and to minimise the chance for cheating. Provide additional time for learners with SEN.
- vii. For learners with SEN, make room for varied modes such as oral, written, the use of a computer (text-to-speech and speech-to-text) among others.
- viii. Avoid anxiety, intimidating language, and unnecessary announcements.
- ix. Provide learners with anonymous identifiers and codes instead of names to enhance reliability and validity.
- x. In the case of practical/performance assessments, share rubrics and marking schemes with learners.
- xi. Ensure controlled and supervised distribution of assessment materials to avoid leaks or unauthorised sharing.

### **3. Scoring the Assessment**

- i. Consistently make use of the marking scheme/ scoring rubrics.
- ii. Ensure multiple ratings or scoring/grading are done where necessary (e.g., for essay-type questions, practical/performance assessment).
- iii. Focus on the content (i.e., what is being assessed) instead of handwriting, spelling, punctuations, concord, and vocabulary when scoring.
- iv. For learners with SEN considerations should be made for vocabulary, spelling, and grammar especially in the English language.
- v. Provide opportunity for remarking, review, or redress where necessary.
- vi. Record the actual scores/grades of learners as a reflection of their performance. Do not add or subtract marks based on personal influences.
- vii. Keep assessment results of the learners safe (either manually or digitally).
- viii. Consider the use of professional scorers, judges, or raters in the case of External Assessments.

#### **4. Reporting and Feedback in Assessment**

- i. Ensure that the learner is aware of those who will be receiving the report.
- ii. Communicate results to authorised persons such as parents/guardians and other teachers.
- iii. Seek permission (informed consent) from the learner or parent/guardian if a third party may be involved.
- iv. Ensure that the true performance of the learner is reported (do not manipulate or distort the results).
- v. Present assessment results without stereotyping or biases.
- vi. Use language and terminology that is respectful and GESI responsive when reporting reports.
- vii. Provide clear and meaningful interpretation of the assessment results.
- viii. Adhere to legal requirements, ethical guidelines and institutional policies governing the reporting of assessment results.

#### **5. Feedback**

- i. Provide constructive feedback timely and promptly.
- ii. Emphasise the learner's strengths and opportunities for improvement rather than focusing solely on weaknesses.
- iii. Ensure that the feedback given to the learner, parents/guardians and other teachers reflects the performance of the learner.
- iv. Consider and adjust the mode of providing feedback to suit the needs of learners (consider GESI and SEN issues).
- v. Provide feedback based on the assessment criteria and not on personal influence.
- vi. Avoid displaying and announcing learners' performance unofficially.
- vii. Create opportunities for learners to readily access their results through creation of portals, portfolios and files for individual learners and other stakeholders.
- viii. Ensure collaborative assessment by sharing and taking the learner's information.
- ix. Create opportunities for learners to reflect on their own assessment results and learning.
- x. Give written comments to learners in formative assessment to help the learner track their errors and make the necessary corrections.

#### **6. Interpreting and Using the Assessment Results**

- i. Provide clear and detailed criteria including criterion/pass mark for interpreting the assessment results.
- ii. Avoid biases in interpreting the assessment results. Ensure result interpretation is not influenced by gender, religion, ethnicity, personal liking among others.

- iii. Use simple and clear language in the interpretation of the assessment results.
- iv. Interpret assessment results based on evidence and sound assessment practices.
- v. Ensure that the interpretation of the results accurately reflects the learner's ability, skills, competencies and knowledge.
- vi. Ensure the learner is aware of the assessment process and the consequence of the results.
- vii. Ensure assessment results are used for their INTENDED PURPOSE, aligning with the learning outcomes.
- viii. Seek the consent of the learner and parents/guardians before using the assessment results for any purpose.
- ix. Ensure that assessment informs the teaching and learning process in a fair and unbiased manner and provide remediation where necessary.
- x. Ensure that assessment results are confidentially kept and only shared with relevant stakeholders, such as the learner, parents/guardians, and school administrators.
- xi. Avoid using assessment results to label (name-calling), stereotype and discriminate among learners.
- xii. Ensure that results are stored and used in a secured manner.
- xiii. Avoid discussing the learner's results and performance unofficially with others (e.g., with other teachers, staff, learners and among others).

### C. Differentiated Assessment

Differentiated assessment adapts strategies to diverse learning needs, strengths, and interests of all learners. Teachers tailor assessments to accommodate varying levels of readiness, learning styles, and preferences that ensure that all learners have equitable opportunities to demonstrate their understanding and skills.

**To implement differentiated assessment, teachers should consider the following:**

- i. *Varied assessment formats:* provide a range of assessment options, such as written assignments, oral presentations, projects, or multimedia presentations. This allows learners to exhibit their knowledge and skills using formats that align with their abilities and strengths.
- ii. *Flexible deadlines:* give learners the opportunity to complete assessments within a flexible timeframe. This considers different learning paces and allows learners to manage their time appropriately.
- iii. *Varying tasks:* Vary levels of difficulty for assessment tasks, allowing learners to choose the one that best suits their needs and challenges them appropriately.
- iv. *Accommodations:* Provide necessary accommodations for learners with unique learning needs, such as extended time, modified formats, or additional resources to support their assessment process.



- v. *Individualised feedback*: Provide individualised and constructive feedback that addresses the learner-specific needs and areas for improvement. Tailoring feedback to specific standards and learning outcomes can help learners understand their strengths and areas for improvement.
- vi. *Learner involvement*: Involve learners in the assessment process by encouraging self-reflection, self-assessment, and goal setting. Engaging learners in dialogue about their learning and assessment promotes

## D. Guidelines on how to Construct Multiple Choice Questions (attachment)

1. Clearly define the purpose of the test/assessment
2. Define the learning outcome (i.e. knowledge, comprehension, skills, or competencies) you want learners to demonstrate through MCQs.
3. Prepare a table of test specifications or blueprints.
  - i. List topics and subtopics covered during the instructional period
  - ii. Distribute the number of test items among course content and instructional objectives or behaviours.
4. Write the test items (note: it should match the content and DoK levels stated in the table of test specification).
  - i. The central issue of the items should be in the question statement (stem).
  - ii. The options should be plausible and homogeneous in content.
  - iii. All options must follow syntax and punctuation rules.
  - iv. Repetition of words in the options should be avoided.
  - v. Vary the placement of the correct option (appropriately, arrange options in alphabetical order, ascending or descending or in order of magnitude if using numbers or dates).
  - vi. Stems and options should be stated positively. However, a negative stem could be used sparingly, and the word should be emphasized either by underlining it or writing it in capital form (e.g. **not**, NOT, not; **except**, EXCEPT, except).
5. Write clear directions/instructions. (e.g. Answer All Questions. All questions carry equal marks, Select/Choose from the alternative lettered A-D the correct answer).
6. Review the test items (go through items again after construction i.e. after a few days to week).
7. Prepare scoring key (scoring keys should be prepared concurrently with item construction).

## E. Common Assessment Used in the Classroom

### Class Exercise As An Assessment Strategy

**Description:** Class exercise as an assessment strategy are tasks designed to evaluate learner's understanding, knowledge, and skills related to a particular subject to gauge how well learners are grasping a content being taught.

Teachers should mainly use class exercises for formative purposes to assess learners across all subject areas, which can take various forms, such as quizzes, problem-solving tasks, group discussions, reflective questions, case studies, question and answer and practical activities, performance, observation, checklist/rubrics and demonstration providing valuable insights into the learning process.

**Purpose:** Class exercises can be used to:

- i. Help identify learning gaps in comprehension, retention, application of knowledge, values and attitudes.
- ii. Allow for immediate feedback and clarification of concepts.
- iii. Encourage active participation of learners for deeper understanding.
- iv. Modify teaching and learning techniques, strategies, and resources based on learning outcomes.
- v. Gradually build learners performance in a lesson over time to reduce summative test anxiety.
- vi. Help identify learners who may require special educational support.
- vii. Accommodate different learning styles and abilities, including group work and multiple representations for learners with special educational needs.

### Settings

- i. Classroom
- ii. Laboratory/Workshops/Resource Centres/Libraries
- iii. Studios
- iv. Field (school park/garden or community spaces)
- v. Online learning platforms/Virtual classrooms e.g. Zoom, Class WhatsApp pages, Google classrooms.

**Time frame:** Class exercises often take place in a lesson and may be conducted before, during and after a lesson depending on the learning outcome and the duration of the lesson.

**Class size:** Class exercises may be conducted for learners either individually, as a group or whole class.

## Steps

### *Before*

The teacher should:

- i. Define the learning outcomes.
- ii. Design exercises using simple and clear language.
- iii. Select relevant exercises based on nature of the class exercise and desired skills/knowledge to be attained. E.g. quizzes, case studies etc.
- iv. Develop and discuss assessment criteria with learners.
- v. Set a reasonable time frame for completion of exercises to maintain focus and efficiency.
- vi. Clearly communicate instructions, including format, length, and resources.

The learner should:

- i. Read and understand instructions to ensure a thorough understanding of the exercise provided.
- ii. Collect all available required resources and tools for the task/exercise.

### *During*

The teacher should:

- i. Assign task/exercise based on the learning outcome as well as learners with special needs.
- ii. Walk around the classroom and observe learners as they work on the exercise.

The learner should:

- i. Organise and set up their work area to facilitate a smooth workflow.
- ii. Plan how to approach the exercise, considering instructions and steps or techniques to employ.
- iii. Commence class exercise timely and promptly to work within the given time for completion of the task.

### *After*

The teacher should:

- i. Evaluate the assessment outcome based on the assessment criteria with the learners.
- ii. Provide constructive feedback for learners' performance for discussions.

**NB:** Teachers should pay attention to learners with special educational needs.

Reflect and modify teaching and learning strategies and resources based on feedback received.

The learner should:

- i. Reflect, self and peer assess their exercises and provide constructive feedback.
- ii. Use the feedback to improve on their work/exercises.

### Homework As An Assessment Strategy

**Description:** Homework or assignments as an assessment strategy involve the use of structured tasks or projects that learners complete outside of regular class time to evaluate their understanding, knowledge and skills gained in a specific learning outcome. This assessment strategy can take various forms, such as written assignments, projects, research papers, problem sets, essays, or creative tasks.

Some concepts that can be assessed using homework/ assignments include menu planning and recipe development, problem solving exercises in mathematics, hands-on experiments and observations, creative writing assignments and art projects, map development and application of GIS in locating places.

**Purpose:** The key purposes of using homework/assignment as an assessment strategy by the teacher include:

- i. Assessment of Understanding
- ii. Application of Knowledge
- iii. Reinforcement of Learning
- iv. Independent Study
- v. Provision of valuable feedback
- vi. Skill Development
- vii. Assessment of Diverse Abilities

### Settings

- i. Classroom
- ii. Field work
- iii. Online platforms
- iv. Home

**Class Size:** Depending on the intended learning outcomes, assignments/ homework can be structured for either:

- i. Small class sizes
- ii. Large class sizes

**Time Frame:** The time frame for conducting assignments can be adjusted based on the desired learning outcomes and the complexity of the task.

- i. Short-term Assignments (Daily or nightly homework and weekly assignments)
- ii. Medium-term Assignments (Bi-weekly or monthly assignments)

iii. Long-term Assignments (Semester/ term-long assignments)

**Steps**

*Before*

The teachers should:

- i. Clearly define the learning outcomes intended to be achieved
- ii. Design/ Create a well-structured assignment with clear instructions and expectations.
- iii. Adapt to the needs of diverse learners especially those with special needs
- iv. Provide Resources such as textbooks, online materials, or reference materials, to support learners in completing the assignment successfully.

*During*

The teachers should:

- i. Keep track of learners' progress on the assignment.
- ii. Be available to answer questions and provide clarification during the assignment phase.
- iii. Provide formative feedback and guidance to help students improve their work.
- iv. Teach learners how to properly cite sources and use information ethically/ avoid plagiarism.

The learner should:

- i. Seek clarification about the task from teachers or peers where necessary
- ii. Actively work on the homework, focusing on comprehension
- iii. Manage their time effectively
- iv. Learners can reach out to their parents/guardians, peers, or online resources for guidance and clarification in responding to the tasks

*After*

The teacher should:

- i. Evaluate the completed assignments using clear and consistent grading criteria
- ii. Analyse student performance to identify common strengths and areas for improvement.
- iii. Discuss feedback with learners
- iv. Reflect on the outcomes of the assignment.
- v. Share the results of the assignment with learners
- vi. Acknowledge and celebrate learners' achievements to boost motivation and self-esteem.

The learner should:

- i. Review their work to identify errors or areas for improvement.
- ii. Reflect on what they have learned
- iii. Bring up questions that were confusing for class discussion.
- iv. Use feedback to learn from their mistakes and improve performance.

### Discussion As An Assessment Strategy

**Description:** Discussion is a formative assessment strategy that involves using verbal communication and group interaction to assess learners' understanding, knowledge, and skills. The teacher is to observe and assess learners' contributions, ability to analyse and synthesise information, and provide feedback based on their performance. It can be used for both formative and summative assessments.

Discussion can be used in all subject areas of the secondary education curriculum depending on the purpose of the assessment and learning outcomes under consideration.

**Purpose:** The following are the purposes of discussion as an assessment strategy:

- i. Build knowledge and develop a learner's critical and creative thinking.
- ii. Develop learners' communication skills.
- iii. Increase the depth of the learner's understanding and eliminate misconceptions.
- iv. Engage learners in active participation in the lesson.

### Setting

- i. A classroom
- ii. Small groups
- iii. Seminars
- iv. Online learning platforms (virtual classroom and discussion forum)
- v. Fieldwork

**Time frame:** Appropriately, discussion as an assessment strategy can last for a lesson depending on the learning outcomes and learning indicator.

**Class size:** The class sizes appropriate for discussion as an assessment strategy can vary from small class to large/whole class.

### Steps

#### *Before*

The teacher should:

- i. Determine the learning outcomes to be assessed.
- ii. Specify the content to be learnt that aligns with the learning outcome.
- iii. Give prepared questions to guide the discussion (i.e., make use of open-ended questions, adaptive to the diverse/abilities of learners)

- iv. Establish discussion guidelines or rules (let learners know what is expected of them, the content of the discussion and the format of the discussion i.e., individual, small or whole class)

The learner should:

- i. Read any assigned readings, watch videos, or engage with other course materials related to the discussion topic.
- ii. Take notes while reviewing the materials on important concepts, arguments, or evidence.
- iii. Reflect on their own experiences, prior knowledge, or relevant examples that relate to the discussion topic.
- iv. Seek clarification if needed.

*During*

The teacher should:

- i. Start and facilitate the discussion (ensure that all learners could participate and encourage learners to engage in critical thinking and reflective thinking).
- ii. Monitor and assess learner's participation (encourage self and peer assessment).
- iii. Provide constructive feedback on learners' responses and contributions. NB. Teachers are advised to manage all learners' responses and accommodate them but must be fair and ethical.

The learner should:

- i. Pay attention, maintain eye contact, and be open to different viewpoints and contributions from mates.
- ii. Share their own unique perspectives, insights, and experiences related to the discussion topic.
- iii. Take notes during the discussion to capture key points, new understanding, or questions that arise.
- iv. Ask follow-up questions, seek clarification, or offer alternatives or suggestions respectfully.

*After*

The teacher and the learners reflect on the discussion in relationship to the expected learning outcomes to check whether the learning outcomes have been achieved.

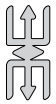
### **Case Study As An Assessment Strategy**

**Description:** A case study can be used as an assessment and or pedagogical strategy. Usually, it is used as an assessment strategy to examine a learner's ability to apply acquired knowledge, skills and experiences by carefully investigating a particular circumstance or scenario to provide solutions to real-life situations. Usually, it will have the following components:

1. Theme
2. Case description
3. Study of the case
4. Class Discussions
5. Conclusion and reflection

### Types of case studies

- i. Descriptive case studies: The teacher should ask learners to analyse and explain the key features and characteristics of the case.
- ii. Explanatory case studies: The teacher should ask learners to give detailed information on the case by identifying and explaining the factors that contributed to the situation.
- iii. Exploratory case reports: The teacher should ask learners to gather information, analyse data, and draw conclusions about a topic where limited information is available
- iv. Cumulative case studies: The teacher should encourage learners to synthesise and integrate their learning across different subjects



#### Note

Any of these can be done individually or as a group depending on the class size. For large class sizes, a group of 3 to 5 members should be used.

**Purpose:** The purpose of a case study is for learners to apply acquired knowledge, concepts and theories to solve real-life situations. What should the teacher consider before using a case study as an assessment strategy?

- i. The complexity of the content standard
- ii. The availability of resources
- iii. Ability level of learners
- iv. Time
- v. Class size

**Steps:** To ensure a well-structured and quality case study, it is important for the teacher to consider the following:

#### *Before*

The teacher should:

- i. Clearly define the learning outcomes to be assessed.
- ii. Identify appropriate issues or cases to be investigated.
- iii. Determine the format of the case study (e.g., written document, a multimedia presentation, a video, or a combination of these), depending on the resources available.



- iv. In form the learner on what to do, time frame, and expectations.
- v. Provide materials (i.e., text, videos, pictures etc.) for the case study discussion.
- vi. Develop and provide a clear scoring rubric that outlines or defines quality
- vii. work to learners.

### ***During***

The teacher should:

- i. Create and maintain a sound environment for the case study discussion.
- ii. Bring the whole class together and invite each group to share their findings, solutions, or recommendations.
- iv. Ask open-ended questions on the issue of discussion to clarify any misconception.
- v. Incorporate peer assessment or peer grading as part of the process.

### ***After***

The teacher should:

- i. Provide constructive feedback on learners' responses.
- ii. Ask the learners to reflect on their learning process, such as what they learned, what they found difficult, or what they would do differently.
- iii. Summarise the main points and lessons learned from the case study and link them to the learning outcomes and content.

**Ethical Considerations:** In the use of case study as an assessment strategy, the teacher should:

- i. Discuss ethical considerations with learners, especially in cases that involve sensitive or potentially controversial topics (e.g., gender, cultural, social, emotional, political and religious issues) when selecting and discussing a case.

**Documentation and Record-Keeping:** The teacher should keep records of assessments and learners' submissions to maintain transparency and fairness (e.g., portfolio)

## **Portfolio Assessment- General**

**Description:** A portfolio assessment is an evaluative tool to measure learners' understanding in a comprehensive manner, looking at the overall progress instead of individual marks from tests and quizzes.

**Purpose:** Portfolio assessment is used to establish various cognitive achievements as well as practical competencies. Portfolio assessment could be used for the different levels of Depth of Knowledge (Levels 1 – 4). It helps teachers identify areas where the learner may need additional support or resources to improve learning and provide a wide variety of learners' mastery of a particular standard and growth over a defined time.

**Types of Portfolio Assessments:** A portfolio is a systematic collection of learners' work that represents learner's activities, actions, and achievements over a specific period in one or more areas of the curriculum. There are three main types of portfolios:

1. Assessment Portfolios
2. Teaching and Learning or Working portfolios
3. Showcase portfolios

#### *Assessment Portfolios*

Assessment portfolios, also known as evaluative portfolios, contain work that has been evaluated according to set standards or criteria. These portfolios demonstrate a learner's ability to meet specific learning standards. They often contain rubrics, test results, learner reflections, teacher's notes, and graded assignments. For instance, in a science class, an assessment portfolio may contain lab reports, results from class tests, assessed projects, and the learner's reflection on their learning throughout the term/semester/year.

#### *Teaching and Learning or Working Portfolios*

Teaching and learning or working portfolios are formative in nature. They allow a learner to demonstrate his or her ability to perform a particular skill. For example, a working portfolio may include a collection of lab reports during a semester (term) that highlight a learner's improving ability to create hypotheses.

#### *Showcase Portfolios*

Showcase portfolios are summative in nature. They include samples of a learner's best work to demonstrate mastery at the end of a unit of study, semester or school year. The showcase portfolio allows the learner to select their most outstanding work, hence demonstrating their highest level of learning and achievement. It can contain final drafts of assignments, projects, or any piece of work that the learner is particularly proud of, demonstrating the learner's mastery of the relevant skills.

### **What is in a Portfolio?**

A portfolio contains the following:

1. Completed assignments and evaluations (e.g., Self-Assessment, Peer-Assessment)
2. Journal writings (daily report – Date, Time and Activities)
3. Reflections on discussions
4. Photos, sketches, and other visuals
5. A summary statement made at different points regarding what has been learned/achieved.

**Setting:** The portfolio assessment strategy can be used in the following settings:

1. Project-Based Learning
2. Independent Study and Research Projects
3. Classroom-based assessment
4. Field Work

5. Exhibitions/ Fairs
6. Problem-based Learning
7. Laboratory environment
8. Studio
9. Resource Centres

For all approaches, the portfolio must demonstrate clear and close adherence to specific learning outcomes in the curriculum.

### **Steps**

#### ***Before***

The Teacher should:

- i. Determine the purpose of the portfolio. Decide how the results of a portfolio evaluation will be used to inform the subject.
- ii. Identify the learning outcomes the portfolio will address.
- iii. Decide what learners will include in their portfolio. Portfolios can contain a range of items—plans, reports, essays, resumes, checklists, self-assessments, references from employers or supervisors, and audio and video clips. Limit the portfolio to 3-4 pieces of learner's work and one reflective essay/memo.
- iv. Identify or develop the scoring criteria (e.g., a rubric) to judge the quality of the portfolio.
- v. Establish standards of performance and examples (e.g., examples of a high, medium, and low-scoring portfolio).
- vi. Create learner instructions that specify how learners collect, select, reflect, format, and submit.
- vii. It is the teacher's responsibility to help learners by explicitly tying subject assignments to portfolio requirements.

#### ***During***

The learner should:

- i. Collect evidence related to the outcomes being assessed.
- ii. Select the best and appropriate evidence and label each piece of evidence according to the learning outcome being demonstrated.
- iii. Be guided on how to write a one or two-page reflective essay/memo that explains why they selected the particular examples, how the pieces demonstrate their achievement of the program outcomes, and/or how their knowledge/ability/attitude changed.
- iv. Be guided on how to format requirements (e.g., type of binder, font and style guide requirements, online submission requirements).
- v. Be given submission (and pickup) dates and instructions.

**After**

The teacher should:

- i. Clearly establish the criteria for evaluating/scoring in a consistent manner
- ii. Mark and record learners' performances
- iii. Reflect on the activity and learner performances
- iv. Provide constructive feedback to the learner
- v. Identify learners with SEN who may need extra support

The learner should:

- i. Reflect on the feedback received
- ii. Revise their work for final submission

**Time Frame:** Deciding on a time frame for Portfolio assessment depends on and includes the following:

- i. Nature of project/problem or assignment
- ii. Class size
- iii. Resources

However, based on the learning outcome(s) the appropriate time frame for this portfolio is a week for minor activity and a term for extended projects, especially in Art and Design or Performing Arts.

**Form**

- i. Individual learner's portfolios when the class size is relatively small.
- ii. Group portfolio when the size is relatively large.
- iii. Whole class/ school

**Research As An Assessment Strategy**

**Description:** Research as an assessment strategy is a systematic process of inquiry and investigation that aligns with a particular learning outcome to develop knowledge and understand a phenomenon. It involves identifying an issue in need of investigation, collecting and analysing data, conducting experiments, and drawing conclusions based on the findings. Once learners have completed their research work, they will write a report and do a presentation on their findings.

**Purpose:** Research as an assessment strategy is used to assess learner's ability to:

- i. Identify a problem and gather information (data) from a variety of sources.
- ii. Evaluate the credibility and accuracy of information.
- iii. Analyse and synthesise information from multiple sources.
- iv. Communicate their findings clearly and concisely.

## Setting

- i. Classrooms
- ii. Factories/ Industries
- iii. School farms
- iv. School communities
- v. Libraries
- vi. Homes.
- vii. Fieldwork
- viii. Workshops

**Class Size:** As a teacher, depending on the number of learners in your class, individual or group research-based assessment can be used. However, teachers can create large groups for complex research, where different members can focus on specific aspects of the research.

**Time Frame:** The time frame for conducting a research-based assessment can vary depending on the complexity of the learning outcomes (skill to be achieved) may be:

- i. Short-term
- ii. Medium-term
- iii. Long term

## Steps

### *Before*

The teacher should:

- i. Define the learning outcomes.
- ii. Develop a theme in line with learning outcomes.
- iii. Design the research work and provide a description that is in line with learning outcomes.
- iv. Define specific tasks to be undertaken in developing the research.
- v. create a timeline.
- vi. Select resources and materials needed.
- vii. Provide guidance and support for learners.
- viii. Develop clear assessment rubrics.
- ix. Provide feedback and revisions.

### *During*

The teacher should:

- i. Provide clear guidelines for developing the research and how to assess it.
- ii. Design and plan the research work to align with the learning outcomes.

- iii. Provide necessary resources, materials, and support to help learners succeed in their research work.
- iv. Guide learners in reflecting on their research-based assessments and help them develop metacognitive skills.

### After

The teacher should:

- i. *Alignment with learning outcomes:* The research work should be aligned with the learning outcomes of the content standards. This means that the research work should allow learners to demonstrate their understanding of the course material and to develop the skills that are being taught.
- ii. *Originality:* The research work should be original and not simply a rehash of existing information. Learners should be encouraged to develop their ideas and to come up with their conclusions.
- iii. *Critical thinking:* The research work should demonstrate that learners can conceptualise, apply, analyse, synthesise and evaluate the information they have gathered and come out with an action plan.
- iv. *Communication skills:* The research work should be well-written and well-organised. Learners should be able to communicate their findings clearly and concisely.

### Practical Assessments

**Description:** Practical assessment gauges a student's capacity to use their knowledge and abilities in practical and hands-on settings. It involves evaluating learners' ability to perform specific tasks and demonstrate practical skills. It includes laboratory experiments, simulations, demonstrations or projects.

The exact nature of the assessment will depend on the subject or area a teacher is interested in.

**Purpose:** The purpose of conducting a practical assessment is to:

- i. Evaluate learners' proficiency, problem-solving capacity, and aptitude for carrying out tasks.
- ii. Create and deliver tests that ask learners to complete real-world assignments, experiments, or demonstrations.

**Setting:** Teachers can use practical assessment in the following settings:

- i. Classroom
- ii. Laboratory
- iii. Field
- iv. School farms/gardens/community
- v. Technical workshops
- vi. Science fair

- vii. Virtual/Digital/Remote
- viii. Co-curricular activities and clubs
- ix. Outdoor spaces
- x. Workplace
- xi. Team project

**Time Frame:** Based on the learning outcome and the skills to be acquired, a Practical assessment can be done in a week, at the end of a term or year depending on the project.

**Class size:** Class size suitable for practical assessment can be individual, group or whole class

### **Steps**

#### *Before*

Learners can understand the content and theory being used by;

- i. Reviewing the theoretical concept
- ii. Familiarising themselves with the concept under assessment

Choosing experimental design, learners are required to;

- i. Design an experiment using the theoretical concept.
- ii. Outline the stages/process for the experiment and formulate hypotheses.

Gathering materials

- i. Make a list of the tools and supplies you will need.
- ii. Ensure that the necessary materials are available

#### *During*

Choosing experimental procedure:

- i. Learners are required describe the step-by-step process in detail including how to control extraneous factors, along with any safety precautions.

Gathering and analysing data

With support from teachers, learners are required to:

- i. Measure the dependent variable appropriately at various factor values to collect data.
- ii. Analyse the data meaningfully.
- iii. Sort, examine, and derive conclusions from the data analysis

#### *After*

Display of findings

- i. Give a concise visual summary of the results.

- ii. Address any restrictions or mistakes.

### *Reflection and improvement*

- i. Consider your advantages and disadvantages.
- ii. Improve the design of upcoming experiments.
- iii. Throughout the process, place a strong emphasis on ethics, integrity, and seeking advice as appropriate.
- iv. Encourage a critical and inquisitive outlook on learning.

## **Debate As An Assessment Strategy**

**Description:** Debate as an assessment strategy involves structured arguments and discussions to evaluate learners' knowledge and understanding of issues/ideas. It encourages research and articulation of views; it can be used for formative or summative assessments. Types of debates include formal debates with rules and roles and informal debates, which are more flexible.

**Purpose:** Using debate as an assessment strategy offers a comprehensive evaluation of learners' ability to generate ideas based on their knowledge and understanding of concepts and confidence in supporting their own ideas.

### **Settings**

- i. Classroom
- ii. Performance spaces (e.g. dining hall, assembly hall, laboratory)
- iii. Electronic platforms
- iv. Music and drama theatre

**Class Size:** Depending on the learning outcomes to be achieved debates can be organised in:

- i. Small classes
- ii. Large classes

**Time frame:** The teacher can conduct a debate within a single class session, it can also span over several class sessions or weeks.

### **Steps**

#### ***Before***

The teacher should:

- i. Select appropriate motion/ topic, ensuring it is relevant to the learning outcome
- ii. Offer resources and materials to support learners
- iii. Assign roles /create teams or pairings
- iv. Establish rules and procedures

The learner should:



- i. Undertake research regarding the debate's topic or motion
- ii. Play an active role as a team member (in team-based debates)

### ***During***

The teacher should:

- i. Host the debate
- ii. Ensure effective time management
- iii. Monitor and take notes

The learner should:

- i. Participate in the debate
- ii. Listen and take notes
- iii. Counter argue when necessary

### ***After***

The teacher should:

- i. Facilitate a debriefing session (Teachers should utilise the debriefing sessions to address any misunderstandings or questions that come up from the debate. They should also highlight the key concepts and important lessons based on the learning outcome)
- ii. Implement peer assessments.
- iii. Organise follow-up activities as necessary.

The learners should:

- i. Reflect on their performance and the debate as a whole.
- ii. Assess their peers' performances based on established criteria.

## **The Test of Practical Knowledge (TPK) Assessment Strategy**

**Description:** This assessment is tailored to evaluate a learner's capacity to apply acquired knowledge in real-life situations by engaging in hands-on tasks or simulations that mirror real-world scenarios, assessing practical skills, problem-solving abilities, and the application of practical knowledge theoretically. It aims to gauge how effectively learners can employ their knowledge to solve problems or accomplish tasks.

**Purposes:** The general purpose of the test of practical knowledge is to assess learners' ability to apply practical knowledge in theory to:

- i. Evaluate their application-based understanding.
- ii. Assess their problem-solving skills.
- iii. Measure the learner's practical knowledge and its use in real-life situations.
- iv. Provide insights into a learner's ability to transfer practical knowledge into theoretical actions.

**Setting:** The Test of Practical Knowledge is conducted in environments that simulate real-life situations relevant to the learning outcome and the context being assessed. This could be a

- i. Classroom
- ii. Laboratory
- iii. Field
- iv. School farms/gardens/community
- v. Technical workshops
- vi. Science fair
- vii. Virtual/Digital/Remote
- viii. Outdoor spaces
- ix. Workplace
- x. Team Project

**Class Size:** The size of the class can vary based on resources and the nature of the practical tasks. It could be individual, smaller groups, or whole class.

**Time Frame:** The timing for assessing the Test of Practical Knowledge can range from a single session to multiple sessions, depending on the complexity of tasks and skills being assessed.

### Steps

#### *Before*

The teacher should:

Provide clear instructions and resources needed for the tasks.

Clarify any doubts about the assessment task.

*The learner should:*

- i. Seek clarification from the teacher or other relevant persons before starting the assessment.
- ii. Familiarise themselves with theoretical concepts beforehand.

#### *During*

The teacher should encourage teamwork and effective communication if tasks involve group work.

The learner should

- i. Focus on applying learned concepts to solve problems or complete tasks accurately within the given context.
- ii. Manage time efficiently to complete tasks within allocated timeframes.

#### *After*

The teacher should encourage learners to reflect on their performance, review their work, and identify areas for improvement.

### **Performance Assessment Strategy**

**Description:** In its simplest terms, a performance assessment is one which requires learners to demonstrate that they have mastered specific skills and competencies by performing or producing something. It is important that the task be meaningful and engaging to learners. When learners perform tasks that are meaningful and engaging to them, they can take ownership of their learning and effectively work, either independently or in collaboration, depending on the requirement of the task. Performance assessment can be used as either formative or summative tool.

**Purpose:** The main purpose of this assessment strategy is to provide learners with the opportunity to demonstrate their knowledge and understanding about a concept and communicate that understanding through a performance task.

**Setting:** Performance assessment can be used in the following settings:

- i. Classroom
- ii. Laboratory/workshops
- iii. Field
- iv. Theatre

**Time Frame:** Teachers should note that the learning outcome and learners' achievement expectations may inform the appropriate time frame for the use of performance assessment. However, the designated time of completion of the assessment task should not be too short or too long.

**Class Size:** Performance assessment works best for all forms of class size. Teachers should, however, be strategic in making learners work individually or in moderate/large groups depending on the unique situation.

**Steps:** To develop and implement performance assessment, teachers should:

#### ***Before***

The teacher should:

- i. State the purpose of the assessment.
- ii. Specify the learning outcome to be assessed using the performance assessment strategy.
- iii. Make learners aware whether they will work individually or as groups (e.g., group of 2-5).
- iv. Design a performance task which requires the learners to demonstrate the intended skills and knowledge required of them.
- v. Discuss with learners the rules of engagement which includes the performance criteria that specifies the extent to which learners have mastered the skills and knowledge.

- vi. Discuss with learners the available resources to be used.

The learner should:

- i. Make ready the available resources that will help them perform the assessment task.
- ii. Seek for clarification on the performance task to be performed when necessary.

**During:**

The teacher should:

- i. Monitor and ensure serenity of the environment for learners to work effectively as individuals or groups as in the case of a laboratory/field/workshop exercise.
- ii. Guide learners to complete the assigned task(s) within the stipulated time.

The learner should:

- i. Design the artifact or the idea using the available resources.
- ii. Should submit the performance product to class at the stimulated time for evaluation.

**After:**

The teacher should:

- i. Collaborate with learners to evaluate the performance task(s) outcome.
- ii. Communicate constructive feedback of the assessment to the learners.
- iii. Provide information on how the assessment feedback would be used.

The learner(s) should:

- i. Offer constructive feedback on their colleague's work.
- ii. Self-reflect and make use of constructive feedback to shape his/her work.

## **Demonstration As An Assessment Strategy**

**Description:** Demonstration as an assessment strategy offers a practical and effective way to evaluate learners' knowledge, skills, and abilities by observing their performance in a real or simulated context. This may include a presentation, a practical experiment, a role-play, a performance, or a project.

**Purpose:** The main purpose of using demonstration as an assessment strategy is to allow learners to showcase their skills and competencies through practical application. Some of the areas in which learners can demonstrate their proficiencies are:

- i. Problem-solving skills
- ii. Critical thinking abilities
- iii. Communication

## Settings

- i. Classroom
- ii. Laboratory/ Workshop /Studio
- iii. Simulation studio/environment
- iv. Field or real-world settings (e.g., field trips, community projects, or internships)
- v. Performance spaces (e.g., theatre, music room, or sports field/studio/rooms)
- vi. Online/remote/virtual platform

**Time Frame:** The time frame for conducting demonstration as an assessment strategy depends on the following:

- i. Learning outcome(s)
- ii. Complexity of the task to be performed
- iii. Resources

**NB:** The teacher should provide the learner enough time to demonstrate their abilities and ensure the assessment process is managed within the constraints of the learning environment.

**Class size:** Demonstration can be used for individuals or groups (large or small groups) for the reasons of attention, support, and prompt feedback on factors such as assessors, resources and equipment, learning outcome and the assessment environment.

## Steps

### *Before*

The teacher should

- i. Set clear expectations of the learning outcomes, specific skills, knowledge and competencies.
- ii. Provide instructions for the demonstration to include safety precautions, criteria for assessment and time.
- iii. Provide learners the opportunity to rehearse the task or the activity to be demonstrated.
- iv. Provide the needed materials and resources to be used for the demonstration.
- v. Address the concerns of the learners raised after the rehearsals.
- vi. Distribute the task to the learner(s) considering Special Education Needs - SEN)

The learner should:

- i. Understand the learning outcomes, specific skills, knowledge, and competencies expected of them.
- ii. Take the necessary steps to prepare for the demonstration by reviewing the instructions and rehearsing the expected knowledge, skills, and competencies.

- iii. Seek clarification about the instructions and materials to be used for the demonstration.
- iv. Take the opportunity to practice and refine their skills or knowledge before the demonstration.
- v. Reflect on their previous learning and experiences related to the skills or knowledge being assessed.

### ***During***

The teacher should:

- i. Observe the learner's performance of the task demonstrated.
- ii. Provide continuous guidance to learner(s) on the task especially when they are working with or in hazardous situations.
- iii. Monitor the progress of the learner(s) on the task.
- iv. Pace the timing of the demonstration such that differentiation is considered.
- v. Assess the performance of the learners on the task.
- vi. Take notes of critical issues such as learners' strengths and areas for improvement

The learner should:

- i. Focus on the demonstration and actively listen to the instructions and explanations provided.
- ii. Carefully watch the demonstration, noting the steps, techniques, and key details being shown.
- iii. Take notes of important points, steps, or tips during the demonstration to refer to later.
- iv. Request feedback from the demonstrator or peers to ensure they are on the right track and identify areas for improvement.

### ***After***

The teacher should:

- i. Provide constructive feedback to the learners based on observations. highlighting areas of improvement, reinforcing correct techniques, and encouraging further practice.
- ii. Review notes to consider where learners have performed well and areas that need improvement
- iii. Provide support to learners who may be struggling with the demonstrated skills. This can involve additional explanations, demonstrations, or one-on- one assistance.

The learner should:

- i. Reflect on their own performance during the demonstration and assess their understanding and execution of the demonstrated skills or techniques.

- ii. Share their performance and ask for feedback to improve their learning.
- iii. Identify specific areas where they need further assistance or practice; they can seek out additional resources such as tutorials, online courses, or books to support their learning and assessment.

## Questioning As An Assessment Strategy

**Description:** Questioning as an assessment strategy is the practice of engaging learners in an interactive dialogue or a series of carefully crafted questions to evaluate their understanding, knowledge, skills, and critical thinking abilities. Teachers can use questioning as an assessment strategy in all learning areas or subjects.

**Purpose:** Questioning as an assessment strategy can be used by the teacher to:

1. Identify learning gaps through the assessment of the level of comprehension, retention and application of knowledge, and skills gained by learners in achieving a learning outcome of a given content.
2. Actively engage learners in the teaching and learning process.
3. Assess if a concept taught has been well grasped as learners' feedback provides valuable feedback to them and the teacher.
4. Clarify concepts leading to deeper understanding or seek additional information in solving real-world or imaginary issues.
5. Promote the acquisition of critical thinking and problem-solving skills.
6. Encourage immediate or real-time feedback from learners leading to deeper thinking.
7. Investigate misconceptions for clarification.
8. Accommodate diverse learning styles to achieve a specific learning outcome.

**Types:** The following are various types of questioning techniques based on the Depth of Knowledge (DoK) levels that the teacher can use in assessment:

- i. Closed-ended questions – DoK 1: have a limited number of predetermined answers and are designed to gather specific information requiring “yes” or “no”, “True or False”
- ii. Open-ended Questions – DoK 2 and 3: allow for a more detailed and
- iii. comprehensive response, which begins with words like “what,” “why,” or “how.”
- iv. Funnel Questions – DoK 2 and 3: used to gradually narrow down a topic, starting with broader questions and proceeding to more specific ones. This technique helps gather information in a logical and structured manner.
- v. Probing Questions – DoK 2 and 3: used to explore a topic in more detail or to gain deeper insights. They are often used to dig deeper into a previous response or to uncover hidden information,
- vi. Leading Questions – DoK 2 and 3: used to steer learners towards a particular answer or viewpoint. They may imply an expected or desired response.

- vii. Hypothetical Questions– DoK 3 and 4: These questions often involve speculative or creative thinking. They require learners to make connections, apply knowledge, and think beyond the immediate context.

### Settings

- i. Classroom
- ii. Co-curricular activities, e.g. School Clubs and Games
- iii. Field trips/work, e.g., Factories/industries, school farms/gardens/pantries(kitchen)
- iv. Laboratory/Resource Centre
- v. Workshops/studios/theatres

**Time Frame:** Teachers can use questioning in their daily teaching and learning activities. However, it should be used based on the learning outcome of the subject matter under consideration. It can specifically be used:

- i. Throughout the teaching and learning process (Formative Assessment): before, during and after the teaching of a lesson.
- ii. In summative assessment, questioning can be used together with other forms of assessment such as oral/aural(listening) assessment at the end of a unit or content and programme.

**Class size:** Individual, small group or whole class

**Steps:** In using questioning as an assessment strategy, the teacher and learner can employ the following steps:

### *Before*

The teacher should:

- i. Define the Learning Outcomes to be achieved and develop key questions
- ii. before class based on the outcomes.
- iii. Select appropriate question type(s) that align with the content standard/ indicators to be taught and the DoK levels to be achieved. The questions to be asked should be clear, relevant, concise, and free from ambiguity and biases.
- iv. Design valid questions that will suit the type of questioning strategy to be used to achieve the learning outcomes.

**NB:** Avoid or minimise the use of questions that will yield Yes/No or True/False responses but make more use of questions that allow for explanatory responses.

Plan question sequence and adapt questioning techniques to meet the diverse learning needs and abilities of their learners to promote active participation.

### *During*

The Teacher should:

- i. Select the context and provide relevant information to give learners the basis for the questions.



- ii. Vary the form of questions: those that gauge knowledge, require diagnosis, or challenge conclusions considering the learner's background characteristics to promote inclusivity.
- iii. Ask one question at a time and wait for responses from learners to allow time to think through responses critically.
- iv. Encourage active engagement of all learners.
- v. Monitor learners' performance and learning process to identify areas where learners may need additional support or clarification or to plan appropriate remediation where appropriate.
- vi. Acknowledge all responses/answers- repeat so the class can hear and/or write them on the board.
- vii. Provide constructive and timely feedback; teachers are advised to accommodate learners' varied responses as well as be fair and ethical.
- viii. Use assessment data to modify their teaching techniques, strategies and resources.
- ix. Move around the classroom or learning centre

The learner should:

- i. Ensure they gain an understanding of the learning outcomes and work towards achieving them through self and peer assessment.
- ii. Actively participate in the questioning process by listening carefully to the questions, thinking critically about their responses, and providing thoughtful answers.
- iii. Self and peer assess themselves using a questioning assessment strategy when learning to enable them to reflect on their learning.
- iv. Own their learning by adapting strategies to improve their learning outcomes, skills and competencies.

*After*

The teacher should:

- i. Analyse responses
- ii. Provide constructive feedback
- iii. Modify teaching and learning processes
- iv. Document assessment data
- v. Reflect and adapt questioning techniques, strategies and resources to check if expected learning outcomes have been achieved.
- vi. Teachers and learners reflect on responses to check if expected learning
- vii. outcomes have been achieved.

## Peer/Self Assessment Strategy

**Description:** Peer/self-assessment is a type of performance monitoring and evaluation related to a learning outcome done by or among learners under the supervision of a teacher to track their learning progress. It can be used as both formative and summative assessment. However, it is predominately used for formative assessment purposes.

**Purpose:** Peer/self-assessment provides an opportunity for learners to reflect and provides insight, leading to meaningful feedback on their or other learners' work (behaviours, competencies and experiences). Peer/self-assessment enhances deep learning and understanding among learners and trains learners to track their progress and areas for improvement.

### Setting

- i. Classroom-based environment
- ii. Fieldwork
- iii. Laboratory i.e., Science Resources Centres
- iv. Studio
- v. Workshop

**Class size:** Peer assessment strategy can be done in small groups or whole class.

**Time Frame:** The time frame depends on the complexity of the assignment, the estimated period of the lesson stated in the curriculum and how learners have been adequately prepared. However, the time should neither be too short nor too long.

### Steps

#### *Before*

The teacher should:

- i. Set clear expectations of the learning outcome, skills and competencies
- ii. Decide the structure and format of the assessment e.g.: written or oral
- iii. Introduce the learners to the assignment to be assessed
- iv. Develop the assessment criteria and scoring rubrics with learners.

#### *During*

The teacher should

- i. Model peer/self-assessment by letting learners assess or review what he has taught to open them up to the assessment to be conducted.
- ii. For peer assessment, lead the pairing or grouping for the assessment. In doing this, the teacher should consider mixed groupings, and avoid inter-pairing and pairing amongst friends. (fairness and transparency)
- iii. In self-assessment, the teacher should guide learners with special educational needs in their assessment through questioning
- iv. Provide constructive feedback to learners after the assessment

The learner should:

- i. Work and submit assignments
- ii. Assess their assignments or that of other learners and give constructive feedback
- iii. Reflect on the feedback received and revise the work for final submission

*After*

The teacher should:

- i. Grade the assignments (summative)
- ii. Reflect on the activity with learners
- iii. Offer help or intervention in areas learners need help
- iv. Work on areas that need improvement

**NB:** The teacher should be a mediator between arguing learners and should also consider and guide learners in their approach to providing feedback. (Be conscious of gender, cultural, social and religious sensitive comments and issues)

Teacher should also provide multiple opportunities or formats for learners to assess to accommodate all learn.

## Appendix 3: Teacher Lesson Observation Form

Name of School: .....

Subject being observed: .....

Class

Year 1

Year 2

Year 3

Sex of the teacher

Male

Female

1. Is the purpose of the lesson clearly stated in the lesson plan and focused on learners achieving the lesson learning outcomes?

Yes

In Part

No

NA

1b. Please provide an explanation to your answer in Q1 above

.....

2. Are the unique needs of female learners, male learners, and learners with special education needs adequately catered for in the lesson plan? For example, the choice of teaching methods and learning activities reflects/does not reflect the learning needs of all learners.

For example, the choice of teaching methods, and learning activities.

Yes

In Part

No

NA

2b. Please provide an explanation to your answer in Q2 above

.....

3. Does the teacher manage behaviour well, maintaining a positive and non-threatening learning environment throughout the lesson?

Yes

In Part

No

NA

3b. Please provide an explanation to your answer in Q3 above

.....

4. Are appropriate teaching and learning materials and other resources (including ICT, books, desks) available, accessible and being used to support learning of all females, males and learners with special education needs?

Yes

In Part

No

NA

4b. Please provide an explanation to your answer in Q4 above

.....

5. Are learners engaged on tasks that challenge them in line with the content standards?  
Does the teacher take into consideration the uniqueness of learners?

Yes  In Part  No  NA

5b. Please provide an explanation to your answer in Q5 above

6. Is there evidence that students are learning?

Yes  In Part  No  NA

6b. Please provide an explanation to your answer in Q6 above

7. Is teaching differentiated to cater for the varied needs of all learners (i.e., male learners, female learners, learners with special education needs) and those with poor literacy and/ or numeracy proficiency?

Yes  In Part  No  NA

7b. Please provide an explanation to your answer in Q7 above

.....

8. Does the teacher use real life examples which are familiar to learners to explain concepts?

Yes  In Part  No  NA

8b. Please provide an explanation to your answer in Q8 above

.....

9. Does the teacher point out or question traditional gender roles when they come up during the lessons as appropriate?

Yes  In Part  No  NA

9b. Please provide an explanation to your answer in Q9 above

.....

10. Does the lesson include appropriate interactive and creative approaches e.g., group work, role play, storytelling to support learners achieving the learning outcomes?

*If yes, give examples of the issues and skills that have been so integrated.*

Yes  In Part  No  NA

10b. Please provide an explanation to your answer in Q10 above

.....

11. Have cross-cutting issues and /or 21st century skills been integrated into the lesson to support learners in achieving the learning outcomes e.g., problem-solving, critical thinking, communication? If yes, give examples of the issues and skills that have been so integrated.

Yes  In Part  No  NA

11b. If yes, give examples of the issues and skills that have been so integrated.

.....

12. Does the teacher incorporate ICT into their practice to support learning?

Yes  In Part  No  NA

12b. Please provide an explanation to your answer in Q12 above

.....

13. Does the teacher encourage all female male and male learners (including those who may be shy or afraid to speak) to ask questions, answer questions, participate in group work, etc. during the lesson?

Yes  In Part  No  NA

13b. Please provide an explanation to your answer in Q13 above

.....

14. Is assessment evident in the lesson? If yes, does it include assessment as, for or of learning and go beyond recall?

*If yes, did it include assessment of, for or as learning and go beyond recall?*

Yes  In Part  No  NA

14b. Please provide an explanation to your answer in Q14 above

.....

15. Do learners make use of feedback from teacher and peers?

Yes  In Part  No  NA

15b. Please provide an explanation to your answer in Q15 above

.....

16. Does the teacher sum up the lesson and evaluate the lesson against the learning outcomes with the learners?

Yes  In Part  No  NA

16b. Please provide an explanation to your answer in Q16 above

.....

17. Does the teachers' planning of lessons taught before the one observed show how they plan for learning over time, considering individual and group needs?

Yes  In Part  No  NA

17b. Please provide an explanation to your answer in Q17 above

.....

18. Does the teacher pay attention to the composition of females and males during group work and assigns females leadership roles.

Yes  In Part  No  NA

18b. Please provide an explanation to your answer in Q18 above

.....

19. Does the teacher provide constructive verbal feedback to both females and males and learners with special education needs?

Yes  In Part  No  NA

19b. Please provide an explanation to your answer in Q19 above

.....

20. Does the teacher provide constructive written feedback to both females and males and learners with special education needs in their exercise book?

Yes  In Part  No  NA

20b. Please provide an explanation to your answer in Q20 above

.....

21. Key strengths in the lesson

.....

22. Areas for development

.....

23. Next steps for teacher

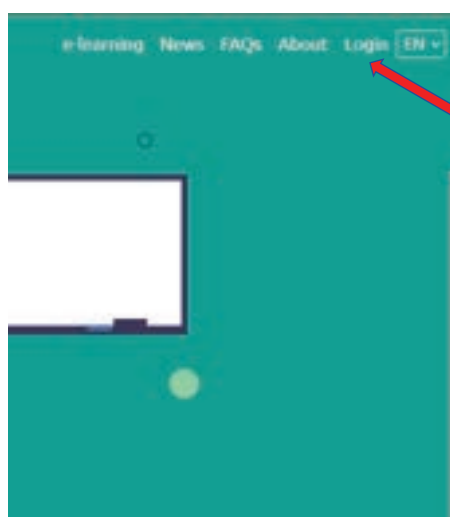
.....

24. Additional Notes (on teacher's actions, the flow of activities, etc.)

.....

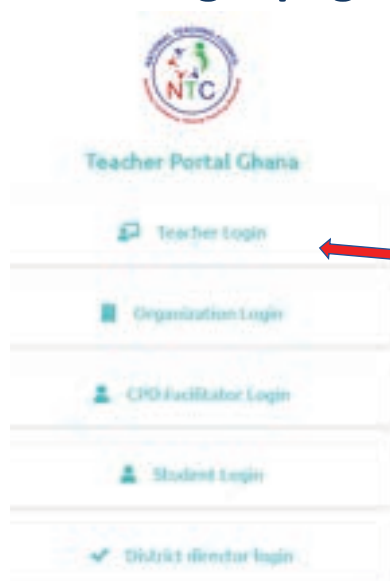
## Appendix 4: How to Check CPD Points and Training Records on Teacher Portal Ghana

### 1. Visit [tpg.ntc.gov.gh](http://tpg.ntc.gov.gh) and click Login



Click Login on the TPG homepage

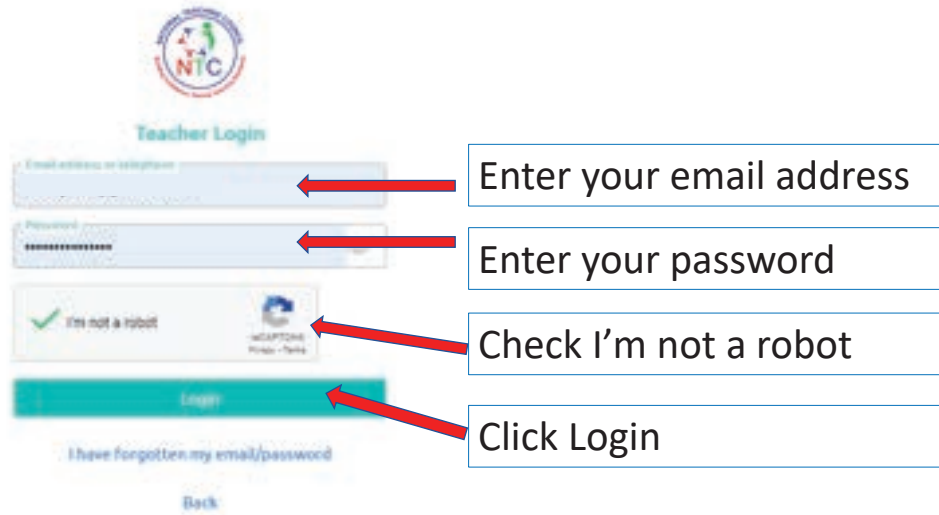
### 2. On the Login page, click Teacher Login



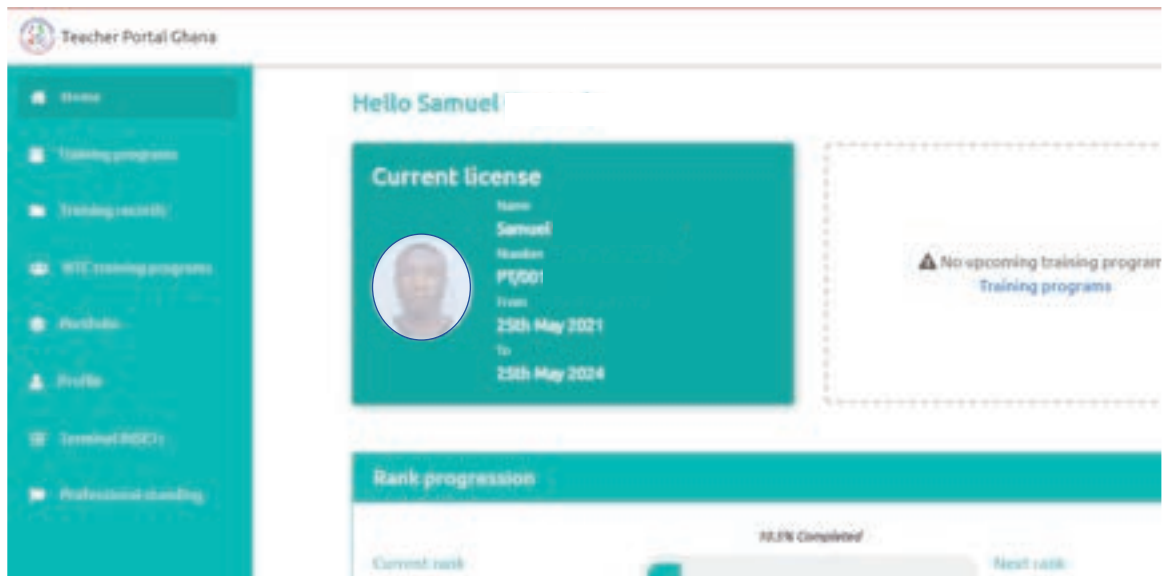
Click Teacher Login



### 3. On the Teacher Login page enter your email address and password and then click Login



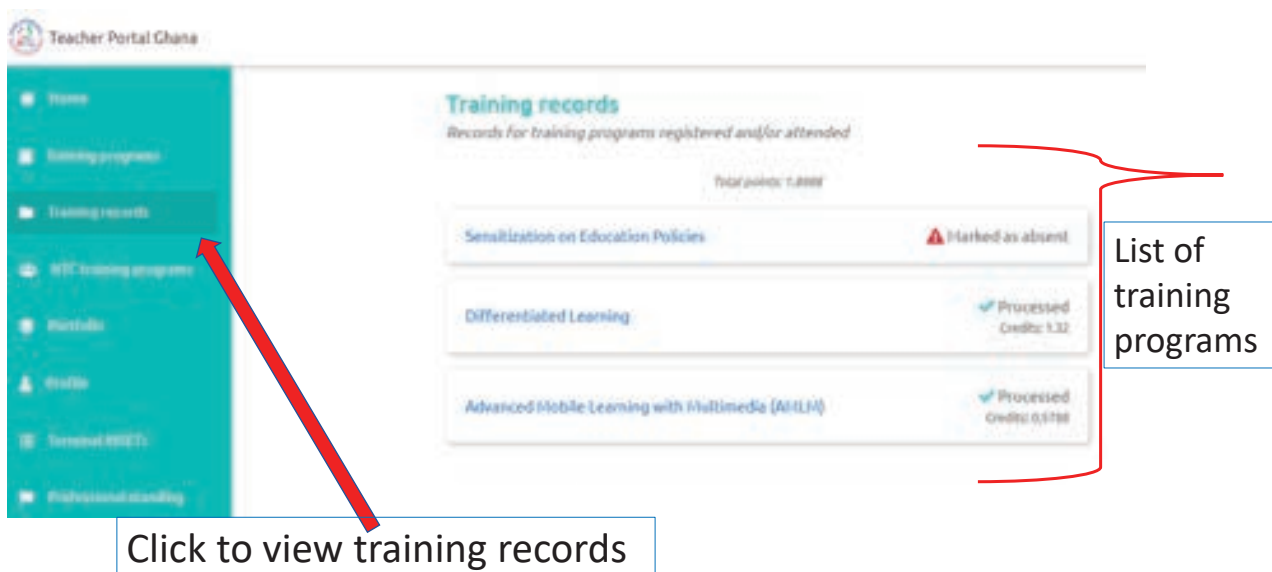
### 4. After a successful login you will get access to your TPG account (Check image below)



5. To check CPD points, scroll down to **Rank progression**. You will see the CPD points progress bar and actual points accrued (Check image below)



6. To view training records, from the side menu tap on **Training records** (Check image below)



## List of Contributors

NaCCA Team	
Name of Staff	Designation
Matthew Owusu	Deputy Director-General, Technical Services
Reginald Quartey	Ag. Director, Curriculum Development Directorate
Nii Boye Tagoe	Senior Curriculum Development Officer (History)
Abigail Birago Owusu	Senior Research, Planning, Monitoring and Evaluation Officer
Sharon Antwi-Baah	Assistant Instructional Resource Officer
Dennis Adjasi	Instructional Resource Officer

No.	Subject	Name of Writer	Institution
1.	Aviation and Aerospace Engineering	David Kofi Oppong	Kwame Nkrumah University of Science and Technology
2.	Agriculture	Dr. Esther Fobi Donkor	University of Energy and Natural Resources, Sunyani
3.	Arabic	Dr. Murtada Mahmoud Muaz	AAMUSTED
4.		Dr Mohammed Almu Mahaman	University for Development Studies
5.	Applied Technology	Michael Korblah Tsorgali	AAMUSTED
6.		Gilbert S. Odjamgba	Ziavi Senior High Technical School
7.		Engr. Dr. Prosper Mensah	CSIR – Forestry Research Institute of Ghana
8.	Home Economics	Rev. Sr. Jusinta Kwakyewaa	St. Francis Senior High Technical School
9.	Performing Arts	Prof. Emmanuel Obed Acquah	University of Education Winneba
10.	French	Maurice Adjetey	
11.	Art and Design Foundation	Angela Owusu-Afriyie	Opoku Ware School
12.	Ghanaian Language	David Sarpei Nunoo	University of Education Winneba, Ajumako Campus

No.	Subject	Name of Writer	Institution
13.	Art and Design Studio	Dzorka Etonam Justice	Kpando SHS
14.	Agricultural Science	Issah Abubakari	Half-Assini SHS
15.	Manufacturing Engineering	Dr. Kofi Owura Amoabeng	Kwame Nkrumah University of Science and Technology
16.		Ali Morrow Fatormah	Mfantshipim School
17.		Benjamin Atribawuni Asaaga	Kwame Nkrumah University of Science and Technology
18.	Design and Communication Technology	Henry Angmor Mensah	Anglican Senior High School, Kumasi
19.	Religious Studies	Anthony Mensah	Abetifi College of Education
20.	Spanish	Franklina Kabio-Danlebo	University of Ghana
21.	Social Studies	Dr. Frank Awuah	Dambai College of Education
22.	Religious and Moral Education	Clement Nsorwineh Atigah	Tamale Senior High School
23.	Literature-in-English	Angela Aninakwah	West African Senior High School
24.		Blessington Dzah	Ziavi Senior High Technical School
25.	Chemistry	Michael Amissah	St. Augustine's College
26.	Biology	Abraham Kabu Otu	Prampram Senior High School
27.	Mathematics	Collins Kofi Annan	Mando Senior High School
28.	Additional Mathematics	Gershon Kwame Mantey	University of Education, Winneba
29.	General Science	Saddik Mohammed	Ghana Education Service
30.	English Language	Perfect Quarshie	Mawuko Girls SHS
31.	Biomedical Science	Jennifer Fafa Adzraku	Université Libre de Bruxelles
32.		Davidson N.K. Addo	Bosomtwi STEM
33.	Robotics	Dr. Nii Longdon Sowah	University of Ghana
34.		Isaac Nzoley	Wesley Girls High School

No.	Subject	Name of Writer	Institution
35.	Engineering	Valentina Osei-Himah	Atebubu College of Education
36.		Daniel Agbogbo	Kwabeng Anglican Senior High School
37.	Physical Education and Health (Core and Elective)	Benedictus Kondoh	St. Thomas Aquinas Senior High School
38.		Bagonluri Kizito Mwinig-Kumo	Wa Technical Institute
39.	Computing	Osei Amankwa Gyampo	Wesley Girls SHS, Kumasi
40.	Information Communication Technology	Raphael Senyo Dordoe	Ziavi Senior High Technical School
41.	Geography	George Boateng	Berekum College of Education
42.	History	Kofi Adjei Akraasi	Opoku Ware School
43.	Economics	Salitsi Freeman Etornam	Anlo Senior High School
44.	Government	Samuel Kofi Adu	Fettehman Senior High School
45.	Business Studies	Theodosia Larteley Oppong	Aburi Girls Senior High School
46.		Ansbert Avole Baba	Bolgatanga Senior High School, Winkogo
47.	Physics	John Tetteh	Benso SHTS
48.	Technical Support	Benjamin Sundeme	St. Ambrose College of Education
49.		Edward Mills Dadson	University for Education, Winneba
50.		Eric Abban	Mt. Mary College of Education
51.		Jennifer Fafa Adzraku	Université Libre de Bruxelles

