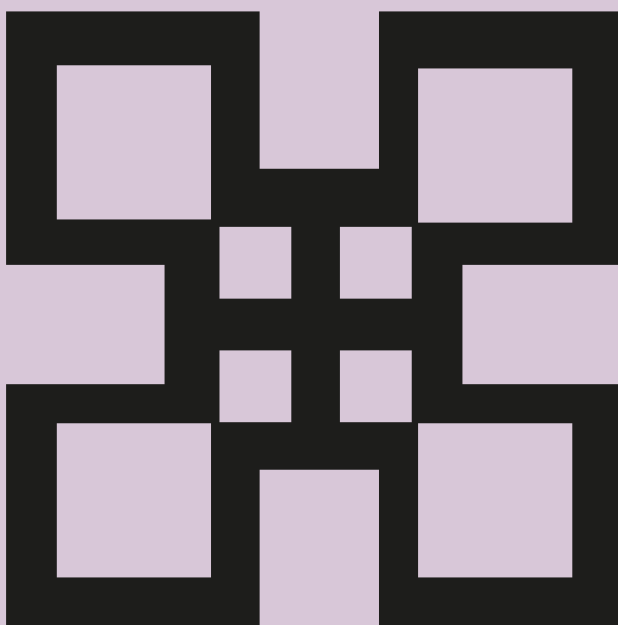


Professional Learning Community Handbook

Chemistry

Year Two



Ghana Education
Service (GES)



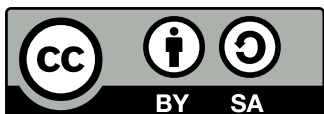
**Professional Learning
Community Handbook**

Chemistry

Year Two



REPUBLIC OF GHANA



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Foreword

As Minister for Education, I am delighted to introduce this handbook on Professional Learning Communities (PLCs). The handbook provides practical guidance and resources for teachers to establish and sustain effective PLCs that will drive quality pedagogy and enhance learning outcomes.

Weekly Professional Learning Community (PLC) sessions are the backbone of this Government's commitment to continuous teacher development in every Senior High School. These PLC sessions enable teachers to come together to master the pedagogy, content and assessment needed to successfully implement Ghana's SHS curriculum.

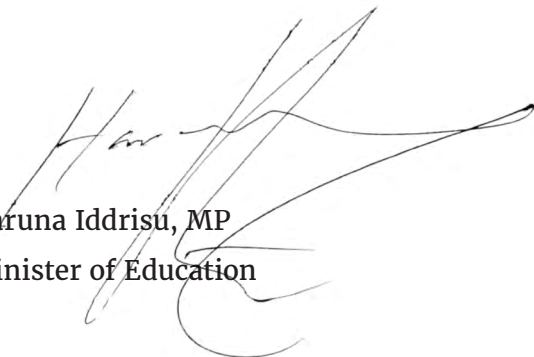
By fostering a culture of collaboration and continuous improvement through PLCs, teachers can enhance their understanding of the new SHS curriculum and effectively facilitate learning in the classroom. This will contribute to our country's resetting agenda by educating a generation of young people with the skills needed to progress to further studies, the world of work and adult life.

PLC sessions are critically important and should be treated with the utmost seriousness. Transforming our education system is a partnership between government, teachers, parents and learners. As teachers gain experience with the new curriculum and assessment regime, PLC sessions can also be tailored to discuss specific issues of concern as a group. It is important that teachers are heard and respected. We have listened to your concerns about PLCs and have factored this feedback into the new Year 2 Subject-Specific PLC Handbooks.

The Handbooks have been designed to be more flexible in structure than those for Year One. Each PLC Handbook is supported by a Subject-Specific App developed by the National Council for Curriculum and Assessment (NaCCA) linked to the revised curriculum. These Apps will help teachers to plan learning activities, assessments and differentiated learning. From our early interactions with teachers to develop and test these Apps we can see the level of excitement about their potential to save teachers time and improve their teaching and learning. These Ghanaian-owned Apps are the first of their kind at this scale anywhere in Africa, helping teachers save time and deliver lessons that truly meet the needs of every learner. I am confident that it will have a significant impact on our education system and ultimately benefit our students, teachers, and communities. All teachers are encouraged to embrace the principles and

practices outlined in this handbook and to work together to build strong, vibrant PLCs that promote enhanced learning outcomes.

I commend the authors and contributors for their tireless efforts in developing this valuable resource, which will enhance the quality of teaching and learning. Thank you to each one of you for your dedication and commitment to helping build the Ghana we want, together.



Haruna Iddrisu, MP
Minister of Education

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Links to APPs

Year One App



[https://www.playlab.ai/project/
cmd940t7h06ujjioubvswrck1](https://www.playlab.ai/project/cmd940t7h06ujjioubvswrck1)

Year Two App



[https://www.playlab.ai/project/
cme6g5xey0aakk9ou6r8olibz](https://www.playlab.ai/project/cme6g5xey0aakk9ou6r8olibz)

PLC Session 0: Introduction to the Year Two Professional Learning Community Handbook and the Subject Specific App

1.0 Introduction and Purpose of the Handbook (15 minutes)

The purpose of the Year Two Professional Learning Community (PLC) Handbook is to support teachers to effectively deliver the new Senior High School (SHS) curriculum. This Handbook is accompanied by a Subject Specific App tailored to SHS curriculum. The App is designed to assist teachers with lesson planning, delivery and assessment. The Subject Specific App uses information directly from the following materials:

1. Curriculum
2. Teacher Manual
3. Learner Materials
4. Vision and Philosophy of the SHS curriculum
5. 21st century skills and competencies
6. National Teachers' Standards
7. West African Examinations Council (WAEC) Scheme of Assessment and Detailed Syllabus
8. Learning Planning Template
9. Teacher Assessment Manual and Toolkit
10. Socio Emotional Learning
11. National Values
12. Gender Equality and Social Inclusion (GESI), etc.

Learning Outcome (LO): To explore how the Subject Specific App can assist teachers with lesson planning, delivery and assessment (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

Learning Indicator (LI) 1: Use the Subject Specific App to explore the Year Two Curriculum Materials (Teacher Manual and Learner Materials)

Learning Indicator (LI) 2: Discuss the advantages and disadvantages of using the Subject Specific App to design lessons and assessment strategies.

2.0 Exploring the Subject Specific App (65 minutes)

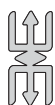
- 2.1** Scan the QR Code or use the link to access your Subject Specific App – <https://www.playlab.ai/project/cme6g5xey0aakk90u6r8olibz>



- 2.2** Have a chat with the Subject Specific App (NTS 3j).

E.g.

- Select a section and the number of lessons you have in a week to start the App
- Provide information about your class. For instance, the number of learners in your class, etc.
- Select a week you are interested in and continue chatting with your App
- Refer to your Teacher Manual and confirm the information provided by the App or otherwise



Note

Always refer to your Teacher Manual to confirm the information the App provides.

- 2.3** Explore the following key areas using the App (NTS 2b, 2c, 2e and 3a–3q)

E.g.

- Learning activities**
I have a 60-minute lesson in a rural farming community in Lawra without enough tables and chairs. I can have my lesson outside the classroom if possible.

b. Assessments

Based on the recommended assessments for the week how can I assess my learners at level 2 at the end of the lesson. I want to give one question during the lesson and one at the end as homework

c. Differentiation strategies

There are two learners in wheelchairs. Another one cannot hear unless you speak very loudly. Finally, 5 learners are comfortable in the local language than in English. How can they be catered for in the lesson and assessment?

Hint

Remember to ask your App to help you add 21st Century Skills, National Values, GESI and SEL to your learning activities, assessment, etc., where applicable.

2.4 Share your experience with the larger group (NTS 3j).

- a.** two things you learnt using the App and how you plan to apply them.
- b.** two advantages of using the App
- c.** two disadvantages of using the App without the appropriate curriculum materials (e.g. Teacher Manual, etc.)

3.0 Reflection**3.1** Reflect and share your views on the session (NTS1a, 1b).**3.2** Remember to read PLC Session 0.5 and bring along your laptop in preparation for next week's session.

PLC SESSION 0.5: Using the Subject Specific App to deliver assessments at appropriate DoK levels

1.0 Introduction (10 minutes)

- 1.1** Read and discuss the purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session

Purpose: The purpose of this session is to refresh our knowledge and understanding of assessment in the SHS curriculum. WAEC's visits to schools show that teachers are generally doing well with setting assessment tasks at DoK Levels 1 and 2 but there are issues with Levels 3 and 4. This session will look at how the subject specific App can assist teachers in developing assessments at all DoK Levels.

Learning Outcome (LO): To strengthen teachers' skills and competencies in developing assessment tasks and items to reflect all the DoK Levels (NTS 3k, 3o-3p).

Learning Indicator (LI) 1: Use the subject specific App to develop assessments linked to the learning indicators and the required DoK levels.

Learning Indicator (LI) 2: Use the subject specific App to review existing assessments to check whether they are linked to the required Learning Indicators and DoK levels.

2.0 Planning and Delivering of Assessment using the Subject Specific App (65 minutes)

- 2.1** Open your App and have a chat with it.

E.g.

- a.** *Select a section and the number of lessons you have in a week to start the App*
- b.** *Provide information about your class. For instance, the number of learners in your class, etc.*

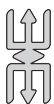
- c. *Select a week you are interested in and continue chatting with your App*
- d. *Refer to your Teacher Manual and confirm the information provided by the App or otherwise.*

2.2 Explore assessment using the App (NTS 3h, 3j, and 3o–3q)

E.g.

Select Assessment

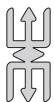
- a. *Look at the LIs for the week and select the appropriate DoK Level or Levels required for the week's lesson. For instance, 'the LI requires modelling, I would like to assess at level 3'*
- b. *Review the responses on the formats from your App, select any that meets your needs or continue chatting with your App to provide other assessment formats.*
- c. *Continue chatting with your App, for instance*
 - i. *'suggest 10 scenario based MCQs'*
 - ii. *'suggest level 3 task taking into consideration the learning activities and differentiation'*
 - iii. *Generate marking scheme for the task and add an explanation why an option is the right answer*



Note

Check that the MCQs are arranged alphabetically, vertically and the options are of similar length

- d. *Now repeat the process for different assessment strategies, for instance*
 - i. *Essay questions at level 3*
 - ii. *Case study questions at level 4*
 - iii. *3-week project task at level 4, etc.*



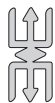
Note

You may select a different section or week for Activity 2.2d

2.3 Use the subject specific App to review the task or items you developed by having a chat with the App to provide justifications as to why the task is at DoK level 3 or 4 (NTS 3j, 3k, 3m, 3o and 3p–3q).

E.g.

Explain why the tasks or items are at DoK level 3.

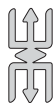


Note

You may repeat this for DoK levels 1, 2 or 4.

3.0 Using your subject specific App to explore one of the key assessment modes

- 3.1** Identify and select an assessment mode you found challenging in the last academic year and explore with your subject specific App how to use this assessment strategy effectively in your lesson delivery (NTS 3k).



Note

- i. *Chatting once may not be enough for the App to provide all that you may need for the tasks.*
- ii. *Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your assessment task, rubrics/mark scheme and how to score them appropriately*

- 3.2** Share your experience with the larger group (NTS 3j).
- a. two things you learnt using the App in developing assessments
 - b. how you plan to apply the experiences
 - c. any challenges you faced in using the App to develop assessments and how you addressed them

4.0 Reflection (15 minutes)

- 4.1** Reflect and share your views on the session (NTS 1a, 1b)

- 4.2** Remember to

- a. read PLC Session 1, Teacher Manual and related Learner Material (NTS 3a).
- b. bring along your laptop, Teacher Manual and PLC Handbook on Week 1 in preparation for the next session (NTS 3a).

PLC Session 1: Enthalpy Change and Standard Enthalpy Changes

1.0 Introduction (10 minutes)

- 1.1** Read and discuss the purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to populate a learning planner for Week 1 on, “explain the various standard enthalpy changes that occur and carry out calculations to determine them” with the needed areas and use the subject-specific App to review the completed learning plan.

Learning Outcome (LO): To populate the learning planner on, “explain the various standard enthalpy changes that occur and carry out calculations to determine them” with essential questions, key notes on differentiation, learning activities and key assessments and to use the subject-specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner on week 1 using the subject specific App.

Learning Indicator (LI) 2: Enact an activity based on your learning plan.

2.0 Planning and Reviewing of Learning Plan (50 minutes)

- 2.1** Refer to your Teacher Manual and have a chat with your subject-specific App to develop your learning plan for Week 1 on, *explain the various standard enthalpy changes that occur and carry out calculations to determine them.* (NTS 3a-3q).

E.g.

i. Essential questions

Suggest 4 essential questions to guide learners to understand the lesson on enthalpy changes that occur and carry out calculations to determine them.

ii. Learning activities

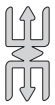
I have 55 learners, 2 with hearing problems, 1 with a visual problem, 10 highly proficient, 15 proficient and 30 approaching proficiency learners. Create learning activities for 2 hours to guide both the teacher and learners during the lesson.

iii. Assessment tasks

Refer to the teacher manual and suggest three discussion assessment tasks that cover DoK levels 2 and 3, ensuring that the characteristics of all learners are taken into consideration. Provide scoring rubrics to ensure fairness in scoring.

iv. Differentiation

Suggest differentiation approaches to cater for the diverse needs of all learners



Note

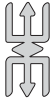
- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks.
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans. Click the link or Scan the QR code to download the template.
<https://curriculumresources.edu.gh/wp-content/uploads/2025/09/Year-Two-Lesson-Planner-Template-20.docx>
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.



3.0 Enactment (20 minutes)

- 3.1** Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c-3j).
- 3.2** Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a critical friend to observe your lesson in relation to PLC Session 1 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 2, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 2: Preparing for Student Transcript Portal Assessment – Group Project

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 1 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 2 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

- 1. review the completed learning plan for week 2
- 2. prepare assessment tasks and rubrics for group project

Learning Outcome (LO): To review the learning plan for week 2 and address any challenges in planning and developing assessment tasks for the group project (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the group project.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your completed learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Learning activities

Attached is my learning plan for week 2. I have 78 learners, 5 are hyperactive, 15 are fast learners, 15 are below average learners, and 8 feel shy in class. Review the learning activities in my learning plan to check for suitability for learners and suggest engaging learning activities and also improvements that suit my learners' characteristics.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. assessment tasks, etc.

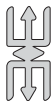
3.0 Prepare to Assign, Assess and Record for the Student Transcript Portal (50 minutes)

- 3.1** Refer to your Teacher Manual for the key assessment to be recorded in the Student Transcript Portal and have a chat with the subject-specific App to review or develop your assessment tasks and mark schemes/rubrics (NTS 2a–2c, 2e–2h and 3j–3q).

E.g.

Group Project

Review group project assessment task in the learning plan and suggest areas for improvement that suit my learners' characteristics (8 feel shy in class, 15 are below average learners). The project starts in week 2, and it is due for submission in week 8.



Note

One chat may not be enough for the App to provide all that you may need for the tasks

- 3.2** Have a chat with your App to verify the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the suggestions to refine the assessment tasks (NTS 1a, 2b, 2c and 3e–3q). In doing this activity, consider:

E.g.

i. Task

Verify if the group project assessment task is suitable based on my learners' characteristics. If it is not, suggest the task which will cater for my learners needs (5 are hyperactive, 15 are fast learners, 8 feel shy in class, 15 below average learner).

ii. Mark scheme and score distribution

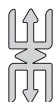
Suggest scoring rubric and score distribution for the group project.

iii. Resources needed for assessment administration

Suggest resources required for the group project assessment to meet the needs of all learners.

iv. How to provide feedback

Suggest appropriate feedback targeted at improving the performance of all learners.



Note

Use the responses to complete your plan

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 2 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** mark, record and upload your learners' assessment scores in the Student Transcript Portal (NTS 3j, 3n).
- b.** read PLC Session 3, Teacher Manual and related Learner Material (NTS 3a).
- c.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- d.** identify areas you found challenging in your teaching and administration of the assessment for discussion during the next session.

PLC Session 3: Preparing for Student Transcript Portal Assessment – Portfolio

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 2 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 3 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

- 1. review the completed learning plan for week 3
- 2. prepare assessment tasks and rubrics for individual portfolio

Learning Outcome (LO): To review the learning plan for week 3 and address any challenges in planning and developing assessment tasks for the individual portfolio (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the individual portfolio.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your completed learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Differentiation

Attached is my learning plan for week 3. I have 78 learners, 23 are highly proficient, 36 are proficient and 19 are approaching proficiency. Review the differentiation styles in the learning plan, suggest styles that need improvement to suit the different characteristics of my learners (23 are highly proficient, 36 are proficient and 19 are approaching proficiency)

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. learning activities
- c. assessment tasks, etc.

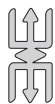
3.0 Prepare to Assign, Assess and Record for the Student Transcript Portal (50 minutes)

- 3.1** Refer to your Teacher Manual for the key assessment to be recorded in the Student Transcript Portal and have a chat with the subject-specific App to review or develop your assessment tasks and mark schemes/rubrics (NTS 2a–2c, 2e–2h and 3j–3q).

E.g.

Individual Portfolio

Develop an individual portfolio assessment task considering the diverse characteristics of my learners (23 are highly proficient, 36 are proficient and 19 are approaching proficiency). Suggest scoring rubric for the portfolio assessment. The portfolio assessment starts from week 3 and it is due for submission in week 22.



Note

One chat may not be enough for the App to provide all that you may need for the tasks

- 3.2** Have a chat with your App to verify the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the suggestions to refine the assessment tasks (NTS 1a, 2b, 2c and 3e–3q). In doing this activity, consider:

E.g.

i. Task

Review this individual portfolio assessment task and recommend the one that works for the specific needs of learners.

ii. Mark scheme and score distribution

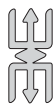
Does the scoring rubric ensure fairness in the distribution of scores for learners? If not modify the scoring rubric and recommend the necessary amendments, etc.

iii. Resources needed for assessment administration

What resources will learners require to effectively execute this individual portfolio task? Suggest locally available materials which will be affordable to my learners.

iv. How to provide feedback

Suggest targeted feedback for individual learners after scoring the individual portfolio assessment task.



Note

Use the responses to complete your plan

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 3 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** mark, record and upload your learners' assessment scores in the Student Transcript Portal (NTS 3j, 3n).
- b.** read PLC Session 4, Teacher Manual and related Learner Material (NTS 3a).
- c.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- d.** identify areas you found challenging in your teaching and administration of the assessment for discussion during the next session.

PLC Session 4: Rate of Reaction and Factors Affecting it

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 3
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 4?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 4 on explaining the term rate of reaction and describe the suitable experimental procedures for measuring rates of reactions using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 4 on explain the term rate of reaction and describe the suitable experimental procedures for measuring rates of reactions (NTS 1a, 2b, 2c, 2e-2h and 3a-3q).

E.g.

i. Essential questions

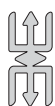
Suggest three essential questions for week 4. One should focus on the teacher, and the other two should focus on the learners. These questions should guide the teaching of 60 students during a 120-minute lesson, where 15% are below-average performers and 85% are average performers.

ii. Differentiation & learning activities

Suggest ways to differentiate learning activities to effectively address each learner's individual needs.

iii. Assessment tasks

Provide me with sample assessment tasks for short quiz with a mark scheme to cover DoK levels 1, 2, and 3, suitable for my learners' abilities



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint



Move to Activity 3.0

2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Learning activities

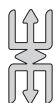
I have attached my learning plan for week 4 lesson. Review the learning activities to meet the needs of all learners.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. assessment tasks, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

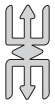
2.2 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 4 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 5, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 5: Collision Theory

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 4
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 5?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 5 on describing the collision theory and using it to explain qualitatively, the effects of the factors that affect the rate of reaction using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 5 on describing the collision theory and using it to explain qualitatively, the effects of the factors that affect the rate of reaction (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Suggest three essential questions to guide my lessons on “describe the collision theory and use it to explain qualitatively, the effects of the factors that affect the rate of reaction” with two focusing on the core content and one guiding me to integrate GESI and 21st century skills into my lesson.

ii. Differentiation

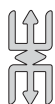
Suggest three differentiation strategies to consider to effectively support all learners of different proficiency levels and varied learning styles.

iii. Learning activities

Develop engaging learning activities to teach “collision theory” in line with the teacher manual, with emphasis on collaborative and activity learning under the headings: introductory activity, main lesson and closure. There are 25 learners in my class. The lesson will last 2 hours. Ensure that there is a strong match between the essential questions, learning activities and differentiation strategies.

iv. Assessment tasks

Provide DoK levels 2 and 3 tasks for class exercise that learners can complete within 20 minutes. Add a comprehensive mark scheme to score the assessment task.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** **Transfer the information from your SS App into your learning planner template to complete your plans.**
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint



Move to Activity 3.0

2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 1.1 Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Learning activities

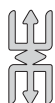
Do the learning activities in my attached plan effectively address the stated essential questions?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. assessment tasks, etc.



Note

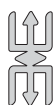
- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans

- iii. *Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.*

- 1.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 1.3 Share your experience with the group.

2.0 Enactment (25 minutes)

- 2.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 2.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 2.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

3.0 Reflection (10 minutes)

- 3.1 Reflect and share your views on the session (NTS 1a, 1b).
- 3.2 Identify a colleague to observe your lesson in relation to PLC Session 5 to provide feedback on your lesson (NTS 1f, 1g).
- 3.3 Remember to:
 - a. read PLC Session 6, Teacher Manual and related Learner Material (NTS 3a).
 - b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 6: Preparing for Mid-Semester Examination

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 5 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 6 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

1. review the completed learning plan for week 6
2. prepare assessment tasks and rubrics for mid-semester examination

Learning Outcome (LO): To review the learning plan for week 6 and address any challenges in planning and developing assessment tasks for the mid-semester examination (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the mid-of semester examination.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Essential questions

I have attached my developed learning plan for week 6. Modify the essential questions to suit the varied ability groups of my learners, etc.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

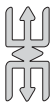
- a. learning activities
- b. differentiation
- c. assessment tasks, etc.

3.0 Prepare for Mid-Semester Examination (50 minutes)

- 3.1** Refer to your Teacher Manual for the format of the mid-semester examination and use the subject-specific App to review or develop your assessment tasks, mark schemes/rubrics, etc. (NTS 2a-2c, 2e-2h and 3j-3q).

E.g.

I have reviewed the structure and guidelines for setting the mid-semester examination. It recommends that the examination should contain 40 multiple-choice questions at DoK levels 1, 2 and 3. Suggest 40 multiple-choice questions that align with the learning indicators in weeks 1 to 5, etc.



Note

In preparing for mid-semester one chat may not be enough for the App to provide all you need (DoK levels, structure, distribution across DoK levels, etc.)

- 3.2** Have a chat with your App to review the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the review to refine the responses and complete the set questions (NTS 1a, 2b, 2c and 3e-3q). In doing this activity, consider:

E.g.

i. Whether the assessment tasks generated follow 30%, 40%, 30% DoK distribution

Modify the assessment tasks to suit 30% DOK level 1, 40% DOK level 2 and 30% DOK levels 3 and 4? etc.

ii. Mark scheme and score distribution

Suggest a marking scheme/rubric for the assessment.

iii. Resources needed for assessment administration

Suggest at least 3 resources required for the smooth conduct of the mid semester examination, etc.

iv. How to provide feedback

Suggest strategies for delivering written feedback to learners after mid-semester assessments, aimed at reinforcing learning, recognising strengths, and pointing out areas requiring improvement, etc.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 6 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** mark, record and upload your learners' assessment scores in the Student Transcript Portal.
- b.** read PLC Session 7, Teacher Manual and related Learner Material (NTS 3a).
- c.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- d.** identify areas you found challenging in your planning and administering of the assessment for discussion during the next session.

PLC Session 7: Equilibrium Constant Expressions and Calculations

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 6
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 7?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 7 on “deduce expressions for equilibrium constants in terms of concentrations and partial pressures and perform relevant calculations from appropriate data” using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 7 on deduce expressions for equilibrium constants in terms of concentrations and partial pressures and perform relevant calculations from appropriate data (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

To effectively achieve the week 7 learning indicators outlined in the teacher manual, suggest three essential questions that cater to the learning needs of learners, one of which guides me in integrating national values into the lesson. Two learners cannot read well.

ii. Differentiation

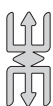
Provide at least three key notes on differentiation to support all learners taking note of the different proficiency levels.

iii. Learning activities

With emphasis on activity-based learning, develop two 60-minute lessons focusing on learning activities in line with the teacher manual.

iv. Assessment tasks

Provide 2 simulation assessment tasks at DoK level 3 that learners can complete within 30 minutes. Include a detailed mark scheme to ensure fairness in mark allocation to learners.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Essential questions

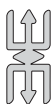
Will the essential questions in the attached learning plan effectively guide lessons on “deduce expressions for equilibrium constants in terms of concentrations and partial pressures and perform relevant calculations from appropriate data”? Suggest other essential questions.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. learning activities
- b. differentiation
- c. assessment tasks, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

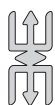
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 7 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 8, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 8: Le Chatelier's Principle and Factors that Affect Equilibrium Positions

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 7
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 8?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 8 on state Le Chatelier's Principle and apply it to deduce qualitatively, the effects of various factors on the positions of equilibrium and on the value of the equilibrium constant using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 8 on state Le Chatelier's Principle and apply it to deduce qualitatively, the effects of various factors on the positions of equilibrium and on the value of the equilibrium constant (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Provide four key questions for week 8 learning indicators to guide teaching in a typical rural setting. One question should help the facilitator incorporate 21st-century skills into the lesson.

ii. Differentiation

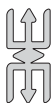
Provide three differentiations to effectively support all learners to understand the effects of various factors on the positions of equilibrium and the value of the equilibrium constant.

iii. Learning activities

I need help to develop two lessons with engaging learning activities to help learners understand this challenging topic. Each lesson is 1 hour long.

iv. Assessment tasks

Create one essay-type assessment task at DoK level 2 or 3 that learners can complete within 30 minutes during each lesson. Include detailed scoring rubrics that clearly break down the total marks by performance level to show how each score is awarded.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Assessment tasks

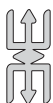
Do the assessment tasks in my attached learning plan effectively reflect the essential questions and the learning activities?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

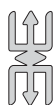
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 8 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 9, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 9: Concepts of Acids and Bases

1.0 Introduction (5 minutes)

- 1.1** Share one thing you applied in your classroom based on PLC Session 8
- the challenges you faced
 - how you addressed them
- 1.2** Have you developed your learning plan for week 9?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 9 on explaining Arrhenius, Bronsted-Lowry and Lewis concepts of acids and bases using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 9 on explaining Arrhenius, Bronsted-Lowry and Lewis concepts of acids and bases (NTS 1a, 2b, 2c, 2e-2h and 3a-3q).

E.g.

i. Essential questions

Suggest 4 essential questions to guide lessons for week 9 focal areas. Take into consideration SEL, GESI and 21st Century skills.

ii. Differentiation

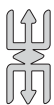
What differentiation approaches should be considered to effectively support all learners- considering their different proficiency and varied learning styles?

iii. Learning activities

Suggest learning activities from the teacher manual with emphasis on collaborative and activity-based learning that should relate to real-world thinking and applications of acid-base concepts in everyday life.

iv. Assessment tasks

Provide 3 peer assessment tasks at DoK levels 2 and 3 that my learners can complete within 20 minutes. Include mark scheme.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Assessment tasks

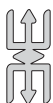
Review and modify the assessment task in my attached learning plan to effectively reflect the essential questions and the learning activities.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

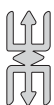
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 9 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 10, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 10: Physical and Chemical Properties of Acids and Bases

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 9
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 10?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 10 on describe the physical and chemical properties of acids and bases using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 10 on describe the physical and chemical properties of acids and bases (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Suggest three essential questions for week 10 learning indicator from the teacher manual. One of them should guide the teacher and the other two the learners but all three guiding the integration of national values and SEL into the lesson. Relate it to real-world thinking and applications of acid-base properties in everyday life. I have one lesson this week for duration of 1 hour. My class has 58 learners – 18 males and 40 females. Two learners have reading difficulties that may affect their performance.

ii. Differentiation

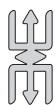
Provide four differentiation strategies I should consider to support all my learners – considering gender and background of my learners.

iii. Learning activities

Suggest learning activities for the lesson in week 10, focusing on the “describe the physical and chemical properties of acids and bases” in the teacher manual emphasising on exploratory and experiential learning approaches. This lesson’s duration is 1 hour. Activities should relate to real-world thinking and applications of acid-base properties in everyday life.

iv. Assessment tasks

Provide an elaborate test of practical assessment task for week 10, focusing on the “describe the physical and chemical properties of acids and bases” from the teacher manual. Assessment should relate to real-world thinking and applications of acid-base properties in everyday life. Suggest assessment task at DoK levels 2 or 3 with clear mark schemes.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0

2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

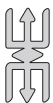
Differentiation

Do I have the right differentiation approaches in my attached learning plan to cater for the diverse needs of all learners?

Hint

Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. learning activities
- c. assessment tasks, etc.

**Note**

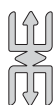
- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans

- iii. *Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.*

- 2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

- 4.1 Reflect and share your views on the session (NTS 1a, 1b).
- 4.2 Identify a colleague to observe your lesson in relation to PLC Session 10 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3 Remember to:
 - a. read PLC Session 11, Teacher Manual and related Learner Material (NTS 3a).
 - b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 11: Strength of Acids and Bases

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 10
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 11?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 11 on distinguish between strong and weak acids, strong and weak bases in terms of the extent of dissociation, rate of reaction, electrical conductivity, pH value in aqueous solution and enthalpy change of neutralisation value using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 11 on “*distinguish between strong and weak acids, strong and weak bases in terms of the extent of dissociation, rate of reaction, electrical conductivity, pH value in aqueous solution and enthalpy change of neutralisation value*” (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Suggest three essential questions to guide two lessons for week 11 on distinguish between strong and weak acids, strong and weak bases in terms of the extent of dissociation, rate of reaction, electrical conductivity. The essential questions should help integrate 21st century skills and national values into lesson. Relate it to real-world thinking and strength of acid and base.

ii. Differentiation

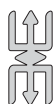
Give four differentiation strategies to consider in order to effectively guide the learning activities and assessment task based on the proficiency levels of my learners.

iii. Learning activities

The teacher manual suggests enquiry-based learning for week 11 lessons; suggest learning activities with emphasis on enquiry-based learning under the headings: introductory activity, main lesson and closure. The duration of each lesson is 120 minutes.

iv. Assessment tasks

Provide two DoK level 3 demonstration tasks. Suggest scoring rubrics for scoring.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0

2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

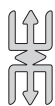
Assessment tasks

I have attached my learning plan for week 11; do the assessment tasks and the scoring rubrics match the essential questions and the learning activities?

Hint

Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

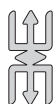
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 11 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a. read PLC Session 12, Teacher Manual and related Learner Material (NTS 3a).
- b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 12: Preparing for End of Semester Examination

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 11 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 12 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

1. review the completed learning plan for week 12
2. prepare assessment tasks and rubrics for end of semester examination

Learning Outcome (LO): To review the learning plan for week 12 and address any challenges in planning and developing assessment tasks for the end of semester examination (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the end of semester examination.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Learning activities

Attached is a developed learning plan for week 12. I have 78 learners, 35 are above average, 22 average learners and 21 below average learners. Review the learning activities and suggest areas that need improvement to suit the peculiar needs of my learners, etc.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. assessment tasks, etc.

3.0 Prepare for End of Semester Examination (50 minutes)

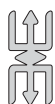
- 3.1** Refer to your Teacher Manual for the format of the end of semester examination and use the subject-specific App to review or develop your assessment tasks, mark schemes/rubrics, etc. (NTS 2a–2c, 2e–2h and 3j–3q).

E.g.

The table of specifications in the teacher manual recommends that the end of semester examination should align with the learning indicators from weeks 1 to 12. The following structure and guidelines are also recommended: 30 multiple-choice questions as paper 1, 5 short answer type and 3 essay type questions as paper 2 across DoK levels 1, 2 and 3. Suggest:

- a. 30 multiple-choice questions
- b. 5 short answer questions
- c. 3 essay type questions

Add mark scheme/Rubric. The duration for the end of semester examination is 2 hours.



Note

In preparing for end of semester examination, one chat may not be enough for the App to provide all you need (DoK levels, structure, distribution across DoK levels, etc.)

- 3.2** Have a chat with your App to review the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the review to refine the responses and complete the set questions (NTS 1a, 2b, 2c and 3e–3q). In doing this activity, consider:

E.g.

- i. Whether the assessment tasks generated follow 30%, 40%, 30% DoK distribution**

Verify the assessment task given to check for 30%, 40%, 30% Dok distribution.

- ii. Mark scheme and score distribution**

Suggest the mark scheme/rubric for the assessment. Show the distribution of the score for the learners, etc.

- iii. Resources needed for assessment administration**

Suggest at least 3 resources required for the smooth conduct of the end of semester examination, etc.

- iv. How to provide feedback**

Outline strategies for delivering written feedback to 68 learners after end of semester examination, aimed at reinforcing learning, recognising strengths, and pointing out areas requiring improvement, etc.

4.0 Reflection (10 minutes)

- 4.1** Reflect and share your views on the session (NTS 1a, 1b).

- 4.2** Identify a colleague to observe your lesson in relation to PLC Session 12 to provide feedback on your lesson (NTS 1f, 1g).

- 4.3** Remember to:

- a.** mark, record and upload your learners' assessment scores in the Student Transcript Portal.
- b.** read PLC Session 13, Teacher Manual and related Learner Material (NTS 3a).
- c.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- d.** identify areas you found challenging in your planning and administering of the assessment for discussion during the next session.

PLC Session 13: Acid – Base Titration

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 12
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 13?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 13 on determine the quantity of analyte in a solution using acid – base titration using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 13 on “*determine the quantity of analyte in a solution using acid – base titration*” (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

To effectively meet the week 13 learning outcome in the teacher manual, suggest three essential questions (one aimed at the learner, two aimed at the teacher) that address the learning needs of 45 mixed-ability students, including one who is blind. These questions should help incorporate GESI and national values into the lesson. The lesson lasts for 2 hours.

ii. Differentiation

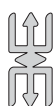
Provide three differentiated strategies that will meet the individual needs of all mixed-ability learners and the blind learner.

iii. Learning activities

Develop engaging learning activities to teach “determine the quantity of analyte in a solution using acid–base titration” reference the teacher manual and emphasise exploratory learning for a two-hour lesson. Ensure that the activities match the essential questions and cater for the learning needs of the learners, especially the blind learner.

iv. Assessment tasks

Provide DoK levels 2 and 3 practical assessment tasks to assess learners with varied abilities, include a detailed mark scheme to score the learners’ responses.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** **Transfer the information from your SS App into your learning planner template to complete your plans.**
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Learning activities

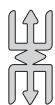
Attached is my learning plan for week 13 lesson on “acid- base titration”. With the characteristics of my learners in mind, modify the learning activities to suit the needs of all learners, especially the blind learner.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. assessment tasks, etc.



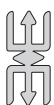
Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. **Transfer the information from your SS App into your learning planner template to complete your plans**
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

- 2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

- 4.1 Reflect and share your views on the session (NTS 1a, 1b).
- 4.2 Identify a colleague to observe your lesson in relation to PLC Session 13 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3 Remember to:
 - a. read PLC Session 14, Teacher Manual and related Learner Material (NTS 3a).
 - b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 14: Preparing for Student Transcript Portal Assessment – Individual Project

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 13 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 14 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

- 1. review the completed learning plan for week 14
- 2. prepare assessment tasks and rubrics for individual project

Learning Outcome (LO): To review the learning plan for week 14 and address any challenges in planning and developing assessment tasks for the individual project (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the individual project.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your completed learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Essential questions

Attached is my learning plan. I have 78 learners, review the essential questions in the learning plan and suggest areas for improvement to suit my learners' characteristics (2 are visually impaired, and 15 are slow learners), etc.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. learning activities
- b. differentiation
- c. assessment tasks, etc.

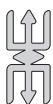
3.0 Prepare to Assign, Assess and Record for the Student Transcript Portal (50 minutes)

- 3.1** Refer to your Teacher Manual for the key assessment to be recorded in the Student Transcript Portal and have a chat with the subject-specific App to review or develop your assessment tasks and mark schemes/rubrics (NTS 2a–2c, 2e–2h and 3j–3q).

E.g.

Individual Project

Develop an individual project assessment task to suit the needs of learners ((2 are visually impaired, and 15 are slow learners). Suggest scoring rubric to score the assessment.



Note

One chat may not be enough for the App to provide all that you may need for the tasks

- 3.2** Have a chat with your App to verify the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the suggestions to refine the assessment tasks (NTS 1a, 2b, 2c and 3e–3q). In doing this activity, consider:

E.g.

i. Task

Is the individual project task crafted to meet the diverse needs of all my learners? If not, suggest the necessary amendment to it so as to meet the needs of all learners.

ii. Mark scheme and score distribution

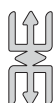
Suggest a scoring rubric for scoring the individual project.

iii. Resources needed for assessment administration

What materials would the learners need to conduct the individual project? Suggest locally available materials

iv. How to provide feedback

Suggest targeted feedback to all the learners after the project work is scored.



Note

Use the responses to complete your plan

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 14 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** mark, record and upload your learners' assessment scores in the Student Transcript Portal (NTS 3j, 3n).
- b.** read PLC Session 15, Teacher Manual and related Learner Material (NTS 3a).
- c.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- d.** identify areas you found challenging in your teaching and administration of the assessment for discussion during the next session.

PLC Session 15: Describe the Patterns in Physical and Chemical Properties of the Period 3 Elements

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 14
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 15?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 15 on “describe the patterns in physical and chemical properties of the Period 3 elements” using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 15 on describing the patterns in physical and chemical properties of the Period 3 elements (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

To effectively achieve week 15 learning indicators in the teacher manual, suggest 3 essential questions (1 targeted at the learner, two targeted at the teacher) to drive the teaching and learning process.

ii. Differentiation

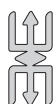
I am planning for Week 15 lesson on “describe the patterns in physical and chemical properties of period 3 elements” with 49 learners. give a plan for a differentiated lesson that will meet the individual needs of all learners in the class.

iii. Learning activities

Provide learning activities from the teacher manual for the 2 lessons in the week. The activities should focus on the problem– based and talk for learning strategies. This lesson’s duration should be 1 hour.

iv. Assessment tasks

Provide DoK levels 2 and 3 questioning tasks for the lesson. Include detailed mark schemes/ rubrics for scoring the tasks



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Differentiation

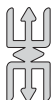
I have attached my learning plan for week 15 on “describe the patterns in physical and chemical properties of period 3 elements”. I have 49 learners (12 above average, 17 average and 20 below average learners). Review the key notes of differentiation in my learning plan and suggest areas of improvement to suit different ability levels of my learners.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. learning activities
- c. assessment tasks, etc.



Note

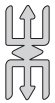
- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans

- iii. *Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.*

- 2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

3.0 Reflection (10 minutes)

- 3.1 Reflect and share your views on the session (NTS 1a, 1b).
- 3.2 Identify a colleague to observe your lesson in relation to PLC Session 15 to provide feedback on your lesson (NTS 1f, 1g).
- 3.3 Remember to:
 - a. read PLC Session 16, Teacher Manual and related Learner Material (NTS 3a).
 - b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 16: Patterns in Physical and Chemical Properties of Compounds (Hydrides, Oxides, Hydroxides and Chlorides) of Period 3 Elements

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 15
- the challenges you faced
 - how you addressed them
- 1.2 Have you developed your learning plan for week 16?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 16 on “describe the patterns in physical and chemical properties of compounds (hydrides, oxides, hydroxides and chlorides) of period 3 elements” using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your

populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 16 on describing the patterns in physical and chemical properties of compounds (hydrides, oxides, hydroxides and chlorides) of period 3 elements (NTS 1a, 2b, 2c, 2e-2h and 3a-3q).

E.g.

i. Essential questions

Suggest 2 essential questions for each of this week's lessons (1 targeted at the learner and the other targeted at the teacher) in the teacher manual for week 16 on "describe the patterns in physical and chemical properties of compounds (hydrides, oxides, hydroxides and chlorides) of period 3 elements". I have 45 mixed-ability learners. The duration of each lesson is 1 hour.

ii. Differentiation

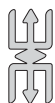
Suggest how this lesson could be differentiated to meet the diverse needs of my learners in assessment

iii. Learning activities

Provide learning activities based on collaborative and experiential learning for the two lessons to cater for the diverse needs of my learners. The duration of each lesson is 1 hour.

iv. Assessment tasks

Suggest two DoK level 2 questions that learners can complete in 20 minutes in the first lesson and one DoK level 3 research question in the second lesson that learners can complete in 2 days. Suggest a mark scheme or rubric to score learners' responses



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.

- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 1.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Essential questions

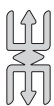
Will the essential questions in my attached learning plan effectively guide the lessons in the week? Considering the learning activities and diverse needs of learners.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. learning activities
- b. differentiation
- c. assessment tasks, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

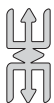
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 16 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a. read PLC Session 17, Teacher Manual and related Learner Material (NTS 3a).
- b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 17: Physical and Chemical Properties of the Halogens (Group 17 Elements)

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 16
 - a. the challenges you faced
 - b. how you addressed them
- 1.2 Have you developed your learning plan for week 17?
 - a. If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - b. If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 17 on explain the physical and chemical properties of the halogens (group 17 elements) using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

2.1 Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 17 on explaining the physical and chemical properties of the halogens (group 17 elements) (NTS 1a, 2b, 2c, 2e-2h and 3a-3q).

E.g.

i. Essential questions

Recommend 4 essential questions for week 17 to effectively guide the lesson this week. I have 56 learners with diverse needs (one with speech impairment). Three of these essential questions should help integrate 21st century skills into the lesson. The duration of the lesson is 2 hours.

ii. Differentiation

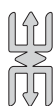
Suggest 4 differentiation strategies to consider to effectively guide the lessons this week.

iii. Learning activities

Develop learning activities in line with explain the physical and chemical properties of the halogens (group 17 elements) in the teacher manual for 1 hour lesson duration.

iv. Assessment tasks

Provide 5 short answer tasks covering DoK levels 2 and 3 as home work to be submitted in 2 days. Include a detailed mark scheme for scoring learners' responses.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Assessment tasks

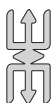
Do the assessment tasks in the attached learning plan clearly match the essential questions and the learning activities?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

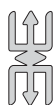
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 17 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 18, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 18: Preparing for Mid-Semester Examination

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 17 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 18 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

1. review the completed learning plan for week 18
2. prepare assessment tasks and rubrics for mid-semester examination

Learning Outcome (LO): To review the learning plan for week 18 and address any challenges in planning and developing assessment tasks for the mid-semester examination (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the mid-semester examination.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Assessment tasks

Attached is a developed learning plan for week 18. Modify the assessment tasks to suit the needs of my learners (78 learners: 35 are above average, 22 average learners and 21 below average learners, etc.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.

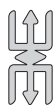
3.0 Prepare for Mid-Semester Examination (50 minutes)

- 3.1** Refer to your Teacher Manual for the format of the mid-semester examination and use the subject-specific App to review or develop your assessment tasks, mark schemes/rubrics, etc. (NTS 2a-2c, 2e-2h and 3j-3q).

E.g.

I have reviewed the structure and guidelines for setting mid-semester examination. It recommends that the examination should contain 40 multiple-choice questions across Dok levels 1, 2 and 3. Suggest 40 multiple-choice questions with a mark scheme, etc.

The examination is for 50 minutes. The developed assessment tasks should align with the learning indicators in weeks 13 to 17.



Note

In preparing for mid-semester examination, one chat may not be enough for the App to provide all you need (Dok levels, structure, distribution across Dok levels, etc.)

- 3.2** Have a chat with your App to review the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the review to refine the responses and complete the set questions (NTS 1a, 2b, 2c and 3e-3q). In doing this activity, consider:

E.g.

i. Whether the assessment tasks generated follow 30%, 40%, 30% Dok distribution

Modify the assessment tasks to suit 30% DOK level 1, 40% DOK level 2 and 30% DOK levels 3 and 4, etc.

ii. Mark scheme and score distribution

Review the marking scheme for the assessment to align with the assessment levels. Show the distribution of the score for the learners, etc.

iii. Resources needed for assessment administration

Suggest at least 3 resources required for the smooth conduct of the mid semester examination, etc.

iv. How to provide feedback

Outline strategies for delivering written feedback to 42 learners after mid-semester assessments, aimed at reinforcing learning, recognising strengths, and pointing out areas requiring improvement, etc.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 18 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** mark, record and upload your learners' assessment scores in the Student Transcript Portal.
- b.** read PLC Session 19, Teacher Manual and related Learner Material (NTS 3a).
- c.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- d.** identify areas you found challenging in your planning and administering of the assessment for discussion during the next session.

PLC Session 19: Hybridisation, Structure and Bonding in Organic Compounds

1.0 Introduction (5 minutes)

- 1.1** Share one thing you applied in your classroom based on PLC Session 18
- the challenges you faced
 - how you addressed them
- 1.2** Have you developed your learning plan for week 19?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 19 on predict the shape and bond angles for species and distinguish between sigma and pi bonds using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 19 on predicting the shape and bond angles for species and distinguish between sigma and pi bonds (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Provide 3 essential questions for week 19 focal area in the teacher manual to effectively guide my one-hour lesson this week. I have 34 learners with diverse needs (3 with dyslexia, 2 are highly creative).

ii. Differentiation

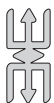
I am planning for week 19 on the focal area– “predict the shape and bond angles for species and distinguish between sigma and pi bonds” with 34 learners (3 with dyslexia, 2 are highly creative). Help me plan a differentiated lesson that will meet the individual needs of all learners in the class.

iii. Learning activities

Give engaging learning activities to effectively deliver a one-hour lesson for week 19 learning indicators considering 21st century skills and GESI. I have 34 learners (3 with dyslexia, 2 are highly creative).

iv. Assessment tasks

Provide two DoK level 2 or 3 essay type tasks suitable to assess learners. I have 34 learners (3 with dyslexia, 2 are highly creative). Add scoring rubric to the assessment tasks.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Differentiation

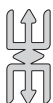
Do I have the best differentiation approaches in the attached learning plan for learners with hearing impairment?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- essential questions
- learning activities
- assessment tasks, etc.



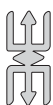
Note

- Chatting once may not be enough for the App to provide all that you may need for the tasks
- Transfer the information from your SS App into your learning planner template to complete your plans
- Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

- 2.2** Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3** Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1** Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2** Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3** Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

- 4.1** Reflect and share your views on the session (NTS 1a, 1b).
- 4.2** Identify a colleague to observe your lesson in relation to PLC Session 19 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3** Remember to:
 - a.** read PLC Session 20, Teacher Manual and related Learner Material (NTS 3a).
 - b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 20: Hybridization, Structure and Bonding in Organic Compounds

1.0 Introduction (5 minutes)

- 1.1** Share one thing you applied in your classroom based on PLC Session 19
- the challenges you faced
 - how you addressed them
- 1.2** Have you developed your learning plan for week 20?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 20 on explaining hybridisation and relate it to various structures and apply the concept of hybridisation to explain sigma and pi bond of organic compounds and explain their structure and bonding using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 20 on explaining hybridisation and relate it to various structures and apply the concept of hybridisation to explain sigma and pi bond of organic compounds and explain their structure and bonding (NTS 1a, 2b, 2c, 2e-2h and 3a-3q).

E.g.

i. Essential questions

Create 4 essential questions for both facilitators and learners to guide two lessons for week 20 considering that 4 learners have communication difficulties and one with severe physical disability. The duration of each lesson is one hour.

ii. Differentiation

Considering that 4 of my learners have communication difficulties and one with severe physical disability. Suggest how to differentiate teaching and learning activities to support each learner's individual needs in the classroom.

iii. Learning activities

Create 3 practical based learning activities to guide lesson, considering 4 learners with communication difficulties and one with severe physical disability.

iv. Assessment tasks

Suggest three practical tasks at DoK levels 3 for learners to answer one in the week's lesson. The duration should be 20 minutes. Include scoring scheme/ rubrics.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0

2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e-3q).

E.g.

Learning activities

Do the learning activities in the attached learning plan effectively address the essential questions?

Hint

Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. assessment tasks, etc.

**Note**

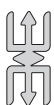
- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans

- iii. *Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.*

- 2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

- 4.1 Reflect and share your views on the session (NTS 1a, 1b).
- 4.2 Identify a colleague to observe your lesson in relation to PLC Session 20 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3 Remember to:
 - a. read PLC Session 21, Teacher Manual and related Learner Material (NTS 3a).
 - b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 21: Alkanes

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 20
- the challenges you faced
 - how you addressed them
- 1.2 Have you developed your learning plan for week 21?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 21 on explain the nomenclature, structure, properties and everyday uses of alkanes using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 21 on explaining the nomenclature, structure, properties and everyday uses of alkanes (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Suggest 4 essential questions that will guide teaching to suit the learning needs of two physically challenged learners and the remaining 18 learners. The duration of each lesson is 2 hours.

ii. Differentiation

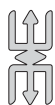
I am developing week 21 learning plan from the teacher manual for 20 learners; two are physically challenged. Give four ways to differentiate my approach to ensure I can effectively support each learner's individual needs.

iii. Learning activities

Suggest learning activities with 21st century skills to be integrated into lessons to guide teaching to suit the learning needs of two physically challenged learners. Include model building and more hands-on experiments. The duration of each lesson is 2 hours.

iv. Assessment tasks

Suggest three essay-type assessment tasks at DoK level 3 for the first lesson and a debate task at DoK level 4 for the second lesson – each with rubrics that should assess the progress of learners, especially the learning needs of two physically challenged learners.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Assessment tasks

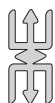
Do the assessment tasks in the attached learning plan satisfy the recommended DoK levels as suggested in the teacher manual?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.



Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).

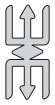
2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).

3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).

3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

4.1 Reflect and share your views on the session (NTS 1a, 1b).

4.2 Identify a colleague to observe your lesson in relation to PLC Session 21 to provide feedback on your lesson (NTS 1f, 1g).

4.3 Remember to:

- a.** read PLC Session 22, Teacher Manual and related Learner Material (NTS 3a).
- b.** bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
- c.** identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 22: Alkenes and Alkynes

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 21
- the challenges you faced
 - how you addressed them
- 1.2 Have you developed your learning plan for week 22?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 22 on explain the nomenclature, structure, properties of alkenes and alkynes using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 22 on explaining the nomenclature, structure, properties of alkenes and alkynes (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

Suggest three essential questions for each of the two learning indicators that should guide teaching in Week 22, as outlined in the teacher manual, while integrating 21st-century skills and GESI into the lesson. The lesson duration is 60minutes.

ii. Differentiation

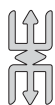
Suggest 3 differentiation strategies, each on learning activities and assessment strategies that should guide teaching to effectively achieve the week 22 learning indicators, considering the different abilities of learners.

iii. Learning activities

Suggest learning activities emphasising collaborative and experiential learning that should be the focal point in teaching the learning indicators in the teacher manual. Each lesson is 60minutes. Provide more hands-on experiments.

iv. Assessment tasks

Provide 3 gamification assessment tasks at DoK level 3 with a mark scheme to assess learners in the 2 lessons for week 22. The duration should be 20 minutes each.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Assessment tasks

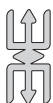
Is the gamification assessment task provided in the attached learning plan at the right DoK level?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. differentiation
- c. learning activities, etc.



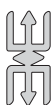
Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

- 2.2** Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3** Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1** Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2** Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3** Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

- 4.1** Reflect and share your views on the session (NTS 1a, 1b).
- 4.2** Identify a colleague to observe your lesson in relation to PLC Session 22 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3** Remember to:
- read PLC Session 23, Teacher Manual and related Learner Material (NTS 3a).
 - bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 23: Benzene and Alkanols

1.0 Introduction (5 minutes)

- 1.1 Share one thing you applied in your classroom based on PLC Session 22
- the challenges you faced
 - how you addressed them
- 1.2 Have you developed your learning plan for week 23?
- If you answered **yes**, conduct your PLC Session from Activity 2.0B
 - If you answered **no**, conduct your PLC Session from Activity 2.0A

Hint



You cannot conduct PLC on Activity 2.0B if you **have not** prepared your learning plan

2.0A Planning and Reviewing of Learning Plan (50 minutes)

Purpose: The purpose for this session is to populate the learning planner for week 23 on describe the structure, bonding, properties of benzene and its uses in everyday life. Explain also the structure, nomenclature, preparation, properties and uses of alkanols as well as their characteristics test. using the subject specific App.

Learning Outcome (LO): To populate the learning planner with the essential questions, differentiation, learning activities and key assessments and use the subject specific App to review your populated learning plan (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g-3k and 3o).

Learning Indicator (LI) 1: Populate the learning planner using the subject specific App

Learning Indicator (LI) 2: Enact an activity from your reviewed learning plan.

- 2.1** Refer to your Teacher Manual and have a chat with your subject specific App to develop your learning plan for Week 23 on describing the structure, bonding, properties of benzene and its uses in everyday life as well as explaining the structure, nomenclature, preparation, properties and uses of alkanols as well as their characteristics test (NTS 1a, 2b, 2c, 2e–2h and 3a–3q).

E.g.

i. Essential questions

For a class of 18 learners (including two physically challenged and one tactile learner), what 3 essential questions would help gauge their understanding of the lesson in week 23?

ii. Differentiation

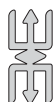
What three differentiation strategies would help gauge their understanding of week 23 lesson? Integrate 21st-century skills and GESI into the lessons.

iii. Learning activities

For a class of 18 learners (including two physically challenged and one tactile learner), what learning activities would help gauge their understanding of the lesson?

iv. Assessment tasks

Suggest 20 MCQ tasks for DoK levels 2 and 3 for a duration of 25 minutes for week 23 learning indicators. Provide a mark scheme for the assessment.



Note

- i.** Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii.** Transfer the information from your SS App into your learning planner template to complete your plans.
- iii.** Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

Hint

Move to Activity 3.0



2.0B Reviewing the Learning Plan and Addressing Challenges in Planning, Delivering and Assessing Lessons (50 minutes)

Purpose: To support teachers address challenges they may have during lesson preparation and delivery.

Learning Outcome (LO): To address specific concerns of teachers in planning, teaching and assessment.

Learning Indicator (LI) 1: Address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Enact an activity in preparation to teach the lesson.

- 2.1** Upload your completed learning plan into the subject specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Differentiation

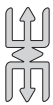
Do the differentiation strategies in the attached learning plan effectively help achieve learning activities and assessment tasks?

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. learning activities
- c. assessment tasks, etc.



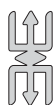
Note

- i. Chatting once may not be enough for the App to provide all that you may need for the tasks
- ii. Transfer the information from your SS App into your learning planner template to complete your plans
- iii. Chat with your App to learn how to integrate National Values, GESI, SEL and 21st century skills in your learning activities, assessment tasks and rubrics/mark scheme.

- 2.2 Identify a challenging area or issue and chat with your subject specific App for steps on how to address it for effective lesson delivery (NTS 3j).
- 2.3 Share your experience with the group.

3.0 Enactment (25 minutes)

- 3.1 Enact a teaching activity in your plan (NTS 1b, 1f, 1g, 2c, 2e, 2f and 3c–3j).
- 3.2 Reflect on the activity enacted to improve lesson delivery (NTS 1a).
- 3.3 Ask for feedback on the activity enacted (NTS 1a, 1e, 2c and 3o).



Note

You may record the enacted activity.

4.0 Reflection (10 minutes)

- 4.1 Reflect and share your views on the session (NTS 1a, 1b).
- 4.2 Identify a colleague to observe your lesson in relation to PLC Session 23 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3 Remember to:
 - a. read PLC Session 24, Teacher Manual and related Learner Material (NTS 3a).
 - b. bring along your laptop, Teacher Manual and PLC Handbook in preparation for the next session (NTS 3a).
 - c. identify areas you found challenging in your teaching for discussion during the next session.

PLC Session 24: Preparing for End of Semester Examination

1.0 Introduction (10 minutes)

- 1.1 Share one thing on assessment in PLC Session 23 that you
 - a. applied in your lesson delivery
 - b. found challenging and how you addressed it.
- 1.2 Share one challenge you encountered while populating your learning plan for week 24 before the session that you would like to discuss during this PLC session.
- 1.3 Read and discuss the Purpose, Learning Outcome (LO) and Learning Indicators (LIs) for the session.

Purpose: The purpose of this session is to use the subject-specific App to

1. review the completed learning plan for week 24
2. prepare assessment tasks and rubrics for end of semester examination

Learning Outcome (LO): To review the learning plan for week 24 and address any challenges in planning and developing assessment tasks for the end of semester examination (NTS 2b, 2c, 2e, 2f, 3a, 3d, 3e, 3g–3k and 3o).

Learning Indicator (LI) 1: Review the learning plan and address challenges in the preparation and delivery of a lesson.

Learning Indicator (LI) 2: Discuss, develop and review assessment tasks with rubrics for the end of semester examination.

2.0 Reviewing the Learning Plan (20 minutes)

- 2.1 Upload your learning plan into the subject-specific App. Have a chat with your App to verify the following and discuss their suitability to reflect the diverse needs of learners in your class (NTS 1a, 2b, 2c and 3e–3q).

E.g.

Differentiation

Attached is the developed learning plan for week 24. 78 learners with 35 above average, 22 average learners and 21 below average learners. Review the key notes on differentiation to suit the various learning abilities of learners. Suggest areas that need improvement for learners, etc.

Hint



Continue chatting with your App to verify the following and use the responses to complete your plan

- a. essential questions
- b. learning activities
- c. assessment tasks, etc.

3.0 Prepare for End of Semester Examination (50 minutes)

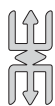
- 3.1** Refer to your Teacher Manual for the format of the end of semester examination and use the subject-specific App to review or develop your assessment tasks, mark schemes/rubrics, etc. (NTS 2a–2c, 2e–2h and 3j–3q).

E.g.

The table of specifications in the teacher manual recommends that the end of semester examination should align with the learning indicators from weeks 13 to 24. The following structure and guidelines are also recommended: 30 multiple-choice questions as paper 1, 5 short-answer type and 3 essay type questions as paper 2 across Dok levels 1, 2 and 3. Suggest:

- a. 30 multiple-choice questions
- b. 5 short answer questions
- c. 3 essay type questions

Add mark scheme/Rubric. The duration of the end of semester examination is 2 hours.



Note

In preparing for end of semester examination, one chat may not be enough for the App to provide all you need (Dok levels, structure, distribution across Dok levels, etc.)

- 3.2** Have a chat with your App to review the suggested assessment tasks and discuss the suitability of the responses from activity 3.1. Use the review to refine the responses and complete the set questions (NTS 1a, 2b, 2c and 3e–3q). In doing this activity, consider:

E.g.

- i. *Whether the assessment tasks generated follow 30%, 40%, 30% Dok distribution***

Verify that the assessment task given follows the 30%, 40%, 30% Dok distribution, etc.

- ii. *Mark scheme and score distribution***

Suggest a marking scheme for the assessment. Show the distribution of the score for the learners, etc.

- iii. *Resources needed for assessment administration***

Suggest resources required for the smooth conduct of the end of semester examination, etc.

- iv. *How to provide feedback***

Suggest various strategies for delivering constructive feedback to 68 learners after end of semester assessments, recognising strengths, and pointing out areas for improvement, etc.

4.0 Reflection (10 minutes)

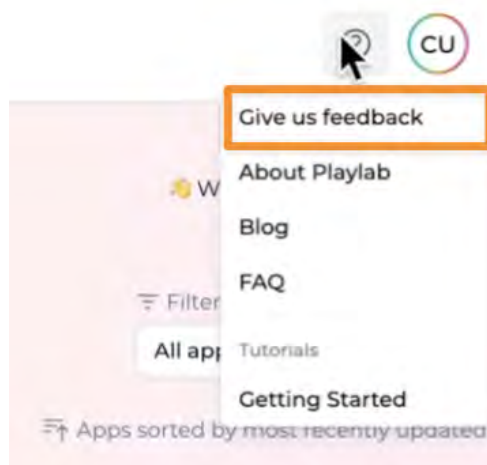
- 4.1** Reflect and share your views on the session (NTS 1a, 1b).
- 4.2** Identify a colleague to observe your lesson in relation to PLC Session 12 to provide feedback on your lesson (NTS 1f, 1g).
- 4.3** Remember to mark, record and upload your learners' assessment scores in the Student Transcript Portal.

Appendix 1: Subject Specific App Teaching & Learning Apps – Issue Reporting Guide

How to Report Issues or Get Support

You have three ways to report issues with the subject-specific apps:

1. Email Support
 - For general issues: Send email to: support@playlab.ai
 - Include:
 - Your school name and region
 - Subject app you're using
 - Description of the issue
 - Screenshots or screen recordings (if possible)
 - Best for: School administrators reporting multiple app issues
 - Response time: Within 24 hours
 - If Urgent please include [URGENT] Message Text in your subject line.
2. Submit Feedback in Playlab
 - In the app, Click the “Give us Feedback” link in the menu and share feedback.



- Access the Feedback Form here
- Complete the form and upload any supporting documentation. (The more detailed your submission is, the more helpful support will be)



User Feedback Form

We want to hear your feedback and learn more about how we can improve Playlab for you. *Please complete this form to submit your feedback to the Playlab team.*

Full Name*

Your answer

Email*

Your answer

What is your role?*

Your answer

Please share your feedback

What challenge are you facing? What feature would you like to see?

Your answer

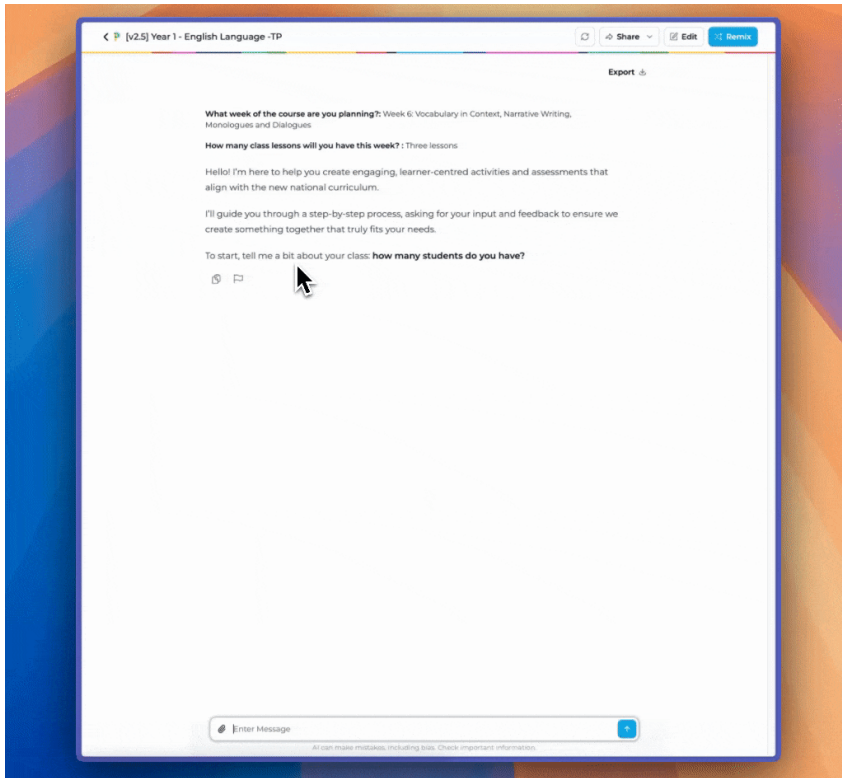
Please share any screenshots or videos that help visualize your feedback.

 **Upload** Size limit: 100 MB. File limit: 10.

Submit

Never submit sensitive personal information, like passwords, through Notion Forms.
[Report abuse](#)

- Best for: Individual teachers reporting specific issues
 - Response time: Within 24–48 hours
3. In-Chat Flagging
- Look for the flag button within your chat conversation



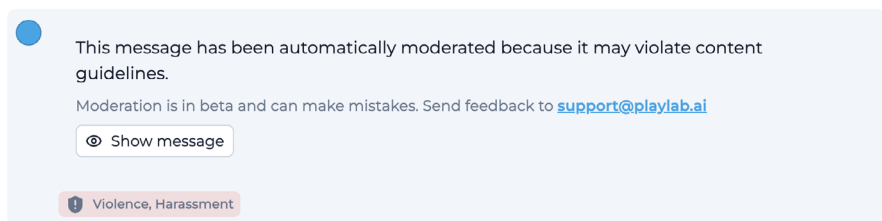
- Click to report biased, inaccurate, or inappropriate messages.
- Best for: Immediate issues with app responses
- There is also in app moderation for both user messages and AI generated responses. You can read more about it here.

What Happens After You Report?

1. The message will be flagged in your user activity. You will see indicators of messages that have been moderated or flagged.

KIPP NYC Restorative Plan Designer	8/21/2025
	 7  1
KIPP NYC Restorative Plan Designer	8/21/2025
	 5
KIPP NYC Restorative Plan Designer	8/15/2025
	 7  1

2. You can review the messages in activity. By default the message is hidden unless you click “show message”.



Thank you for sharing the details of the incident. Here's the step-by-step analysis and proposed restorative plan based on the provided situation:

3. If something is consistently being flagged, you may want to address it in your implementation, make revisions to the app, or contact support@playlab.ai for more guidance.

Tips for Effective Reporting:

- Be specific about what you were trying to do
- Note which subject app you're using
- Include your school and region information
- Describe what happened versus what you expected

Additional Support Resources

1 App Basics:

- Starting a conversation
 - Scan your QR code to use your app.
- If you encounter a problem, follow the directions for Escalating an issue.

Video Tutorials

- a Lesson Planning Walkthrough: Step-by-step guide using a real subject app with sample conversations
 - Lesson Plan Development
 - Watch a sample conversation here.
 - As you're using the apps, you can provide specifics on how you might want to differentiate for class needs
 - Assessment Development
 - Watch a sample conversation here.

- As you're using the apps, you can adjust the DOK levels as you create assessments at different complexity levels
- b For any additional questions please refer to the learn.playlab.ai page.

Key Reminders

- 1 Apps are supplemental tools to support your PLC Handbook and Teacher Manual—not replace them
- 2 Always refer to official curriculum documents as your primary resource
- 3 Use your professional judgment to adapt app suggestions for your classroom context

Appendix 2: Learning Planner Template

Name of Subject:							
Learning Planner Template Year Two							
Number of Learners in Class		Week		Duration		Form	
Strand							
Sub-Strand							
Content Standard							
Learning Outcome(s)							
Learning Indicator(s)							
Essential Question(s)							
Pedagogical Strategies							
Teaching & Learning Resources							
Key Notes on Differentiation Identify the different learner needs in your class and make notes on how to cater for them during the lesson							
Lesson (complete per number of lessons for the week)							
Refer to the Teacher Manual and Learner Material to complete this section							
Introduction Main Lesson Closure							

Key Assessment	
1.	Formative Assessment Mode: Task: Mark Scheme:
2.	Key Assessment for Student Transcript Portal Assessment Mode: Task: Rubric/Mark Scheme:
Reflection & Remarks	

Appendix 3: Teacher Lesson Observation Form

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

b1. 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 behavior 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

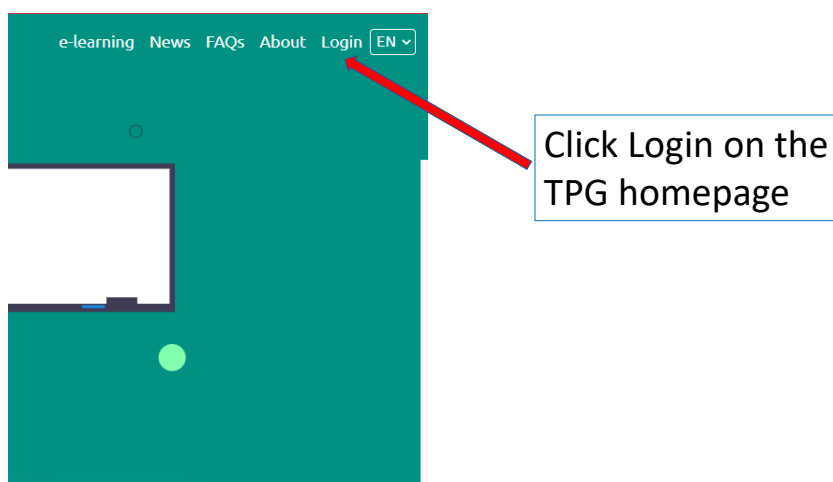
22. Areas for development

23. Next steps for teacher

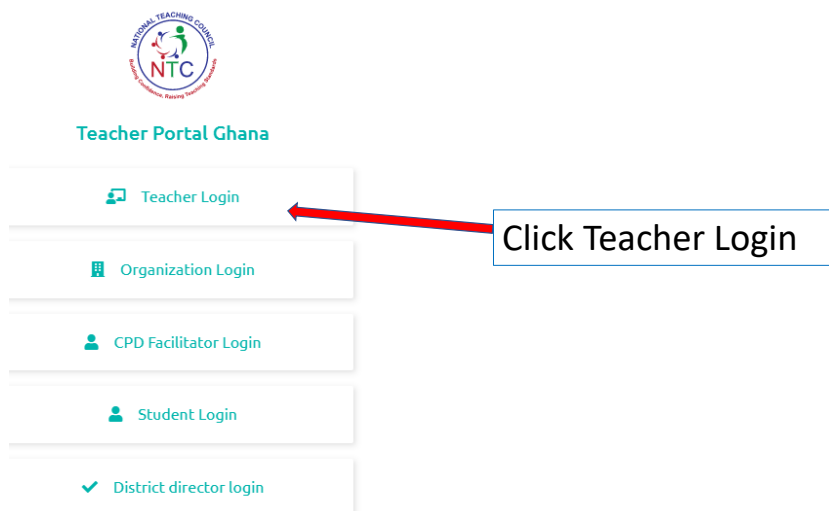
Additional Notes (on teacher's actions, the flow of activities, etc.)

Appendix 4: How to check CPD Points and Training Records on Teacher Portal Ghana

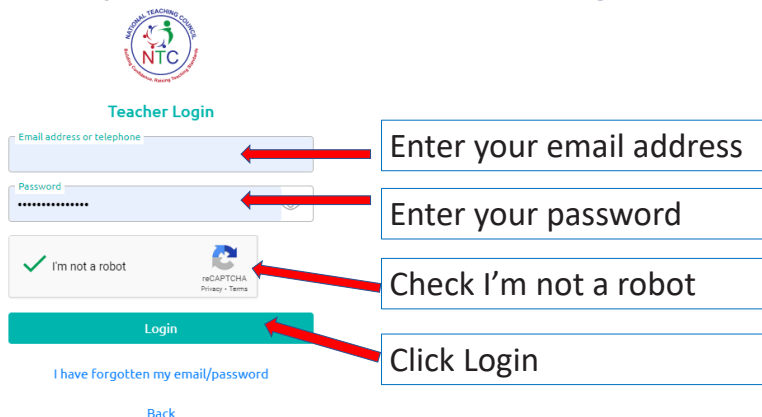
1. Visit tpg.ntc.gov.gh and click Login



2. On the Login page, click Teacher Login



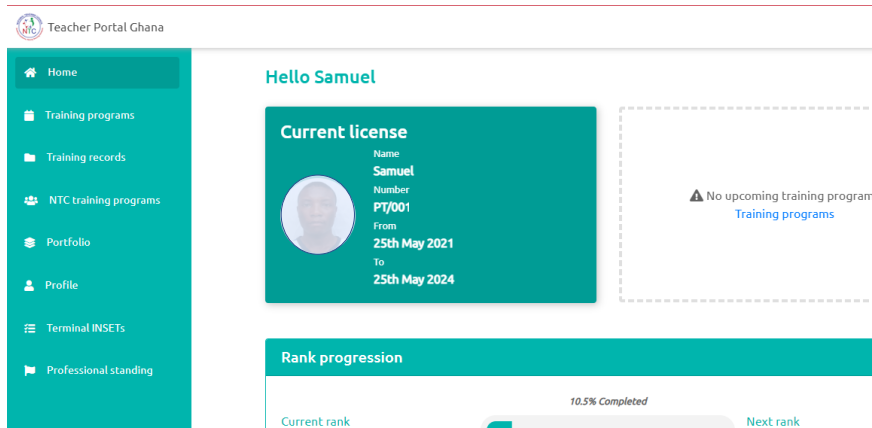
3. On the **Teacher Login** page enter your email address and password and then click **Login**



The image shows the Teacher Login page with the following elements and annotations:

- Teacher Login** (Page Title)
- Email address or telephone** (Input field) - Annotated with: **Enter your email address**
- Password** (Input field) - Annotated with: **Enter your password**
- I'm not a robot** (Captcha) - Annotated with: **Check I'm not a robot**
- Login** (Button) - Annotated with: **Click Login**
- [I have forgotten my email/password](#) (Link)
- [Back](#) (Link)

4. After a successful login you will get access to your **TPG account** (Check image below)



The image shows the Teacher Portal Ghana dashboard for a user named Samuel. The dashboard includes the following sections:

- Header:** Teacher Portal Ghana
- Left Sidebar:**
 - Home
 - Training programs
 - Training records
 - NTC training programs
 - Portfolio
 - Profile
 - Terminal INSETs
 - Professional standing
- Main Content Area:**
 - Hello Samuel**
 - Current license**
 - Name: Samuel
 - Number: PT/001
 - From: 25th May 2021
 - To: 25th May 2024
 - Rank progression**
 - Current rank
 - 10.5% Completed
 - Next rank
 - No upcoming training program** (Warning message with link to [Training programs](#))

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)

The image shows the 'Teacher Portal Ghana' interface. On the left is a teal side menu with options: Home, Training programs, Training records, NTC training programs, Portfolio, Profile, Terminal INSETs, and Professional standing. A red arrow points from a text box to the 'Training records' option. The main content area is titled 'Training records' and shows 'Records for training programs registered and/or attended'. It lists three programs: 'Sensitization on Education Policies' (Marked as absent), 'Differentiated Learning' (Processed, Credits: 1.32), and 'Advanced Mobile Learning with Multimedia (AMLW)' (Processed, Credits: 0.5788). A red bracket groups these programs, with a text box pointing to it. A text box at the bottom points to the 'Training records' menu item.

Teacher Portal Ghana

Training records

Records for training programs registered and/or attended

Total points: 1.8988

Training Program	Status	Credits
Sensitization on Education Policies	Marked as absent	
Differentiated Learning	Processed	1.32
Advanced Mobile Learning with Multimedia (AMLW)	Processed	0.5788

List of training programs

Click to view training records

THANK YOU

