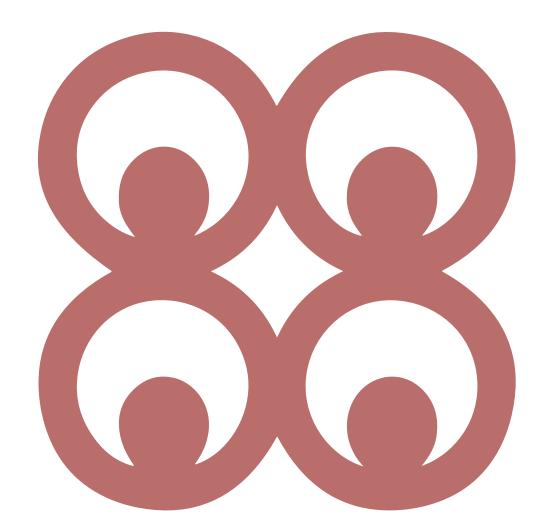
TUTOR PROFESSIONAL DEVELOPMENT HANDBOOK: B.Ed in Initial Teacher Education Science Year 4

HANDBOOK FOR TUTORS







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TUTOR PROFESSIONAL DEVELOPMENT HANDBOOK: B.Ed in Initial Teacher Education Science Year 4

Tutor Version

Tutor PD Session			
Age Level/s: JHS		Name of Subject/s: Physics and Chemistry	
Course Title: Physics - Properties of Ma			-
and Electromagnetism.			
Chemistry - Chemistry Around Us			
Lesson Title: Measurement Errors	and		
Dimensional Analysis			
Year 4		Semester 2	
Tutor PD Sessio	on for Lessor	1 in the Course Manual	
Focus: the bullet points provide	Guidance	Notes on Tutor Activity during the	Time
the frame for what is to be done	PD Session	 What PD Session participants 	in
in the session. The SWL should	(Tutors) w	ill do during each stage of the	sessio
use the bullets to guide what	session.		n
they write for the SL/HoD and			
tutors to do and say during each			
session. Each bullet needs to be			
addressed and specific reference			
should be made to the course			
manual/s.			
1a Introduction to the semester		s the overview related to the JHS	20
– in session one	special	ism from the course manual.	mins
Overview of subject/s age			
level/s to be covered in the		ording to your subject specialisms.	
PD sessions and guidance on NO			
grouping tutors according to		s to be covered with their	
the subject/s, age level/s.		oonding course titles during this	
Introduction to the course		ter's PD sessions are:	
manual/s		Physics): Properties of Matter and	
Overview of course learning		omagnetism.	
outcomes		hemistry):	
Introduction to the two	Chemistry	Around Us	
continuous assessment	4.2. Dec. 44		
components to be		he course descriptions, course	
undertaken in each subject		g outcomes and their	
during the semester (See	corresponding learning indicators from		
Course Assessment	your re	espective course manuals.	
Components Appendix NB in subjects where there are no	NOTE. This	would anable you to familiarize	
-		would enable you to familiarise with the course learning outcomes	
assessment components in the course manuals examples	1 *	orresponding learning indicators	
will need to be provided by	for the sen		
the SWL for the SL/HoD.			
		s the two assessment components	
1b		-	
Introduction to the session	(Subject project and subject portfolio) for the semester.		
 Review prior learning 			

Reading and discussion of the	NOTE:	
introductory sections of the	(Subject Portfolio: Overall weighting of	
lesson up to and including	project = 30%	
learning outcomes and	Weighting of individual parts of portfolio out	
indicators	of 100.	
Overview of content and		
identification of any	Three (3) items of work produced during the	
distinctive aspects of the	semester selected by student teachers with	
lesson/s,	tutor support during the semester as best	
NB The guidance for SL/HoD	examples of their progress and 200-word	
should identify, address and	reflection on the items i.e.	
provide explanations for any	<i>i.</i> (a) Each of the three (3) items selected by	
areas where tutors might require	the student teacher is 30 % (90%).	
clarification on an aspect of the	<i>i.</i> (b) Presentation and organization of	
lesson.	portfolio 10%.	
NB SL/HoD should ask tutors to		
plan for their teaching as they go	OR	
through the PD session	ii. (a). Each of the two (2) items selected by	
	the student teacher is 30 % (60%).	
	ii(b)Mid semester assessment 30%	
	ii. (c) Presentation and organization of	
	portfolio 10%.	
	Subject Project: Overall weighting of project	
	= 30%	
	= 30% Weighting of individual parts of project out	
	Weighting of individual parts of project out	
	Weighting of individual parts of project out of 100%	
	Weighting of individual parts of project out of 100% ▹ Introduction – 10%	
	Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20%	
	 Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20% ➢ Substantive section – 40% 	
	Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20%	
	 Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20% ➢ Substantive section – 40% Conclusion – 30%) 	
	 Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20% ➢ Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> 	
	 Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20% ➢ Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> ➢ Lab reports 	
	 Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20% ➢ Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> ➢ Lab reports ➢ Integrating indigenous knowledge 	
	 Weighting of individual parts of project out of 100% ➢ Introduction – 10% ➢ Methodology – 20% ➢ Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> ➢ Lab reports ➢ Integrating indigenous knowledge into science teaching. 	
	 Weighting of individual parts of project out of 100% > Introduction – 10% > Methodology – 20% > Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> > Lab reports > Integrating indigenous knowledge into science teaching. > Charts, graphs created 	
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	 Weighting of individual parts of project out of 100% Introduction – 10% Methodology – 20% Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> Lab reports Integrating indigenous knowledge into science teaching. Charts, graphs created Designs, TLMs, posters, worksheets 	
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	 Weighting of individual parts of project out of 100% Introduction – 10% Methodology – 20% Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> Lab reports Integrating indigenous knowledge into science teaching. Charts, graphs created Designs, TLMs, posters, worksheets Subject Portfolio STS Portfolio Action Research reports. 	
	 Weighting of individual parts of project out of 100% Introduction – 10% Methodology – 20% Substantive section – 40% Conclusion – 30%) Suggested examples for subject <u>Project</u> Lab reports Integrating indigenous knowledge into science teaching. Charts, graphs created Designs, TLMs, posters, worksheets Subject Portfolio STS Portfolio Action Research reports. 	

	1.5.1. Explain how you applied what you have written in your varied lessons.	
	1.6. Discuss lessons on Basic Chemistry II and come out with challenges you faced and how you overcame them from the previous semester lessons.	
S	1.7. Read and discuss the introduction sections of the lesson up to learning indicators from your course manuals.	
t	Note: Some of the learning outcomes and their corresponding indicators for Physics and Chemistry are:	
	<u>Chemistry:</u> <u>L.O</u> Demonstrate the ability to transfer knowledge and skills from one lesson onto developing new concepts (NTS 2e & 2f, p.13.	
	<u>LI</u> Present a checklist on new expectations based on the links between Basic chemistry II and chemistry around us.	
 	Physics: LO Demonstrate knowledge and understanding in the various errors involved in scientific measurement and apply dimensional analysis in determining relations among physical quantities. (NTS 1a, 2a, Pg. 18 &20)	
	<u>LI</u> Show exercises in student teachers' workbook on errors and limitations of scientific measurement, and the relation of derived quantity to its basic quantity.	
1	1.8. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge.	

	1 9 Identify and discuss the distinctive	
	1.9. Identify and discuss the distinctive features of lesson 1 for the two	
	courses from the course manuals.	
As this course is dealing with	1.1. Discuss the need to develop	
supporting and/or assessing the	professional teaching portfolio in your	
Professional Teaching Portfolio	respective groups.	
Development and/or Classroom		
Enquiry and Action Research Project, Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	1.1.1. List the artefacts of a professional teaching portfolio and show how you will help student teachers to develop their own professional teaching portfolio in their respective basic schools when posted. (<i>Refer to Y3S2 STS</i> Handbook Pg. 114-118).	
	 Explain how they will assist the initial teachers to complete their classroom enquiry report. Refer to Y3 STS Pg. 91- 100. 	
	 Explain how you would assist initial teachers to discuss some professional practices of their mentors and co- mentees. (Refer to NTS 3a-3p, pg. 14). 	
For each session remember this	1.13. Identify the cross-cutting issues in the	
is the final semester before	course manual and explain how you can help	
Students start teaching provide	the initial teachers to implement them in the	
prompts to help support this	basic school classroom after posting.	
transition for planning and give		
regard for GESI, CCI, ICT etc.		
2 Concept Development (New	2.1. List and discuss the major concepts in	15
learning likely to arise in lesson/s):	lesson 1.	mins
 Identification and discussion 	2.2. Discuss the potential misconceptions and	
of new learning, potential	barriers with respect to the concepts listed.	
barriers to learning for		
student teachers or students,	2.3. Identify the most appropriate teaching	
new concepts or pedagogy	strategies that can be employed to best	
being introduced in the	deliver the new concepts in both CoE and	
lesson, which need to be explored with the SL/HoD	basic school classroom to achieve the LOs and the LIs of the lesson.	
NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors		

	Planning for teaching, learning	3.1. Read and discuss the teaching and	15min
and assessment activities for the		learning activities in the course manuals for	S
les	son/s	the two course levels.	
\triangleright	Reading and discussion of the		
	teaching and learning	Note: Tutors should go through the activities	
	activities	one after the other taking into	
\triangleright	Noting, addressing, and	consideration the time available,	
	explaining areas where tutors	resources and nature of learners,	
	may require clarification	coherency and methodology.	
\triangleright	Noting opportunities for	, , , , , , , , , , , , , , , , , , , ,	
	making <i>explicit</i> links to the	3.1.1. Identify and discuss areas that need	
	Basic School Curriculum	clarification.	
\triangleright	Noting opportunities for		
	integrating: GESI	3.2. Discuss how the different activities	
	responsiveness and ICT and	would be carried out in both CoE and basic	
	21 st C skills	school classroom to achieve the LOs and the	
\triangleright	Reading, discussion, and	Lis of lesson 1 from your course manuals.	
	identification of continuous		
	assessment opportunities in	<i>Note:</i> Ensure that the language used in	
	the lesson. Each lesson should	instructing learners to carry out the varied	
	include at least two	activities is gender responsive.	
	opportunities to use	<i>E</i> , <i>g</i> . Do not use harsh, threatening language	
	continuous assessment to	or actions that instil fear in both females and	
	support student teacher	males.	
	learning		
	Resources:	3.3. Discuss how GESI issues related to the	
-	 links to the existing PD 	teaching and learning activities of the lesson	
	Themes, for example,	would be addressed.	
	action research,		
	questioning and to other	E g. (i). Pay attention to slow learner.	
	external reference	(ii). Assign leadership roles to females and	
	material: literature, on	males equally.	
		males equally.	
	web, YouTube, physical	2.2 Explain how you would assist the	
	resources, power point;	3.3. Explain how you would assist the	
	how they should be used.	student teachers to demonstrate the 21 st	
	Consideration needs to be	century skill in the basic school	
	given to local availability	classroom.	
	• guidance on any power		
	point presentations, TLM	3.5. Read the assessment activities in the	
	or other resources which	various course manuals and identify areas	
	need to be developed to	that require clarification.	
*	support learning		
	Tutors should be expected to	3.4. Identify the inclusive resources	
	have a plan for the next	needed for teaching and learning of the	
	lesson for student teachers	concepts in both CoE and basic school	
		classrooms.	

	E.g., Games-Bingo, Audio-visuals from YouTube in relation to teaching measurement, samples of individual tutor learning plans.	
	<i>Note:</i> Make sure the resources are enough and appropriate to all learners (males, females and persons with SEN)	
 4. Evaluation and review of session: a. Tutors need to identify critical friends to observe lessons and report at next session b. Identifying and addressing any 	4.1. Identify a critical friend who took part in the PD session to sit in your class during lesson to provide feedback and report on observations made in the next PD session.	15 mins
outstanding issues relating to the lesson/s for clarification	4.2. Discuss anything relating to Lesson 1 that needs clarification.	
	4.3. Read lesson 2 from the PD manual and find relevant materials for the next session.	

Tutor PD Session			
Age Levels/s: JHS		Name of Subject/s: Physics & Chemistry	
Course Title/s: Physics- Properties of			
Matter and Electromagnet	ism		
Chemistry: Chemistry Arou			
Lesson Title: Physics- Fluid			
Chemistry: Chemical bond			
substances	0		
Year 4		Semester 2	
Tutor P	D Session for	r Lesson 2 in the Course Manual	
Focus: the bullet points	Guidance N	lotes on Tutor Activity during the PD	Time in
provide the frame for		hat PD Session participants (Tutors) will	session
what is to be done in the		ach stage of the session.	
session. The SWL should	0	5	
use the bullets to guide			
what they write for the			
SL/HoD and tutors to do			
and say during each			
session. Each bullet			
needs to be addressed			
and specific reference			
should be made to the			
course manual/s.			
1 Introduction to the	1.1 Write o	ne thing that didn't go on well in the	20 mins
session		ed lesson of the previous PD session and	20
 Review prior learning 		<i>i</i> t affected your lesson.	
 A critical friend to 			
share findings for a	1 2 Invite v	our critical friends to share their	
short discussion and		ations made during lesson delivery and	
lessons learned		the suggestions provided.	
 Reading and 			
discussion of the	1.3 Read a	nd discuss the introductory sections of	
introductory sections		on up to course learning outcomes and	
of the lesson up to		brs from your course manuals.	
and including learning		is nom your course manadis.	
outcomes and	Note (1). Th	he topics and lesson	
indicators		n/descriptions for lesson 2 at the various	
 Overview of content 	course leve		
and identification of		s) Topic: Fluid at rest.	
any distinctive		cription - In this lesson, Tutor discusses	
aspects of the		with student teachers. Thus, student	
	-	ill be introduced to measurements and	
lesson/s,			
NB The guidance for		s of density and relative density.	
SL/HoD should identify,	-	and calculation of pressure will also be	
address and provide	introduced	to student teachers.	
explanations for any			

areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session	JHS (Chemistry) Topic: Chemical bonding in substances Lesson Description - The lesson is designed to make student teachers reflect substances in the home and environment and how they are formed (bonding) as well explain their characteristics using the knowledge of how they are formed. E.g., 2. Physics CLO: Demonstrate adequate knowledge of physics principles in fluids at rest, basic fluid properties and the physical laws that govern fluid behaviour. (NTS 2a, Pg. 20) Physics CLI: Provide worked examples on relation of mass, volume and density (m = vp) and friction in liquid properties of viscous substance. 1.3.1. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge. 1.4. Identify and discuss the distinctive features of lesson 2 for the two courses from the course manuals. NOTE Distinctive Features JHS (Physics): > Measurement of Density and Relative density > Definition and calculation of pressure > Fluid at rest (Density, Relative density and pressure) Distinctive Features JHS (Chemistry): > Physical Properties of Compounds > Chemical properties > Bonding
As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom	1.1. Discuss the activities that the student teachers are supposed to undertake with their mentors by the end of the extending placement during post internship seminar.

Enquiry and Action	Some Examples are:	
Research Project Report	Undertake an action research project to	
writing, Tutors should be	improve the learning opportunities of an	
provided with guidance	agreed group of pupils to promote greater	
on what to do including	inclusion.	
organisation of Post	Discuss key features of the school curriculum,	
Internship Seminar.	including issues of continuity and progression	
	both within their specialism and across all	
	the subjects they will teach. (Refer to Y3 STS	
	Handbook, Page 7.)	
	1.2. Brainstorm on the meaning of teaching	
	philosophy and together come out with the	
	most appropriate meaning.	
	most appropriate meaning.	
	1.3. Describe how you will review the general	
	guidelines/steps for writing a teaching	
	philosophy statement with student teachers.	
	1.4. Write down your own example of a teaching	
	philosophy statement and share it with the le	
	group.	
For each session	1.9. Identify the features of GESI responsive	
remember this is the	classroom set-up and explain how you can help the	
final semester before	initial teachers to implement them in the basic	
Students begin teaching	school classroom after posting.	
provide prompts to help		
support this transition		
for planning and give		
regard for GESI, CCI, ICT		
etc.		
2 Concept Development	2.1. List and discuss the major concepts in a lesson	15 mins
(New learning likely to		
arise in lesson/s):	2.2. Discuss the potential misconceptions and	
Identification and	barriers concerning the concepts listed.	
discussion of new		
learning, potential	2.3. Identify the most appropriate teaching	
barriers to learning	strategies that can be employed to best deliver the	
for student teachers	new concepts in both CoE and basic school	
or students, new	classrooms to achieve the LOs and the LIs of the	
concepts or pedagogy	lesson.	
being introduced in		
-	Eq. (i) Domonstration (practical activity that is	
the lesson, which	E.g. (i) Demonstration / practical activity that is	
need to be explored	GESI responsive on how an object floats in water	
with the SL/HoD	(Tutor guides student teachers to do hands-on/	
NB The guidance for	practical activities, discuss and calculate the	
SL/HoD should set out	density (m = vp) and relative density in an	

int iss sho ga su	hat they need to do to produce and explain the ues/s with tutors, they ould take feedback to uge understanding and pport tutor gagement.	inclusive, multi-grade, and developmentally appropriate classrooms.) (ii) Video/ multimedia simulation on the concept of density and how objects float. (iii). Group presentation For videos on float and sink go to: <u>https://www.youtube.com/</u> user/learning junction <u>https://www.youtube.com/</u> watch?v=Oe6bDTL3YQg	
2 1	Jonning for tooching	<u>https://www.youtube.com/</u> watch?v=kE8I_M2pyg8 3.1. Read and discuss the teaching and learning	40 mins
	Planning for teaching, arning and assessment	activities in the course manuals for the two course	40 111115
	tivities for the lesson/s	levels.	
	Reading and	Note: Go through the activities one after the other	
Ĺ	discussion of the	taking into consideration the time available,	
	teaching and learning	resources and nature of learners, coherency and	
	activities	methodology.	
	Noting, addressing,	include of gyr	
		3.1.1. Identify and discuss areas that need	
	where tutors may	clarification.	
	, require clarification		
\triangleright	Noting opportunities	3.2. Discuss how the varied activities would be	
	for making explicit	carried out in both CoE and basic school classroom	
	links to the Basic	to achieve the LOs and the LIs of lesson 2 from your	
	School Curriculum	course manuals.	
\succ	Noting opportunities	<i>Note:</i> Ensure that the language used in instructing	
	for integrating: GESI	learners to carry out the varied activities is gender	
	responsiveness and	responsive.	
	ICT and 21 st C skills	E. g.,1: Instead of "When everyone contributes <u>his</u>	
\succ	Reading, discussion,	ideas, the discussion will be a success".	
	and identification of	It may read: "When everyone contributes <u>his or her</u>	
	continuous	ideas, the discussion will be a success".	
	assessment		
1	opportunities in the	2. Do not use harsh, threatening language or actions	
	lesson. Each lesson	that instil fear in both females and males.	
	should include at least	2.2 Discuss how CESI issues related to the teaching	
	two opportunities to use continuous	3.3. Discuss how GESI issues related to the teaching	
	assessment to	and learning activities of the lesson would be addressed.	
	support student		
	teacher learning,	E g. (i). Prepare and use TLRs that attract the	
	subject specific	attention and interest of both female and male	
	examples should be	students, such as short video on science concept	
	provided for SL/HoD	to be learned.	

A	Resources: links to	(ii) Attract the interact of both female and male	
		(ii). Attract the interest of both female and male Students and motivate them.	
1	the existing PD Themes, for example,	שלים שלים שלים שלים שלים שלים שלים שלים	
1	action research,	3.4. Explain how you would assist the student	
	questioning and to	teachers to demonstrate the 21 st century skill in	
	other external	the basic school classroom.	
	reference material:		
	literature, on web,	3.5. Read the assessment activities in the various	
	YouTube, physical	course manuals and identify areas that require	
	resources, power	clarification.	
	point; how they		
	should be used.	3.6. Identify the inclusive resources needed for	
	Consideration needs	teaching and learning of the concepts in both CoE	
	to be given to local	and basic school classrooms.	
~	availability	E.g., Games-Going Fishing, Audio-visuals from	
	Tutors should be	YouTube in relation to teaching density and relative	
	expected to have a	density as well as calculations of pressure.	
	plan for the next		
	teachers		
		•••••	
		persons with SEN).	
4.	Evaluation and review	4.1. Identify a critical friend who took part in the	15 mins
		, , , , , , , , , , , , , , , , , , , ,	10 11110
•.			
	Tutors should		
	friends to observe	4.2. Discuss anything relating to Lesson 2 that needs	
	lessons and report at	clarification.	
	next session		
	addressing any		
	outstanding issues		
	outstanding issues relating to the		
	relating to the		
of	lessons and report at next session Identifying and addressing any	 Note: (i). Make sure the resources are enough and appropriate to all learners (females, males, and persons with SEN). 4.1. Identify a critical friend who took part in the PD session on lesson 2 to sit in your class during lesson to provide feedback and report on observations made in the next PD session. 4.2. Discuss anything relating to Lesson 2 that needs clarification. 	15 mins

Tutor PD Session			
Age Levels/s: JHS	Name of Subject/s: Physics &		
Course Title/s: Physics- Properties of	f	Chemistry	
Matter and Electromagnetism			
Chemistry: Chemistry Around Us			
Lesson Title: Physics- Electricity			
Chemistry: Hydrogen ion Concentrat	tion (pH) in		
Systems			
Year 4		Semester 2	
Tutor PD Session	for Lesson 3	in the Course Manual	
Focus: the bullet points provide	Guidance N	otes on Tutor Activity during	Time in
the frame for what is to be done	the PD Sess	ion. What PD Session	session
in the session. The SWL should	participants	(Tutors) will do during each	
use the bullets to guide what they	stage of the	session.	
write for the SL/HoD and tutors to			
do and say during each session.			
Each bullet needs to be addressed			
and specific reference should be			
made to the course manual/s.			
1 Introduction to the session	1.1. Writ	e two things you learned	20 mins
Review prior learning	durin	g the previous PD session on a	
A critical friend to share	post	in card and tell how it affected	
findings for a short discussion	your	lesson positively.	
and lessons learned			
Reading and discussion of the	1.2. Invit	e your critical friends to share	
introductory sections of the	their	observations made during	
lesson up to and including	lesso	n delivery and discuss the	
learning outcomes and	sugge	estions provided.	
indicators			
Overview of content and		l and discuss the introductory	
identification of any distinctive		ons of the lesson up to course	
aspects of the lesson/s,		ing outcomes and indicators	
NB The guidance for SL/HoD	from	your course manuals.	
should identify, address and			
provide explanations for any areas		e topics and lesson	
where tutors might require		/descriptions for lesson 2 at	
clarification on an aspect of the		course levels are:	
lesson. SL/HoD take feedback to) Topic: Electricity	
gauge understanding and support		ription - In this lesson, Tutor	
tutor engagement.		ectricity with student teachers.	
NB SL/HoD should ask tutors to	-	g topics will be introduced to	
plan for their teaching as they go		chers under Current Electricity;	
through the PD session		uits, Potential difference (v),	
		Ω), and Ohm's law.	
	-	try) Topic: Hydrogen ion	
	Concentrati	on (pH) in Systems	

	Lesson Description - The lesson is
	designed to further improve student
	teachers' conceptual understanding of
	chemicals (Acids and Alkalis or bases) and
	to guide student teachers to be able to
	present this in practical ways for the JHS
	learner.
	E.g., 2. Chemistry CLOs:
	Demonstrate knowledge and skills in identifier addition of the second skills of the second
	identifying pH in systems (NTS 2c,
	p.13)
	Demonstrate the ability to explain
	the concepts of pH to JHS learners.
	Chemistry CLIs:
	 Present concept maps on pH in
	systems in the home.
	Demonstrate how to explain the
	concepts to their peers.
	1.3.1. Explain how the course learning
	outcomes and their corresponding
	indicators are related to student teachers'
	relevant previous knowledge.
	1.4. Identify and discuss the distinctive
	features of lesson 3 for the two
	courses from the course manuals.
	NOTE
	Distinctive Features JHS (Physics):
	 Current Electricity (Electric circuits,
	Potential difference (v), Resistance (Ω)
	and Ohm's law)
	Distinctive Features JHS (Chemistry):
	The concepts of pH (Hydrogen ion
	concentration in systems
	-
As this source is dealing with	
As this course is dealing with	1.5. List the thematic areas which the
supporting and/ or assessing the	classroom inquiry and action research
Professional Teaching Portfolio	write-up follow and share with the whole
Development and/ or the	group.
Classroom Enquiry and Action	
Research Project Report writing,	1.5.1. Explain how you will review the
Tutors should be provided with	scope of each thematic area of a

guidance on what to do including organisation of Post Internship Seminar.	 classroom inquiry and action research project report/write-up with student teachers during the post-internship seminar. 1.6. Discuss how you would share the purposes of the Teacher Licensure Examination with student teachers during the post-internship seminar. 1.7. Identify the licensing process for Newly Qualified Teachers (NTQs) which you have to share with the student teachers during the post-internship 	
For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.	 seminar. 1.8. Identify decisions that needed to be made during GESI responsive lesson planning and explain how you can help the initial teachers to implement them in the basic school classroom after posting. 1.9. Discuss GESI responsive teaching methodologies and learning activities and how you would help the initial teachers to implement them in the basic school classroom after posting. 	
 2 Concept Development (New learning likely to arise in lesson/s): > Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement. 	 2.1. List and explain the major concepts in lesson 3. 2.2. Discuss the potential misconceptions and barriers concerning the concepts listed. 2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson. 	15 mins

3.1. Read and discuss the appropriateness	40 min
of the teaching and learning activities in	
levels.	
Note: Tutors should go through the	
activities one after the other taking into	
consideration the coherency,	
methodology, time available, teaching	
and learning resources, and	
characteristics of learners as well as GESI	
related issues. E.g., Consider how to	
arrange the classroom and interact with	
the students to promote equal	
participation of all students.	
Plan in advance to ask substantive	
questions to all students. Etc.	
,	
3.1.1. Identify and discuss areas that	
3.2. Discuss how the varied activities	
-	
manadis.	
Note: Ensure that the language used in	
uctivities is genuer responsive.	
E a 1: Instead of "When everyone	
De a success.	
It may read "When everyone contributes	
, , ,	
SULLESS .	
2 Do not uso harsh throatoning language	
ana males.	
3.3. Model the teaching of the concept of electricity.	
	the course manuals for the two course levels. Note: Tutors should go through the activities one after the other taking into consideration the coherency, methodology, time available, teaching and learning resources, and characteristics of learners as well as GESI related issues. E.g., Consider how to arrange the classroom and interact with the students to promote equal participation of all students. Plan in advance to ask substantive questions to all students. Etc.

2.4. Discuss how CECL issues related to the	
3.4. Discuss how GESI issues related to the	
teaching and learning activities of the	
lesson would be addressed.	
E g.	
(i). Prepare and use TLRs that attract the	
attention and interest of both female	
and male students, such as short video	
on science concept to be learned.	
(ii). Attract the interest of both female and	
male students, motivate them and	
provide relevance to the lesson	
learned.	
3.5. Explain how you would assist the	
student teachers to demonstrate the 21 st	
century skill in the basic school classroom.	
3.6. Read the assessment activities in the	
various course manuals and identify areas	
that require clarification.	
•	
3.7. Identify the inclusive resources	
needed for teaching and learning of the	
concepts in both CoE and basic school	
classrooms.	
E.g., E.g., COKO Games-	
https://www.cokogames.	
com/ohm-simulation-interactive-ohms-	
law), Audio-visuals from YouTube in	
relation to teaching electricity and	
potential difference as well as calculations	
involving ohm's law concept.	
Note:	
(i). Make sure the resources are enough	
and appropriate to all learners (females,	
males and persons with SEN)	
, , ,	

l

4. Evaluation and review of	4.1. Provide feedback on this PD	15 mins
session:	session taking into consideration – Clarity of concepts, pedagogical	
 Tutors should Identifying critical friends to observe lessons and report at next session Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	 approaches employed, ICT integration, GESI, Twenty First Century Skills (NTS 1a, 3i,) and make notes that will help you to teach Lesson 3. 4.2. Identify a critical friend who took part in the PD session on lesson 3 to sit in your class during lesson to provide feedback and report on observations made in the next PD session. 4.3. Discuss anything relating to Lesson 3 	
	that needs clarification.	

Tutor PD Session			
Age Levels/s: Course Titles: Physics - Properties of Matter and Electromagnetism. Chemistry - <i>Chemistry Around Us</i> Lesson Title: Chemistry- Hydrogen ion Concentrati in Systems. Physics- Electricity.	on (pH)	Name of Subject/s: Physics and Chemistry	
Year 4		Semester 2	
Tutor PD Session f	for Lessor	a 4 in the Course Manual	
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	the PD S	Session. What PD Session ants (Tutors) will do during each the session.	Time in session
1 Introduction to the session	1.1 Disc	cuss the successes and	20 mins
 Review prior learning A critical friend to share findings for a short discussion and lessons learned Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and 	less 1.2. Sha lar sat act	llenges of the PD session for on 3. are your observations with the ger group as critical friends who : in different lessons during the tual teaching of lesson 3.	
 indicators Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide</i> <i>explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session 	 1.3. Read the introduction, lesson description and the purpose of lesson 4 in the course manual and indicate how they are related to student teachers' relevant previous knowledge. Note Topics and brief lesson descriptions for lesson 4 are: Physics - In this lesson, Tutor discusses Electricity with student teachers. The following topics will be introduced to student teachers under electricity; identification of cell (chargeable and non-chargeable) and electric power. In this lesson student teachers will 		

1
overcome their misconceptions in
identification of cell (chargeable and
non-chargeable) and Electric power, and
basically learn how to teach these topics
to the basic school learner.
Chemistry- The lesson is designed to
further improve student teachers
conceptual understanding of chemicals
(Acids and Alkalis or bases) and to guide
student teachers to be able to present
-
this in practical ways for the JHS learner.
The following topics will be introduced to
student teachers: Concept of buffer,
Buffers and their applications.
1.4. Read, identify and discuss the
LOs and LIs of lesson 4 in the course
manuals.
Chemistry:
L.O
Demonstrate knowledge and skills in
identifying buffers in systems (NTS 2c,
p.13) Demonstrate the ability to explain
the concepts of pH to JHS learners.
LI
Prepare a checklist of buffers.
Demonstrate an understanding of
buffers by explaining to peers.
Physics:
<u>10</u>
Draw simple electrical circuits, solve
basic problems in electricity and state
the importance of electricity and
magnetism. (NTS 1a &1b, 2a &2c, Pg. 18
& 20).
1.5. Explain how the course learning
outcomes and their corresponding
indicators are related to student
teachers' relevant previous
knowledge.
KIOWICUBC.
<u>U</u> Dravida a shart sharring the draving of
Provide a chart showing the drawings of
simple electrical circuits, some basic

As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	solutions in electricity, list the importance of electricity and magnetism and gadgets that Hands-on Practical activities on identification of cells (chargeable and non-chargeable) and calculations in electric power, and sharing ideas in class. Student teachers use electromagnetic properties 1.6. Identify and explain the distinctive features of lesson 4 for the two courses. Note: Examples of distinctive features of electricity are: Cells (chargeable and non- chargeable) and calculations on electric power. Examples of distinctive features of Buffer are: Buffers in biological system – food and blood, pH, acids, and bases. 1.1. Describe how you will assist student teachers to discuss the effects of the interventions of their Classroom Enquiry and Action Research on learners. Refer to STS Handbook pg. 91-100.	
For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.	1.8. Discuss how you will help the student teachers to integrate ICT tools and GESI issues in their lessons when posted. <i>E.g., Using Microsoft Excel and Word</i> <i>processor to plan lessons and design</i> <i>inclusive TLRs.</i>	
 Concept Development (New learning likely to arise in lesson/s): Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or 	 2.1. Use thinks pair share to identify and explain the main concepts of Lesson 4 from the course manuals. <i>Examples of main concept/ new learning of lesson 4 are:</i> <i>Physics</i>-Drawing of simple electrical circuits, the skill of solving basic problems in electricity. 	15 mins

pedagogy being introduced in the lesson, which need to be	Chemistry -buffers in biological system	
explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to	2.2. Identify and discuss any GESI issues related to the new concepts of Lesson 4 from the course manuals.	
introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.	E.g., Concepts must reflect the diversity of ALL learners and should not reinforce false gender assumptions or stereotypes.	
	2.3. In mixed-gender groups, (where applicable), discuss and share potential barriers to the teaching and learning of the new concepts of Lesson 4.	
	A potential barrier (Physics)- Have the misconception on chargeable and non-chargeable cells, thus, all electrical cells are chargeable.	
	<i>Suggested solution to the potential barrier</i> - Ask learners to read on Electrical Cell before the start of the lesson.	
	2.4. Discuss the appropriateness of the teaching strategies suggested in the course manuals for teach lesson 4 and suggest alternative ones if possible.	
	Example of Teaching Strategies from the course manuals: Using simulations and multimedia	
	presentations, demonstration, group work and discussion.	
3.Planning for teaching, learning	3.1. Discuss through questions and	40 mins
and assessment activities for the	answers the various suggested	
lesson/s	teaching and learning activities from	
 Reading and discussion of the teaching and learning activities 	the course manuals to be used in delivery lesson 4.	
Noting, addressing, and	NB: Carefully review with your	
explaining areas where	colleagues the language used in the	
tutors may require	activities of the course manual to make	
clarification	them gender responsive and inclusive if	
 Noting opportunities for making <i>explicit links</i> to the 	appropriate.	

 Basic School Curriculum Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills Pooding, discussion, and 	3.2. Discuss in your groups how GESI responsiveness, ICT and 21 st Century skills will help to promote the delivery of the lessons in both the B.Ed. and Basic School Curricula.	
Reading, discussion, and		
identification of continuous	Examples of 21 st century skills from the	
assessment opportunities in	course manual and other sources:	
the lesson. Each lesson	Ccommunication skills, collaboration,	
should include at least two	observation and enquiry skills, digital	
opportunities to use	literacy, creativity, personal	
continuous assessment to	development and global citizenship.	
support student teacher		
learning, subject specific	Examples of GESI responsiveness from	
	the course manual and other sources:	
examples should be		
provided for SL/HoD	Making reasonable adjustments for	
Resources: links to the	physically challenged learners.	
existing PD Themes, for	Both male and female learners playing	
example, action research,	leading roles in a group task.	
questioning and to other	The use of braille and audio machines.	
external reference material:		
literature, on web, YouTube,	Examples of ICT tools from the course	
physical resources, power	manual and other sources:	
point; how they should be	Office 365 vs G-suite for education,	
used. Consideration needs to	Google meet for online teaching, Google	
be given to local availability		
Tutors should be expected	classroom for online assignment	
to have a plan for the next	submissions, plagiarism checking	
lesson for student teachers	software, tools for checking grammar	
	errors online.	
	3.3. Read the assessment section in	
	the course manuals and discuss how	
	they align with the NTEAP.	
	3.3.1. Discuss how you will	
	guide student teachers to do	
	hands-on/ practical activities on	
	identification of cells (chargeable	
	and non-chargeable cells) and	
	buffer solutions in inclusive	
	classrooms and submit a typed	
	report on them.	
	Note:	
	(This report could be used as their	
	subject project).	

	 Student teachers, in pairs, (male and females as appropriate) should also provide charts on current electricity just after the lesson. (This report could be used as part of their subject portfolio). 3.4. Projector or watch a video, as appropriate, on different types of cells (chargeable and non-chargeable) and buffer solutions in their groups and discuss how this concept will be presented to the student teachers. 	
	(i) Electric Power - YouTube (ii) Respiratory Buffer System - YouTube	
	NB: Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed.	
 4. Evaluation and review of session: Tutors should Identifying critical friends to observe lessons and report at next session Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	 4.1. Identify a critical friend who took part in the PD session to sit in your class during lesson to provide feedback to you and report on observations made in the next PD session. 4.2. Discuss in your groups anything relating to Lesson 4 that needs clarification. 	15 mins
	Note: (i). In the case of unresolved issues consult the subject writing leads. (ii). Read lesson 5 from the PD manual and find relevant materials for the next session.	

Tutor PD Session			
Age Levels/s: Course Titles:	N	Name of Subject/s:	
Physics - Properties of Matter and	P	Physics and Chemistry	
Electromagnetism.			
Chemistry - Chemistry Around Us			
Lesson Title:			
Chemistry- Electrolytes and non-ele	ctrolytes.		
Physics: Magnet and Electromagnet	:		
Year 4	S	Semester 2	
Tutor PD Session	for Lesson 5 i	in the Course Manual	
Focus: the bullet points provide	Guidance No	otes on Tutor Activity during	Time in
the frame for what is to be done	the PD Session	on. What PD Session	session
in the session. The SWL should	participants	(Tutors) will do during each	
use the bullets to guide what they	stage of the s	session.	
write for the SL/HoD and tutors to			
do and say during each session.			
Each bullet needs to be addressed			
and specific reference should be			
made to the course manual/s.			
1 Introduction to the session		the successes and challenges	20 mins
Review prior learning	of the PD ses	ssion for lesson 4.	
A critical friend to share			
findings for a short discussion		ur groups, invite your critical	
and lessons learned		o share their observations	
Reading and discussion of the		ring delivery of lesson 4 and	
introductory sections of the	discuss th	he suggestions provided.	
lesson up to and including			
learning outcomes and		the introduction, lesson	
indicators		on and the purpose of lesson	
Overview of content and		course manual and indicate	
identification of any distinctive		are related to student	
aspects of the lesson/s,		' relevant previous	
NB The guidance for SL/HoD	knowledg	ge.	
should identify, address and			
provide explanations for any areas	Note		
where tutors might require	=	rief lesson descriptions for	
clarification on an aspect of the	lesson 4 are:		
lesson. SL/HoD take feedback to	-	e main topic for this lesson is	
gauge understanding and support	-	Electromagnet. In this	
tutor engagement.		discusses properties of a	
NB SL/HoD should ask tutors to	-	magnetic field with student	
plan for their teaching as they go	-	ain, student teachers will be	
through the PD session	-	ercome their misconceptions	
		of magnets and magnetic	
	-	sically learn how to teach	
	these topics	to the basic school learner.	

Chemistry- The lesson is designed to	
further improve student teachers'	
knowledge and understanding on	
electrolytes and non-electrolytes and to	
guide them to be able to teach same	
concepts for the JHS learner.	
 Read, identify and discuss the LOs and LIs of lesson 5 in the course manuals. 	
<u>Chemistry:</u>	
L.O	
Explain the use for electrolytes and non-	
electrolytes (NTS 2c, p. 13, 3i, 3i, p.14).	
cicenolytes (NIS 20, p. 13, 51, 51, p.14).	
LI	
Prepare model experimental set-up to	
show the use of electrolyte in electrical	
conductivity.	
Physics:	
<u>LO</u>	
Demonstrate understanding of magnets	
and electromagnetics (NTS 1b, 3a, 3e &	
3j).	
(i). Draw magnetic field lines.	
(ii) Show the relationship between	
electric and magnetic field lines.	
1 E Evelain how the course learning	
1.5. Explain how the course learning outcomes and their corresponding	
indicators are related to student	
teachers' relevant previous	
knowledge.	
KIIOWICUBC.	
1.6. Identify and explain the	
distinctive features of lesson 5 for the	
two courses.	
Note: Examples of	
distinctive features of lesson 5 are:	
Electric field- an electric property	
associated with each point in space	
when charge is present in any form.	

As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	 Magnetic field-is a vector field that describes the magnetic influence on moving electric charges, electric current, and magnetic materials. Magnetic field lines- are a visual tool used to represent magnetic fields. Electrolytes- a liquid or gel which contains ions e.g., K⁺, Na⁺, Cl⁻ ions in solution. 1.1. Describe how you will assist student teachers to discuss the effects of the interventions of their Classroom Enquiry and Action Research on learners. Refer to STS Handbook pg. 91-100. 	
For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.	 1.7. Discuss how you will help the student teachers to integrate Cross-cutting Issues and GESI issues in their lessons when posted. <i>E.g., Using mobile phones to show image, power points and videos to enhance learning.</i> <i>Lesson plans should make allowance for all students to participate in the learning activity. When doing science experiments, ensure that girls, boys, and students with disability have a chance to use the equipment and chemicals.</i> 	
 2 Concept Development (New learning likely to arise in lesson/s): ➢ Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD 	 2.1. Identify and explain the main concepts of Lesson 5 from the course manuals. Examples of main concept/ new learning of lesson 5 are: Physics- Properties of magnets and magnetic field. Chemistry- Electrolytes and Nonelectrolytes. 	15 mins

NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.	 2.2. Discuss alternative strategies to be employed to teach the new concepts. <i>E.g., Using audio visual materials to teach the concepts.</i> 2.3. Identify and discuss any GESI issues related to the new concepts of Lesson 5 from the course manuals. <i>E.g., Equity and SEN: through appropriate gender and equity sensitive group work to protect vulnerable student teachers, establish an interactive and inclusive classroom atmosphere.</i> 2.4. In mixed-gender groups, (where applicable), discuss and share potential barriers to the teaching and learning of the new concepts of Lesson 5. 	
3.Planning for teaching, learning	<i>3.1.</i> Read and discuss the various	40 mins
and assessment activities for the	teaching and learning activities	
lesson/s	suggested in the course manuals to	
Reading and discussion of the	be used to achieve the LOs and LIs of	
teaching and learning activities	lesson 5.	
Noting, addressing, and		
explaining areas where tutors	3.2. Discuss in your groups how GESI	
may require clarification	responsiveness, ICT and 21 st Century	
Noting opportunities for	skills will help to promote the	
making explicit links to the	delivery of the lessons in both the	
Basic School Curriculum	B.Ed. and Basic School Curricula.	
Noting opportunities for		
integrating: GESI	Examples of 21 st century skills from the	
responsiveness and ICT and	course manual and other sources: Digital	
21 st C skills	literacy,	
Reading, discussion, and	Ccommunication skills, collaboration,	
identification of continuous	observation and enquiry skills, digital	
assessment opportunities in	literacy, creativity, personal development	
the lesson. Each lesson should	and global citizenship.	
include at least two	Examples of GESI responsiveness from	
opportunities to use	the course manual and other sources:	
continuous assessment to	Both male and female learners playing	
support student teacher	leading roles in a group task.	
learning, subject specific		
examples should be provided for SL/HoD	Examples of ICT tools from the course	

	Resources: links to the existing PD Themes, for example, action research, questioning and to other external reference material: literature, on web, YouTube, physical resources, power point; how they should be used. Consideration needs to be given to local availability Tutors should be expected to have a plan for the next lesson for student teachers	 Office 365, Google classroom for online assignment submissions, plagiarism checking software, tools for checking grammar errors online. 3.3. Read the assessment section in the course manuals and discuss how they align with the NTEAP. 3.3.1. Discuss how you will guide student teachers to do hands-on/ practical activities on establishing the properties of magnet in an inclusive, multi-grade and developmentally appropriate classroom and submit a typed report on them. Note: (This report could be used as their subject project). Student teachers, in pairs, (male and females as appropriate) should also provide a 30 min. lesson plan on how to teach the concept of electrolytes and non-electrolytes to JHS 3 learners. (This report could be used as part of their subject portfolio). 3.4. Project or watch a video, as appropriate, on electrolytes and non-electrolytes in their groups and discuss how this concept will be presented to the student teachers. What Are Electrolytes? - YouTube NB: Let everybody have a concrete plan 	
		NB: Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed.	
4	Evaluation and review of	4.1. Identify a critical friend who took	15 mins
	sion:	part in the PD session to sit in your class	10 111115
\succ	Tutors should Identifying	during lesson to provide feedback to you	
	critical friends to observe lessons and report at next session	and report on observations made in the next PD session.	

A	Identifying and addressing any outstanding issues relating to the lesson/s for clarification	4.2. Discuss in your groups anything relating to Lesson 5 that needs clarification.
		Note: (i). In the case of unresolved issues consult the subject writing leads. (ii). Read lesson 6 from the PD manual and find relevant materials for the next session.

Tutor PD Session			
Year 4		Semester 2	
Age Levels/s: Course Titles: Physics - Properties of Matter and Elect Chemistry - Chemistry Around Us Lesson Title: Chemistry- Course Review 1 with STS see Physics: Course Review 1 with STS semi Tutor PD Session for Lesson 6 in the Co	eminar nar	Name of Subject/s: Physics and Chemistry	
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	during the PD Session partici during each st	es on Tutor Activity Session. What PD pants (Tutors) will do age of the session.	Time in session
 Introduction to the session Review prior learning A critical friend to share findings for a short discussion and lessons learned Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and provide explanations for any areas where tutors might require clarification on 	 lessons of t and how it teaching po if possible s upon the ne 1.2 A critical fri observation the lessons learnt. 1.3 Think-pair-s introductor 1 -5 up to a 	eful the previous the PD session were influenced your ositively, challenges and subject way to improve ext PD session lessons. The during enactment of and what they have share to present the y section of the lesson nd including the tcomes (LOs) in phase	20 mins
As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio	groups. 1.4 Explain how outcomes a indicators a teachers' re knowledge state their o Session. 1.5. Review the internship sem	v the course learning and their corresponding are related to student elevant previous in lessons 1-5 and expectations of the PD	

Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	experiences with the whole group.	
For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.	1.6. Review the different GESI, CCI, and ICT issues raised in lessons 1,2,3,4, and 5, tell how those issues raised impacted positively in your previous lessons and what you need to do to improve upon incorporating GESI, CCI, and ICT features in your subsequent lessons.	
 2 Concept Development (New learning likely to arise in lesson/s): > Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement. 	 2.1. Identify familiar and unfamiliar concepts in the lessons and discuss with the larger group. 2.2. Outline possible challenging areas. 2.3. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson. 	15 mins
 3.Planning for teaching, learning and assessment activities for the lesson/s Reading and discussion of the teaching and learning activities Noting, addressing, and explaining areas where tutors may require clarification Noting opportunities for making <i>explicit links</i> to the Basic School Curriculum Noting opportunities for integrating: GESI responsiveness and ICT and 21st C skills 	 3.1 Suggest teaching and learning activities for the lessons taking into account GESI issues. <i>E.g.</i> Provision made for physically challenged Both genders take leading roles in group tasks Even distribution of questions to different categories of learners based on gender, ability, previous experience, etc. 3.2 Identify and discuss areas that 	40 mins
 Reading, discussion, and identification of continuous assessment opportunities in the lesson. Each lesson should 	a.3 Discuss how the different activities would be carried out in	

include at least two	both CoE and basic school	
opportunities to use	classroom to achieve the LOs and	
continuous assessment to	the LIs of lesson 1-5 from their	
support student teacher	course manuals.	
learning, subject specific		
examples should be provided	3.4 Model a presentation of a concept	
for SL/HoD	using ICT tools and taking into	
Resources: links to the existing	consideration GESI issues and 21 st	
PD Themes, for example,	Century skills (e.g. Both genders	
action research, questioning	take the leading roles in their	
and to other external	groups and in the demonstration	
reference material: literature,	of the use of ICT tools) to teach	
on web, YouTube, physical	their lessons.	
resources, power point; how		
they should be used. Consideration needs to be	3.5 Read and discuss the assessment activities in the various course	
given to local availability	manuals and identify areas that	
 Tutors should be expected to 	require clarification.	
have a plan for the next lesson		
for student teachers	3.6 Identify the inclusive resources	
	needed for teaching and learning of	
	the concepts in both CoE and basic	
	school classrooms.	
	E.g.	
	Cardboards, Course manual, Flip	
	charts, Poster paper,	
	computers with internet access	
	https://www.ncbi.nlm.nih.gov/pmc/a	
	rticles/PMC533116/	
	https://www.nap.edu/read/5287/cha	
4. Evaluation and review of session:	<i>pter/3#13</i> 4.1 Provide feedback of the PD	15 mins
4. Evaluation and review of session:	session taking into consideration	
Tutors should Identifying critical	inclusivity – how to be patient	
friends to observe lessons and	with stammers, using tactile and	
report at next session	audio devices for visually	
2. Identifying and addressing any	challenged, paying attention to all	
outstanding issues relating to the	courses, etc.	
lesson/s for clarification		
	4.2 identify unresolved issues relating	
	to this lesson for clarification	
	4.3 a critical friend to observe your	
	, teaching and record his/her	
	findings to be presented after	
	delivery or in the Next PD session.	1

Tutor PD Session		
Age Levels/s: JHS (Chemistry): Water JHS (Physics): Magnet and Electromagnet	Name of Subject/s: Chemistry and Phys	sics
Year 4	Semester 2	
Tutor PD Session for Lesson 7 in the Co	ourse Manual	
Focus: the bullet points provide the	Guidance Notes on Tutor Activity	Time in
frame for what is to be done in the	during the PD Session. What PD	session
session. The SWL should use the	Session participants (Tutors) will do	
bullets to guide what they write for	during each stage of the session.	
the SL/HoD and tutors to do and say during each session. Each bullet		
needs to be addressed and specific		
reference should be made to the		
course manual/s.		
 Introduction to the session Review prior learning A critical friend to share findings for a short discussion and lessons learned 	 Write things they learnt in lesson 7 PD sessions. Explain how you applied what you have written to the whole 	20 mins
 Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session 	 group 1.3. Critical friends to share their findings for a short discussion 1.4. Read and discuss the Introductory sections of the lesson up to learning indicators from their course manuals. LO: demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j) LI: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics. 1.5. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge. 	

	1.6. Identify and discuss the	
	distinctive features of lesson 8 for	
	the two courses from the course	
	manuals	
As this course is dealing with	1.1. Explain how they will organise	
supporting and/ or assessing the	post internship seminar for	
Professional Teaching Portfolio	student teachers.	
Development and/ or the Classroom		
Enquiry and Action Research Project	1.2. List the artefacts of a	
Report writing, Tutors should be	professional teaching portfolio	
provided with guidance on what to	and show how they will help	
do including organisation of Post	student teachers to develop their	
Internship Seminar.	own professional teaching	
	portfolio in their respective basic	
	schools when posted. (Refer to Y3	
	STS Handbook Pg. 114-118).	
	1.2 Fundaire la sur the survey del a saist	
	1.3. Explain how they would assist	
	initial teachers to discuss some	
	professional practices of their	
	mentors and co-mentees. (Refer	
	to NTS 1a, 3a, 3e and 3j Pg.14).	
For each session remember this is the	1.7. Identify the cross-cutting	
final semester before Students begin	issues in the course manuals and	
teaching provide prompts to help	explain how they can help the	
support this transition for planning	initial teachers to implement	
and give regard for GESI, CCI, ICT etc.	them in the basic school	
	classroom after posting.	
2 Concept Development (New	2.1. List and discuss the major	15 mins
learning likely to arise in lesson/s):	concepts in lesson 7.	
Identification and discussion of		
new learning, potential barriers to	2.2. Discuss the potential	
learning for student teachers or	misconceptions and barriers with	
students, new concepts or	respect to the concepts listed.	
pedagogy being introduced in the		
lesson, which need to be explored	2.3. Identify the most appropriate	
with the SL/HoD	teaching strategies that can be	
NB The guidance for SL/HoD should	employed to best deliver the new	
set out what they need to do to	concepts in both CoE and basic	
introduce and explain the issues/s	school classroom to achieve the	
•		
with tutors, they should take	LOs and the LIs of the lesson.	
feedback to gauge understanding and		
support tutor engagement.		

	nning for teaching, learning and	3.1. Read and discuss the teaching	40 mins
	ssment activities for the lesson/s	and learning activities in the	
3.1	Reading and discussion of the	course manuals for the two	
2.2	teaching and learning activities	course levels	
3.2	Noting, addressing, and		
	explaining areas where tutors	3.1.1. Discuss areas that need	
	may require clarification	clarification.	
3.3	Noting opportunities for		
	making <i>explicit links</i> to the Basic	3.2. Discuss how the different	
	School Curriculum	activities would be carried out in	
3.4	Noting opportunities for	both CoE and basic school	
	integrating: GESI	classroom to achieve the LOs and	
	responsiveness and ICT and 21 st	the LIs of lesson 8 from their	
	C skills	course manuals	
3.5	Reading, discussion, and		
	identification of continuous	Note:	
	assessment opportunities in the	Pays attention to all learners,	
	lesson. Each lesson should	especially girls and students with	
	include at least two	Special Educational Needs,	
	opportunities to use continuous	ensuring their progress. (NTS 3f)	
	assessment to support student	 Employs instructional strategies 	
	teacher learning, subject	appropriate for mixed ability,	
	specific examples should be	multilingual and multi-age classes.	
26	provided for SL/HoD	(NTS 3g)	
3.6	Resources: links to the existing PD Themes, for example, action	3.3. Discuss how GESI issues	
	research, questioning and to	related to the teaching and	
	other external reference	learning activities of the lesson	
	material: literature, on web,	would be addressed	
	YouTube, physical resources,	would be addressed	
	power point; how they should	3.4. Guide tutors to explain how	
	be used. Consideration needs	they would assist the student	
	to be given to local availability	teachers to demonstrate the 21 st	
3.7	Tutors should be expected to	century skill in the basic school	
017	have a plan for the next lesson	classroom.	
	for student teachers		
		E.g. (1) Digital Literacy e.g. The use of	
		power-point to prepare and present	
		lessons.	
		(2) Development of leadership,	
		collaborative and communicative	
		skills through group works and	
		presentations.	
		3.5. Read the assessment activities	
		in the various course manuals and	
		in the various course manuals and	

	identify areas that require	I
	identify areas that require	
	clarification	
	3.6. Identify the inclusive	
	resources needed for teaching	
	and learning of the concepts in	
	both CoE and basic school	
	classrooms	
	Note:	
	(i). Make sure the resources are	
	enough and appropriate to all	
	learners (males, females and persons	
	with SEN).	
	(ii). Let everybody have a concrete	
	plan for teaching the given topics,	
	thus, the activities agreed on by the	
	group to be followed.	
4. Evaluation and review of session:	4.1. Identify a critical friend who took	15 mins
	part in the PD session to sit in their	
Tutors should Identifying critical	class during lesson to provide	
friends to observe lessons and	feedback and report on observations	
report at next session	made in the next PD session.	
Identifying and addressing any		
outstanding issues relating to the	4.2. Discuss anything relating to	
lesson/s for clarification	Lesson 7 that needs clarification.	
	Note:	
	(i). In the case of unresolved issues	
	consult the subject writing leads.	
	(ii). Encourage tutors to read lesson 8	
	from the PD manual and find relevant	
	materials for the next session.	
	התנכוותוג למי נווב הבאר גבאוטווי	

Tutor PD Session		
Age Levels/s: JHS (Chemistry) JHS (Physics)	Name of Subject/s: Chemistry and Phys Types of Climates and their effect on for Basic School Physics Curriculum Materic	od
Year 4	Semester 2	115.
Tutor PD Session for Lesson 8 in the Co	urse Manual	
Focus: the bullet points provide the frame for what is to be done in the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors to do and say during each session. Each bullet needs to be addressed and specific reference should be made to the course manual/s.	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
 1 Introduction to the session Review prior learning A critical friend to share findings for a short discussion and lessons learned Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD should identify, address and <i>provide</i> <i>explanations</i> for any areas where tutors might require clarification on an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session 	 1.1 Write 4 things they learnt in lesson 7 PD sessions. 1.2 Explain how you applied what you have written to the whole group 1.3 Critical friends to share their findings for a short discussion 1.4 Read and discuss the introductory sections of the lesson up to learning indicators from their course manuals. LO: demonstrate skills in teaching Basic School Physics and in using Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j) LI: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics. Explain how the course learning outcomes and their corresponding indicators are related to student teachers' relevant previous knowledge. 	20 mins

	1.1 Identify and discuss the distinctive	
	features of lesson 8 for the two	
	courses from the course manuals	
As this course is dealing with	1.2 Explain how they will organise	
supporting and/ or assessing the	post internship seminar for	
Professional Teaching Portfolio	student teachers	
Development and/ or the Classroom		
Enquiry and Action Research Project	<i>1.3</i> List the artefacts of a professional	
Report writing, Tutors should be	teaching portfolio and show how	
provided with guidance on what to do	they will help student teachers to	
including organisation of Post	develop their own professional	
Internship Seminar.	teaching portfolio in their	
	respective basic schools when	
	posted. (<i>Refer to Y3 STS Handbook</i>	
	Pg. 114-118).	
	·	
	1.4 Explain how they would assist	
	initial teachers to discuss some	
	professional practices of their	
	mentors and co-mentees. (Refer	
	to NTS 1a, 3a, 3e and 3j Pg.14).	
For each session remember this is the	1.10. Identify the cross-cutting issues	
final semester before Students begin	in the course manuals and explain	
teaching provide prompts to help	how they can help the initial teachers	
support this transition for planning	to implement them in the basic	
and give regard for GESI, CCI, ICT etc.	school classroom after posting.	
2 Concept Development (New	2.1 List and discuss the major	15 mins
learning likely to arise in lesson/s) :	concepts in lesson 8.	12 111112
 Identification and discussion of 	concepts in lesson 8.	
	2.2 Discuss the potential	
new learning, potential barriers to	·	
learning for student teachers or	misconceptions and barriers with	
students, new concepts or	respect to the concepts listed.	
pedagogy being introduced in the		
lesson, which need to be explored	2.3 Identify the most appropriate	
with the SL/HoD	teaching strategies that can be	
NB The guidance for SL/HoD should	employed to best deliver the new	
set out what they need to do to	concepts in both CoE and basic	
introduce and explain the issues/s	school classroom to achieve the	
with tutors, they should take	LOs and the LIs of the lesson.	
feedback to gauge understanding and		
support tutor engagement.		

3.Planning for teaching, learning and assessment activities for the lesson/s Reading and discussion of the teaching and learning activities3.1 Read and discuss the teaching and learning activities in the course manuals for the two course levels40 minsNoting, addressing, and explaining areas where tutors may require3.2 Discuss areas that need clarification.40 mins
Reading and discussion of the teaching and learning activities Noting, addressing, and explainingmanuals for the two course levels3.2 Discuss areas that need
teaching and learning activitiesNoting, addressing, and explaining3.2 Discuss areas that need
areas where tutors may require clarification.
clarification
Noting opportunities for making3.3 Discuss how the differentexplicit links to the Basic Schoolactivities would be carried out in
Curriculum both CoE and basic school
Noting opportunities for integrating: classroom to achieve the LOs and
GESI responsiveness and ICT and 21 st the LIs of lesson 8 from their
C skills course manuals
Reading, discussion, and identification
of continuous assessmentNote:opportunities in the lesson. Each> Pays attention to all learners,
opportunities in the lesson. Each> Pays attention to all learners, especially girls and students with
opportunities to use continuous Special Educational Needs,
assessment to support student <i>ensuring their progress. (NTS 3f)</i>
teacher learning, subject specific
examples should be provided for appropriate for mixed ability,
SL/HoD multilingual and multi-age classes.
Resources: links to the existing PD(NTS 3g)Themes, for example, action research,(NTS 3g)
questioning and to other external 3.1 Discuss how GESI issues related to
reference material: literature, on web, the teaching and learning
YouTube, physical resources, power activities of the lesson would be
point; how they should be used. addressed
Consideration needs to be given to
local availability 3.2 Explain how you would assist the student teachers to demonstrate
the 21 st century skill in the basic
school classroom.
E.g. (1) Digital Literacy e.g. The use of
power-point to prepare and present
lessons.
(2) Development of leadership, collaborative and communicative
skills through group works and
presentations.
3.3 Read the assessment activities in
the various course manuals and
identify areas that require clarification

	3.4 Identify the needed inclusive resources for teaching and learning of the concepts in both CoE and basic school classrooms	
	Note: (i). Make sure the resources are enough and appropriate to all learners (males, females and persons with SEN). (ii). Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed	
4. Evaluation and review of session:	4.1. Identify a critical friend who took part in the PD session to sit in their	15 mins
 Tutors should Identifying critical friends to observe lessons and report at next session Identifying and addressing any 	class during lesson to provide feedback and report on observations made in the next PD session.	
outstanding issues relating to the lesson/s for clarification	4.2. Discuss with tutors anything relating to Lesson 8 that needs clarification.	
	Note: (i). In the case of unresolved issues consult the subject writing leads. (ii). Encourage tutors to read lesson 9 from the PD manual and find relevant materials for the next session.	

Tutor PD Session			
Age Levels/s: JHS	Na	me of Subject/s: JHS (PHYSICS): Basic Scho Curriculum Materials (CHEMISTRY): Climatic effects on nutrition in	JHS
Year 4	Sei	mester 2	
Tutor PD Sess	ion	for Lesson 9 in the Course Manual	
Focus: the bullet points provide the frame for what is to be done the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors do and say during each session. Each bullet needs to be addresse and specific reference should be made to the course manual/s.	to ed	Guidance Notes on Tutor Activity during the PD Session. What PD Session participants (Tutors) will do during each stage of the session.	Time in session
 Introduction to the session Review prior learning A critical friend to share findin for a short discussion and lessons learned Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators Overview of content and identification of any distinctive aspects of the lesson/s, NB The guidance for SL/HoD show identify, address and <i>provide</i> <i>explanations</i> for any areas where tutors might require clarification an aspect of the lesson. SL/HoD take feedback to gauge understanding and support tutor engagement. NB SL/HoD should ask tutors to plan for their teaching as they go through the PD session 	ve uld on	 1.1. In your distinctive groups write two things that didn't go on well in lesson 8 of the previous PD session on a post in card and tell how it affected the session. 1.2. A critical friend to give feedback on his/ her observation of the previous enacted lesson laying emphasis on clarity of content, assessment strategies, ICT integration, GESI, 21st Century. 1.3. Read individually and discuss in pairs the introductory sections of the lesson up to and including Learning Outcomes indicators in the course manual and indicate how they are related to student teachers' relevant previous knowledge. <i>Physics- Lesson title - Climatic effects on</i> <i>nutrition in foods</i> <i>Lesson looks at the relationship</i> <i>between climate, availability of nutrients</i> <i>and food production.</i> <i>Chemistry-Lesson title -</i> Basic School Physics Curriculum Materials 	20 mins

Lesson description:
The main topic for this lesson is basic school physics curriculum materials. Under this topic Tutor discusses the rational, general aims, objectives, and organisation of the syllabus (Profile Dimension) with student teachers. Student teachers will be guided on how to develop rational, general aims, objectives, and organisation of the syllabus (Profile Dimension)
1.1. Read and discuss the Overview of content and identification of any distinctive aspects of lesson 9 in the course manual.
E.g., PHYSICS – LO Demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lesson planning and delivery. (NTS 1b, 3a, 3e & 3j)
LI
Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics.
CHEMISTRY: LO Demonstrate understanding of the effect of climatic change on nature of the soil for plant crops and nutritive value of produced crops for farm animals and farmed fish.
LI Report in diverse forms
 1.2. Identify and discuss the distinctive features of lesson 9 form your various levels.

As this course is dealing with supporting and/ or assessing the Professional Teaching Portfolio Development and/ or the Classroom Enquiry and Action Research Project Report writing, Tutors should be provided with guidance on what to do including organisation of Post Internship Seminar.	 Distinctive features JHS: PHYSCIS ➢ Rational, general aims, objectives, and organisation of the syllabus (Profile Dimension) JHS: CHEMISTRY ➢ Climate ➢ availability of nutrients ➢ food production 1.6 Describe how you will assist student teachers to discuss the effects of the interventions of their Classroom Enquiry and Action Research on learners. <i>Refer to STS Handbook pg. 91-100</i> 	
For each session remember this is the final semester before Students begin teaching provide prompts to help support this transition for planning and give regard for GESI, CCI, ICT etc.	 1.7 Answer questions on how you can facilitate student teachers to incorporate 21st century ICT, cross-cutting and GESI issue in daily STS lesson. e.g – How to use computer or mobile phone to search for information on the internet. 	
 2 Concept Development (New learning likely to arise in lesson/s): > Identification and discussion of new learning, potential barriers to learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement. 	 2.1 identify and explain the main concepts of Lesson 9 from the course manuals Physics- Climatic effects on nutrition in foods Chemistry Basic School Physics Curriculum Materials 2.2 Outline and discuss possible potential barriers areas in teaching the various concept listed. JHS: (chemistry)-Learners sometimes think that poor climatic conditions and subsequent famines are punishments from gods or evil deeds by community members 	15 mins

		ULC. (Dhusies)]
		JHS: (Physics)	
		Student teachers may lack the skills of	
		developing rational, general aims,	
		objectives, and organisation of the	
		syllabus (Profile Dimension)	
		2.3 In pairs identify and discuss the	
		needed pedagogy to be used in the	
		lesson 9 to deliver the new concepts in	
		both CoE and basic school classroom to	
		achieve the LOs and the LIs of the lesson.	
		2.4 identify and discuss how GESI issues	
		can be integrated in the teaching of the	
		new concepts of Lesson 9 from the	
		course manuals.	
		Note: refer to GESI session 0 for	
		examples.	
3.Plan	ning for teaching, learning	3.1 Read through the teaching and	40 mins
and as	ssessment activities for the	learning activities of Lesson 9 from the	
lesson	/s	course manual and suggest other	
\succ	Reading and discussion of	teaching and learning activities for	
	the teaching and learning	teaching the various courses.	
	activities		
\succ	Noting, addressing, and	3.2 Identify areas that need clarification	
	explaining areas where	and how to address it in the lesson.	
	tutors may require		
	clarification	3.3 In your various groups/levels discuss	
\succ	Noting opportunities for	how the different activities would be	
	making <i>explicit links</i> to the	carried out in both CoE and basic school	
	Basic School Curriculum	classroom to achieve the LOs and the LIs	
\succ	Noting opportunities for	of the course manual for lesson 9.	
,	integrating: GESI		
	responsiveness and ICT and	3.4 Discuss how GESI issues related to	
	21 st C skills	the teaching and learning activities of	
\succ	Reading, discussion, and	lesson 9 would be addressed.	
	identification of continuous		
	assessment opportunities in	3.5 Identify two 21 st century skills that	
	the lesson. Each lesson	can be developed in the learners and	
	should include at least two	assist the student teachers to	
		demonstrate it in the basic school	
	opportunities to use		
	continuous assessment to	classroom.	
	support student teacher	2. C. Dened. identify and disc. as the	
	learning, subject specific	3.6 Read, identify and discuss the	
	examples should be	continuous assessment opportunities in	
	provided for SL/HoD	the lesson 9.	
\checkmark	Resources: links to the		

existing PD Themes, for example, action research, questioning and to other		
external reference material:		
literature, on web, YouTube,		
physical resources, power point; how they should be		
used. Consideration needs		
to be given to local		
availability		
Tutors should be expected		
to have a plan for the next		
lesson for student teachers		
4. Evaluation and review of	4.1 Identify a critical friend from the	15 mins
session:	same or related discipline to observe the	
	enactment of their lesson and provide	
Tutors should Identifying critical	feedback during the next PD Session	
friends to observe lessons and	(NTS 1a).	
report at next session Identifying and addressing any	4.2 Identify unresolved issues relating to	
outstanding issues relating to the	this lesson 9 for clarification	
lesson/s for clarification		
,	4.3. Read through lesson 10 before the next PD.	

Tutor PD Session			
Age Levels/s: JHS (Physics) JHS (Chemistry)	a me of Subject/s: kills in teaching Basic school Physics urther studies on the Secondary School Chemistry urriculum		
Year 4	Semester 2		
Tutor PD Sess	sion for Lesson 10 in the Course Manual		
Focus: the bullet points provide the frame for what is to be done the session. The SWL should use the bullets to guide what they write for the SL/HoD and tutors do and say during each session. Each bullet needs to be address and specific reference should be made to the course manual/s.	e in participants (Tutors) will do during each stage of the session.sessionsed		
 made to the course manual/s. 1 Introduction to the session Review prior learning A critical friend to share findings for a short discussion and lessons learned Reading and discussion of the introductory sections of the lesson up to and including learning outcomes and indicators Overview of content and identification of any distinctiaspects of the lesson/s, NB The guidance for SL/HoD shourd identify, address and provide explanations for any areas where tutors might require clarification on an aspect of the lesson. SL/HoT shourd and support tutors engagement. NB SL/HoD should ask tutors to plan for their teaching as they got through the PD session 	 have written to the whole group 1.3. Critical friends to share their findings for a short discussion 1.4. Read and discuss the Introductory sections of the lesson up to learning indicators from their course manuals. buld LO: demonstrate skills in teaching Basic School Physics and in using Basic School Science Curriculum Materials for lessons planning and delivering. (NTS 1b, 3a, 3e & 3j) r LI: Provide Lesson plan on teaching some concepts and show Video clip on teaching some topics in Basic School Physics. 		

	1.2 Island frame at a strategy in the
	1.2.Identify and discuss the distinctive
	features of lesson 10 for the two
	courses from the course manuals
As this course is dealing with	1.1. Explain how you would assist
supporting and/ or assessing the	initial teachers to discuss some
Professional Teaching Portfolio	professional practices of their
Development and/ or the	mentors and co-mentees from the
Classroom Enquiry and Action	NTS.
Research Project Report writing,	
Tutors should be provided with	Refer to NTS:
guidance on what to do including	Professional Values and Attitudes
organisation of Post Internship	1(a) critically and collectively reflects to
Seminar.	improve teaching and learning.
	Professional Knowledge
	2(c) Has secure content knowledge,
	pedagogical knowledge and pedagogical
	content knowledge for the school and
	grade they teach in.
	2(f) Takes accounts of and respects
	learners' cultural, linguistic, socio-
	economic and educational backgrounds in
	planning and teaching.
	Professional Practice
	3(a) Plans and delivers varied and
	challenging lessons, showing a clear
	grasp of the intended outcomes of their
	teaching.
	<i>3(c) Creates a safe, encouraging learning</i>
	environment.
	3 (d) Manages behaviour and learning
	with small and large classes.
	3(g) Employs instructional strategies
	appropriate for mixed ability, multilingual
	and multi-age classes.
For each session remember this is	1.3.Identify the cross-cutting issues in the
the final semester before Students	course manuals and explain how they
begin teaching provide prompts to	can help the initial teachers to
help support this transition for	implement them in the basic school
planning and give regard for GESI,	classroom after posting.
CCI, ICT etc.	
·	Examples of cross-cutting issues are:
	 The use of ICT
	 Equity
	 Inclusivity
	Gender issues

2 Concept Development (New	2.1. List and discuss the major	15 mins
learning likely to arise in lesson/s):	concepts in lesson 10.	
Identification and discussion of		
new learning, potential barriers	2.2. Discuss the potential	
to learning for student teachers	misconceptions and barriers in the	
or students, new concepts or	course manual with respect to the	
pedagogy being introduced in	concepts.	
the lesson, which need to be		
explored with the SL/HoD	2.3. Identify the most appropriate	
NB The guidance for SL/HoD should	teaching strategies that can be	
set out what they need to do to	employed to best deliver the new	
introduce and explain the issues/s	concepts in both CoE and basic school	
with tutors, they should take	classroom to achieve the LOs and the	
feedback to gauge understanding	LIs of the lesson.	
and support tutor engagement.		
3.Planning for teaching, learning	.1. Read and discuss the teaching and	40 mins
and assessment activities for the	learning activities in the course	
lesson/s	manuals for the two course levels	
Reading and discussion of the		
teaching and learning activities	.2. Discuss areas that need clarification.	
Noting, addressing, and explaining		
areas where tutors may require	.3. Discuss how the different activities	
clarification	would be carried out in both CoE and	
Noting opportunities for making	basic school classroom to achieve the	
explicit links to the Basic School	LOs and the LIs of lesson 10 from their	
Curriculum	course manuals	
Noting opportunities for		
integrating: GESI responsiveness and ICT and 21 st C skills	Note:	
	Pays attention to all learners, aspecially aids and students with	
Reading, discussion, and identification of continuous	especially girls and students with	
	Special Educational Needs, ensuring	
assessment opportunities in the lesson. Each lesson should include	their progress. (NTS 3f)	
at least two opportunities to use	 Employs instructional strategies appropriate for mixed ability, 	
continuous assessment to support	multilingual and multi-age classes.	
student teacher learning, subject	(NTS 3g)	
specific examples should be	(1113 Sg)	
provided for SL/HoD	.4. Discuss how GESI issues related to	
Resources: links to the existing PD	the teaching and learning activities of	
Themes, for example, action	the lesson would be addressed	
research, questioning and to other	.5. Guide tutors to explain how they	
external reference material:	would assist the student teachers to	
literature, on web, YouTube,	demonstrate the 21 st century skill in	
physical resources, power point;	the basic school classroom.	
how they should be used.		
Consideration needs to be given to		
local availability	E.g. (1) Digital Literacy e.g. The use of	
		L

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	tors should be expected to have	power-point to prepare and present	
	lan for the next lesson for	lessons.	
stu	ident teachers	(2) Development of leadership,	
		collaborative and communicative	
		skills through group works and	
		presentations.	
		.6. Read the assessment activities in the	
		various course manuals and identify	
		areas that require clarification	
		.7. Identify the needed inclusive	
		resources for teaching and learning of	
		the concepts in both CoE and basic	
		school classrooms	
		Note:	
		(i). Make sure the resources are enough	
		and appropriate to all learners (males,	
		females and persons with SEN).	
		(ii). Let everybody have a concrete plan	
		for teaching the given topics, thus, the	
		activities agreed on by the group to be	
		followed.	
4.	Evaluation and review of	4.1. Identify a critical friend who took	15 mins
ses	ssion:	part in the PD session to sit in their class	
		during lesson to provide feedback and	
\triangleright	Tutors should Identifying	report on observations made in the next	
	critical friends to observe	PD session.	
	lessons and report at next		
	session	4.2. Discuss with tutors anything relating	
\triangleright	Identifying and addressing any	to Lesson 10 that needs clarification.	
	outstanding issues relating to	Note:	
	the lesson/s for clarification	(i). In the case of unresolved issues consult	
		the subject writing leads.	
		(ii). Encourage tutors to read lesson 11	
		from the PD manual and find relevant	
		materials for the next session.	
L			II

Tutor PD Session			
Age Levels/s: JHS		Name of Subject/s: Ph Chemistry	ysics &
Course Title/s: Physics- Properties of			
Matter and Electromagnetism			
Chemistry: Chemistry Around Us			
Lesson Title: Physics- Skills in Tee	aching Basic School		
Physics			
Chemistry: Co-planning, Co-teac	hing and Co-		
assessment			
Year 4		Semester 2	
Tutor PD Ses	sion for Lesson 11 in the	Course Manual	
Focus: the bullet points	Guidance Notes on Tu	tor Activity during the	Time in
provide the frame for what is	PD Session. What PD S	ession participants	session
to be done in the session. The	(Tutors) will do during	each stage of the	
SWL should use the bullets to	session.		
guide what they write for the			
SL/HoD and tutors to do and			
say during each session. Each			
bullet needs to be addressed			
and specific reference should			
be made to the course			
manual/s. 1 Introduction to the session	1.1. Identify two thing	s you learned during	20 mins
Review prior learning		ession and tell how	20 111115
A critical friend to share	•	r lessons positively.	
findings for a short			
discussion and lessons	1.2. Invite your critica	al friends to share their	
learned	observations mad		
Reading and discussion of	delivery and discu	uss the suggestions	
the introductory sections	provided.		
of the lesson up to and			
including learning	1.3. Read and discuss	the introductory	
outcomes and indicators	sections of the les	sson up to course	
Overview of content and	-	s and indicators from	
identification of any	your course manu	uals.	
distinctive aspects of the			
lesson/s,	Note (1): The topics an		
NB The guidance for SL/HoD	introduction/descriptio	-	
should identify, address and	various course levels ar		
provide explanations for any	JHS (Physics) Topic: Ski	ins in leaching basic	
areas where tutors might require clarification on an	school Physics		
aspect of the lesson. SL/HoD	Lesson Description - Th	ne lesson is a	
take feedback to gauge	furtherance to lesson 1		
understanding and support	students to understand	•	
and support		i that i hysics yets	L

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tutor engagement.	involved in their daily life right from waking	
NB SL/HoD should ask tutors	up in the morning	
to plan for their teaching as		
they go through the PD session	JHS (Chemistry) Topic: Co- planning, co-	
	teaching and co-assessment	
	Lesson Description – This lesson deals with	
	interpreting, planning, executing and	
	assessing lessons taught in reflective mode.	
	ussessing lessons taught in rejictive moue.	
	E. a. 2. Dhusing Cl. Oa	
	E.g., 2. Physics CLOs:	
	Demonstrate skills in teaching Basic School	
	Physics and in using Basic School Science	
	Curriculum Materials for lessons planning and	
	delivering. (NTS 1b, 3a, 3e & 3j)	
	Physics CLIs:	
	Provide Lesson plan on teaching some	
	concepts and show Video clip on teaching	
	some topics in Basic School Physics.	
	E.g., 3. Chemistry CLOs:	
	Demonstrate understanding of curriculum,	
	required pedagogies and assessment	
	procedures. Understand how learning occurs	
	in diverse contexts and apply this in their	
	execution of co-planned and co-taught lesson	
	Chemistry CLIs:	
	In pairs co-plan, co-teach, co-assess and co-	
	reflect prepared 30-minute lesson from week	
	10.	
	10.	
	1.3.1. Explain how the course learning	
	outcomes and their corresponding indicators	
	are related to student teachers' relevant	
	previous knowledge.	
	1.4. Identify and discuss the distinctive	
	1.4. Identify and discuss the distinctive	
	features of lesson 11 for the two courses	
	from the course manuals.	
	NOTE	
	-	
	Distinctive Features JHS (Physics):	
	 Planning and designing experiments 	
	Communicating and reporting	
	Discussions on experimental	

1.5. Discuss how you will assist student	
teachers during the post internship seminars	
to practice the qualities of a professional	
teacher when posted.	
Some Qualities of a Professional Teacher are:	
Good teachers are strong	
communicators	
Good teachers listen well.	
Good teachers focus on collaboration	
Good teachers are adaptable.	
Good teachers are engaging.	
Good teachers show empathy	
Good teachers have patience.	
Professional teachers Value real-world	
learning.	
Professional teachers share best	
practices	
Professional teachers are life-long	
learners.	
 1.6. Explain the classifications of the Newly Qualified Teachers (NQTs) roles and responsibilities in the portfolio assessment process and how you will discuss the classifications with the extending teachers during the post internship seminar. 1.7. Discuss the Sample Portfolio Elements that would be used both by district and regional assessors and how you will share these sample portfolio elements with the student teachers during the post internship seminar. 	
	 teachers during the post internship seminars to practice the qualities of a professional teacher when posted. Some Qualities of a Professional Teacher are: Good teachers are strong communicators Good teachers listen well. Good teachers focus on collaboration Good teachers are adaptable. Good teachers are engaging. Good teachers show empathy Good teachers have patience. Professional teachers value real-world learning. Professional teachers are life-long learners. 1.6. Explain the classifications of the Newly Qualified Teachers (NQTs) roles and responsibilities in the portfolio assessment process and how you will discuss the classifications with the extending teachers during the post internship seminar. 1.7. Discuss the Sample Portfolio Elements that would be used both by district and regional assessors and how you will share these sample portfolio elements with the student teachers during the post internship

For each session remember	1.8. Identify decisions that needed to be	
this is the final semester	made during GESI responsive lesson planning	
before Students begin	how you can help student teachers to	
teaching provide prompts to	implement them in the basic school	
help support this transition for	classroom after posting.	
planning and give regard for	Note:	
GESI, CCI, ICT etc.	To ensure GESI responsiveness lesson	
	planning, the following wide range of	
	decisions needed to be made:	
	Choice of learning materials to use	
	Methodologies	
	➢ Content	
	Learning activities	
	Language use	
	Classroom setup	
	Classroom interaction	
	Assessment of the learning/ learner	
	Fair knowledge of the background of	
	learners to inform all the above.	
	1.2. Discuss GESI responsive lesson	
	planning activities and how you would	
	help the initial teachers to implement	
	them in the basic school classroom after	
	posting.	
	Note:	
	GESI Responsive Lesson Planning Activities:	
	Reviews student attendance every 2-3	
	months (particularly for females) - if	
	there are problems with attendance, the	
	teacher should follow up with the head	
	teacher and parents.	
	Plan classroom seating so that males	
	and females are mixed, and so that	
	pupils who need more support sit at the	
	front Protect students with disability	
	from abuse or bully by other students.	
	Plan to use teaching strategies that	
	ensure equal participation of both	
	females and males. (Refer to Guidance	
	note for integrating gender equality and	
	social inclusion, Pg. 16)	

2 Concept Development (New learning likely to arise in lesson/s):	2.1. List and explain the major concepts in lesson 11.	15 mins
 Identification and discussion of new learning, potential barriers to 	2.2. Discuss the potential misconceptions and barriers with respect to the concepts listed.	
learning for student teachers or students, new concepts or pedagogy being introduced in the lesson, which need to be	2.3. Discuss the potential barriers that may impede extending teachers' learning and application of concepts learned in basic schools.	
explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement.	2.4. Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson.	

3.Planning for teaching,	3.1. Read and discuss the appropriateness of	40 mins
learning and assessment	the teaching and learning activities in the	
activities for the lesson/s	course manuals for the two course levels.	
Reading and discussion of	Note: Tutors should go through the activities	
the teaching and learning	one after the other taking into	
activities	consideration the coherency,	
Noting, addressing, and	methodology. time available, teaching	
explaining areas where	and learning resources, and	
tutors may require	characteristics of learners as well as GESI	
clarification	related issues.	
Noting opportunities for	<i>E.g., (i) Plan to use exercises/activities that do</i>	
making <i>explicit links</i> to the	not reinforce traditional gender roles and	
Basic School Curriculum	in some cases, actively challenges or	
Noting opportunities for	reverses traditional gender roles.	
integrating: GESI	(ii) Review TLRs for traditional gender roles	
responsiveness and ICT	and ensures that materials are distributed	
and 21 st C skills	and used equally between female and	
Reading, discussion, and	males	
identification of		
continuous assessment	3.1.1. Identify and discuss areas that need	
opportunities in the lesson.	clarification.	
Each lesson should include		
at least two opportunities	3.2. Discuss how the varied activities would	
to use continuous	be carried out in both CoE and basic school	
assessment to support	classroom to achieve the LOs and the LIs of	
student teacher learning,	lesson 11 from your course manuals.	
subject specific examples		
should be provided for	<i>Note:</i> Ensure that the language used in	
SL/HoD	instructing learners to carry out the varied	
Resources: links to the	activities is gender responsive.	
existing PD Themes, for	E. g.,1: Instead of "When everyone	
example, action research,	contributes <u>his</u> ideas, the discussion will be a	
questioning and to other	success".	
external reference	It may read: "When everyone contributes <u>his</u>	
material: literature, on	or her ideas, the discussion will be a success".	
web, YouTube, physical		
resources, power point;	2. Do not use harsh, threatening language or	
how they should be used.	actions that instil fear in both females and	
Consideration needs to be	males.	
given to local availability		
Tutors should be expected	3.3. Model how to co-plan, co-teach and co-	
to have a plan for the next	reflect a lesson based on any selected	
lesson for student teachers	concept in the semester.	
	3.4. Discuss how GESI issues related to the	
	teaching and learning activities of the lesson	
	would be addressed.	

	 (i). Prepare and use TLRs that attract the attention and interest of both female and male students, such as short video on science concept to be learned. (ii). Attract the interest of both female and male students, motivate them and provide relevance to the lesson learned. 3.5. Explain how you would assist the student teachers to demonstrate the 21st century skill in the basic school classroom. 3.6. Read the assessment activities in the various course manuals and identify areas that require clarification. 3.7. Identify the inclusive resources needed for teaching and learning the concepts in both the CoE and basic school classrooms. <i>E.g., Syllabus, teacher's handbook, pupil's textbook, student teachers ' book. ok.</i> <i>Also, curriculum, lesson notes, internet (if required), box.</i> 	
	 (i). Make sure the resources are enough and appropriate to all learners (females, males and persons with SEN). ii). Let everybody have a concrete plan for teaching the given topics, thus, the activities agreed on by the group to be followed 	
 4. Evaluation and review of session: ➤ Tutors should Identifying critical friends to observe lessons and report at next session > Identifying and addressing any outstanding issues relating to the lesson/s for clarification 	 4.1. Provide feedback on this PD session taking into consideration – Clarity of concepts, pedagogical approaches employed, ICT integration, GESI, Twenty First Century Skills (NTS 1a, 3i,) and make notes that will help you to teach Lesson 11. 4.2. Identify a critical friend who took part in this PD session lesson to sit in your class during lesson to provide feedback and report on observations made in the next PD session. 	15 mins

4.3. Discuss anything relating to Lesson 11 that needs clarification.
Note: (i) Read lesson 12 (Review Lesson) from both course manuals and PD manuals and find relevant materials for the next session. (ii)Find out the challenges student teachers faced during their entire extending teaching for discussion in the next lesson.

Tutor PD Session		
-	Name of Subject/s: Chemistry and Physics:	
	Course Review II with STS seminar	
Tutor PD Session	for Lesson 12 in the Course Manual	
Focus: the bullet points provide	Guidance Notes on Tutor Activity during	Time in
the frame for what is to be done	the PD Session. What PD Session	session
in the session. The SWL should use	participants (Tutors) will do during each	
the bullets to guide what they write for the SL/HoD and tutors to	stage of the session.	
do and say during each session.		
Each bullet needs to be addressed		
and specific reference should be		
made to the course manual/s.		
1 Introduction to the session	1.1. Mention how students were well	20 mins
Review prior learning	placed to employ the various	
A critical friend to share	strategies and skills during the Basic	
findings for a short discussion	School classroom work including STS	
and lessons learned➢ Reading and discussion of the	Field Experience.	
Reading and discussion of the introductory sections of the	1.2. How useful were the previous PD	
lesson up to and including	sessions and how have they	
learning outcomes and	influenced your teaching over the	
indicators	weeks?	
Overview of content and		
identification of any distinctive	1.3. A critical friend to give feedback	
aspects of the lesson/s,	on Lesson 7-11 which they observed.	
NB The guidance for SL/HoD should		
identify, address and <i>provide</i>	1.4. Read and discuss the	
<i>explanations</i> for any areas where tutors might require clarification	introductory sections of the lesson up to and including learning	
on an aspect of the lesson. SL/HoD	outcomes and indicators of lesson	
take feedback to gauge	12.	
understanding and support tutor		
engagement.	Example.	
NB SL/HoD should ask tutors to	JHS (Chemistry)-This lesson is a review	
plan for their teaching as they go	and audit of the lessons for the second	
through the PD session	half of the semester as well as review	
	and discussion of lessons learned,	
	reflection and peer review of teaching	
	and learning portfolios.	
	JHS (physics) -The review and audit the	
	lessons for the second half of the	
	semester (from lesson 7-lesson 11). It is	
	also expected that Student teachers will	

	a	[]
	reflect during this lesson on their own	
	progress in the course.	
	JHS- Learning Outcomes	
	<i>i)</i> Be able to reflect on lessons and state	
	new insights or grey areas needing	
	remedies	
	ii) Basis for co-planning and co-teaching	
	ing basis for co-planning and co-teaching	
	JHS-Learning Indicators	
	-	
	i) Provide a reflection report on STS and	
	demonstrations and illustrations on a	
	given media of lessons learnt so far.	
	ii) Present teaching and learning e-	
	portfolios developed throughout	
	semester.	
	1.5. In pairs discuss the distinctive	
	aspects of lesson 7- 11 such as	
	fundamental concepts and developing	
	awareness of equity and diversity issues	
	and issues on ICT	
As this course is dealing with	1.6. Bring out and discuss the challenges	
supporting and/ or assessing the	the student teachers said they faced	
Professional Teaching Portfolio	during the entire extending	
Development and/ or the	teaching.	
Classroom Enguiry and Action	_	
	1.6.1.Explain how you will assist the	
Research Project Report writing,	student teachers to overcome	
Tutors should be provided with	their challenges so as to prevent	
guidance on what to do including	them from occurring in their new	
organisation of Post Internship	schools when posted.	
Seminar.		
For each session remember this is	1.7. Identify and discuss key GESI, ICT	
the final semester before Students	and cross-cutting issues you know that	
begin teaching provide prompts to	are very relevant but were not discussed	
help support this transition for	in any of the PD sessions.	
planning and give regard for GESI,	1.7.1. Explain how you will assist the	
CCI, ICT etc.	student teachers to integrate the	
	key GESI, ICT and Cross-Cutting	
	issues in their teaching when	
	posted.	
2 Concept Development (New	2.1 Identify and discuss the major	15 mins
learning likely to arise in lesson/s):	concepts in lesson 7-11.	
 Identification and discussion of 	2.2 Use Think-Pair-Share to outline	
new learning, potential barriers	possible challenging areas in	
to learning for student teachers	teaching and assessing of lesson 7-	
_		
or students, new concepts or	11.	

pedagogy being introduced in the lesson, which need to be explored with the SL/HoD NB The guidance for SL/HoD should set out what they need to do to introduce and explain the issues/s with tutors, they should take feedback to gauge understanding and support tutor engagement. 3.Planning for teaching, learning	 2.3 Identify the most appropriate teaching strategies that can be employed to best deliver the new concepts in both CoE and basic school classroom to achieve the LOs and the LIs of the lesson apart from the once that was used in the previous lesson 7-11. 3.1 Read and discuss of the teaching and 	40 mins
and assessment activities for the	learning activities from the course	
lesson/s	manual for lesson 7- 11.	
Reading and discussion of		
the teaching and learning	3.2. List and explaining areas where	
activities	tutors may still require clarification for	
Noting, addressing, and	the lesson 7-11 and also making explicit	
explaining areas where	links to the Basic School Curriculum.	
tutors may require		
clarification	3.2 Discuss how GESI issues related to	
Noting opportunities for making <i>explicit links</i> to the	the teaching and learning activities of the lesson 7- 11 would be	
Basic School Curriculum	addressed in the case of unresolved.	
 Noting opportunities for 		
integrating: GESI	3.3 Read, identify and discuss continuous	
responsiveness and ICT and	assessment opportunities in lesson	
21 st C skills	7-11 that can be added to what was	
Reading, discussion, and	already in the manual.	
identification of continuous		
assessment opportunities in		
the lesson. Each lesson		
should include at least two		
opportunities to use		
continuous assessment to		
support student teacher		
learning, subject specific		
examples should be		
provided for SL/HoD ➤ Resources: links to the		
existing PD Themes, for example, action research,		
questioning and to other		
external reference material:		
literature, on web,		
YouTube, physical		
resources, power point;		
how they should be used.		
Consideration needs to be		

 given to local availability Tutors should be expected to have a plan for the next lesson for student teachers 		
4. Evaluation and review of session:	 Discuss anything relating to Lesson 7-12 that needs further clarification. 	15 mins
Tutors should Identifying critical friends to observe lessons and report at next session		
 Identifying and addressing any outstanding issues relating to the lesson/s for clarification 		

Appendix 1. Course Assessment Components, detail in the Revised NTEAP Toolkit (Sept.

	21)	
COMPONENT	SUBJECT PROJECT	SUBJECT PORTFOLIO
	1 per course per semester, individual or collaborative student teacher work.	1 per course per semester, individual or collaborative student teacher work.
WHAT IS IT?	The Subject project is an assignment designed to enable student teachers to demonstrate achieving one or more of the CLOs, progress towards achieving identified NTS, development of knowledge and understanding of: the Basic School Curriculum, GESI responsiveness, using ICT and 21stC skills	The Subject Portfolio is the deliberate collection of student teachers' work that has been selected and organized for a particular subject to show student teacher's learning and progress to achieving the CLOs.
CONSTITUENTS	Introduction: a clear statement of aim and purpose Methodology: what the student teacher has done and why to achieve the aim and purpose of the project Substantive or main section: Presentation of any artifacts, experiments, TLMs created for the project; presentation, analysis, and interpretation of what has been done, learned, or found out in relation to focus of the project. Conclusion: Statement of the key outcomes of the project; reflection on what the student teacher has learnt	<i>Either</i> 3 items of work produced during the semester or 2 items of work and a mid-semester assessment The items of work to be selected by student teachers, with tutor support, during the semester as best examples of their progress. For each item they select, Student teacher's need to reflect on: progress against identified NTS; achieving CLOs; increased knowledge and understanding of the Basic School Curriculum, GESI responsiveness, integration of ICT and how they could have approached developing the item differently to achieve a better outcome The mid-semester assessment: ssssssscase study, reflective note, quiz etc.
WEIGHT	Overall weighting of project = 30% Weighting of individual parts of project out of 100 Introduction – 10 Methodology – 20 Substantive section – 40 Conclusion – 30	Overall weighting of project = 30% Weighting of individual parts of portfolio out of 100 Each item of work - 30 Mid semester assessment - 30 - <i>if</i> <i>applicable</i> Presentation and organisation of portfolio - 10

EXAM	End of semester Exam, weight 40%. To assess: achievement of one or more
	of the CLOs, progress towards achieving identified NTS, development of
	knowledge and understanding of the Basic School Curriculum, ability to use
	GESI responsive approaches and to integrate ICT and 21 st C skills in teaching
	and learning

Examples of course assessment components Subject portfolio examples of items of work

Literacy:

- o Reading log of children's literature
- o Review of different types of writing and how to teach them
- o Book summaries/reports
- o Report on different purposes for and types of reading or writing
- o Vocabulary achievement
- o Schemes of work

Mathematics:

- o Samples of problem solving with written explanations of how the problems were solved and how this can be taught
- o Charts and graphs with written explanations of how and why they were created and how this can be taught
- o Computer analyses conducted as well as use of software to teach mathematics and how effective they are
- o Use indigenous knowledge in mathematics teaching.
- o Schemes of work

Science

- o Lab reports,
- o Research reports
- o Charts, graphs created
- o Designs, TLMs, posters, worksheets
- o Integrating indigenous knowledge into science teaching
- o Schemes of work

Subject project examples

Pedagogic Studies. What are the qualities you need to develop to be a good teacher? Reflect on your personal experiences, values, and background, the NTS and the expectations of, and vision for, the B.Ed.

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