NECT

GRADE 10 - 12

PHYSICAL SCIENCE

TERMS 3&4

2019

TRAINER'S GUIDE

CONTENTS

Workshop Objectives

By the end of this training session, participants will:

1. Be aware of the programme for this training session.
2. Be informed of the NECT Programme 1 updates.
3. Have improved Term 3&4 pedagogical content knowledge.
4. Be fully oriented to the Trainer's Guide that will be used to train teachers on this programme.
5. Be motivated to improve their personal facilitation skills.
6. Be motivated to improve teaching and learning in their districts/ provinces.

Before the Training

1. Be prepared to model excellence in training and facilitation.
2. Prepare the venue as best as possible, to ensure that participants are comfortable, that they can all see the presenter, and that the setup is conducive for discussion.
3. Be prepared to show the slide show and videos. Deal with technical issues before the training.
4. Be fully prepared, have all of your materials laid out in an orderly fashion.
5. Display the objectives of the workshop, and go through these with participants.
6. Display an 'agenda' – a chart listing every activity that will be completed, together with the planned time allocation.
7. At the end of every training day, reflect on the objectives and agenda, and tick off what has been achieved that day.
8. DISPLAY ALL RELEVANT RESOURCES THAT HAVE BEEN PRODUCED BY THE NECT FOR CLASSROOMS, i.e.: POSTERS; RESOURCE PACK ITEMS; ETC. (Make an effort to properly prepare these items to present them in a way that models good practice and will protect resources from wear and tear.)

Tone of the Training

1. Remember that you are training TRAINERS and TEACHERS. Please ensure that you address participants correctly.
2. Be polite, patient and RESPECTFUL at all times. This is possibly the most important aspect of being a trainer.
    - Participants will generally be open to you and to the programme if they are treated with respect.
    - Arrive early and be prepared – for every session!
    - Greet participants by name whenever possible, and ensure that names are pronounced correctly.
    - Do not be dismissive of a participant's concern. If you do not have time, or if you know that the issue will be addressed later in the session, create a PARKING LOT. Write down the query, and stick it in the parking lot to be addressed later.
    - Do not be dismissive of participants' knowledge, skills and experience. As much as possible, allow participants to contribute to discussions.
3. Remember that humour is always a good strategy – try to add some fun to the training, in a way that does not make anyone uncomfortable.
4. Please remember to use icebreakers and energisers when required – it is important to keep the mood and energy of the training positive.

NECT
GRADES 10 - 12 PHYSICAL SCIENCE
TERM 3&4 2019 TRAINING PROGRAMME

	TIME	ACTIVITY	TRAINER WORKSHOP	TEACHER WORKSHOP
1	30 minutes	Welcome, housekeeping and agenda		
2	30 minutes	Pre-training activity		
3	1 hour 30 minutes	Reflections on Term 1 and 2		
4	30 minutes	Setting ground rules - new		
5	2 hours	Grade 10 – Instantaneous speed and velocity and the equations of motion		
6	2 hours	Grade 11 – Electromagnetism & Grade 12 Electrodynamics		
7	1 hour	Grade 10 - Reactions in aqueous solutions		
8	2 hours 30 minutes	Grade 11- Types of Reactions and Grade 12 - Electrochemical reactions		
9	1 hours 30 minutes	Grade 12 - Photoelectric effect		
10	2 hours 30 minutes	Grade 12 - Electric circuits practical		
11	2 hours	Lesson Demonstrations: Briefing and Preparation		
12	3 hours	Lesson Demonstrations and Feedback		
13	30 minutes	Orientation to the Trainers' Guide		
14	30 minutes	Final questions and answers		
15	30 minutes	Training of teachers: planning session		
16	30 minutes	Post-training activity		
17	30 minutes	Closure and evaluation		

* Ensure that the teacher training session adds up to at least 10 hours. This is a requirement to qualify for the 15 CPTD points through SACE

What you will need for this training:

ITEM	QUANTITY	CHECK
Flipchart stand and paper	2	
Kokis	10	
Blank A4 paper	100	
30 cm plastic rulers	1 per participant	
Highlighters	2 per participant	
Laptop, data-projector, screen and speakers	1	
USB with all materials	1	
Attendance register	1	
Prestik	5	
Evaluation Forms	1 per participant	
Learning Programmes resource pack	1 per participant	
Electric Circuit Boards	1 per group	
Chemicals and Apparatus for Reactions in Aqueous Solutions Practical	1 per group	
Chemicals and Apparatus for Electrochemistry Practical	Demonstration	
Apparatus for Electrodynamics Demonstrations	Demonstration	
Casio or Sharp Scientific Calculators	1 per participant	
Posters	5 per participant	
Training Handout	1 per participant	
Content Books, Resource Packs and Trackers Grades 10-12	1 per participant	
Pre-test	1 per participant	
Post-test	1 per participant	

Training Activities

1	30 minutes	WELCOME, HOUSEKEEPING AND AGENDA	Facilitator:	What you will need: • Ensure that there is a sign outside your training room • Prepared chart of agenda / programme

1. Settle the group in plenary.
2. Welcome participants, and complete the introductions.
3. Start the day with a short message, song or prayer if appropriate.
4. If there are any new members to the group, or if you are new to the group, briefly do a round of introductions. Ask participants to say:
   - their name
   - their position
   - their province
   - the phase/s they support
   - If there is time, ask them to also add what they like about their work
5. Share the relevant housekeeping notes, to ensure that participants are clear about the toilet and catering arrangements and agenda.
6. Introduce MQA colleagues and allow them to provide details of MQA function and activities for the training.
7. Present any relevant updates, or share interesting and successful data or stories.

NOTES:

2	30 minutes	PRE-TRAINING ACTIVITY	Facilitator: MQA	What you will need: • Copies of pre-test

1. Work together to hand out copies of the pre-training activity to participants.
2. Ask participants not to look at the activity yet.
3. Briefly explain the purpose of the pre-training activity, which is to measure the success of the training, not to measure the scores of individuals.
4. Briefly explain the test conditions, i.e. to work independently and in silence, for a period of 30 minutes. Ask participants who finish before time to please cover their work and wait quietly for others.
5. Ask participants to work through the pre-training activity, walk around and offer practical assistance if needed.
6. Once time is up, collect and collate pre-training activities in an orderly fashion.

NOTES:

3	1 hour 30 minutes	REFLECTIONS ON TERMS 1 AND 2	Facilitator:	What you will need: • Flipchart paper • Marker pen • Blank A4 papers

INTRODUCTION

1. Settle participants so that you have their attention.
2. Next, tell participants that you would like to take some time to get them to reflect on their own experience of the implementation of the training and programme.

ACTIVITY

3. Make sure each participant has a piece of A4 paper.
4. Ask participants to fold the paper into 4.
5. Next, ask them to do the following:
   a. In the first square, they must write their: name, position, school or district.
   b. In the second square, they must write: What has worked well in schools in Terms 1 and 2. Tell them to write a bit of detail about each of these.
   c. In the third square, they must write: What was problematic in Terms 1 and 2. Tell them to write a bit of detail about each of these.
   d. In the fourth square, they must write: at least one solution for each problem listed.
6. Draw this diagram on flipchart paper to help participants remember what to do:

Name Position School or District	What worked well in Terms 1 and 2
What was problematic in Term 1 & 2	A solution to address the problems given

7. After this exercise, facilitate a group discussion on what is really working with the programme in schools, what is not working and how concerns can be addressed.
8. List all contributions onto flipchart paper:

What is working

9. Split the problematic issues into four different areas, and list them as participants make contributions:

What is problematic			
NECT- related	DBE/Policy-related	District-related	School-related

10. For each problem/ issue raised, discuss a potential solution or follow up action.
11. Facilitate a conversation with participants and encourage them to share solutions.
12. Document these to include in your report.

CONCLUSION

13. Thank participants for their contributions and assure them that you will include them in your training report, so that they may be addressed.

4	30 minutes	SETTING GROUND RULES	Facilitator:	What you will need: • Flipchart and paper • Kokis • Blank Paper • Video clip

INTRODUCTION

1. Settle participants so that you have their attention.
2. Next, tell participants that you would like to take some time to get them to reflect on the importance of ground rules and what the participants expect to gain from the training and what contributions they are willing to make.

ACTIVITY

1. Make sure each participant has a piece of A4 paper.
2. Get participants to discuss why ground rules are important and which rules we should have.
3. Write the rules for the group on a flipchart and display. Include use of cell phones and punctuality and why these are important.
4. Show a motivational video.
5. Get participants to write on a piece of paper what their expectations are of the workshop and what role they are willing to play and commit to. (WIIFM-What's In It For Me).

CONCLUSION

6. Thank participants for their contributions and assure them that they will be gaining much from the workshop.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. To set the ground rules.
2. To remind participants why they are here.
3. To motivate participants and get them to take responsibility for their part in the workshop.

NOTES:

5	1 hour 30 minutes	Grade 10 – Instantaneous speed and velocity and the equations of motion	Facilitator:	What you will need: • Flipchart and paper • Kokis • Calculators • Training Handout • Rulers

Outcomes for Teachers

Teachers will:

- Correct any prior misconceptions in instantaneous speed and velocity and the equations of motion
- Gain confidence in teaching this section by working through challenging examples

1. Work through the theory together and address any misconceptions. Refer to Section 1 in the Training Handout.
2. Work through Question 1 in Section 1 the Training Handout for this session on speed, velocity and equations of motion with the participants.
3. Discuss each part of the question as you work through it. They get progressively more difficult and there are points that need to be discussed on each question.
4. Allow delegates to attempt Questions 2 – 4 in groups. Go over these and discuss them with participants.
5. Work through ticker tapes and Question 5 with delegates.
6. Allow delegates to attempt Question 6 in groups. Go over these and discuss them with participants.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. To remove any misconceptions around Grade 10 – Instantaneous speed and velocity and the equations of motion.
2. To learn new teaching methods.
3. To increase skill level by working through problems.
4. To learn from each other and the facilitator.

NOTES:

6	2 hours	Grade 11 – Electromagnetism & Grade 12 Electrodynamics	Facilitator:	What you will need: • Apparatus for Demonstration • Flipchart and paper • Kokis • Training Handout • Hilighters

Outcomes for Teachers

Teachers will:

- Link Grade 11 – Electromagnetism to Grade 12 Electrodynamics
- Gain a deeper understanding of how motors and generators work
- Become confident in the application of all relevant Hand Rules

1. Work through the following theory in Section 2 in the Training Handout for this session:
   - Right Hand Grip Rule
   - Right Hand Solenoid Rule
   - Faraday's Law
   - Right Hand Dynamo Rule
   - The A.C. Generator
   - The D.C. Generator
   - Fleming's Left-Hand Motor Rule
   - The D.C. Motor
2. Discuss each device as you work through them. Emphasising the use of slip rings and split rings.
3. Ensure participants understand magnetic flux-time graphs and are able to compare them to emf-time graphs.
4. Refer to Section 2 in the Training Handout. Allow delegates time to work through Questions 1 - 7 in groups. Move around the room to assist where necessary.
5. Circulate memos (1 per group) at the end and regroup to discuss difficult points, where necessary.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. To remove any misconceptions around Grade 11 – Electromagnetism & Grade 12 Electrodynamics.
2. Making use of apparatus to clear up misconceptions and assist in complete understanding of difficult concepts.
3. To learn new teaching methods.
4. To increase skill level by working through problems.
5. To learn from each other and the facilitator.

7	1 hour	Grade 10 - Reactions in aqueous solutions	Facilitator:	What you will need: • Flipchart • Kokis • Training Handout • Chemicals and apparatus for experiments

Outcomes for Teachers

Teachers will:

- Develop a concrete basis for teaching Chemistry in the higher grades
- Think creatively and practically to design and carry out experiments

1. Refer to Section 3 in the Training Handout and explain to participants the importance of the basic chemistry learnt in Grade 10 for future grades. Chemistry is hierarchical and as such the basic concepts build a vital foundation for all future Chemistry taught.
2. Tell the participants they are going to design and carry out an experiment to test for the following anions in solution:

   SO_4^{2-}

   CO_3^{2-}

   Cl^-

   Br^-

   I^-
3. They can make use of Appendix 1 in the Appendices Section of the Training Handout to assist them.
4. Divide the participants into groups and show them where the chemicals are. They must design the practical and then carry it out in their groups.
5. Spend a few minutes discussing laboratory safety.
6. Circulate and provide assistance where necessary during the practical.
7. Once the practical is complete and the room tidied, participants must work on their own and complete the multiple-choice questions in Section 3 of the Training Handout.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. Conceptual understanding is gained through 'doing' (practical work).
2. Learning is accelerated through 'doing'.
3. To design a practical and be able to use all the necessary concepts in this topic to do so.
4. Perform practical activities safely and efficiently.

8	2 hours 30 minutes	Grade 11- Types of Reactions and Grade 12 -Electrochemical reactions	Facilitator:	What you will need: • Apparatus for Demonstration • Flipchart and paper • Kokis • Training Handout

Outcomes for Teachers

Teachers will:

- Learn through observation the microscopic changes that can be seen on a macroscopic level
- Gain confidence in performing and making use of simple demonstrations
- Gain a deeper understanding of all aspects of Grade 11- Types of Reactions and Grade 12 - Electrochemical reactions and see the link between the sections

1. Refer participants to Section 4 in the training Handout and get them to make their own notes from observing the practical demonstration of the direct electron transfer from zinc to copper sulfate.
2. By making use of Table 4B in Section 4 of the Training Handout, explain the concept of redox reactions and show how this table provides the necessary oxidation and reduction half reactions.
3. Set up the zinc-copper electrochemical cell and use this demonstration as well as table 4B to write half reactions and calculate the emf of the cell.
4. Explain the standard hydrogen electrode and use it to write cell notations.
5. Explain how rate of reaction and equilibrium principles affect the current and emf of the electrochemical cells.
6. Participants must now work in groups and complete the questions in Section 4 of the Training Handout.
7. Move around the room to assist where necessary.
8. Circulate memos (1 per group) at the end and regroup to discuss difficult points, where necessary.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. Through demonstration of practicals gain a visual understanding of microscopic chemical reactions on a macroscopic level.
2. Understand the theory and practical aspects of redox reactions and electrochemical cells.
3. Improve understanding by working through questions and theory.

9	1 hour 30 minutes	Grade 12 - Photoelectric effect	Facilitator:	What you will need: • Flipchart • Kokis • Training Handout

Outcomes for Teachers

Teachers will:

- Develop a sense of confidence in teaching all aspects of the Photoelectric Effect
- Cement their understanding by working through challenging questions with the facilitator

1. Work through theory in Section 5 of the Training Handout.
2. Use diagrams to assist in explanations.
3. Explain fully electromagnetic radiation, the photoelectric effect, threshold frequency, work function and atomic emission and absorption spectra.
4. Work through each question together in Section 5 of the Training Handout and provide answers.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. To gain a full understanding of electromagnetic radiation and how wavelength and frequency affect the photoelectric effect.
2. Be able to explain the wave-particle duality of light.
3. Be able to apply this knowledge to theory questions and calculations.
4. Grasp the difference between emission and absorption spectra.

NOTES:

10	2 hours 30 minutes	Grade 12 - Electric circuits practical	Facilitator:	What you will need: • Flipchart and paper • Kokis • Training Handout • Circuit boards • DVD

Outcomes for Teachers

Teachers will:

- Learn about electricity – resistors in series and parallel and internal resistance
- Gain practical knowledge to help them teach content and concepts to learners
- Develop their confidence in performing practical activities

PART 1: 10 minutes

1. Start by discussing and acknowledging the challenges teachers face with regards to the execution of Physical Sciences practicals in the classroom.
2. Ask participants what their experience is with regards to practicals:
   - Do teachers perform the prescribed experiments?
   - If not, what is/are the reason/s? Lack of equipment, experience?
   - Firstly, is there anything that the Subject Advisor might be able to do to enable teachers to perform these experiments first hand? This may involve:
     - putting teachers in touch with resource suppliers.
     - giving teachers the necessary training.
     - creating a pool of shared resources between a cluster of schools.

PART 2: 60 minutes

3. Now highlight that in an effort to assist with practicals, we have put together a Practical Pack for teachers. This practical pack will include:
   - DVDs of all practicals required for formal assessment. These DVDs contain an introduction to the experiment and then shows the experiment being performed.
   - Because learners need to become familiar with the recording and interpretation of results, a guideline practical handout will be provided that can be photocopied for all learners. However, at the point in the

DVD where the reading must be taken, it will be up to the learners to take the readings and record them themselves.

- A marking guideline will be provided for the teacher to mark the practicals.

4. Now use the **Grade 12 Practical on Electric Circuits** to showcase the practical DVD.
5. Refer to this practical in Section 6 in the Training Handout.
6. Play the DVD on this experiment and allow participants to work through the experiment, recording results etc. Work through the whole experiment from start to finish and allow participants to break into small groups to finalise their results and conclusions.

PART 3: 80 minutes

7. Now divide participants into groups and have them perform the experiment themselves.
   - Hand out a copy of the marking guidelines to each participant and allow time for groups to mark their work and discuss the answers.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

1. Appreciate the value of performing practicals.
2. The value of the Practical DVDs.
3. A chance for feedback on problems related to performing practicals.

NOTES:

11	2 hours	Lesson Demonstrations: Briefing and Preparation	Facilitator:	What you will need: • Content Booklets • Resource Packs • Tracker • Flipchart Paper • Markers • Improvised resources

BRIEFING AND INSTRUCTIONS

1. Tell participants that we are now going to really engage with:
   a. The structure of lesson plans
   b. The content in the lesson plans
2. Explain to participants that in the next session they will be presenting demonstration lessons in groups. They have one hour to prepare.
3. Every participant must have his/her lesson plan and resource pack to help them prepare.
   a. Participants should work alone or in pairs (depending on the size of the group).
   b. If you put participants into pairs, create pairs that support the phase/ grade that the participant's support.
   c. Each person/pair must select a lesson in any grade. The lesson should incorporate practical elements. Encourage participants to use the resource pack in different and creative ways.
4. Give each participant/ pair some flipchart papers and markers for their preparation.
5. Tell the participants that they will now prepare a lesson to present to the rest of the group.
6. Explain that they will have the rest of this session for preparation. They need to work efficiently.
7. Next, explain that groups will have 20 minutes for the actual presentation, which will be followed by a 5 to 10-minute plenary discussion.
8. Explain that when they present a lesson, they must act as the teacher and address the rest of the group as if they are the class. They must actually teach the lesson to the other participants.
9. Ask all other participants to please play the role of the 'class'.

PRESENTATION REQUIREMENTS

10. Tell participants, that because of the time limitations, presentations must be well prepared, concise and to the point. There is no time for greetings or chat – presenters must get straight into the lesson.
11. The presentation will be stopped after the allocated time – use an alarm on your phone to keep time.
12. The presentations must include: (write this onto a flipchart):

a. **An introduction**– one person in the group must write this on a flipchart and must present this at the start of the lesson. (2 mins)
b. **Teaching Vocabulary** – one person must be prepared to teach ONE relevant vocabulary word. (4 mins)
c. **Main Body of the lesson-** At least one common misconception must be identified, and the teacher must ensure that the correct concept/s are taught. (12 mins)
d. **Conclusion-**The lesson must be wrapped up and main point/s reinforced (2 mins)

13. Explain that in their presentations, participants need to note:
    a. When teaching the main concept, they should not provide learners with the answers. Learners should be encouraged to think about the answers. They should be challenged.
    b. It is fine for learners to get things wrong – it is important that they are not criticized for trying and that they are shown how to solve problems and come to an understanding.
    c. They should try to include practical work as it was done the practical demonstrations earlier. They can improvise with available resources at the venue.
14. Tell participants that the other participants will comment on their presentations using the tool in Section 7 in the Training Handout: *Lesson Demonstrations and Feedback.*

LESSON PREPARATION

15. While participants prepare their lessons, move around the venue and assist/ provide guidance wherever applicable or necessary.
16. Ensure that:
    - participants are preparing sufficiently
    - all participants are involved
    - the board work is being neatly prepared
    - the presentations look solid and meaningful
    - that practical work is included where possible
17. Where possible, remind participants that they need to present model lessons that demonstrates their concept and content understanding.
18. Remind participants of how much time they have left to prepare.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

(3 minutes)

1. It is important to be thoroughly prepared before you teach a lesson.
2. Always write your chalkboard notes up on the chalkboard in advance.
   (Or, suggest to teachers that they may want to write these as charts, especially if they teach more than one class.)
3. Make sure that you understand the content and skills thoroughly before you teach the lesson.
4. Teach new vocabulary in a meaningful way, and use the vocabulary in context.
5. It is fine for learners not to get the answers right first time around. It is the teacher's job to stretch them and help them come to an understanding that makes sense to them.
6. It is important to be mindful of time, and to try and complete activities within the prescribed time.

NOTES:

12	3 hours	Lesson Demonstrations and Feedback	Facilitator:	What you will need: • Content Booklets • Resource Packs • Trackers • Flipchart Paper • Markers • Improvised resources • Training Handout

INTRODUCTION

1. Welcome participants back.
2. Tell participants that you are really looking forward to their presentations:
3. Remind participants of these criteria explained in the briefing yesterday:

Because of the time limitations, presentations must be well prepared, concise and to the point. There is no time for greetings or chat – presenters must get straight into the lesson.

The presentation will be stopped after the allocated time – use an alarm on your phone to keep time.

The presentations must include:

a. **An introduction**– one person in the group must write this on a flipchart and must present this at the start of the lesson. (2 mins)
b. **Teaching Vocabulary** – one person must be prepared to teach ONE relevant vocabulary word. (4 mins)
c. **Main Body of the lesson-** At least one common misconception must be identified, and the teacher must ensure that the correct concept/s are taught. (12 mins)
d. **Conclusion-**The lesson must be wrapped up and main point/s reinforced (2 mins)

OBSERVATIONS

4. Tell participants to use the reflction tool in Section 7 of the Training Handout.
5. Explain that they should use the lesson reflection tool to help them evaluate and give feedback on the lesson demonstrations that they watch.
6. Explain that this tool has actually been designed for teachers to reflect on their own teaching. For this reason, they will not use the first section on preparation (*). They should however, complete all of the other sections.
7. Read through the main headings in the tool with the participants so that they know what to look out for when they observe the lessons.

8. Remind participants that their presentations should take 20 minutes.
9. Stop the presentations after the allocated time. You must be strict with the time, otherwise not everybody will have a chance to present.
10. If a group does not manage to do very much within the time, speak to them about time management. Explain that they will not have much more time than this in class to do these presentations. Discuss how the group could speed up.
11. Ask the group to state the grade, topic and sub-topic for the lesson that they will present.

FEEDBACK

12. After each lesson demonstration encourage conversation for critical and constructive feedback.
13. In addition to the evaluation tool, you should ask questions like:
    a. Were the presenters well prepared?
    b. Was the lesson easy to follow? Why/ why not?
    c. Would this be appropriate to Grade ___ learners?
    d. Were the content and skills easily scaffolded? (Was there a structured transition between accessing information and conceptual development?)
    e. Did the presenter ask encouraging and critical questions?
    f. Was the time managed effectively?
    g. What was good about the lesson?
    h. How could the lesson be improved?

    Note: These questions are a guide. You cannot ask each group all questions – use the questions that are relevant. Remember to ALWAYS start the discussion / feedback session with a POSITIVE STATEMENT. You want teachers to leave these demonstrations feeling good about themselves, and confident that they can implement the programme.
14. Hold a discussion on each presentation. Encourage all participants to take part in the feedback session.

SUMMARISE THE MAIN POINTS OF THIS ACTIVITY FOR PARTICIPANTS AS FOLLOWS:

(2 minutes)

1. Teachers need to take time to prepare thoroughly for each lesson that they teach.
2. Good lessons are those that have been well prepared.
3. Lessons that are well prepared are of greater value and benefit to the learners.
4. It is important to do self-reflection on your teaching practice.
5. Constructive peer review is a powerful professional development activity.

13	30 minutes	Orientation to the Trainer's Guide and Resources	Facilitator:	What you will need: • Training Guide • Handout • Content Books • Resource Packs • Trackers

Note: If you have any extra time, spend it on this activity, particularly points 4 and 6.

INTRODUCTION

1. Settle participants with all their materials.
2. Give each participant a copy of the **Trainers Guide** and **Training Handout**.
3. Explain to participants that the **Trainers Guide** and **Training Handout** contains all the activities for the Term 3&4 training.

PLANNING

4. Planning the training session:
    a. Tell participants to look carefully at the programme at the front of the trainer's guide.
    b. Go through this programme and tell participants which activities to complete when training other trainers.
    c. Go through this programme and discuss which activities to complete when training teachers. (This will depend on the numbers of hours for this training)

ORIENTATION

5. Orientation to the guide and handout:
    a. Go through each activity in the trainer's guide, and look at the corresponding resources or section in the training handout.
    b. Work with participants to summarise the key steps and points of each activity.
    c. After you have done this for each activity, revise the order of activities, and the main points for each activity. For example:
        - Start with the **Guidelines for facilitators and participants.**
        - You have 30 minutes for this.
        - You must: tell participants to think about when real learning takes place; get them to discuss this with a partner; write a list of key points; discuss what is the same and different between a classroom and an adult training event; create a list of guidelines for facilitators and participants; ask participants to follow guidelines, and commit to following facilitator guidelines.

6. The point of doing this is try and ensure that trainers clearly understand each activity, and internalise as much of the workshop as possible.

DRY RUNS

7. If time allows, allocate different activities to volunteers, and ask them to present a 'dry-run' presentation of the activity. After each presentation, ask the other participants to give feedback based on the following:
    a. Was the activity presented correctly?
    b. Did the main points of the activity come across clearly?
    c. Did the presenter give clear instructions?
    d. Was the presenter audible?
    e. Did the presenter interact effectively with participants?
    f. Did the presenter manage time effectively?

CONCLUSION

8. Finally, thank participants for their presentations, and hold a closing discussion:
    a. Ask: Which activities are you worried about presenting or facilitating? Why?
    b. Try to address any concerns that participants may have.
    c. Wish participants well for their training.

NOTES:

14	30 minutes	FINAL QUESTIONS AND ANSWERS	Facilitator:	What you will need: • Motivational video clip

1. Settle participants so that you have their attention.
2. Remind participants that we want them to IMPLEMENT THIS TRAINING IN A MEANINGFUL WAY.
3. Ask participants to think through all the materials, content, skills and information they have engaged with in this workshop. Give them time to look through materials as they do this.
4. Next, ask participants if they have any final questions.
5. Answer each question as clearly as possible. Where appropriate, involve participants in answering.

15	30 minutes	TRAINING OF TEACHERS: PLANNING SESSION	Facilitator:	What you will need: • Trainer's Guide • Training Handout

1. Explain that this is an opportunity for Coaches and Subject Advisors to work together to talk about the logistics of the teacher training sessions in their district.
2. Allow participants to sit together in groups and discuss relevant issues.
3. If all the logistics are sorted, then participants should talk about co-facilitation, and who will present which activities.
4. They should also speak about resources in their district, like data-projectors and speakers.
5. Ensure that Subject Advisors know that the training needs to last for a minimum of 10 hours for teachers to qualify for the 15 SACE CPTD points.

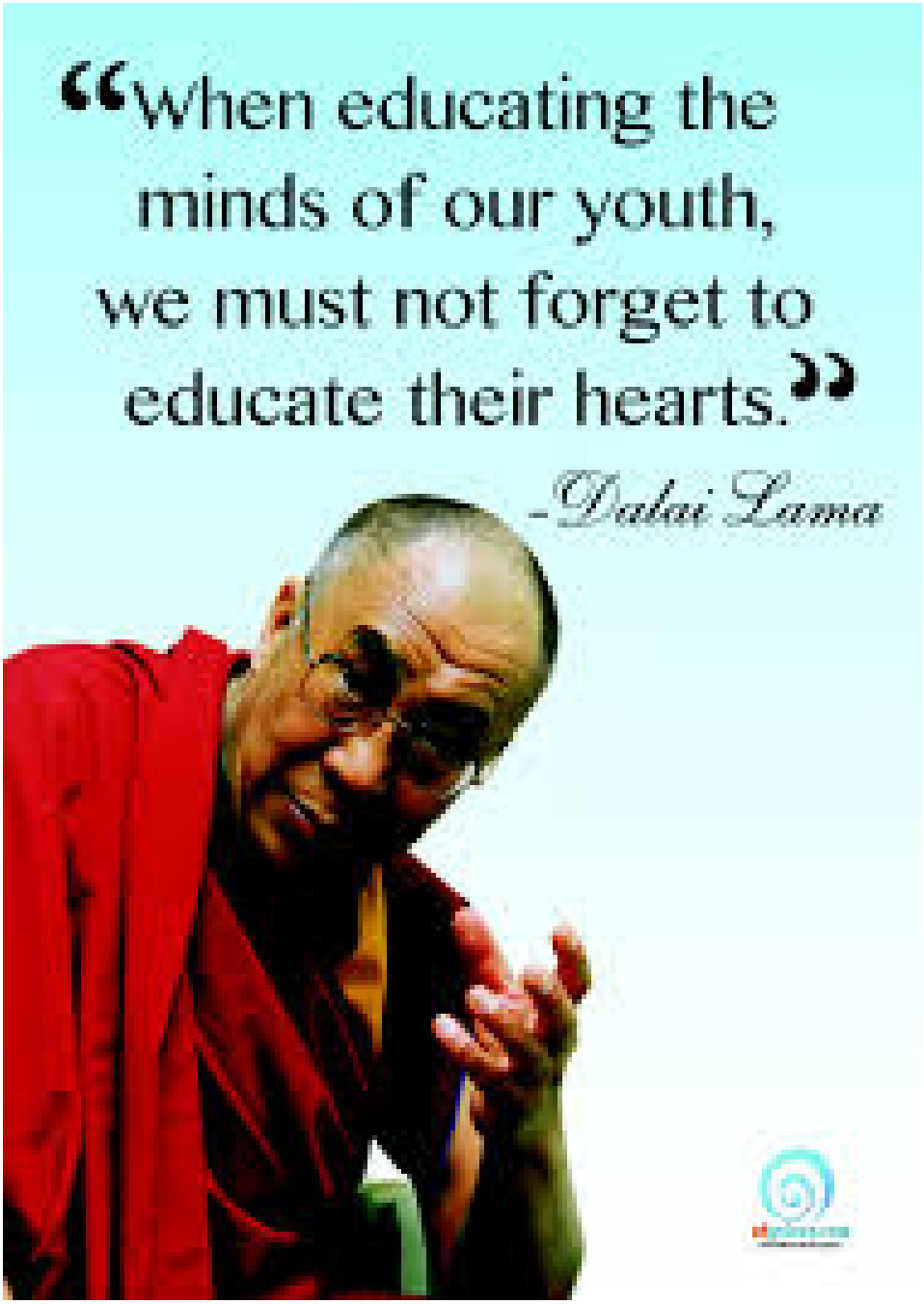
16	30 minutes	POST-TRAINIG ACTIVITY	Facilitator:	What you will need: • Copies of post-test

1. Work together to hand out copies of the post-training activity to participants.
2. Remind participants that the purpose of this activity is to measure the success of the training, not to measure the scores of individuals.
3. Remind participants of the activity conditions and available time.
4. As participants complete the activity, walk around and offer practical assistance if needed.
5. Once time is up, help to collect and collate the papers in an orderly fashion.

17	30 minutes	CLOSURE AND EVALUATION	Facilitator:	What you will need: Evaluation forms

1. Settle participants so that you have their attention.
2. Give participants an evaluation form, briefly take them through the form, and then ask them to please complete it thoughtfully and carefully.
3. Collect the completed evaluation forms.
4. Call participants to attention, and ask them to share some of the positives that they take away from this training. This can be absolutely anything: new content that they have learnt or clarified; a new skill; a better understanding of the curriculum; new enthusiasm for their job; a closer working relationship with a colleague; etc.
5. Document what participants say for your report.
6. Thank the participants for their ongoing commitment to education, and to the development of South Africa.
9. Wish participants well for their own training.

NOTES:



Thank you for your ongoing dedication and commitment to this cause.