

Master Action Plan Template

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Unit Title: Develop Scientific Literacy among secondary science teachers

Grade Level: Secondary grade teachers

Unit Length: Two day workshop (8 hrs)

Unit Materials & Resources:

Desired Results	
Goals or Power Standards	
<p>Standard Foster scientific literacy among secondary school science teachers to incorporate scientific inquiry, STSE, language and PCK to implement student centered teaching.</p> <p>Goal To develop science teachers' understanding about</p> <ol style="list-style-type: none"> 1. scientific literacy 2. Student centered learning 3. Pedagogical content knowledge <p>Objectives</p> <ul style="list-style-type: none"> • To develop training session focusing science literacy • Enhance content and pedagogical content knowledge of the science teachers • To facilitate science teachers to develop lesson plans based on scientific literacy • To provide opportunity to the teachers to micro teach 	
Enduring Understandings	Essential Questions
<p><i>Teachers will understand</i></p> <ul style="list-style-type: none"> • How to teach biological concepts by incorporating the components of scientific literacy • How to design their lesson plan based on pedagogical content knowledge 	<ul style="list-style-type: none"> • How can I facilitate science teachers to incorporate scientific literacy in their classroom? <p>Subsidiary question</p> <ul style="list-style-type: none"> • How can I enhance pedagogical content knowledge of the science teachers? • How to assess teachers enhanced content knowledge and pedagogical knowledge to teach photosynthesis?
Knowledge	Skills
<p>Teachers will be able to</p> <ul style="list-style-type: none"> • Describe the major components of scientific literacy • Explain the phenomenon of 	<p>Teachers will be able to</p> <ul style="list-style-type: none"> • Develop lesson plans to teach photosynthesis • Implement their lesson plan in the classroom. Reflect and re-plan the lesson in the light of

<p>photosynthesis in plants</p> <ul style="list-style-type: none"> Identify the factors responsible for photosynthesis 	<p>reflection.</p> <ul style="list-style-type: none"> Design an experiment to prove that carbon dioxide, chlorophyll, sunlight and water are essential for photosynthesis. Develop data collection, analysis and interpretation skills.
Disposition	
<p>Teachers will develop the attitude to</p> <ul style="list-style-type: none"> Appreciate that plants play an important role in ecosystem Develop carrying attitude towards plants. 	<ul style="list-style-type: none"> Show interest and curiosity about teaching of photosynthesis Work collaboratively while investigating factors responsible for photosynthesis.
Assessment Evidence	
Performance Tasks	Other Evidence
<p>Teachers will be assessed through</p> <ul style="list-style-type: none"> The classroom teaching plan to teach photosynthesis Each group of four teacher will micro teach Classroom observation of at least five teachers (optional) Content knowledge will be assessed through post test. 	<ul style="list-style-type: none"> Teachers will develop attitude to plan lesson in the light of students alternative framework
Learning Plan/ Timeline (Include Benchmark Dates for PELI)	
Learning Activities (September 2009– March 2010)	
<ul style="list-style-type: none"> Identify major misconception related to photosynthesis by students and teachers Develop training plan (scientific literacy) Develop pre-post tests Conduct training sessions (based on scientific literacy frame work). Teachers will develop their lesson plan and do micro teaching. Analysis of pre-post tests to assess content enhancement Classroom teaching observation (optional) Report writing 	<p>Sep 2009</p> <p>Oct-Nov, 2009</p> <p>Dec 2009</p> <p>Jan 2010</p> <p>Feb 2010</p> <p>March 2010</p>