

## APPENDIX A

### OBSERVATION FORM

Observer:	Date:
Teacher observed:	Unit observed:
School:	Topic observed:
PEDAGOGICAL CONTENT KNOWLEDGE DIMENSIONS	
Knowledge of Learners	Does the teacher elicit students' prior knowledge? Explain how?
	Does teacher remember/mention pre-requisite knowledge for learning the new topic? Explain how?
	Does teacher realize that students' have misconceptions and/ or difficulties related the topic taught? Explain how?
Knowledge of Instructional Strategy	Does teacher use any subject-specific strategy? (ex. 5E, conceptual change, inquiry). Explain how?
	Does teacher use any topic-specific strategy? (Analogy, models, simulations, daily-life example, demonstration, discussion, questioning). Explain how?
Knowledge of curriculum	Does teacher know goals, objectives, and purposes stated in the curriculum? Explain how?
	Does teacher relate the topic to the other topics in the same grade? Explain how?
	Does teacher relate the topic to the other topics in the previous and next grade? Explain how?
	Does teacher relate the topic to the other topics in physics and biology? Explain how?
Knowledge of Assessment	What does teacher assess? (ex: Knowledge, application of knowledge taught, nature of science understanding, science process skills, etc.) Explain how?
	How does teacher assess students' understanding? (ex. Quiz, informal questioning, etc.) Explain how?

## APPENDIX B

### Content Representation (CoRe)

Name:		LESSON PLANNING FORM		
Chemistry Topic/Content Area:		Grade Level:	Curriculum Objectives to be Addressed:	
1. What concepts/big ideas do you intend students to learn?		Concept#1	Concept#2	Concept#3
2. What do you expect students to understand about this concept and be able to do as a result?				
3. Why is it important for students to learn this concept? (Rationale)				
4. As a teacher, what should you know about this topic?				
5. What difficulties do students typically have about each concept?				
6. What misconceptions do students typically have about each concept?				
7. Which teaching strategy and what specific activities might be useful for helping students develop an understanding of the concept?				
8. In what ways would you assess students' understanding or confusion about this concept?	Formative Assessment			
	Summative Assessment			
9. What materials/ equipment are needed to teach the lesson?				