

## LIST OF FIGURES

Figure 2.1. Concentration against reaction rate curve .....	22
Figure 2.2. The relationship between collision theory and concentration .....	25
Figure 2.3. Relationship between collision theory and surface area .....	25
Figure 2.4. Relationship between collision theory and temperature.....	25
Figure 2.5. Diagram of the energy level of reactions with catalysts .....	26
Figure 2.6. Zero order .....	27
Figure 2.7. First order .....	27
Figure 2.8. Second order .....	28
Figure 2.9. Thinking framework.....	30
Figure 3.1. Student worksheet research procedures .....	35
Figure 4.1. Basic competencies, indicators and learning objectives .....	45
Figure 4.2. Graph of validator assessment results .....	49
Figure 4.3. Addition of competency achievement indicators .....	50
Figure 4.4. Addition space for problem formulation activities.....	51
Figure 4.5. Addition of contextual data analysis activities.....	51
Figure 4.6. Chemical reactions in paragraph (a) before (b) after revision.....	52
Figure 4.7. The sentence before revision.....	52
Figure 4.8. The sentence after revision.....	53
Figure 4.9. The material (a) before revision and (b) after revision .....	53
Figure 4.10. Percentage chart of chemistry teacher response results .....	55
Figure 4.11. Percentage chart of student response results .....	56