

## LIST OF CONTENT

	Pages
Motto Sheet .....	i
Legalization Sheet .....	ii
Originality Statement Sheet .....	iii
Publication Approval Sheet .....	iv
Biography .....	v
Abstract .....	vi
Preface.....	vii
List of Content .....	ix
List of Picture .....	xii
List of Table.....	xiii
List of Appendix .....	xiv
<b>CHAPTER I. INTRODUCTION .....</b>	<b>1</b>
1.1. Background .....	1
1.2. Problem Identification .....	3
1.3. Problem Scope .....	4
1.4. Problem Formulation .....	4
1.5. Research Objective .....	4
1.6. Research Benefit .....	5
1.7. Operational Defenition .....	5
<b>CHAPTER II. THEORITICAL REVIEW .....</b>	<b>7</b>
2.1. Learning Resource .....	7
2.1.1. Defenition of Learning Resource .....	7
2.1.2. Classification of Learning Resource .....	8
2.1.3. The Advantages of Learning Resource .....	9
2.2. Booklet .....	9
2.3. Model of Research and Development .....	11
2.4. Biodiversity .....	15

2.4.1.The Defenition of Biodiversity .....	15
2.4.2.Level of Biodiversity .....	16
2.5.Environmental Based Biology Learning .....	19
<b>CHAPTER III.RESEARCH METHODS .....</b>	<b>21</b>
3.1.Research Time and Location .....	21
3.2.Research Subject and Object .....	21
3.3.Research Type and Design .....	21
3.3.1.Research Type .....	21
3.3.2.Research Design .....	21
3.4.Procedure of Development .....	22
3.5.Research Instrument .....	24
3.6.Data Analysis Technique .....	28
3.6.1.Data Analysis Expert Team .....	28
3.6.2.Data Analysis of Students Responses Sheet .....	30
3.6.3.Analysis effectiveness of Learning .....	32
<b>CHAPTER IV. RESULTS AND DISCUSSION .....</b>	<b>34</b>
4.1.Result of Research .....	34
4.1.1.Define Stage .....	34
4.1.2.Design Stage .....	38
4.1.3.Develop Stage .....	40
4.1.3.1.Asesment by Material Expert .....	40
4.1.3.2.Revision based on Expert Review .....	41
4.1.3.3.Asesment by Media Expert .....	43
4.1.3.4.Revision based on Media Expert Review .....	44
4.1.3.5.Biology Teacher Response .....	46
4.1.3.6.Individual Groups Trial .....	47
4.1.3.7.Small Groups Trial .....	48
4.1.3.8.Limited Group Trial .....	48
4.1.3.9.Final Product .....	49
4.1.4.Disseminate Stage .....	50
4.1.4.1.Limited Field Effectiveness .....	50
4.1.4.2.Results of Analysis of Using Worksheets .....	51

4.2.Discussion .....	51
4.3.Limited of Research .....	53
CHAPTER V.CONCLUSION AND SUGGESTION .....	54
5.1.Conclusion .....	54
5.2.Suggestion .....	54
REFERENCES .....	55
APPENDIX .....	58



THE  
*Character Building*  
UNIVERSITY

## LIST OF PICTURE

	Pages
<b>Figure 2.1</b> Scheme of research and development .....	11
<b>Figure 2.2</b> Scheme of Development 4-D .....	13
<b>Figure 2.3</b> Biodiversity of orchid .....	16
<b>Figure 2.4</b> Species diversity of butterfly .....	18
<b>Figure 2.5</b> Ecosystem diversity .....	19
<b>Figure 4.1</b> Display of cover Booklet .....	38
<b>Figure 4.2</b> Example of content the Booklet .....	39

UNIVERSITAS NEGERI  
MEDAN  
UNIMED

THE  
*Character Building*  
UNIVERSITY

## LIST OF TABLE

	Page
<b>Table 3.1.</b> Booklet assesment instrument grid for material expert.....	25
<b>Table 3.2.</b> Booklet assesment instrument grid for media expert .....	26
<b>Table 3.3.</b> Booklet assesment instument grid for teachers .....	27
<b>Table 3.4.</b> Booklet assesment instrument grid for students.....	28
<b>Table 3.5.</b> Percentage of feasibility of Booklet by material expert .....	29
<b>Table 3.6.</b> Percentage of feasibility of Booklet by media expert .....	29
<b>Table 3.7.</b> Percentage of feasibility of Booklet by teacher biology .....	30
<b>Table 3.8.</b> Percentage of analysis of student responses data .....	31
<b>Table 3.9.</b> Qualifications of each criteria .....	31
<b>Table 3.10.</b> Learning outcomes improvement category .....	33
<b>Table 4.1.</b> Feasibility levels of Booklet by material experts .....	41
<b>Table 4.2.</b> Revision based on material experts review .....	42
<b>Table 4.3.</b> Feasibility levels of Booklet by media experts .....	44
<b>Table 4.4.</b> Revision based on media experts review .....	45
<b>Table 4.5.</b> Results of response biology teacher .....	47
<b>Table 4.6.</b> Results of individual group trial.....	48
<b>Table 4.7.</b> Results of small group trial .....	48
<b>Table 4.8.</b> Results of limited group trial.....	49
<b>Table 4.9.</b> Results of normality test.....	50
<b>Table 4.10.</b> Results of homogeneity test .....	50
<b>Table 4.11.</b> Results N-Gain score.....	51

## LIST OF APPENDIX

	Pages
Appendix 1 (syllabus) .....	58
Appendix 2 (Assesment Instrument for Material Expert) .....	60
Appendix 3 (Assesment Instrument for Media Expert) .....	61
Appendix 4 (Assesment Instrument for Teachers) .....	62
Appendix 5 (Assesment Instrument for Students) .....	63
Appendix 6 (Soal Test) .....	64
Appendix 7 (Result Achievement of Learning outcomes) .....	69
Appendix 8 (Students Response Trial) .....	71
Appendix 9 (Letter of Statement) .....	75

THE  
*Character Building*  
UNIVERSITY