

PREFACE

Thanks to Jesus Christ who has been blessing and giving mercy to the author, so he can complete his research well and on time according to the plan. This research title is “STEM Approach Students’ Worksheet Development with 4-D Model on Sound Waves Topic in Class XI MIA SMAN 1 Perbaungan”. This thesis was compiled to satisfy the requirements for achieving Bachelor of Education Degree at Faculty of Mathematics and Natural Science, State University of Medan.

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The author has endeavored as much as possible in completing this thesis, but author realizes that this thesis is far from perfection, there are many mistakes either in terms of material or grammar, then author expect criticism and constructive

suggestions from readers to improve this thesis. Finally, the author hopes that this thesis will be useful for the advancement of science and provide inspiration for the readers, either just for reading the material or those who want to conduct further research.

Medan, June 2019
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The logo of Universitas Sumatera Utara (UNIMED) is a circular emblem. It features a central sun with rays, a green plant with a red flower, and a green bird. The text "UNIVERSITAS SUMATERA UTARA" is written around the top inner edge, "UNIMED" is at the bottom, and "1955" is on the left and right sides.

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