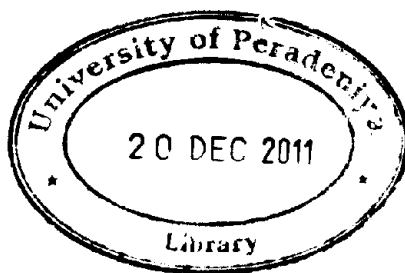


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**SELF STUDY GUIDE FOR ENHANCING PERFORMANCE OF  
STRAIGHTLINE MOTION AND FORCE AMONG WEAKER  
STUDENTS IN GRADE 10 PHYSICS**

**A PROJECT REPORT PRESENTED BY  
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To the Board of Study in Science Education of the  
**POSTGRADUATE INSTITUTE OF SCIENCE**



In partial fulfillment of the requirement  
for the award of the degree of

**MASTER OF SCIENCE IN SCIENCE EDUCATION**  
of the

**UNIVERSITY OF PEREDENIYA  
SRI LANKA  
2011**

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iii

**ABSTRACT**  
**SELF STUDY GUIDE FOR ENHANCING PERFORMANCE OF**  
**STRAIGHTLINE MOTION AND FORCE AMONG WEAKER**  
**STUDENTS IN GRADE 10 PHYSICS**

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The main purpose of the project is to prepare a self study guide in Physics for the Grade 10 Science unit one. A new syllabus for Grade 10 Science has been introduced from 2007. Under the new syllabus several new sections have been introduced. Gaining a conceptual understanding of Physics is difficult for many students. The modern concept in education is to guide the student to seek knowledge rather than teaching them. It is the student centered education approach. Under this system students would need simple and easy to understand learning materials for self learning.

The sections on Straight-line motion and Force have been introduced as a part of the Mechanics section in Physics syllabus. The main objective of this self study guide is to help the students understand the concept of The Straight-line motion and Force, make it easy to learn its application to understand some of the phenomena common in day to day life and improve their problem solving skills and to enable them to understand unit one of the physics syllabus. Depending on the condition under which it is applied for the topic is broken down into a series of short and simple steps. These steps are then arranged in sequential order so that anyone can follow them easily. For example, relevant problems, illustrations explanations and answers are given at the end of the each section in order to facilitate comprehensive learning. Questions which have been included at end of each section are to be answered before proceeding to next section and this will serve as a self evaluation. The correct answers are given at the last page of this book to assist with the self evaluation

To evaluate the effectiveness of the self study guide two schools were selected in Batticaloa district, hundreds students were selected as a sample for the study. These students were selected according to their performance by the pre-test and post- test method and their achievements were evaluated comparing their marks at the post and pretests.

It was found that the student performance improved after using the self study guide. These study guides will improve the quality of student's learning and serve as a useful tool in future needs