



**Davao del Sur State College**  
Brgy. Matti, Digos City, Davao del Sur

# Teaching Science in the Elementary Grades (Physics and Earth & Space Science)

## Version 1





## PREFACE

This coursepack for Teaching Science in the Elementary Grades (Physics, Earth and Space Science) is designed to support pre-service teachers in developing the knowledge, skills, and values necessary for effective science teaching in the elementary classroom. It provides a structured and learner-centered approach that integrates fundamental concepts in Physics and Earth and Space Science with practical teaching strategies and inquiry-based methods. The materials in this coursepack are aligned with the current science curriculum and emphasize the spiral progression of concepts, allowing learners to build understanding gradually and meaningfully. It also highlights the importance of developing instructional materials, applying appropriate assessment tools, and integrating technology to enhance student engagement and learning.

Each module is carefully organized to guide students through essential topics such as Force and Motion, Energy, Geology, Meteorology, and Astronomy, while fostering higher-order thinking skills, scientific inquiry, and effective communication. Activities and lessons are designed to prepare future educators to address diverse learners and real-world classroom situations.

This coursepack aims to serve as a practical and reliable resource that will help pre-service teachers become competent, reflective, and innovative science educators committed to continuous professional growth.



# **BEED 603**

## **TEACHING SCIENCE IN THE ELEMENTARY GRADES (Physics and Earth & Space Science)**

**A COURSEPACK FOR  
BEED STUDENTS**

**CHRIS JAKE P. CODILLA, MAEd**

Davao Del Sur State College  
Matti, Digos City, Davao del Sur



## TABLE OF CONTENTS

|                                                                                                                       | <b>PAGE</b> |
|-----------------------------------------------------------------------------------------------------------------------|-------------|
| TITLE PAGE                                                                                                            | I           |
| PREFACE                                                                                                               | II          |
| TABLE OF CONTENTS                                                                                                     | III         |
| <b>MODULE 1: Introduction to Teaching Science in the Elementary<br/>Grades: Physics and Earth &amp; Space Science</b> |             |
| <b>MODULE OVERVIEW</b>                                                                                                | 1           |
| LESSON 1: DepEd MATATAG Curriculum Science Framework<br>and its Curriculum Key Stages from K-10                       | 2           |
| LESSON 2: Physics and Earth and Space Science as Content in the<br>Elementary Grade Science                           | 8           |
| LESSON 3: Teaching Elementary Grades Physics and Earth and<br>Space Science                                           | 12          |
| LESSON 4: Lesson Planning in Teaching Physics, Earth and<br>Space Science                                             | 20          |
| <b>MODULE ASSESSMENT</b>                                                                                              | 24          |
| <b>MODULE SUMMARY</b>                                                                                                 | 27          |
| <b>REFERENCES</b>                                                                                                     | 27          |
| <br><b>MODULE 2: Force and Motion</b>                                                                                 |             |
| <b>MODULE OVERVIEW</b>                                                                                                | 28          |
| <b>CHAPTER I: Teaching Elementary Physics: Force and Motion</b>                                                       |             |
| LESSON 1: Grade 3: Motion and Objects                                                                                 | 29          |
| LESSON 2: Grade 4: The Effects of Force on Objects                                                                    | 34          |
| LESSON 3: Grade 5: How to Measure Time and Distance using<br>Standard Units                                           | 39          |
| LESSON 4: Grade 6: Gravitation and the Frictional Forces                                                              | 46          |
| <br><b>CHAPTER II: Teaching Elementary Physics: Energy</b>                                                            |             |
| LESSON 1: Grade 3: The Sources and Uses of Light, Sound, Heat<br>and Electricity                                      | 51          |
| LESSON 2: Grade 4: How Sound, Light, and Heat Travel                                                                  | 56          |
| LESSON 3: Grade 5: Conductors of Heat and Electricity                                                                 | 66          |
| LESSON 4: Grade 5: Electricity and Magnetism                                                                          | 73          |
| LESSON 5: Grade 6: Energy Transformation in Simple Machines                                                           | 77          |
| <b>MODULE ASSESSMENT</b>                                                                                              | 82          |
| <b>MODULE SUMMARY</b>                                                                                                 | 86          |
| <b>REFERENCES</b>                                                                                                     | 86          |
| <br><b>MODULE 3: Earth and Space</b>                                                                                  |             |
| <b>MODULE OVERVIEW</b>                                                                                                | 88          |
| <b>CHAPTER I: Earth and Its Processes</b>                                                                             |             |
| LESSON 1: Grade 3: The Earth and Its Surroundings                                                                     | 90          |



|                                                                                                    |     |
|----------------------------------------------------------------------------------------------------|-----|
| LESSON 2: Grade 4: Types of Soil                                                                   | 94  |
| LESSON 3: Grade 5: Weathering and Soil Erosion                                                     | 99  |
| LESSON 4: Grade 5: Sources and Importance of Water                                                 | 104 |
| LESSON 5: Grade 6: Earthquake and Volcanic Eruption                                                | 108 |
| <br><b>CHAPTER II: Climate and Weather</b>                                                         |     |
| LESSON 1: Grade 3: Classification and Types of Weather                                             | 117 |
| LESSON 2: Grade 4: The Components of Weather, Instruments, and Charts                              | 123 |
| LESSON 3: Grade 5: Weather Disturbances: Types and Effects on Living Organisms and the Environment | 127 |
| LESSON 4: Grade 6: Philippines' Weather Patterns                                                   | 132 |
| <br><b>CHAPTER III: The Solar System and The Universe</b>                                          |     |
| LESSON 1: Grade 3: The Natural Objects Found in the Sky                                            | 138 |
| LESSON 2: Grade 4: The Sun: Its Importance, Effects and Safety Precautions                         | 143 |
| LESSON 3: Grade 4: The Solar System                                                                | 148 |
| LESSON 4: Grade 5: The Phases of the Moon and the Patterns of the Stars                            | 155 |
| LESSON 5: Grade 6: Earth's Rotation and Revolution                                                 | 163 |
| <b>MODULE ASSESSMENT</b>                                                                           | 168 |
| <b>MODULE SUMMARY</b>                                                                              | 173 |
| <b>REFERENCES</b>                                                                                  | 173 |