

TABLE OF CONTENTS

| | |
|---|----|
| INTRODUCTION . . . Celebrate Basic Earth & Space Science Skills | 5 |
| Skills Checklist for Earth & Space Science | 6 |
| | |
| SKILLS EXERCISES | 7 |
| The Famous 10 . . . (Solar System) | 8 |
| Solar System Sleuthing . . . (Solar System/Planets) | 10 |
| Hot Spots . . . (Solar System/Sun & Stars) | 11 |
| Close Encounters . . . (Space Objects) | 12 |
| Cool Moves . . . (Solar System Motions) | 13 |
| Reasons for Seasons . . . (Solar System Motions) | 14 |
| Moon Talk . . . (Moon Phases) | 15 |
| Casting Shadows . . . (Solar & Lunar Eclipses) | 16 |
| What's out There? . . . (Space Exploration) | 17 |
| Space Ventures . . . (Space Exploration) | 18 |
| The Air up There . . . (Earth's Atmosphere) | 20 |
| Air on the Move . . . (Air Movements) | 21 |
| Weather or Not . . . (Weather) | 22 |
| More Weather or Not . . . (Weather) | 23 |
| Up Front . . . (Weather Fronts) | 24 |
| What Difference Does It Make? . . . (Climate) | 25 |
| Climate Choices . . . (Climate) | 26 |
| Ocean Motions . . . (Water Movements) | 28 |

| | |
|--|----|
| Catch a Wave . . . (Water Movements/Waves) | 29 |
| Which Tide Is Which? . . . (Water Movements/Tides) | 30 |
| Tide Talk . . . (Water Movements/Tides) | 31 |
| Ups & Downs at the Bottom . . . (Ocean Bottom Topography) | 32 |
| Disappearing Act . . . (Erosion) | 33 |
| Water on the Move . . . (Erosion/Moving Water) | 34 |
| Mostly Water . . . (Surface Water/Erosion) | 35 |
| What's True about Groundwater? . . . (Groundwater/Erosion) | 36 |
| Awesome Ice . . . (Glaciers/Erosion) | 37 |
| Digging In . . . (Earth's Layers) | 38 |
| The Amazing Crust . . . (Surface Landforms) | 39 |
| Taken for 'Granite' . . . (Rocks) | 40 |
| Treasures in the Earth . . . (Minerals) | 42 |
| Which Volcano? . . . (Volcanoes) | 44 |
| Folds, Faults & Quakes . . . (Earthquakes) | 45 |
| Giant Plates . . . (Plate Tectonics) | 46 |
| Great Quakes & Eruptions . . . (Earthquakes & Volcanoes) | 47 |
| Such Odd Stuff! . . . (Earth's Features) | 48 |
| APPENDIX | 49 |
| Earth & Space Science Glossary | 50 |
| Physical Properties of Some Common Minerals | 54 |
| Earth & Space Science Skills Test | 55 |
| Skills Test Answer Key | 59 |
| Answers | 60 |

CELEBRATE BASIC EARTH & SPACE SCIENCE SKILLS

Basic does not mean boring! There certainly is nothing dull about . . .

- . . . visiting with viruses
- . . . wondering whether the weather you're in is a cyclone, hurricane, tornado, or waterspout
- . . . tracking down some of the world's shakiest earthquakes and wildest volcanic eruptions
- . . . getting a sense of the great jigsaw puzzle that makes up Earth's surface
- . . . exploring coral reefs, ocean trenches, underwater mountain ranges, and other wonders beneath the sea
- . . . looking into glaciers, mudpots, geysers, caves, ice shelves, volcanic craters, and other wonders above the surface
- . . . adventuring around outer space with comets, meteors, meteorites, shooting stars, asteroids, and other space wanderers
- . . . becoming an expert on moon phases, eclipses, and tides



The idea of celebrating the basics is just what it sounds like—getting excited about science because you understand more about how things work. The pages that follow are full of exercises for students that will help to **review and strengthen specific, basic skills in the content area of earth and space science**. This is not just another ordinary 'fill-in-the-blanks' way to learn. The high-interest exercises will put students to work applying a rich variety of the most important facts about earth and outer space while enjoying fun and challenging exercises.

The pages in this book can be used in many ways:

- for individual students to sharpen a particular skill
- with a small group needing to relearn or strengthen a skill
- as an instructional tool for teaching a skill to any size group
- by students working on their own
- by students working under the direction of an adult

Each page may be used to introduce a new skill or content area, reinforce a skill, or assess a student's ability to perform a skill. And, there's more than just the great student activities! You'll also find a hearty appendix of resources helpful for students and teachers—including a ready-to-use test for assessing these earth and space science content skills.

As students take on the challenges of these adventures with wonders in the world and outer space, they will sharpen their mastery of basic skills and will enjoy learning to the fullest. And as you watch them check off the basic earth and space science skills they've strengthened, you can celebrate with them!

