# Science | Scope & Sequence

## botany

| | P3 | P4 | K | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Understand the concept of Living and Non-Living | ● | ● | ● K | | | | | | |
| Apply the acronym MRSGREF to the concept of Living and Non Living | | | | ● | ● 3 | ● 3 | | | |
| Understand the difference between Plants and Animals | ● | ● | ● | ● 1 | | | | | |
| Classify five kingdoms of living things | | ● | ● | ● | ● | ● | ● | ● | ● |
| Study advanced classification | | | | | | | ● | ● | ● |
| Identify external parts of a flower | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Identify external parts of a leaf | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Identify the external parts of a plant | ● | ● | ● | ● | ● | ● 3 | ● | ● | ● |
| Identify external parts of: seaweed, moss, fern, pine tree | | | | | ● | ● 3 | | | |
| Identify and name leaf shapes | | | | ● | ● | ● | | | |
| Understand plants needs/care of a plant | ● | ● | ● | ● | ● | ● 3 | ● | ● | ● |
| Understand the life cycle of a plant | | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Understand how different plant organisms meet their needs | | | | | | ● | ● | ● | ● 6 |
| Understand photo-synthesis | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Understand difference between Bryata vs. Tracheata | | | | | | | ● | ● | ● 6 |
| Understand Tracheata: Sporemakers and Seedmakers | | | | ● | ● | ● | ● | ● | ● 6 |
| Study superphyla of seedmakers: Gymnosperms vs. Angiosperms | | | | | ● | ● | ● | ● | ● 6 |
| Engage in an overview of Gymnosperms | | | | | ● | ● | ● | ● | ● |
| Study Anthrophyta Phylum: Monocots vs. Dicots | | | | | | | ● | ● | ● |
| Study Plant Classification | | | | | | | ● | ● | ● |
| Study the Kingdom of Fungi | | | | | | | ● | ● | ● |
| Use a Microscope | | | | | | | ● | ● | ● |

## zoology

| | P3 | P4 | K | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Study classification of Vertebrates and Invertebrates | ● | ● | ● | ● | ● 2 | ● | ● | ● | ● |
| Study advanced classification of Vertebrates and Invertebrates | | | | | | ● | ● | ● | ● |
| Study the characteristics of the five main classes of Vertebrates | ● | ● | ● | ● | ● | ● 3 | ● | ● | ● |
| Identify external parts of a fish | ● | ● | ● | ● 1 | ● | | | | |
| Identify external parts of an amphibian | ● | ● | ● | ● 1 | ● | | | | |
| Identify external parts of a reptile | ● | ● | ● | ● 1 | ● | | | | |
| Identify external parts of a bird | ● | ● | ● | ● 1 | ● | | | | |
| Identify external parts of a mammal | ● | ● | ● | ● 1 | ● | | | | |
| Understand different organism's habitats; climate and environment | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Understand how different animal organisms meet their needs | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Understand the food chain | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Classify 6 classes of Invertebrates | | | | | ● | ● 3 | ● | ● | ● |
| Characteristics of Invertebrates | | | | | ● | ● 3 | ● | ● | ● |
| External parts of Invertebrates | | | | | ● | ● 3 | ● | ● | ● |
| Internal parts of vertebrates | | | | | ● | ● 3 | ● | ● | ● 6 |
| Recognize 5 senses | ● | ● | ● | ● | ● 2 | | | | |
| Migration and Hibernation | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Understand the life cycle of animals | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Understand the life cycle of a butterfly and frog | | | | ● | ● | ● 3 | | | |
| Tree of Life | | | | | | | ● | ● | ● |
| Classification/Taxonomy | | | | | | | ● | ● | ● |
| Definitions: Introductory activities | | | | | | | ● | ● | ● |
| Introduction to the Five Kingdoms | | | | | | | ● | ● | ● |
| Modern System: Carolus Linnarus | | | | | | | ● | ● | ● |
| Invertebrates vs. Vertebrates: phyla of each | | | | | | | ● | ● | ● |
| Dissections | | | | | | | ● | ● | ● |

## biology

| | P3 | P4 | K | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Exploration of Vital functions of Animals and Plants | | | | | ● | ● | ● | ● | ● |
| Describe the hierarchical organization of multicellular organisms (cells, tissues, organs etc.) | | | | | | | ● | ● | ● |
| Identify major systems in the human body | | | | | | | ● | ● | ● |
| "The Great River": Introduction to body systems | | | | | | | ● | ● | ● |
| Study of the cell parts and functions, microscope use to view cell slides, cell project | | | | | | | ● | ● | ● |
| Skeletal System: learning about and identifying bones | | | | | | | ● | ● | ● |
| Circulatory System: identifying parts/functions of heart, blood, and blood vessels, dissection of sheep's heart | | | | | | | ● | ● | ● |
| Respiratory Syatem: identifying parts/functions | | | | | | | ● | ● | ● |
| Digestive System: identifying prts/functions, test on digestive system, presentation on nutritution | | | | | | | ● | ● | ● |

## physical sciences

| | P3 | P4 | K | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Understand concept of Conservation and Recycling | ● | ● | ● | ● | ● | ● | ● | ● | ● 6 |
| Introduction to Chemistry | | | | | | | ● | ● | ● |
| Understand States of Matter: liquid, solid, gas | ● | ● | ● | ● | ● | ● 3 | ● | ● | ● |
| Particles which attract and do not attract | ● | ● | ● | ● | ● | ● 3 | ● | ● | ● |
| Mixture and Solutions | | | | ● | ● | ● 3 | ● | ● | ● |
| Study of the Periodic Table | | | | | | | ● | ● | ● |
| Elements and Compounds | | | | | | | ● | ● | ● |
| Chemical Bonding | | | | | | | ● | ● | ● |
| Chemical Equations | | | | | | | ● | ● | ● |
| Laws of Motion: force, balance, movement | | | | | | | ● | ● | ● |
| Use of simple machines | | | | | | | ● | ● | ● |
| Properties of Objects: flexibility, hardness | | | | ● | ● | ● 3 | | | |
| Laws of Gravity (History experiments) | | | | ● | ● | ● 3 | | | |
| Concept of sink and float | ● | ● | ● | ● | ● | ● 3 | | | |
| Types, Forms and Sources of Energy: electrical,magnetic, heat | | | | | | | ● | ● | ● |
| Renewable and Nonrenewable Sources of Energy | | | | | | | ● | ● | ● |
| Study of the Sun: suns rays/position/affects weather | ● | ● | ● | ● | ● | ● 3 | | | |
| Understand Light and Color | | | | | | | | | |
| Study of the Stars and Astronomy; life cycle of stars (cycle 1 LE) | | | | ● | ● | ● | ● | ● | ● |
| Magnetism: Intro and definition | | | | ● | ● | ● | ● | ● | ● |
| Types of Magnets: electromagnets | | | | | | | ● | ● | ● |
| Laws governing magnetism | | | | | | | ● | ● | ● |

## peace education

| | P3 | P4 | K | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|---|---|---|
| Introduction to Maria Montessori | ● | ● | ● | ● | ● | ● | | | |
| Self Awareness | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Community Awareness/Service | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Cultural Awareness | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Environmental Awareness | ● | ● | ● | ● | ● | ● | | | |
| Introduction to Peace Makers of the world | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Classroom Groundrules: Ways to be peaceful | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Introduction to the Peace Table/Area | ● | ● | ● | ● | ● | ● | | | |
| Independent conflict resolution | ● | ● | ● | ● | ● | ● | ● | ● | ● |
| Introduction to United Nations | ● | ● | ● | ● | ● | ● | ● | ● | |
| Participation in Montessori Model United Nations | | | | | | | | | ● |